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Instructional Decision-Making Authority and Job Satisfaction of Four-Year Faculty  
by Primary Job Activity, Percentage of Time Spent Teaching, and Academic Discipline

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**Abstract**

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The purpose of this study was to examine the effect of faculty satisfaction with instructional autonomy on overall job satisfaction. Using data from the 2004 National Study of Postsecondary Faculty and drawing on sum-of-facets theory, this study explored the job satisfaction of full-time faculty at four-year institutions who spent part of their time on teaching activities. The study also looked at differences by primary job activity, percentage of time spent teaching, and academic discipline using Biglan's discipline classification as the conceptual framework. Results of the study indicate that faculty are satisfied with their jobs overall. Additionally, results indicate that when controlling for demographic and employment variables, differences in primary job activity, percentage of time spent teaching, and academic discipline have a small but significant effect on the amount of overall job satisfaction that can be explained by satisfaction with instructional autonomy. The study's findings have theoretical implications for those concerned with maintaining or increasing faculty job satisfaction, including college administrators, policy makers, and faculty union leaders.

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## Chapter 1: Introduction to the Study

### *Problem Statement*

Job satisfaction has been defined as “the pleasurable emotional state resulting from the appraisal of one’s job as achieving or facilitating the achievement of one’s job values” (Locke, 1969, p. 316). Employee attitudes and behaviors that have been linked to low levels of job satisfaction include absenteeism, turnover, burnout, poor job performance, and behavior that intentionally hurts the organization, all of which can negatively impact not only organizational costs, but also organizational effectiveness (Spector, 1997). In higher education, organizational effectiveness measures include quality of teaching, attraction of faculty who studied at the leading graduate schools in their field, student retention and graduation rates, research productivity, and attainment of research funding, all of which can have an effect on an institution’s reputation.

Numerous studies have sought to identify and explain the various factors that contribute to faculty job satisfaction, but significantly fewer studies have looked at the extent to which one or more individual factors contribute to overall job satisfaction. While there is evidence that instructional autonomy is a factor of faculty job satisfaction, the importance of this job factor to overall job satisfaction, and the identification of any differences that may exist due to primary job activity, percentage of time spent teaching, and academic discipline is not known.

Given the impact of faculty job satisfaction on organizational costs, effectiveness, and reputation, and the general decline in faculty job satisfaction since 1969 (Schuster & Finkelstein, 2006), an understanding of the factors that contribute to faculty job satisfaction, as well as the extent to which the factors contribute, is very important and should therefore be of concern to higher education administrators. Without this understanding, administrators face the risk of

making decisions without an awareness of how, and to what extent, these decisions may negatively affect faculty job satisfaction.

### *Purpose of Study*

Faculty job satisfaction is very complex. The literature has identified dozens of job satisfaction factors, the importance of the individual factors to overall job satisfaction can differ widely, and differences have been found among faculty according to demographic factors such as age, race, and gender as well as employment factors such as tenure status, rank, and the year faculty began working in their current jobs.

The purpose of this study is to contribute to the literature on faculty job satisfaction by exploring one job satisfaction factor – instructional autonomy. Specifically, the study will determine the percentage of overall job satisfaction that can be explained by satisfaction with instructional decision-making authority. The study will also further explore the relationship between satisfaction with instructional decision-making authority and overall job satisfaction by determining if differences exist among faculty according to academic discipline, primary job activity, and percentage of time spent teaching.

### *Importance of Study*

Faculty believe that instructional decision-making authority, as well as authority over course schedules, prerequisites, and requirements, should be held by individual faculty (Copur, 1990). This authority is not only valued by faculty, but is also an important component of job satisfaction. For example, Diener (1985) found that the ability to make major decisions about one's own teaching was one of the major contributors to job satisfaction. Fiorentino (1999) combined instructional decision-making authority with the following factors - authority over non-instructional aspects of the job, time to work with students, and the quality of undergraduate

and graduate students – to form one variable. She found that this variable, combined with three others (workload/available time, salary/benefits, and security/advancement), explained 51% of the variance in overall faculty job satisfaction.

Faculty appear to be generally satisfied with their instructional decision-making authority. 92.5% of faculty at a research university reported being satisfied with their authority to determine course content and methods and 77.5% reported satisfaction with their authority to determine what courses to teach (Nienhuis, 1994). A descriptive review of the 1999 National Study of Postsecondary Faculty data revealed that 95% of faculty members reported being satisfied with their authority to determine course content (Clery, 2002). However, knowing that faculty are generally satisfied with their instructional decision-making authority is not enough. If faculty job satisfaction is to be maintained, or increased, it is important that administrators understand the extent to which individual job satisfaction facets contribute to overall faculty job satisfaction as well as any differences that may exist among faculty according to demographics and job-related factors. The greater the extent to which administrators understand faculty job satisfaction and its complexities, the more likely faculty job satisfaction will be considered during discussions of new or revised institutional policies that will or may affect faculty. Without this understanding, administrators face the risk of making decisions that may reduce faculty job satisfaction, and this reduction in job satisfaction, in turn, may affect organizational costs, effectiveness, and reputation (Spector, 1997). Faculty job satisfaction is, and will remain, an important topic that requires continuous attention.

### *Overview of Study*

This study analyzes data from the 2004 National Study of Postsecondary Faculty (NSOPF:04), a comprehensive, national study of the characteristics, workloads, and career paths

of faculty and instructional staff at public and private not-for-profit institutions in the United States. NSOPF:04 contains data on faculty at both two- and four-year institutions; only data for faculty at four-year institutions will be selected for inclusion in this study. Multiple regression analysis will be used to identify the percentage of overall faculty job satisfaction that can be explained by satisfaction with instructional decision-making authority as well as any differences that may exist for this measure when primary job activity, percentage of time spent teaching, and academic discipline are considered.

Chapter 2 of this study provides an overview of the research literature pertaining to the dissertation topic. The literature review is divided into four main sections. The first section looks at the various job factors that have been shown to be related to the job satisfaction of four-year faculty and includes studies that used National Study of Postsecondary Faculty (NSOPF) data from the 1993 and 1999 surveys, data from other job satisfaction scales, and survey instruments developed for specific studies. The second section addresses the importance of autonomy to college and university faculty and the relationship of autonomy to faculty job satisfaction, thereby offering a rationale for the proposed study's focus on autonomy. Next, the literature review discusses several of the taxonomies that have been used to group faculty by academic discipline. The last section of the literature review addresses the importance of the teaching function and the status of the teaching function relative to the other duties of college and university faculty. This chapter concludes with an explanation of how the proposed study will contribute to the literature on faculty job satisfaction.

Chapter 3 explains the methodology that was used for this study. This chapter contains an explanation of the hypotheses and research questions, the data source, the definitions of the variables, and the method(s) that were used to analyze the data. Chapter 4 presents and analyzes

the results of the study as they pertain to the hypotheses and research questions, and the final chapter, Chapter 5, focuses on a review of the study approach, a summary of the study findings, implications for theory and practice, limitations of the study, and suggestions for further research.

## Chapter 2: Review of the Literature

### *Background*

One of the earliest job satisfaction theories was the “two-factor” theory developed by Herzberg (1966). The main tenet of this theory is that motivation factors, which affect job satisfaction, are different from hygiene factors, which affect job dissatisfaction. Examples of motivation factors include achievement, recognition, and responsibility; examples of hygiene factors include organizational policies, salary, and working conditions. These two types of factors are not only different, according to the theory, they are also unrelated. Therefore, an increase or decrease in one factor does not affect the other. According to Lawler (1973), studies designed to test the two-factor theory have produced mixed results, and “even proponents of the theory admit that the same factors can cause both satisfaction and dissatisfaction and that a given factor can cause satisfaction in one group of people and dissatisfaction in another group of people” (p. 72.).

The sum-of-facets (or job facet) theory, which has its roots in Herzberg’s (1966) two-factor theory, holds that employee satisfaction results from the level of satisfaction with a variety of job factors and that each factor can be evaluated on a continuous scale from dissatisfied to satisfied (Bess, 1981). According to Bess:

Facet studies of faculty satisfaction have the advantage of identifying, even with limited face validity, characteristics of faculty and their work environment which may contribute to overall institutional morale and perhaps to improvements in productivity and the quality of work (p. 6).

In a study of education faculty at Midwestern institutions, Plascak (1988) compared sum-of-facets theory with three other job satisfaction theories: 1) need fulfillment theory, defined in the study as the levels or amounts of those job elements that are compatible with one’s needs, 2)

discrepancy theory, which focuses on the discrepancies between what one needs or desires from the job and what one receives from the job, and 3) value appraisal theory, which looks at job elements according to the following formula: (value x current level) - [value x (desired level-current level)]. Using a variety of work elements related to the job, the institution, social factors, and psychological factors, Plascak found that of the four theories studied, the sum-of-facets theory explained the most variance (37%) in global job satisfaction.

Sum-of-facets is the theoretical basis for this study, which focuses on one job factor – instructional autonomy – and its relationship to overall job satisfaction. Autonomy was selected as the facet of study because of its importance to faculty. Data from the 1999 National Study of Postsecondary Faculty (NSOPF:99) revealed that the top three job factors with which faculty were satisfied were related to autonomy (Clery, 2002). The specific autonomy-related job facet used in this study is satisfaction with decision-making authority over course content and methods. After determining the percentage of overall job satisfaction that can be explained by satisfaction with decision-making authority over course content and methods, possible differences between faculty based on academic discipline, percentage of time spent teaching, and primary job responsibility will be explored.

Several of the researchers included in this literature review grouped faculty by Biglan (1973a, 1973b) disciplinary groups in order to study differences in faculty job satisfaction by academic discipline. It is therefore useful to describe the Biglan model in this introduction to the literature review.

The Biglan model (1973a, 1973b) is based on research in which scholars from a large, research university and scholars from a small college worked separately to identify subject matter similarities between disciplines. Using a multidimensional scaling technique, Biglan used

the data from the scholar groups to identify three dimensions that characterize academic fields: 1) hard vs. soft paradigm – the extent to which a discipline has a clear and commonly agreed-upon paradigm, 2) pure vs. applied research – the extent of concern with the practical application of subject matter, and 3) life vs. non-life - the extent of concern with living or organic objects. These three dimensions yield eight mutually exclusive disciplinary groups – Hard/Applied/Life (HAL), Hard/Applied/Non-life (HAN), Hard/Pure/Life (HPL), Hard/Pure/Non-life (HPN), Soft/Applied/Life (SAL), Soft/Applied/Non-life (SAN), Soft/Pure/Life (SPL), and Soft/Pure/Non-life (SPN),. Studies which validate the Biglan model will be discussed later in this chapter.

#### *Demographic Characteristics, Job Facets, and Faculty Job Satisfaction*

Fiorentino (1999), Dubois (2002), and Isaac (1997) used data from the 1993 National Study of Postsecondary Faculty (NSOPF:93) to identify job facets associated with job satisfaction. Fiorentino studied faculty employed at institutions that provided programs of at least two years in length, and who were either designated as “faculty” or not designated “faculty” but had responsibilities related to instruction, to identify the factors associated with job satisfaction, the relationships between the factors, and the factors that best explain variance in job satisfaction. Using correlational analysis and multiple regression analysis, Fiorentino found that the following factors were associated with job satisfaction – role congruence, institutional quality, advancement opportunities, research-related facilities and opportunities, teaching-related resources, research-related resources, and an environment that is perceived as fair to all faculty, including females and faculty of color. Using four measures of job satisfaction – workload/available time, authority over instructional/non-instructional aspects of the job, salary/benefits, and security/advancement, Fiorentino found that the four measures together

explained 51% of the variance in overall job satisfaction, with authority over instructional/non-instructional aspects of the job by itself explaining the most variance (24%).

The purpose of Dubois' (2002) study was to determine new entrant, full-time faculty's satisfaction with the roles of teaching, research, and service and whether satisfaction with these roles differed by disciplinary group. From NSOPF:93 data, she sampled full-time faculty at public or private liberal arts institutions who held faculty status and had been employed in higher education for seven years or less. Dubois used factor analysis to create two composite dependent variables – satisfaction with academic work issues (authority to make decisions about course content and method, authority to make decisions about non-instructional aspects of the job, authority to make decisions about what courses to teach, job security, and opportunity for advancement in rank) and satisfaction with time availability issues (time available for working with students, workload, time available for keeping current in one's field, and freedom to do outside consulting). One-way ANOVA was used to identify differences among disciplinary groups. The findings of this study included the following – most faculty were generally satisfied with their positions but did not rule out the possibility of accepting positions at other institutions; of the faculty who spent more than 75% of their time teaching, most wanted more time for research; a majority of the faculty were satisfied with their career choice; and disciplinary differences accounted for only 1% - 6% of the variance in the job satisfaction variables. Regarding overall job satisfaction, the study concluded that new entrant faculty in the Hard/Pure/Non-Life (HPN) and Soft/Applied/Life (SAL) Biglan groups were more satisfied with their jobs overall than faculty from the other Biglan groups.

Isaac (1997) studied full-time faculty at liberal arts institutions. He used correlational methods, analysis of variance, and multiple regression analysis to determine the amount of

variance in faculty intention to leave that could be explained by two blocks of predictor variables. The first block consisted of the following demographic factors - gender, rank, tenure, and time at the institution. The second block consisted of percent of time spent teaching, job satisfaction (work load, job security, opportunity for advancement, time to keep current in their field, freedom to do outside consulting, salary and benefits, and job opportunities for spouse) and satisfaction with faculty authority in instructional matters (authority to make decisions about what courses to teach, authority to make decisions about course content and methods, and authority to make decisions about non-instructional aspects of the job).

All factors, with the exception of percentage of time spent teaching, were correlated with faculty intent to leave. Isaac (1997) found that the demographic factor block and the job factor block explained 14.3% and 14.8%, respectively, of the variation in faculty intent to leave. He then used discriminant analysis to determine which predictor variables could be used to correctly assign faculty to one of the following three groups – not at all likely to leave, somewhat likely to leave, and very likely to leave. The discriminant function correctly assigned 58% of faculty to one of the three groups. Job satisfaction, rank, and tenure were found to have the highest discriminating power.

In terms of faculty job satisfaction, the subject of this dissertation, Isaac (1997) found greater job satisfaction among males, tenured faculty, faculty at the rank of professor, and faculty who spent 40-54 percent of their time teaching. Satisfaction with authority over instructional matters was greatest for tenured faculty.

Seifert and Umbach (2008) and Gahn (1995) studied job facets associated with faculty job satisfaction using data from the 1999 National Study of Postsecondary Faculty (NSOPF:99). Seifert and Umbach (2008) studied job satisfaction for the following sub-sample of faculty -

teaching faculty with the rank of assistant professor, associate professor, or professor employed at doctoral research-intensive and doctoral research-extensive institutions with a tenure process. Hierarchical linear modeling was the method used to create a predictive model of the effects of demographic characteristics and disciplinary context on job satisfaction. Dependent variables consisted of four dimensions of job satisfaction – autonomy (decision-making authority over course content, courses taught, and other job aspects), financial compensation and opportunities for career advancement, convenience (time available to advise students, prepare for class, and keep current in one's field), and relationships with co-workers (faculty perceptions of the treatment of female and minority faculty). The researchers found that women were less satisfied than men on all four dimensions and that some differences existed by race/ethnicity. Faculty of color did not differ significantly from white faculty on satisfaction with autonomy, but Asian/Pacific Islanders and Latino faculty were less satisfied than White faculty with financial compensation and opportunities for career advancement, African-American faculty were less satisfied with convenience than White faculty, and faculty of color perceived less equitable treatment of females and faculty of color than their White peers.

Regarding differences by academic discipline, the researchers found that faculty in disciplines that publish more books and give more presentations (e.g. natural sciences and applied health) were more satisfied with their autonomy, compensation, and advancement than other faculty, but only female faculty in disciplines with greater productivity were more satisfied with the convenience dimension. For the relationships with co-workers dimension, Seifert and Umbach (2008) found that faculty in disciplines with higher research productivity, and those in disciplines with a higher proportion of female faculty, perceived less equitable treatment of women and minority faculty than their peers in other disciplines. The researchers also found that

faculty who were first generation college students and those with disabilities were less satisfied than other faculty with compensation/advancement and autonomy, respectively.

Gahn (1995) asked if associate professors vary in job satisfaction, research productivity, and attitudes about criteria for promotion by academic discipline, time in rank, and gender. Only the research pertaining to job satisfaction will be discussed here. The NSOPF:99 sub-sample used in this study was associate faculty at research and doctoral-granting universities. Using multivariate analysis of variance, Gahn found significant differences in job satisfaction by discipline, time in rank, and gender. To study differences by academic discipline, Gahn divided faculty into four groups using two of the three Biglan (1973a, 1973b) dimensions – hard vs. soft paradigm and pure vs. applied research. The highest mean job satisfaction score among the faculty studied was for intrinsic job factors, which consisted of decision-making authority, departmental leadership, job security, and opportunities for advancement. All four faculty groups expressed approximately equal levels of satisfaction with the intrinsic measures. However, differences in job satisfaction were found among extrinsic job factors, such as salary, benefits, institutional mission, and institutional reputation. Faculty in the hard/applied discipline group (e.g., business, engineering) were significantly more satisfied with the extrinsic job factors than faculty in the soft/pure discipline group (e.g., history, English).

For the independent variable time in rank, the study found that the longer faculty remained in the same rank, the less satisfaction they expressed regarding opportunities for advancement, but the more satisfied they were toward overall workload.

Women reported less satisfaction than men with their salaries, although the differences were not statistically significant. Significant gender differences did exist, however, along a workload satisfaction scale, which was comprised of workload satisfaction; time available to

work with students; quality of research facilities; the mix of teaching, research, administration, and service responsibilities; and availability of equipment and support services. Women who had been in their current rank less than three years or more than eight years were less satisfied with workload than male faculty with the same number of years in their current rank. Women who had been in their current rank three to eight years had the same workload satisfaction as men in the same time-in-rank group.

Some researchers, such as Winkler (1982) and Opp (1992), used data from instruments other than the National Study of Postsecondary Faculty to study faculty job satisfaction. Winkler surveyed faculty employed at doctoral-granting universities with student enrollments of at least 10,000 using two established instruments: 1) the Job Descriptive Index (JDI), which measures job satisfaction using the variables work, supervision, pay, promotion, and co-worker, and 2) a modified version of the short form of the Minnesota Satisfaction Questionnaire (MSQ), which measures satisfaction with the job environment. Winkler found that the two job factors most highly associated with satisfaction were autonomy/academic freedom/independence and teaching and/or advising excellent students. The factors most highly associated with dissatisfaction were salary, administration and leadership, lack of support (budget, equipment, secretarial, public), the university structure and reward system, and difficult colleagues. No statistically significant differences were found when faculty were compared by age, rank, and tenure status using data from either instrument. Although data from both the JDI and the MSQ revealed higher mean job satisfaction scores for men than for women, only the difference using MSQ data was statistically significant.

Looking at each of the 20 disciplines represented in the study, Winkler (1982) found that for both the JDI and MSQ data, the only mean difference in satisfaction that was statistically

significant was the difference between Agriculture faculty (the highest mean satisfaction) and Mechanical Engineering faculty (the lowest mean satisfaction). Winkler also compared mean faculty satisfaction scores using each separate Biglan dimension as well as all combinations of two and three Biglan dimensions. For both JDI and MSQ data, only the difference between faculty in Hard/Life disciplines and Soft/Life disciplines was significant.

Opp (1992) conducted a study to test Clark's (1987b) assertion that to understand faculty culture, disciplinary differences must be considered. The 1989-1990 HERI (Higher Education Research Institute) Faculty Survey, which was designed to gather data on job satisfaction, student and colleague interactions, and teaching and research activities, was administered to 93,000 faculty at 432 institutions. Opp studied the job satisfaction predictors of the 13,810 faculty respondents who were employed full-time, for whom teaching was the principal work activity, who taught at least one undergraduate course in the last academic term before the HERI survey was administered, and whose academic discipline fell within one of the following arts and sciences groups – biological sciences, humanities, fine arts, physical sciences, and social sciences. He found that salary was the strongest predictor of career satisfaction for faculty in the physical sciences; research as a primary interest had a negative relationship on satisfaction for all five disciplinary groups, but especially for faculty in the biological and physical sciences; the existence of a collaborative research environment was a predictor of satisfaction for faculty in the biological sciences, the physical sciences, and the social sciences; and public control of higher education institutions was negatively associated with the satisfaction of faculty in the humanities, social sciences, and physical sciences. These differences led Opp to conclude that Clark's assertion about the importance of studying disciplinary differences in order to better understand faculty is correct.

Neal (1990) analyzed data gathered by Austin and Rice (1987) to examine disciplinary differences among liberal arts college faculty in factors relating to job satisfaction. The job factors studied were personal characteristics (gender, academic rank, and number of years at the college), intrinsic job factors (autonomy, variety, service, creativity, leadership, and specialization), and extrinsic job factors (prestige, security, involvement in decision-making on academic issues, and involvement in decision-making on non-academic issues). The personal characteristics gender and academic rank were removed from the study after Neal found they were not significantly related to job satisfaction.

To examine disciplinary differences, faculty respondents were divided into four disciplinary groups using two of the three Biglan (1973a, 1973b) dimensions - Hard/Soft paradigm and Pure/Applied research. Neal (1990) conducted regression analyses on each individual job factor and found disciplinary differences in the factors that explained the most variance in job satisfaction. Of the three variables that individually explained the most variance for each discipline group, only involvement in academic decision-making was common to all four groups. Top-three factors common to two groups were security (for Hard/Pure and Soft/Pure), involvement in non-academic decision-making (for Soft/Pure and Hard/Applied), and prestige (for Hard/Applied and Soft/Applied). No top-three factors were common to three of the four groups.

Using all significant factors together in regression analysis, Neal (1990) found that power, prestige, and security explained the most variance (23%) in job satisfaction for faculty in Hard/Pure disciplines; prestige, creativity, security, and involvement in academic decision-making explained the most variance (28%) in job satisfaction for faculty in Soft/Pure disciplines; creativity, involvement in non-academic decision-making, and autonomy explained the most

variance (29%) for Hard/Applied faculty; and for the Soft/Applied group, 31% of the variance in job satisfaction was explained by leadership, specialization, creativity, service, autonomy, security, prestige, and involvement in academic decision-making.

Some researchers of faculty job satisfaction developed their own survey instruments. For example, Plascak (1988) surveyed education faculty employed at ten research universities in the Midwest - nine public and one private – using a questionnaire that asked faculty about satisfaction with a variety of job elements categorized as work-related, institution-related, and social-related. She identified 12 job facets that are significant predictors of variability in faculty job satisfaction. These facets, which explained approximately one-third of the variance in faculty job satisfaction, are autonomy, creativity, clearly-defined work activities, the perceived value of their work within the university community, work load, financial rewards, relationships with colleagues, interrole conflict between valued work functions, evaluative and administrative activities, working conditions, and opportunities for relationships with department chairpersons.

As stated in the Introduction chapter, Plascak (1988) also compared sum-of-facets theory with three other job satisfaction theories: 1) need fulfillment theory, defined in the study as the levels or amounts of those job elements that are compatible with one's needs, 2) discrepancy theory, which focuses on the discrepancies between what one needs or desires from the job and what one receives from the job, and 3) value appraisal theory, which looks at job elements according to the following formula:  $(\text{value} \times \text{current level}) - [\text{value} \times (\text{desired level} - \text{current level})]$ . Using a variety of work elements related to the job, the institution, social factors, and psychological factors, Plascak found that of the four theories studied, the sum-of-facets theory explained the most variance (37%) in global job satisfaction. The sum-of-facets theory is the theoretical basis for this study.

Diener (1985) surveyed all faculty members at two predominantly black higher education institutions - a community college and a liberal arts college located in a southeastern state – using a 167-item survey instrument that asked about work attitudes, stress, and job satisfaction. He found that faculty autonomy to make major decisions about their own teaching was the third highest provider of job satisfaction, behind seeing/supporting student growth and personal growth and intellectual stimulation. Diener also found that faculty derived job satisfaction from one set of factors and job dissatisfaction from another set of factors, which supports Herzberg's (1966) two-factor theory, which holds that the factors which affect job satisfaction are distinct from the factors which affect job dissatisfaction.

Moore and Gardner (1992) studied the job satisfaction of faculty groups at Michigan State University. Using their own survey instrument, Moore and Gardner looked for differences in job satisfaction by academic rank, gender, primary job activity, interest in leaving the institution, and academic discipline. For academic discipline, faculty were divided into 11 groups to coincide with the 11 colleges within the university: 1) Agriculture, 2) Arts and Letters, 3) Business, 4) Communication Arts, 5) Education, 6) Engineering, 7) Human Ecology, 8) Medicine, 9) Natural Science, 10) Social Science, and 11) Veterinary Medicine. Factor analysis of the 28 work environment items included in the survey resulted in the selection of six job satisfaction variables for inclusion in the study – institutional reputation, work assignment, support services, teaching/instruction assignment, career outlook (job security at the institution), and compensation.

Using ANOVA to identify group differences, Moore and Gardner (1992) found that satisfaction with institutional reputation was higher for females, those with appointments in extension programs, and those with no interest in leaving the college. Satisfaction with primary

work assignment and support services was highest for full professors, males, those whose primary job activity is research, and those with no interest in leaving the college. Satisfaction with teaching assignment was highest for full professors and those with no interest in leaving. Finally, satisfaction with career outlook was highest among full professors, males, those whose primary job activity is research, and those with no interest in leaving; satisfaction with compensation was highest for assistant professors.

Disciplinary differences in job satisfaction were also identified by Moore and Gardner (1992). Satisfaction with institutional reputation was highest for faculty in Human Ecology, Agriculture, and Education; satisfaction with work assignment was highest for faculty in Business, Natural Science, Communication Arts, Education, and Agriculture; satisfaction with support services was highest for faculty in Business, Communication Arts, Education, and Natural Science; faculty in Veterinary Medicine expressed much lower satisfaction with career outlook than the other faculty groups; and satisfaction with compensation was highest for faculty in Veterinary Medicine, Engineering, and Agriculture. No significant differences among faculty groups was found for satisfaction with teaching assignment.

### *Autonomy*

Autonomy is closely related to the concept of shared governance and is one of the reasons faculty are attracted to academe (Gappa, Austin, & Rice, 2007). The American Association of University Professor's (AAUP) Survey of Subcommittee T on Faculty Participation in College and University Government (1971) identifies five levels of faculty participation in higher education governance: 1) determination – faculty have legislative or operational authority over the policy or action, 2) joint action – formal agreement by both the faculty and one or more other groups or bodies is required for policy or action determination,

3) consultation – a formal procedure or practice that allows faculty to present its views on a policy or action, 4) discussion - the formally expressed opinion of a committee selected by the administration or the informal expression of faculty opinion, and 5) no shared governance. The authority of faculty to determine the content and methods of the courses they teach is an example of the determination level.

According to Cohen (1998), faculty responses to the many surveys of the way faculty spend their time and how satisfied they are with their career choice have one common characteristic - “faculty derive satisfaction from the work they do, the autonomy they enjoy, and their own activities...” (p. 351). Along with academic freedom and the principle of merit, autonomy has been referred to as one of “the norms that guide the academic career” (Finkelstein, 1984, p. 5).

According to Locke, Fitzpatrick, and White (1984), “the more important the job aspect, the more effect that aspect has on job satisfaction” (p. 121). Instructional autonomy, operationalized as “satisfaction with decision-making authority over course content and methods,” is the subject of this study. Faculty believe that authority over course content and methods, as well as authority over course schedules, prerequisites, and requirements, should be held by individual faculty (Copur, 1990). This authority is not only valued by faculty, but is also an important component of job satisfaction. For example, Clery (2002), using data from NSOPF:99, identified the top three job factors with which faculty reported satisfaction. These job factors, which all relate to autonomy, were satisfaction with their authority to determine course content and methods, satisfaction with their freedom to perform outside consulting, and satisfaction with their authority to decide what courses to teach. In a survey study of professors at two predominantly Black institutions in the Southeast (one community college and one liberal

arts college), Diener (1985) found that autonomy in the classroom contributed to faculty job satisfaction.

Faculty appear to be generally satisfied with their instructional decision-making authority. 92.5% of faculty at a research university reported satisfaction with their authority to determine course content and methods and 77.5% reported satisfaction with their authority to determine what courses to teach (Nienhuis, 1994). In addition, 95% of the faculty who responded to NSOPF:99 reported being satisfied with their authority to determine course content and methods (Clery, 2002). Finally, in a study of the characteristics of faculty who desire a mid-career change to an administrative position and faculty who want to remain in their current positions, Snyder, Howard, and Hammer (1978) found that those wanted to stay in a faculty position chose to do so because of the autonomy the positions offer.

### *Academic Discipline Taxonomies*

The curriculum offered by colonial colleges in the U.S. was limited to a small number of subjects intended to prepare young men for the ministry as well as for the role of “gentleman” (Braxton & Hargens, 1996). For example, a schedule published by Harvard in 1638 listed the only subjects of study as logic, physics, rhetoric, divinity, botany, Greek etymology, Hebrew grammar, ethics, politics, Greek prose and dialectics, arithmetic, astronomy, and geometry (Cohen, 1998). Today, Harvard offers approximately 50 major areas of undergraduate study (Harvard College, 2010), and large research universities offer even more subjects.

One of the most important changes in higher education in the last 150 years has been the increase in the number of academic disciplines (Braxton & Hargens, 1996). It has been argued that “the ‘academic profession’ does not exist” (Light, 1974, p. 12), but rather consists of many professions organized around academic disciplines (Clark, 1987a, 1987b; Light, 1974).

According to Clark (1987b), “with the growth of specialization in the last century, the discipline has become everywhere an imposing, if not dominating, force in the working lives of the vast majority of academics” (p. 25). Looking at the academic world by disciplinary differences, therefore, increases our knowledge of that world (Becher, 1987; Light, 1974).

Because “the academic discipline has come to be recognized as the single greatest influence shaping the professional attitudes and behaviors of college faculty” (Smart, Feldman, & Ethington, 2000, p. 7), and because differences between disciplines are “profound and extensive” (Braxton & Hargens, 1996, p. 35), a study of faculty job satisfaction will not be complete without investigating differences among faculty according to their disciplines. Disciplinary differences among faculty have been identified for several job satisfaction facets, including institutional reputation and faculty salaries (Gahn, 1995; Moore & Gardner, 1992), faculty salaries and benefits (Fiorentino, 1999), authority over work (Seifert & Umbach, 2008), cooperation and interpersonal satisfaction (Gahn, 1995), and security/advancement and workload/available time (Fiorentino, 1999). Disciplinary differences in overall faculty job satisfaction were found by Opp (1992) and Winkler (1982). With such a plethora of academic disciplines, many researchers use taxonomies to group disciplines together and study group differences.

*College taxonomy models.* College taxonomy models are based on the location of academic fields into departments, schools, or colleges within higher education institutions. Because there are almost as many college models as there are colleges, college model taxonomies are not often used in research unless the research is specific to one institution, and the validity of these models is open to question because such factors as funding and institutional politics may influence the placement of the disciplines within the departments, schools, and

colleges.

*The Pantin Model.* Some taxonomies focus on the scientific disciplines. According to C. F. A. Pantin (1968), “knowledge of the natural world” is the popular usage of the term “science”, but the actual definition is “all knowledge” (p. 2). Although Pantin believed that any division of the sciences would only be arbitrary, he developed a taxonomy for “practical convenience and no more” (p. 24). His taxonomy of scientific disciplines consisted of the categories “restricted” and “unrestricted.” “Restricted” sciences refers to restrictions on the class of objects studied, the lack of richness and complexity of the phenomena studied, the lack of need to use data from other sciences in order to advance study, and the rapid maturity of the disciplines. Pantin cited physics and chemistry as examples of restricted sciences. In contrast to restricted disciplines, unrestricted disciplines study a broader array of natural phenomena, study rich and complex phenomena, use data from other sciences to advance their disciplines, and mature more slowly as a result. Geology is an example of an unrestricted science. Pantin was careful to point out that although in general the physical sciences are restricted and the biological sciences are unrestricted, there are exceptions. For example, the physical science of meteorology is unrestricted because its study involves other sciences, such as biology and geology, and the biological subspecialty of taxonomy is restricted. Similarities exist between Pantin’s system and that of The Royal Society of London for Improving Natural Knowledge, which classified the study of natural phenomena into Series A (mathematical and physical sciences) and Series B (biological sciences). Pantin states that “We can partially justify the rough division of the sciences by the Royal Society into ‘A’ and ‘B’ if we say that it correlates to a division into the restricted and the unrestricted” (p. 18).

*The Kuhn Model.* Another taxonomy for the sciences focuses on paradigms. Kuhn (1970) defined “paradigm” as “the entire constellation of beliefs, values, techniques, and so on shared by the members of a given community” (p. 175) and “the concrete puzzle-solutions which, employed as models or examples, can replace explicit rules as the basis for the solution of the remaining puzzles of normal science” (p. 175). He argued that scientific disciplines should be categorized according to the status of their paradigm development because paradigms may exist prior to the rules and laws that govern disciplines and may be more complete than the sum of the rules and laws. Kuhn identified two categories of paradigm development: 1) paradigmatic, and 2) preparadigmatic. These labels do not distinguish the disciplines according to whether or not they have a paradigm, for “a science develops before it acquires its first universally received paradigm” (p. 13). Rather, a scientific discipline is considered to be in its paradigmatic period if there is general agreement on problems, methods, and standards of solution. This agreement does not preclude paradigm shifts, such as the shift from Newtonian physics to quantum physics. Disciplines are in their preparadigmatic period if there are frequent and significant debates about problems, methods, and standards of solution. Kuhn cited physics as an example of a paradigmatic discipline, and although his research focused on the sciences, he cited psychology and sociology as examples of preparadigmatic disciplines.

*The Holland model.* John Holland (1973) developed a theory “to explain vocational behavior and suggest some practical ideas to help young, middle-aged, and older people select jobs, change jobs, and attain vocational satisfaction. To a lesser degree, the theory also concerns personal competence, educational behavior, and social behavior” (p. 1). The theory identifies six personality types: 1) Realistic (R) – acquires mechanical, technical, and manual skills and has a preference for activities that involve the hands-on manipulation of objects; 2) Investigative (I) –

acquires mathematical and scientific skills and has a preference for investigating the physical, biological, and cultural worlds; 3) Artistic (A) – acquires artistic skills such as writing, art, and music and has a preference for activities that create art; 4) Social (S) – acquires human relations skills and has a preference for activities that help others; 5) Enterprising (E) – acquires leadership, persuasion, and interpersonal skills and has a preference for activities that result in economic gain or the attainment of organizational goals; and 6) Conventional (C) – acquires clerical, calculation, and business skills and has a preference for activities that involve the manipulation of data.

Holland (1973) is careful to point out that no one is a pure type, such as enterprising only or artistic only. Rather, each of us has a personality and behaviors that primarily reflects one type, but that also reflects other types to a lesser degree. He categorized people according to the three types that characterize them most. For example, a person categorized as ISA mostly exhibits behaviors of the Investigative type but also exhibits some behaviors of the Social type and, to a lesser extent, the Artistic type. Holland's theory also posits that jobs and environments can be placed into one of the six categories and that people seek a job and an environment that best fits their personality type, and if they are successful in finding this "fit," they thrive.

The description of Holland's (1973) theory, above, was taken from his third formulation, which he described as being more comprehensive and systematic than his earlier formulations (1958, 1966). Several studies of college students provide support for Holland's theory, including those by Elton and Rose (1970), Walsh and Lacey (1970), Morrow (1971), Williams (1972), Walsh, Vaudrin, and Hummel (1972), and Antony (1998).

The six personality/environment types of Holland's (1973) theory of vocational choice have also been used to categorize academic disciplines and the personalities of the faculty who

work within a discipline. According to Smart and McLaughlin (1974), individuals can be placed in a Holland personality type not only by the results of occupational interest tests and personality tests, but also by their occupational choice. These researchers validated Holland's model in a study of the goal orientations of department chairs. Department chairs at a sample of doctoral-granting institutions were asked to respond to a survey about 11 common goals of academic departments. The chairs ranked the 11 goals, which represented five goal dimensions, on a five-point scale with a score of one meaning the goal is of little to no importance for their department and a score of five meaning the goal is very important to their department. 1,037 of the returned surveys were from department chairs whose academic discipline could be classified according to Holland's model. Smart and McLaughlin found large variation between Holland groups on two of the five goal dimensions. Department chairs in realistic and investigate disciplines ranked the dimension "produce new knowledge through research/graduate well-educated students" as more important to their department than the chairs in the other Holland groups. The goal dimension of faculty climate orientation revealed another difference between groups. Compared to chairs in Realistic and Investigative disciplines, chairs in Social, Artistic, and Conventional disciplines placed a greater importance on interpersonal relationships, the congeniality of the work environment, and academic freedom. The researchers reported that the differences they found between the groups are consistent with the personalities associated with the different Holland groups.

As part of the survey conducted by Smart and McLaughlin (1974), department chairs also rated 27 job duties on a five-point scale according to the number of hours per week spent on each duty. Smart (1976) used factor analysis to identify six of the 27 job factors for inclusion in his study of job duty differences among department chairs by Holland group: 1) faculty

development; 2) representing the department in meetings/coordinating policies and procedures; 3) recruitment, selection, and development of graduate students; 4) internal administration; 5) teaching and advising students, and 6) program management. He then used discriminant analysis to identify three discriminant functions: 1) curriculum management (emphasis on instructional duties and program management, 2) internal orientation (emphasis on internal administration and program management), and 3) faculty orientation (emphasis on faculty development duties). Smart found that after adjusting for variation related to the size of the academic departments, department chairs in Artistic, Social, and Enterprising departments spent more time on curriculum management than chairs of other departments, chairs in Artistic and Investigative departments spent more time on internal administration and program management than other chairs, and chairs of Enterprising departments spent more time on faculty development than the chairs in the other Holland groups. He suggested that these results support the influence of personality orientation on department chairs' allocation of time.

Smart (1982) expanded his research on Holland's (1973) model by studying faculty at different types of institutions to determine if faculty differences by Holland group were consistent across institutional type. A 1972-1973 American Council on Education (ACE) questionnaire asked faculty to rate the importance of a variety of teaching goals on a four-point scale. For his study, Smart selected a sample of 1,140 full-time faculty representing four major research universities, four smaller doctorate-granting institutions, four comprehensive institutions, three liberal arts colleges, and three two-year institutions. Of the 16 goals included in the ACE questionnaire, Smart chose to use character development, intellectual development, and vocational development. Statistically significant differences among Holland groups were found for all three teaching goals and were consistent across the five types of institutions studied.

*The Biglan model.* The Biglan model (1973a, 1973b), discussed earlier in this chapter, divides faculty into eight mutually exclusive disciplinary groups based on three dimensions - whether the academic field has a hard or soft paradigm, whether the faculty conduct pure or applied research, and whether the field is concerned with life or non-life systems. The eight disciplinary groups are Hard/Applied/Life (HAL), Hard/Applied/Non-life (HAN), Hard/Pure/Life (HPL), Hard/Pure/Non-life (HAN), Soft/Applied/Life (SAL), Soft/Applied/Non-life (SAN), Soft/Pure/Life (SPL), and Soft/Pure/Non-life (SPN).

Research has been conducted to test the validity of the Biglan model. The first test of validity was conducted by Biglan (1973b) himself. Using a faculty questionnaire and university records, Biglan identified differences among the faculty groups in terms of social connectedness (collaboration with other faculty); commitment to teaching, research, administration, and service; and scholarly output. A comparison between faculty in hard and soft disciplines revealed that faculty in hard disciplines scored higher on social connectedness, hard area faculty reported a preference for research while soft area faculty reported a preference for teaching, and faculty in hard disciplines produced more journal articles, but fewer monographs, than those in soft disciplines. For the pure vs. applied dimension, faculty in applied disciplines scored higher on social connectedness, published more technical reports, and spent as much time as faculty in pure disciplines on research even though faculty in pure disciplines reported more of a preference for research activities. Finally, a comparison between faculty in life and non-life disciplines revealed more social connectedness for those in non-life fields, a greater preference for research activities for scholars in pure disciplines, and no differences between the two groups on scholarly output. Biglan concluded his study by stating that his results identify the need to consider academic discipline when studying higher education organizations.

In a study of faculty job satisfaction at Western Kentucky University (WKU), Eison (1976) administered the Job Descriptive Index to a voluntary sample of 296 faculty and compared the Holland (1973) and Biglan (1973a) models with WKU's college taxonomy model (College of Business and Public Affairs, College of Applied Arts, College of Education, College of Science and Technology, and College of Arts and Humanities) in terms of their ability to correctly categorize faculty according to discipline and their ability to explain variation in job satisfaction. The job satisfaction factors measured by the Job Descriptive Index are satisfaction with the work itself, satisfaction with supervision, satisfaction with co-workers, satisfaction with pay, and satisfaction with promotions and promotional opportunities. Eison found that although Holland's model correctly classified faculty 48.99% of the time compared to the Biglan model's 37.16%, the Biglan model explained the most variance in faculty job satisfaction (97.81% compared to 94.35% for the Holland model). WKU's college taxonomy model explained the least variance and incorrectly classified faculty more often than the Holland or Biglan models.

The validity of the Biglan model (1973a, 1973a) has also been tested on topics other than faculty job satisfaction. In a study of the goal orientations of 488 academic departments in 32 public universities, department chairpersons were asked to rate 11 goals using a five-point Likert-type scale (Smart & Elton, 1975). Researchers divided the department chairpersons who responded to the survey into the eight Biglan classifications according to their academic department. Using multiple discriminant analysis, the researchers found that the hard vs. soft dimension of the Biglan model accounted for 24% of the variance in goal orientation, the pure vs. applied dimension accounted for 45%, and the life vs. non-life dimension accounted for 16%. The researchers concluded that each of Biglan's three dimensions identified differences between the goals of academic departments and that the Biglan model could be used in systematic

research on academic departments and their faculty members.

The Biglan model (1973a, 1973b) was also validated in a study of faculty reward structures (Smart & McLaughlin, 1978). All faculty at a large, land-grant university were asked to record their work-related activities for a period of one week. They were then asked to complete the National Center for Higher Education Management System's Faculty Analysis Questionnaire to indicate how their work-related activities were divided among 11 areas of responsibility. In addition to the survey data, researchers also gathered data from the university regarding faculty members' years of service at the university, years of professional experience, and salary. After placing faculty respondents in the eight Biglan groups, separate regression equations for each group were prepared using salaries as the dependent variable and the 11 areas of responsibility, years of service at the land-grant university, and the number of years of professional higher education experience as the predictor variables. An additional regression equation was prepared for the total sample. The researchers found that the Biglan model improved the ability to explain differences in faculty salaries and stated that the study supported the use of the Biglan model for studying college and university faculty.

In another study of faculty salary, researchers (Muffo & Langston, 1981) asked whether faculty salaries, department size, number of students taught, and teaching loads differed significantly according to where the department falls on each of the three Biglan dimensions (1973a, 1973a). Data for this study came from faculty at the University of Illinois, one of the institutions used in the development of Biglan's model; nationwide data was also used. Specifically, data was taken from the 1978-1979 Faculty Salary Survey administered by Oklahoma State University, which gathered data from 71 higher education institutions on faculty salaries by discipline and rank. The mean salary of the faculty studied varied not only by rank,

but also by their location at one of the ends of each Biglan dimension. Analysis of variance was used to determine if the mean salary differences were statistically significant. For the University of Illinois data, the researchers found statistically significant differences in the mean salary of professors, associate processors, and assistant professors on all three Biglan dimensions. The level of statistical significance was  $p > .001$  for all differences except for assistant professors on the life/non-life dimension ( $p > .01$ ). Using the national data from the Oklahoma State University study, the researchers found statistically significant differences in mean salary between assistant and associate professors on the pure/applied dimension ( $p > .001$ ), between full professors on the life/non-life dimension ( $p > .001$ ), and between assistant professors on the hard/soft dimension ( $p > .05$ ). They concluded that they found empirical evidence to support the Biglan model, but they also pointed out a possible conceptual problem with the model. They stated that cross-institutional differences in the mission, nature, and administrative location of departments affect their Biglan category and that therefore, assuming that the same discipline falls into the same Biglan category regardless of the institution(s) studied may result in incorrect placement of a discipline within the Biglan model.

In another test of the Biglan model (1973a, 1973b), Creswell and Bean (1981) reviewed data on faculty research output, which had not been done since Biglan's original validation study (1973b). The source of data for this study was the 1977 Survey of the American Professoriate, a national study of faculty attitudes and opinions conducted by Ladd and Lipset (1978). The survey included faculty from two- and four-year institutions, but Creswell and Bean limited their study to faculty at institutions classified by 1973 Carnegie Commission data as either Research I, Research II, Doctoral Granting I, or Doctoral Granting II due to the generally higher research output at these institutions. From a total of 128 questions, the researchers selected 11 predictor

variables that were related to types of research and research productivity. Length of service and tenure status were used as control variables, and the dependent variable was Biglan group.

Using analysis of variance, the researchers found that faculty in hard disciplines published more journal articles than faculty in soft disciplines, faculty in soft disciplines published more books and monographs than faculty in the hard disciplines, faculty in the pure disciplines obtained more federal research funds than those in the applied disciplines, faculty in life disciplines obtained more state and local funds than those in the non-life disciplines, and the non-life faculty obtained more funds from the private sector than faculty in the life disciplines.

Another study by Smart and Elton (1982) validated the Biglan (1973a, 1973b) model using data from an American Council on Education survey of faculty in 301 higher education institutions. The survey addressed faculty attitudes and values; the division of their time among various areas of responsibility; the extent of emphasis of undergraduate teaching goals, research and publication activities; and the desirability of various job characteristics. Factor analysis of the survey data identified four second-order variables: 1) professional success, 2) research opportunities, 3) conservatism, and 4) character development. The researchers found that Biglan's (1973a, 1973b) hard vs. soft paradigm dimension explained 31% of the variation in conservatism and character development, the pure vs. applied application dimension accounted for 64% of the variation in conservatism and character development, and the life vs. non-life systems dimension explained 4% of the variation in professional success and character development. One of the conclusions of this study was that the Biglan model "would appear to have particular value in the quest to develop systematic knowledge about the internal diversity of institutions of higher learning" (p. 219).

In a study that used NSOPF:93 data to examine the overall job satisfaction of faculty

employed less than seven years at liberal arts colleges and universities, however, DuBois (2002) found that disciplinary differences using the Biglan model (1973a, 1973b) explained only two percent of the variance in job satisfaction. She concluded that academic discipline appeared to have little or no relationship to the overall job satisfaction of the faculty included in the study.

Malaney (1986) conducted a study to expand the number of academic disciplines included in the Biglan model (1973a, 1973b). In consultation with administrators of a graduate school, Malaney used four-point ordinal scaling to rate graduate programs at a large research university on each of the three Biglan dimensions. This work expanded the number of disciplines in the Biglan model by more than 100.

### *The Importance of Teaching*

The proposed study looks at faculty in their instructional role. A brief discussion of the teaching function and its value and/or perceived value will therefore prove useful. In the seventeenth and early eighteenth centuries, college teaching was considered “a vocation – a sacred calling – an act of dedication honored as fully as the ministry” (Boyer, 1990, p. 4). The young men who taught college students at that time were not professors, but rather tutors.

According to Finkelstein (1984):

It was assumed that any bright graduate was ready to teach all subjects leading to the degree, and thus instructional staffs were composed entirely of tutors, young men, often no more than twenty, who had just received their baccalaureate degree and who were preparing for careers in the ministry. The responsibilities of tutors were both pedagogical and pastoral-custodial in nature. Ideally, a single tutor was assigned the shepherding of a single class through all four years of their baccalaureate program, both inside and outside the classroom (p. 8).

By the second half of the eighteenth century, a few professors were added to the faculty. These professors, unlike the tutors, usually had postbaccalaureate training in law, medicine, or theology. The role of the professors was different from that of the tutors. First, their positions were considered to be permanent rather than a pathway to the ministry. Second, they did not shepherd a class through all four years of study, but rather taught within a specific subject area, such as languages or natural philosophy (Finkelstein, 1984).

In the nineteenth century, a shift occurred in higher education's focus. Preparing students for leadership in religious and civic life was replaced by the goal of providing students with the skills necessary to build the nation. This era is characterized by the establishment of Rensselaer Polytechnic Institute, the country's first technical college, and the passage of the Morrill Act of 1862, which established land grant colleges that supported both liberal arts and skills training in such fields as mechanics and agriculture. It was during this era that service joined teaching as one of the missions of U.S. higher education. (Boyer, 1990).

German universities focused on research and graduate education, and an increasing number of U.S. professors pursued their graduate training in German universities and brought the research focus back to the U.S. By the end of the nineteenth century, research and graduate study were part of the modern university, and research had joined teaching and service as one of the missions of higher education (Boyer, 1990).

Today, higher education in the U.S. is often criticized for its perceived emphasis on research over teaching. According to Shulman (1979):

The academic model holds that teaching, research, and community service are the core of academic life. Research, however, commands the scholar's first loyalty and is valued above other activities. Consequently, academic evaluations and rewards have

traditionally stressed the quality and quantity of research endeavors over teaching and service activities (p. 26).

Oakley (2001) considers this criticism invalid, claiming that all colleges and universities are being judged by the environment at a small number of research universities and citing NSOPF:99 data that revealed that 70% of faculty reported their primary interest as teaching.

The primacy of research activities for promotion and tenure decisions may explain why, between the 1970s and the 1990s, the percentage of faculty time spent on teaching and administration went down while time spent on research activities increased. Although research is the primary criterion for promotion and tenure at most higher education institutions, most faculty at non-research universities believe that teaching should be the primary method of assessment. Even faculty employed at research universities are somewhat split on this issue. Almost as many faculty believe teaching should be the primary assessment than believe research should hold this position (Finkelstein, Seal, & Schuster, 1998).

In addition to faculty's belief that teaching should play an important role in assessment, other evidence exists that a shift in the primacy of the research function, or in the extent of the primacy of the research function, may be underway. For example, for purposes of public accountability, the government is starting to focus on what students learn and achieve from their higher education experience (Levine, 2001). The Carnegie Foundation for the Advancement of Teaching prepared a report that focused on means of assessing all areas of scholarship, including teaching, so they can be evaluated as a component of academic work and be rewarded as research is rewarded (Glassick, Huber, & Maeroff, 1997). Another example is the American Association for Higher Education's Peer Review of Teaching project, which experimented with methods of engaging faculty to become teaching colleagues in order to discuss such teaching-

related matters as course development, teaching methods, and student learning outcomes (Huber, 2004). A final example of a possible resurgence in the importance of teaching comes from Boyer (1990), who has called for the definition of “scholarship” to be expanded to include all academic functions, including teaching. His reasons for this call include the existence of a reward system that does not include all major academic functions, the ambivalence many faculty feel towards their roles when research is prized but they prefer teaching, the feeling by faculty that they must choose between competing roles, and the diminished quality of the campus environment for both faculty and students when teaching is undervalued. According to Finkelstein et al. (1998), “Boyer’s thesis is a creative response to the building pressure on faculty to revitalize teaching and to rescue teaching from the neglect that so many critics perceived it had endured” (p. 5).

Although the teaching function will probably never have the primacy it held during the colonial college era, the current discussions of the importance of teaching and the need for assessment hold promise that teaching will become a more valued function and the quality of teaching will become more important.

### *Summary and Conclusions*

Although there has been a general decline in faculty job satisfaction since 1969, the amount and rate of decline is not uniform for all faculty (Schuster & Finklestein, 2006). The literature shows variations in levels of job satisfaction by academic discipline, gender, tenure status, rank, percentage of time spent teaching, race/ethnicity, institution type, and primary job activity. Job satisfaction is very complex. The studies discussed in this literature review identified more than two dozen job factors, or facets, that affect job satisfaction, and future research may identify even more.

Burnout, turnover, absenteeism, poor job performance, and behavior that intentionally hurts the organization have all been linked to low levels of job satisfaction, which in turn can negatively affect organizational costs, organizational effectiveness, and organizational reputation (Spector, 1997). In higher education, organizational effectiveness measures include quality of teaching, attraction of faculty who studied at the leading graduate schools in their field, student retention and graduation rates, research productivity, and attainment of research funding.

Given the impact of faculty job satisfaction on organizational costs, effectiveness, and reputation, an understanding of the factors that contribute to faculty job satisfaction, as well as the extent to which the individual factors contribute to job satisfaction, is very important and should be understood by higher education administrators. Without this understanding, administrators face the risk of making decisions without an awareness of how, and to what extent, these decisions may negatively affect faculty job satisfaction and in turn, their institutions.

This study will explore one job satisfaction factor related to faculty autonomy – instructional decision-making authority. After determining the percentage of overall faculty job satisfaction that can be explained by satisfaction with instructional decision-making authority, the study will further explore the relationship between satisfaction with instructional decision-making authority and overall job satisfaction by determining if differences exist among faculty according to primary job activity, percentage of time spent teaching, and academic discipline.

## Chapter 3: Methodology

This chapter explores the current study's methodological approaches. Specifically, the chapter explores the study's research questions, hypotheses, statistical analyses, data source, data sample, and variables.

### *Research Questions and Hypotheses*

This study sought to expand the literature on faculty job satisfaction by further exploring one facet of faculty job satisfaction – satisfaction with instructional decision-making authority. The effect that satisfaction with instructional decision-making authority had on overall job satisfaction, and differences in the effect by primary job activity, percentage of time spent teaching, and academic discipline, were explored. The following research questions guided this study:

*Research question 1:* Is there a correlation between the following demographic and job-related characteristics and overall job satisfaction: age, race, gender, tenure, rank, and year began current job?

*Research question 2:* When controlling for demographic and job-related characteristics, what percentage of overall faculty job satisfaction can be explained by satisfaction with instructional decision-making authority?

*Research question 3:* When controlling for demographic and job-related characteristics, does the percentage of overall faculty job satisfaction that can be explained by satisfaction with instructional decision-making authority differ by primary job activity?

*Research question 4:* When controlling for demographic and job-related characteristics, does the percentage of overall faculty job satisfaction that can be explained by satisfaction with instructional decision-making authority differ by the percentage of time spent on teaching

activities?

*Research question 5:* When controlling for demographic and job-related characteristics, does the percentage of overall faculty job satisfaction that can be explained by satisfaction with instructional decision-making authority differ by academic discipline?

Given the above research questions, the following hypotheses were tested in this study:

*Hypothesis 1:* The following demographic and job-related characteristics - age, race, gender, tenure, rank, and year began current job - have a correlational relationship to overall faculty job satisfaction.

Prior research has identified that age, race, gender, tenure, rank, and year began current job are correlated with overall faculty job satisfaction. However, these studies were either completed or begun prior to the availability of NSOPF:04 data. To confirm that these variables should be used as control variables for this study, it will be useful to determine if the NSOPF:04 data shows the same correlations as the prior research.

*Hypothesis 2:* After controlling for the effects of demographic characteristics and job-related factors, satisfaction with instructional decision-making authority will significantly predict levels of overall faculty job satisfaction.

According to Locke, Fitzpatrick, and White (1984), “the more important the job aspect, the more effect that aspect has on job satisfaction” (p. 121). Faculty believe that authority over course content and methods should be held by individual faculty (Copur, 1990), and NSOPF:99 data revealed that the top three job factors with which faculty reported satisfaction were all related to autonomy: satisfaction with the authority to determine course content and methods, satisfaction with the freedom to perform outside consulting, and satisfaction with the authority to decide what courses to teach (Clery, 2002).

*Hypothesis 3:* After controlling for the effects of demographic characteristics and job-related factors, the predictive value of satisfaction with instructional decision-making authority on overall faculty job satisfaction will differ significantly by primary job activity.

The effect an individual facet has on job satisfaction is related to the importance of the individual facet (Locke, et al. 1984). It is predicted that faculty whose primary job activity is teaching place more importance on instructional decision-making authority than other faculty, and therefore the predictive value of satisfaction with instructional decision-making authority is expected to be highest for this group.

*Hypothesis 4:* After controlling for the effects of demographic characteristics and job-related factors, the predictive value of satisfaction with instructional decision-making authority on overall faculty job satisfaction will differ significantly by percentage of time spent teaching.

As stated above, the effect an individual facet has on job satisfaction is related to the importance of the individual facet (Locke, et al. 1984). It is predicted that the more time faculty spend on teaching activities, the greater the importance placed on instructional decision-making authority. Therefore, the predictive value of satisfaction with instructional decision-making authority is expected to be higher for faculty who spend more time on teaching activities.

*Hypothesis 5:* After controlling for the effects of demographic characteristics and job-related factors, the predictive value of satisfaction with instructional decision-making authority on overall faculty job satisfaction will differ significantly by academic discipline.

One of the most important changes in higher education in the last 150 years has been the increase in the number of academic disciplines (Braxton & Hargens, 1996). It has been argued that “the ‘academic profession’ does not exist” (Light, 1974, p. 12) but rather consists of many professions organized around academic disciplines (Clark, 1987a; Clark, 1987b; Light, 1974).

According to Clark (1987b), “with the growth of specialization in the last century, the discipline has become everywhere an imposing, if not dominating, force in the working lives of the vast majority of academics” (p. 25). Looking at the academic world by disciplinary differences, therefore, increases our knowledge of that world (Becher, 1987, Light, 1974).

Disciplinary differences among faculty have been identified for several job satisfaction facets, including institutional reputation and faculty salaries (Gahn, 1993; Moore & Gardner, 1992), faculty salaries and benefits (Fiorentino, 1999), authority over work (Seifert & Umbach, 2008), cooperation and interpersonal satisfaction (Gahn, 1993), and security/advancement and workload/available time (Fiorentino, 1999). Disciplinary differences in overall faculty job satisfaction were found by Opp (1992) and Winkler (1982).

### *Statistical Analyses*

A variety of statistical methods were used to investigate the research questions. These methods included multiple regression analysis, ANOVA, chi-square, and descriptive statistics. Tests were first run for multicollinearity, homoscedasticity, linearity, normality, and outliers to ensure the data were ready to be used in a multiple regression equation.

Research question one was exploratory and intended to confirm what previous research found about differences in overall job satisfaction by the following demographic and job-related factors: age, race, gender, tenure, rank, and year began current job. Crosstabs were used to describe how overall job satisfaction is distributed across these variables. Chi-square tests for independence were calculated for the nominal variables race/ethnicity, gender, rank, and tenure status to determine if there was a significant association between these variables and overall job satisfaction, Spearman’s rho was calculated to determine the relationship between rank and overall job satisfaction, and Pearson’s product-moment correlation coefficient was calculated to

measure the degree of the linear relationship between age and overall job satisfaction and between year began current job and overall job satisfaction. In addition, for each control variable containing three or more groups, one-way analysis of variance (ANOVA) was calculated to identify whether differences in the mean overall job satisfaction were significant.

Multiple regression analysis was used to explore research question two. To test whether the regression model provided significantly better results than using the mean as an estimate, one-way analysis of variance (one-way ANOVA) was calculated. Finally, Pearson's product moment correlation coefficient was used to determine the strength of the relationship between the independent variables and the dependent variable.

Multiple regression analysis, ANOVA, and Pearson's correlation coefficient were also calculated for research questions three through five. For each question, the study sample was divided into sub-samples based on primary job activity (question three), percentage of time spent teaching (question four), and academic discipline (question five). Descriptive statistics were used to describe how overall job satisfaction is distributed among these faculty sub-groups.

#### *Data Source*

All data used in this study were from the 2004 National Study of Postsecondary Faculty (NSOPF:04), a comprehensive, national study of postsecondary faculty and instructional staff at public and private not-for-profit two-year and four-year institutions in the United States. NSOPF:04 used a two-stage sampling methodology to select eligible faculty and instructional staff. In the first stage, a sample of 1,080 postsecondary institutions was selected. Based on eligibility criteria, this sample size was reduced to 1,070. In the second sampling stage, 34,330 eligible faculty and instructional staff were selected from lists provided by 980 of the sampled institutions. A total of 26,110 surveys (76.0%) were completed and returned by faculty and

instructional staff using either the Internet (67%) or a computer-assisted telephone interview (24%). NSOPF:04 was the fourth cycle of the National Study of Postsecondary Faculty. Previous studies were conducted in 1988, 1993, and 1999 (Heuer et al., 2006).

### *Study Sample*

The sample for this study included all full-time faculty members at four-year institutions who had faculty status as defined by their institution and who spent some of their time on instructional activities. Full-time status was identified by a response of “full-time” to NSOPF:04 question #5 (During the 2003 Fall term, did [FILL INSTNAME] consider you to be employed full-time or part-time?). Four-year institutions were identified according to the following 2000 Carnegie Classifications used for NSOPF:04: Doctoral-Extensive, Doctoral-Intensive, Master’s I, Master’s II, Comprehensive, Baccalaureate – Liberal Arts, Baccalaureate – General, and Baccalaureate/Associate.

Faculty status was measured by a response of “yes” to NSOPF:04 question #3 (During the 2003 Fall term at [FILL INSTNAME], did you have faculty status as defined by that institution?). Faculty who spent some of their time on instructional activities were identified by a response greater than “zero percent” to either NSOPF:04 question #32a (For the hours you worked during the 2003 Fall term at [FILL INSTNAME], what percentage of your time was spent on instructional activities with undergraduates, including teaching and preparing for classes, advising, and supervising students at this institution?), NSOPF:04 question #32b (For the hours you worked during the 2003 Fall term at [FILL INSTNAME], what percentage of your time was spent on instructional activities with graduates/first-professionals, including teaching and preparing for classes, advising, and supervising students at this institution?), or both. For purposes of data analysis, variable X01Q32, which was created by NSOPF:04 researchers to

collapse the data from NSOPF:04 questions #32a and #32b into one variable (percentage of time spent on instructional activities), was used.

**Question Five**

**Form:** Q5 **Label:** Employed full or part time at this institution

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

During the 2003 Fall Term, did [FILL INSTNAME] consider you to be employed full time or part time?

1 = Full time

2 = Part time

**Question Three**

**Form:** Q3 **Label:** Faculty status

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

During the 2003 Fall Term at [FILL INSTNAME], did you have faculty status as defined by that institution?

0 = No

1 = Yes

### Question Thirty-Two

**Form:** Q32

**Name:** Q32a **Label:** Percent time spent on instruction, undergraduate

**Name:** Q32b **Label:** Percent time spent on instruction, graduate/first-professional

**Name:** Q32c **Label:** Percent time spent on research activities

**Name:** Q32d **Label:** Percent time spent on other unspecified activities

**Form Administered To:**

Faculty and instructional staff who worked at least one hour per week at the target institution

**StemWording:**

For the hours you worked during the 2003 Fall Term at [FILL INSTNAME],

we would like you to allot this time—using percentages—into four broad categories:

**Instruction with undergraduates, Instruction with graduate and first-professional students, Research, and Other Activities.** (If you are not sure, give your best estimate.

The percentages should sum to 100%. If none for a category, enter "0".)

What percentage of your time was spent on. . .

- \* a. ***Instructional Activities with Undergraduates***, including teaching and preparing for classes, advising, and supervising students at this institution?
- \* b. ***Instructional Activities with Graduate and First Professional students***, including teaching and preparing for classes, advising, and supervising students at this institution?
- \* c. **Research Activities**, other forms of scholarship, or grants at this institution?
- \* d. **All Other Activities** at this institution like administration, professional growth, service, and other activities not related to teaching or research.

### *Study Sub-Samples*

The study sample was divided into sub-samples for research questions three, four, and five. To identify whether the percentage of overall job satisfaction that can be explained by satisfaction with instructional decision-making authority differed by primary job activity, the sample was divided into seven sub-samples based on responses to NSOPF:04 question #4. To identify whether the percentage of overall job satisfaction that can be explained by satisfaction with instructional decision-making authority differed by percentage of time spent teaching, the sample was divided into five sub-samples chosen by the author of the study. To identify whether the percentage of overall job satisfaction that can be explained by satisfaction with instructional

decision-making authority differed by academic discipline, the sample was divided into eight sub-samples based on the eight Biglan groups of Hard/Applied/Life (HAL), Hard/Applied/Non-life (HAN), Hard/Pure/Life (HPL), Hard/Pure/Non-life (HPN), Soft/Applied/Life (SAL), Soft/Applied/Non-life (SAN), Soft/Pure/Life (SPL), and Soft/Pure/Non-life (SPN).

### *Description of Variables*

*Independent Variables – Control.* The control variables for research questions two through five consisted of demographic and job-related factors and were selected based on prior research that identified a relationship between the variables and faculty job satisfaction. The control variables were age (Winkler, 1982), race/ethnicity (Seifert & Umbach, 2008), gender (Isaac, 1997; Seifert & Umbach, 2008; Winkler, 1982), tenure (Isaac, 1997; Winkler, 1982), rank (Isaac, 1997; Winkler, 1982), and year began current job (Neal, 1990). NSOPF:04 questions regarding age (#72) and year began current job (#9) were fill-in questions; questions regarding race/ethnicity (#74, #73), gender (#71), tenure status (#12), and rank (#10) were forced-choice.

#### **Question Seventy-Two**

**Form:** Q72 **Label:** Age, year of birth

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

In what year were you born?

\* Enter year:

#### **Question Nine**

**Form:** Q9 **Label:** Year began current job

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

In what year did you start working at the job you held during the 2003 Fall Term at [FILL INSTNAME]? Consider promotions in rank as part of the same job.

\* Year:

**Question Seventy-Four****Form:** Q74**Name:** Q74a **Label:** Race, American Indian or Alaska Native**Name:** Q74b **Label:** Race, Asian**Name:** Q74c **Label:** Race, Black or African American**Name:** Q74d **Label:** Race, Native Hawaiian or other Pacific Islander**Name:** Q74e **Label:** Race, White**NSOPF:04 Faculty Instrument Facsimile****35****Form Administered To:**

All faculty and instructional staff

**StemWording:**Please select **one or more** of the following choices to best describe your race. Are you. . .  
(Select all that apply.)

- \* American Indian or Alaska Native
  - \* Asian
  - \* Black or African American
  - \* Native Hawaiian or Other Pacific Islander
  - \* White
- 0 = No  
1 = Yes

**Question Seventy-Three****Form:** Q73 **Label:** Race/ethnicity, Hispanic/Latino**Form Administered To:**

All faculty and instructional staff

**StemWording:**

Are you Hispanic or Latino?

- 0 = No  
1 = Yes

**Question Seventy-One****Form:** Q71 **Label:** Gender**Form Administered To:**

All faculty and instructional staff

**StemWording:**The last few questions ask you to describe yourself and your opinions about your job.  
Are you . . .

- 1 = Male  
2 = Female

**Question Twelve****Form:** Q12 **Label:** Tenure status**Form Administered To:**

All faculty and instructional staff

**StemWording:**

During the 2003 Fall Term at [FILL INSTNAME], were you . . .

- 1 = Tenured
- 2 = On tenure track but not tenured
- 3 = Not on tenure track
- 4 = Not tenured because institution had no tenure system

**Question Ten****Form:** Q10 **Label:** Rank**Form Administered To:**

All faculty and instructional staff

**StemWording:**

During the 2003 Fall Term, was your academic rank, title, or position at [FILL INSTNAME] . . .

(If no ranks are designated at your institution, select "Not applicable.")

- 0 = Not applicable (No formal ranks are designated at this institution)
- 1 = Professor
- 2 = Associate professor
- 3 = Assistant professor
- 4 = Instructor
- 5 = Lecturer
- 6 = Other title (e.g., Administrative, Adjunct, Emeritus, other)

*Independent Variable – Predictor.* The independent variable for research questions two through five was instructional decision-making authority, operationalized for this study as satisfaction with decision-making authority over course content and methods. This variable was measured by faculty responses to NSOPF:04 question #61a.

**Question Sixty-One****Form:** Q61**Name:** Q61a **Label:** Satisfaction with authority to make decisions**Form Administered To:**

All faculty and instructional staff (Q62a–Q62d)

**StemWording:**With regard to your job at [FILL INSTNAME] during the 2003 **Fall Term**, would you say you were very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied with. . .

\* The authority you had to make decisions about content and methods in your instructional activities

*Dependent Variable.* The dependent variable for research questions two through five was overall job satisfaction, which was measured by faculty responses to NSOPF:04 question #62d.

**Question Sixty-Two****Form:** Q61**Name:** Q62d **Label:** Satisfaction with job overall**Form Administered To:**

All faculty and instructional staff with instructional responsibilities (Q61a–Q61d); All faculty and instructional staff (Q62a–Q62d)

**StemWording:**With regard to your job at [FILL INSTNAME] during the 2003 **Fall Term**, would you say you were very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied with. . .\*

\* Your job at this institution, overall

*Conclusion*

Overall job satisfaction is composed of numerous job satisfaction facets and is therefore very complex. Although the literature includes numerous studies that have identified the facets that contribute to faculty job satisfaction, fewer studies have examined the extent to which the individual facets contribute. This study takes a step to remedy this lack of knowledge by analyzing data from the most recent National Study of Postsecondary Faculty to identify the predictive value of one facet – satisfaction with decision-making authority over course content and methods – on overall job satisfaction and by identifying relationships between the predictor

variable and the dependent variable by faculty primary job activity, percentage of time spent teaching, and academic discipline. Without an understanding of the complexity of faculty job satisfaction, administrators risk making decisions that negatively affect faculty job satisfaction, which in turn can negatively impact an organization's costs, effectiveness, and reputation.

## Chapter 4: Data Analysis

### *Descriptive Analysis*

This section examines demographic and employment data for the study sample, which contained data on 12,283 faculty respondents from NSOPF:04. Specifically, the study sample included only those faculty at four-year institutions who were full-time, had faculty status as defined by their institution, and who spent some of their time on undergraduate teaching activities during fall, 2003. Table 1 below identifies the frequency distribution of the study sample subgroups as well as within-group percentages by demographic and employment characteristics (the control variables).

The variable used for race/ethnicity is X03Q74, which combines data from NSOPF:04 questions #74 (race) and #73 (ethnicity). For purposes of presenting the data in Table 1, age groups were identified using variable X03Q72, which collapsed the data from question #72 (age) using the categories reported with the NSOPF:93 data. Also for purposes of Table 1, groupings for year began current job were identified using collapsed variable X03Q9, years held current job, created by NSOPF:04 researchers using data from the year began current job variable.

Respondents with the highest frequencies for each subgroup represented in Table 1 were: Gender – Male (61.04%), Race/Ethnicity – White (82.0%), Age – 45 to 54 (32.10%), Rank – Professor (30.64%), Tenure status – Tenured (49.65%), and Years held current job – 11 to 20 (23.43%). Respondents with the lowest frequencies for each subgroup were: Gender – Female (38.96%), Race/Ethnicity – American Indian/Alaska Native (1.2%), Age – 71 or older (1.3%), Rank – Not applicable (0.29%), Tenure Status – Not on tenure track (4.08%), and Years held current job – nine (2.87%)

Table 1

*Frequency Distribution and Within-Group Percentages of Study Sample by Demographic and Employment Variables*

Variable		Study Sample (N=12,283)	Within Group Distribution (%)
Gender	Male	7,498	61.04
	Female	4,785	38.96
Race/Ethnicity	American Indian/Alaska Native	148	1.20
	Asian/Pacific Islander	874	7.10
	Black /African-American	582	4.70
	Hispanic	605	4.90
	White	10,074	82.00
Age	Under 35	1,040	8.50
	35-44	3,116	25.40
	45-54	3,941	32.10
	55-64	3,384	27.60
	65-70	647	5.30
	71 or older	155	1.30
Rank	Professor	3,764	30.64
	Associate Professor	3,136	25.53
	Assistant Professor	3,456	28.14
	Instructor	761	6.20
	Lecturer	490	3.99
	Other	640	5.21
	Not applicable	36	.29
Tenure Status	Tenured	6,099	49.65
	On Tenure Track, Not Tenured	2,909	23.68
	Not on Tenure Track	2,774	22.58
	No Tenure System	501	4.08
Years Held Current Job	1	1,131	9.21
	2	1,001	8.15
	3	1,020	8.30
	4	921	7.50
	5	695	5.66
	6	603	4.91
	7	456	3.71
	8	452	3.68

Table 1, continued

*Frequency Distribution and Within-Group Percentages of Study Sample by Demographic and Employment Variables*

Variable		Study Sample (N=12,283)	Within Group Distribution (%)
Years Since Began	9	353	2.87
Current Job	10	370	3.01
	11-20	2,878	23.43
	21-30	1,528	12.44
	More than 30	875	7.12

Overall job satisfaction was measured by NSOPF:04 question #62d. Responses to the overall job satisfaction question were coded as follows: (a) very satisfied = 1, (b) somewhat satisfied = 2, (c) somewhat dissatisfied = 3, and (d) very dissatisfied = 4. On this scale, a score of 1 is high and a score of 4 is low; therefore, the lower the score, the higher the overall job satisfaction.

**Job Satisfaction**

**Form:** Q61

**Name:** Q62d **Label:** Satisfaction with job overall

**Form Administered To:**

All faculty and instructional staff (Q62a–Q62d)

**StemWording:**

With regard to your job at [FILL INSTNAME] during the 2003 **Fall Term**, would you say you were very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied with. . .

\* Your job at this institution, overall

Table 2 identifies the mean overall job satisfaction scores for the subgroups included in Table 1. For all subgroups, the mean overall job satisfaction score was between one (very satisfied) and two (somewhat satisfied).

*Parametric Test Assumptions*

Tests for multicollinearity, outliers, normality, homoscedasticity, and linearity were run to determine if the data were ready to be used in parametric tests such as Pearson's product-moment correlation coefficient, t-test, one-way ANOVA, and multiple regression analysis. The assumption of multicollinearity was not violated as none of the bivariate correlations between any two variables were .7 or greater. Using the five percent trimmed mean test and Cook's Distance statistic, outlier data were determined not to have a distortion effect on the variables. The assumption of normality was confirmed using VIF (range 1.016-2.049) and tolerance (range .488-.984) statistics.

Table 2

*Mean Responses of Overall Job Satisfaction by Demographic and Job-Related Variables*

Variable		Mean	SD
Gender	Male	1.74	.759
	Female	1.77	.760
Race/Ethnicity	American Indian/Alaska Native	1.81	.786
	Asian/Pacific Islander	1.92	.737
	Black /African-American	1.83	.759
	Hispanic	1.83	.820
	White	1.73	.755
Age	Under 35	1.68	.700
	35-44	1.81	.763
	45-54	1.81	.756
	55-64	1.71	.772
	65-70	1.54	.773
	71 or older	1.43	.655
Rank	Professor	1.70	.762
	Associate Professor	1.83	.770
	Assistant Professor	1.78	.761
	Instructor	1.72	.715
	Lecturer	1.68	.756
	Other	1.68	.709
	Not applicable		
Tenure Status	Tenured	1.77	.770
	On Tenure Track, Not Tenured	1.77	.755
	Not on Tenure Track	1.71	.744
	No Tenure System	1.75	.733
Years Held Current Job	1	1.62	.725
	2	1.69	.709
	3	1.78	.755
	4	1.79	.761
	5	1.83	.782
	6	1.82	.765
	7	1.82	.738
	8	1.79	.776
	9	1.86	.768

Table 2, continued

*Mean Responses of Overall Job Satisfaction by Demographic and Job-Related Variables*

Variable		Mean	SD
Years Since	10	1.77	.789
Began Current Job	11-20	1.81	.767
	21-30	1.75	.774
	More than 30	1.56	.725

For Levene's test, a test for homoscedasticity, the two variables with the largest number of groups (more than 50 each) were replaced with other equivalent variables because the software used for this study, Statistical Package for the Social Sciences (SPSS), would not calculate this statistic for groups of more than 50. In place of year began current job, the collapsed variable years held current job (X03Q9) was used. This variable was created by NSOPF:04 researchers using data from the year began current job question. In place of age, a variable (X03Q72) that collapsed age data into the eight categories reported for NSOPF:93 data was used. Levene's tests revealed that the assumption of homoscedasticity was met for the variables tenure, gender, and years since began current job, but the assumption was violated for age, race/ethnicity, and rank. With Levene's test, a large sample with only small variances can result in a false determination that the assumption of homoscedasticity was not met (Field, 2005). To further investigate age, race/ethnicity, and rank, variance ratios were calculated. These ratios indicated that the assumption of homoscedasticity was met for race/ethnicity and rank, but not for age.

All parametric test assumptions were met with the exception of homoscedasticity for age. For the F-ratio for age described later in this chapter, an alternative to the F-ratio, the Welch F, was used. Welch F is designed to test the significance of mean differences between groups and addresses the problems resulting from violations of the assumption of homoscedasticity by adjusting the F-ratio and the residual degrees of freedom (Field, 2005).

### *Research Question 1*

Research question one asks: Is there a correlation between the following demographic and job-related characteristics and overall job satisfaction: age, race, gender, tenure, rank, and year began current job? Six variables were identified as control variables based on relationships

between these variables and overall faculty job satisfaction as identified in the literature. These variables are age, race/ethnicity, gender, tenure, rank, and year began current job. Because the studies that identified these variables as related to overall job satisfaction were either completed or begun prior to the availability of NSOPF:04 data, analyses of the NSOPF:04 data for these variables was conducted to confirm their use or elimination as control variables.

*Age.* The relationship between age and overall job satisfaction was investigated using the Pearson product-moment correlation coefficient. There is a small, positive correlation between the variables ( $r=.056$ ,  $N = 12,283$ ,  $p > 0.01$ ), with higher age associated with higher overall job satisfaction. One-way analysis of variance (one-way ANOVA) was calculated using the collapsed age data presented in Table 1. Using Welch  $F$  because the age data does not meet the assumption of homoscedasticity, a statistically significant relationship between age and overall job satisfaction was identified: Welch  $F(5, 1310.496) = 30.484$ ,  $p > .001$ . Post-hoc comparisons using Tukey's HSD test indicated that the mean score for the under 35 age category was statistically significant from the age groups 35-44, 45-54, 55-64, 65-70, and 71 or above at  $p > .05$ ; the mean score for the 35-44 category was statistically significant from the 65-70 and 71 or above categories at  $p > .05$ ; the mean score for the 45-54 age group was statistically significant from the 55-64, 65-70, and 71 or above groups at  $p > .05$ ; and the mean score for the 55-64 age group was statistically significant from the 65-70 and 70 or above groups at  $p > .05$ .

*Race/Ethnicity.* Output from the chi-square test for independence indicated a statistically significant relationship between race/ethnicity and overall job satisfaction with a small effect size. However, the data also revealed that one cell had an expected frequency of less than five (4.27), which violates one of the assumptions of chi-square and can invalidate the test results. One-way analysis of variance was calculated to determine if there were significant differences in

the mean dependent variable across the five groups:  $F(4, 12278) = 16.372, P > .001$ . Post-hoc comparisons using the Tukey HSD test indicated that the mean scores for the Asian/Pacific Islander, Black/African-American, and Hispanic groups were significantly different from the mean score of the White group ( $p < .05$ ).

*Tenure.* The chi-square test for independence indicated a statistically significant, positive association between tenure status and overall job satisfaction,  $\chi^2(n = 12,283) = 21.52, p < .05$ . The effect size, according to Cramer's V, is small at .024. One-way ANOVA was calculated to further explore the association between the variables by determining if there are significant differences in the mean dependent variable across the four groups (tenured, not tenured – on tenure track, not on tenure track, no tenure track). The resulting F score of 4.930 is statistically significant at  $p < .01$ . According to the Tukey HSD test, the mean score differences between the not on tenure track group and both the tenured group and the not tenured – on tenure track group were statistically significant at  $p < .05$ .

*Gender.* The chi-square test of independence indicated no statistically significant association between gender and overall job satisfaction,  $\chi^2(n = 12,283) = 6.499, p = .090$ . Because the gender data contains only two categories, male and female, one-way ANOVA could not be calculated for this variable. An independent samples t-test was therefore used to compare the means between the two groups. Although the differences between the mean overall job satisfaction scores of males ( $M = 1.74, SD = .759$ ) and females ( $M = 1.77, SD = .760$ ) appears very small, the t-test found a significant difference between the means,  $t(12,281) = -2.176, p < .05$ . Not surprisingly given the very small differences between the means and the standard deviations, the Cohen's d effect size was small (.02).

*Rank.* The relationship between rank and overall job satisfaction was measured using

Spearman's rho. The data showed a small, positive association between the two variables,  $r_s = .011$ ,  $n=12,283$ ,  $p = .227$ , with higher rank associated with higher overall job satisfaction. One-way analysis of variance was calculated to determine if there were significant differences in the mean dependent variable across the five groups,  $F(6, 12276) = 13.091$ ,  $p > .001$ ). Post-hoc comparisons using the Tukey HSD test indicated that no mean score for any group was statistically significant at  $p > .05$  with any other group. Although Spearman's rho did not find that the relationship between rank and overall job satisfaction was statistically significant, it did show an association between the variables, and significant relationships between rank and faculty job satisfaction were identified in prior research (Isaac, 1997; Winkler, 1982). Rank will therefore remain a control variable in this study.

*Year began current job.* The relationship between year began current job and overall job satisfaction was investigated using the Pearson product-moment correlation coefficient. There is a medium-effect, positive correlation between the variables ( $r=.033$ ,  $N = 12,283$ ,  $p > 0.01$ ), with the greater the number of years the job was held associated with higher overall job satisfaction. One-way ANOVA was not calculated for this variable because the data are not categorical, nor were they collapsed by the NSOPF:04 researchers. They were presented in Table 1 as categorical data for description purposes only. However, NSOPF:04 researchers used the data from the year began current job variable to create a new variable, years *held* current job (X03Q9), and this data was collapsed using the categories reported for NSOPF:93. One-way ANOVA using this new variable was calculated to determine if there are statistically significant differences in the mean dependent variable across the following eight categories – five or fewer, 6-10, 11-15, 16-20, 21-25, 26-30, 31-40, and more than 40. The results are statistically significant:  $F(12, 12.270) = 11.480$ ,  $p > .001$ ). According to the Tukey HSD test, the following

mean score differences were significant at  $p < .05$ : five or fewer with six to 10, 31-40, and more than 40; six to 10 with 26-30, 31-40, and more than 40; 11-15 with 31-40 and more than 40; 16-20 with 31 to 40 and more than 40; and 21-25 with 31-40 and more than 40.

### *Research Question 2*

Research question two asks: When controlling for demographic and job-related characteristics, what percentage of overall faculty job satisfaction can be explained by satisfaction with decision-making authority over course content and methods? To answer this question, a multiple regression analysis was calculated using the block entry method. The six control variables were entered in the first block, and the predictor variable satisfaction with decision-making authority over course content and methods was entered in the second block. As evidenced by the data in Table 3, the data that summarize the regression model reveal that the model improves the ability to predict the dependent variable, overall job satisfaction. The  $R^2$  for Model 1 (control variables) is .010, which means the control variables as a group explain one percent of the variance in the dependent variable for the study sample. The  $R^2$  for Model 2 (control variables and predictor variable) is .129, which means when controlling for the demographic and job-related variables, satisfaction with authority over course content and methods explains 11.9% of the variance in overall job satisfaction.

The adjusted  $R^2$  for Model 2 is the same as the  $R^2$  for Model 2. When an adjusted  $R^2$  differs from the  $R^2$  by only a small amount, or does not differ at all, it means that if the study data came from the population rather than from a sample, the percentage of variance in the dependent variable would be very close to that of the sample data. This indicates how well Model 2 can be generalized to the population.

The assumption of independent errors assumes that for any two observations, the residual

Table 3

*Summary of Regression Data for Research Question 2*

	Regression Coefficient		Constant	R <sup>2</sup>	Adjusted R <sup>2</sup>	R <sup>2</sup> Change
	Unstandardized	Standardized				
Model 1			-8.938	.010	.010	.010
Age	.005***	.062***				
Race/ethnicity	-.051***	-.064***				
Tenure	-.038***	-.046***				
Gender	.036*	.023*				
Rank	-.013	-.023				
Year began current job	.001	.014				
Model 2			-8.417	.129	.129	.119
Age	.004***	.060***				
Race/ethnicity	-.029***	-.036***				
Tenure	-.053***	.064***				
Gender	.042**	.027**				
Rank	-.017**	-.030**				
Year began current job	.001	.007				
Satisfaction with decision-making authority over course content and methods	.445***	.347***				

\*p&lt;.05    \*\*p&lt;.01    \*\*\*p&lt;.001

terms should be independent. The Durbin-Watson score, which tests for the assumption of independent errors, is 1.974 for Model 2. Figures between 1.00 and 3.00 are generally not a cause for concern, for figures close to 2.00 indicate that the assumption has been met. To test whether the regression model provides significantly better results than using the mean as an estimate, a one-way analysis of variance (ANOVA) was calculated. ANOVA produces an F ratio which represents how much better the regression line fits the data compared to the mean. The F score from the one-way ANOVA calculation for Model 2 is 260.555. F scores greater than 1.00 indicate that the fit of the regression line is greater than the inaccuracy within the model. The maximum Cook's Distance value is .012, indicating that none of the cases had an undue influence on the regression model. Only Cook's Distance values above 1.0 indicate that a case may be influencing the model.

The relationship between the control and predictor variables and the dependent variable are presented in Table 3. The data show that a one standard deviation increase in satisfaction with decision-making authority over course content and methods increases overall job satisfaction by .347 standard deviations. The t-test associated with the Beta value is significant at  $p < .001$ .

### *Research Question 3*

Research question three asks: When controlling for demographic and job-related characteristics, does the percentage of overall faculty job satisfaction that can be explained by satisfaction with decision-making authority over course content and methods differ by primary job activity? To answer this question, the same multiple regression analysis run for research question two will be repeated with one important difference. Rather than run one regression for the total sample, seven regressions will be run, one for each of the seven primary job activities

(teaching, research, public service, clinical service, administration, on sabbatical, and other activity). Frequency and within-group percentages for each primary job activity group can be found in Table 4; mean responses of overall job satisfaction for each primary activity group are presented in Table 5.

Table 4

*Frequency Distribution and Within-Group Percentages of Study Sample by Primary Job Activity*

Variable	Study Sample (N=12,283)	Within Group Distribution (%)
Primary Job Activity		
Teaching	8,119	66.10
Research	1,807	14.71
Public Service	130	1.06
Clinical Service	552	4.50
Administration	1,229	10.00
On Sabbatical	162	1.32
Other Activity	284	2.31

Table 5

*Mean Responses of Overall Job Satisfaction by Primary Job Activity*

Variable	Mean	SD
Primary Job Activity		
Teaching	1.77	.764
Research	1.77	.767
Public Service	1.65	.692
Clinical Service	1.80	.716
Administration	1.64	.726
On Sabbatical	1.92	.819
Other	1.69	.755

For each of the seven regression equations, the six control variables were entered in the first block of the regression equation and the predictor variable was entered in the second block. The results of the individual multiple regression equations are displayed in Tables 6 through 12 and a comparison summary of the regression models can be found in Table 13.

The regression models for all seven primary job activities reveal that the models improve the ability to predict overall job satisfaction. When controlling for age, race/ethnicity, tenure, gender, rank, and year began current job, the predictor variable, satisfaction with decision-making authority over course content and methods, explains some of the variance in the dependent variable. The percentage of the variance explained by the predictor variable is 13.3% for teaching, 12.0% for research, 14.7% for public service, 14.5% for clinical service, 9.5% for administration, 6.8% for on sabbatical, and 4.7% for other activity. The difference between  $R^2$  and adjusted  $R^2$  for Model 2 for the teaching group was 0.00, and small differences were revealed for the research and administration groups. This indicates that the models could be generalized to the population.

According to Tukey's HSD Test, differences in the mean overall job satisfaction scores between the administrative group and the teaching, research, and on sabbatical groups were significant at  $p < .001$ , mean differences between the administrative group and the clinical service group were significant at  $p < .01$ , and mean differences between the public service group and the on sabbatical group were significant at  $p < .05$ .

Durbin-Watson scores for the seven models range from 1.965 (teaching) to 2.100 (clinical service and public service). The assumption of independent errors was therefore met for all models. F scores were calculated using one-way ANOVA to determine whether the models provide significantly better results than would be obtained using the means as estimates. The F

Table 6

*Summary of Regression Data by Primary Job Activity: Teaching*

	Teaching					
	Unstandardized	Standardized	Constant	R <sup>2</sup>	Adjusted R <sup>2</sup>	R <sup>2</sup> Change
Model 1			-10.119	.012	.012	.012
Age	.005***	.063***				
Race/ethnicity	-.050***	-.061***				
Tenure	-.060***	-.072***				
Gender	.035*	.022*				
Rank	-.010	-.017				
Year began current job	.002	.021				
Model 2			-10.404	.145	.145	.133
Age	.005***	.069***				
Race/ethnicity	-.024**	-.029**				
Tenure	-.068***	.080***				
Gender	.040*	.026*				
Rank	-.021*	-.034*				
Year began current job	.001	.012				
Satisfaction with decision-making authority over course content and methods	.517***	.367***				

\*p<.05    \*\*p<.01    \*\*\*p<.001

Table 7

*Summary of Regression Data by Primary Job Activity: Research*

	Research					
	Unstandardized	Standardized	Constant	R <sup>2</sup>	Adjusted R <sup>2</sup>	R <sup>2</sup> Change
Model 1			4.149	.004	.001	.004
Age	-.002	-.020				
Race/ethnicity	-.043*	-.061*				
Tenure	-.080	-.019				
Gender	.036	.029				
Rank	-.010	-.017				
Year began current job	.000	.004				
Model 2			2.466	.125	.121	.120
Age	-.001	-.019				
Race/ethnicity	-.026	-.036				
Tenure	-.035*	.038*				
Gender	.046	.026				
Rank	.010	.017				
Year began current job	.001	.010				
Satisfaction with decision-making authority over course content and methods	.420***	.349***				

\*p<.05    \*\*p<.01    \*\*\*p<.001

Table 8

*Summary of Regression Data by Primary Job Activity: Public Service*

	Public Service					
	Unstandardized	Standardized	Constant	R <sup>2</sup>	Adjusted R <sup>2</sup>	R <sup>2</sup> Change
Model 1			12.480	.040	-.012	.040
Age	-.012	.157				
Race/ethnicity	-.044	-.046				
Tenure	-.092	-.113				
Gender	-.160	-.114				
Rank	.073	.188				
Year began current job	.006	.087				
Model 2			11.667	.157	.140	.147
Age	-.012	-.157				
Race/ethnicity	-.030	-.032				
Tenure	-.138	-.169				
Gender	-.204	-.146				
Rank	.099*	.255*				
Year began current job	.006	.090				
Satisfaction with decision-making authority over course content and methods	.332***	.388***				

\*p&lt;.05    \*\*p&lt;.01    \*\*\*p&lt;.001

Table 9

*Summary of Regression Data by Primary Job Activity: Clinical Service*

	Regression Coefficient			Clinical Service		
	Unstandardized	Standardized	Constant	R <sup>2</sup>	Adjusted R <sup>2</sup>	R <sup>2</sup> Change
Model 1			-15.938	.023	.013	.023
Age	-.003	-.038				
Race/ethnicity	-.057*	-.085*				
Tenure	.038	.045				
Gender	-.014	-.009				
Rank	-.055	-.100				
Year began current job	.012	.132				
Model 2			-10.152	.168	.158	.145
Age	-.002	-.028				
Race/ethnicity	-.048	-.070				
Tenure	.035	.042				
Gender	-.045	.031				
Rank	-.048	-.086				
Year began current job	.008	.088				
Satisfaction with decision-making authority over course content and methods	.384***	.383***				

\*p&lt;.05    \*\*p&lt;.01    \*\*\*p&lt;.001

Table 10

*Summary of Regression Data by Primary Job Activity: Administration*

	Regression Coefficient			Administration		
	Unstandardized	Standardized	Constant	R <sup>2</sup>	Adjusted R <sup>2</sup>	R <sup>2</sup> Change
Model 1			-19.844	.024	.019	.024
Age	.009**	.104**				
Race/ethnicity	-.081**	-.097**				
Tenure	-.019	-.026				
Gender	.035	.023				
Rank	-.017	-.041				
Year began current job	.002	.032				
Model 2			-16.526	.118	.113	.095
Age	.008**	.093**				
Race/ethnicity	-.057*	-.068*				
Tenure	-.042	.058				
Gender	.071	.048				
Rank	-.015	-.037				
Year began current job	.001	.018				
Satisfaction with decision-making authority over course content and methods	.403***	.312***				

\*p<.05    \*\*p<.01    \*\*\*p<.001

Table 11

*Summary of Regression Data by Primary Job Activity: On Sabbatical*

	On Sabbatical				
	Regression Coefficient	Constant	R <sup>2</sup>	Adjusted R <sup>2</sup>	R <sup>2</sup> Change
	Unstandardized	Standardized			
Model 1			.032	-.006	.032
Age	.016	.186			
Race/ethnicity	.026	.030			
Tenure	.037	.028			
Gender	.204	.122			
Rank	-.082	-.095			
Year began current job	-.007	-.080			
Model 2			.100	.059	.068
Age	.014	.163			
Race/ethnicity	.044	.051			
Tenure	.068	.050			
Gender	.167	.100			
Rank	-.046	-.054			
Year began current job	-.006	-.073			
Satisfaction with decision-making authority over course content and methods	.168***	.266***			

\*p<.05    \*\*p<.01    \*\*\*p<.001

Table 12

*Summary of Regression Data by Primary Job Activity: Other*

	Regression Coefficient			Adjusted R <sup>2</sup>	R <sup>2</sup> Change
	Unstandardized	Standardized	Constant		
Model 1			-15.870	.014	.014
Age	.003	.044			
Race/ethnicity	.015	.018			
Tenure	-.018	-.022			
Gender	.119	.079			
Rank	-.022	-.053			
Year began current job	.006	.069			
Model 2			-12.156	.061	.047
Age	.002	.030			
Race/ethnicity	.020	.028			
Tenure	-.014	-.018			
Gender	.101	.067			
Rank	-.022	-.052			
Year began current job	.005	.056			
Satisfaction with decision-making authority over course content and methods	.240***	.217***			

\*p<.05    \*\*p<.01    \*\*\*p<.001

Table 13

*Comparison Summary of Regression Data for Model 2 by Primary Job Activity*

Primary Job Activity	R2	Adjusted R2	R2 Change	Beta	Predictor variable t-test sig.
Teaching	.145	.145	.133	.367	<.001
Research	.125	.121	.120	.349	<.001
Public Service	.157	.140	.147	.388	<.001
Clinical Service	.168	.158	.145	.383	<.001
Administration	.118	.113	.095	.312	<.001
On Sabbatical	.100	.059	.068	.266	<.001
Other	.061	.037	.047	.217	<.001

scores are teaching:  $F$  197.124,  $p < .001$ , research:  $F$  36.559,  $p < .001$ , public service:  $F$  4.011,  $p < .01$ , clinical service:  $F$  15.723,  $p < .001$ , administration:  $F$  23.271,  $p < .001$ , on sabbatical:  $F$  2.433,  $p < .05$ , and other activity:  $F$  2.547,  $p < .05$ . With all  $F$  scores above 1.00, it can be determined that the fit of the regression line is greater than the inaccuracy within the models. All Cook's Distance values were below 1.00, indicating that none of the cases had an undue influence on any of the models. Finally, VIF and tolerance statistics for all models reveal that multicollinearity is not a problem.

The addition of a primary job activity to each regression model increased the ability of the model to explain variances in overall job satisfaction. The largest adjusted  $R^2$  increase occurred for the group whose primary job activity is public service (.147). The other adjusted  $R^2$  changes, in order of the amount of the increased predictive ability, are: clinical service (.145), teaching (.133), administration (.094), on sabbatical (.065), other (.044), and research (.009). The t-tests associated with the Beta value for the predictor variable are significant at  $p < .001$  for all primary job groups with the exception of the on sabbatical group, for which the t-test associated with the Beta value is  $p < .01$ .

#### *Research Question Four*

Research question four asks: When controlling for demographic and job-related characteristics, does the percentage of overall faculty job satisfaction that can be explained by satisfaction with decision-making authority over course content and methods differ by the percentage of time spent on instructional activities? In order to perform the same type of analysis as was conducted for research question three and will be conducted for research question five, the percentage of time spent on teaching activities data needed to be collapsed into categories. NSOPF:04 did not collapse the data, so the data were collapsed as part of this study.

To collapse the data, the study sample was divided into five groups based on percentage of time spent on teaching activities – one to 20 percent, 21 to 40 percent, 41 to 60 percent, 61 to 80 percent, and 81 to 100 percent. Frequency and within-group percentages for each group are presented in Table 14; mean responses of overall job satisfaction for each group can be found in Table 15.

Table 14

*Frequency Distribution and Within-Group Percentages of Study Sample by Percentage of Time Spent Teaching*

Variable		Study Sample (N=12,283)	Within Group Distribution (%)
Percentage of Time Spent Teaching	0-20%	1,870	15.22
	21-40%	1,549	12.61
	41-60%	2,896	23.58
	61-80%	3,465	28.21
	81-100%	2,503	20.38

Table 15

*Mean Responses of Overall Job Satisfaction by Percentage of Time Spent Teaching*

Variable		Mean	SD
Percentage of Time Spent Teaching	0-20%	1.72	.736
	21-40%	1.74	.760
	41-60%	1.79	.762
	61-80%	1.77	.762
	81-100%	1.71	.766

A multiple regression analysis was calculated for each of the five groups using the block entry method, with the six control variables entered in the first block and the predictor variable entered in the second block. Tables 16 through 20 contain summaries of the five regression models, and comparison summary data is presented in Table 21.

The data for each of the five regression calculations indicate that the models improve the ability to predict overall job satisfaction. When controlling for age, race/ethnicity, tenure, gender, rank, and year began current job, the predictor variable explains some of the variance in the dependent variable. The percentage of the variance explained by the predictor variable for each percentage of time spent teaching group, in ascending order, are: 9.1% for faculty who spend 41 to 60 percent of their time teaching, 9.4% for faculty who spent 21 to 40 percent of their time teaching, 10.4% for the one to 20 percent group, 14.7% for the 61 to 80 percent group, and 16.4% of the 81 to 100 percent group. The differences between  $R^2$  and adjusted  $R^2$  for all of the models were small. This indicates that the models could be generalized to the population.

Durbin-Watson scores were calculated to determine if the assumption of independent errors was met by the models. The scores ranged from 1.930 (41 to 60 percent group) to 2.061 (zero to 20 percent group), which indicates that the assumption was met. One-way ANOVA was calculated to determine if the models provide significantly better results than would be obtained using the means as estimates. The resulting F scores are: zero to 20 percent group:  $F(6,7) = 28.882$ ,  $p < .001$ ; 21 to 40 percent group:  $F(6,7) = 30.597$ ,  $p < .001$ ; 41 to 60 percent group:  $F(6,7) = 49.953$ ,  $p < .001$ ; 61 to 80 percent group:  $F(6,7) = 90.929$ ,  $p < .001$ ; 81 to one hundred percent group:  $F(6,7) = 73,941$ ,  $p < .001$ . With all F scores above 1.00, the fit of the regression lines are greater than the inaccuracy within the

Table 16

*Summary of Regression Data by Percentage of Time Spent Teaching: 1-20%*

		1-20%			
		Constant	R <sup>2</sup>	Adjusted R <sup>2</sup>	R <sup>2</sup> Change
		Regression Coefficient			
	Unstandardized	Standardized			
Model 1			.012	.008	.012
	Age	.007**			
	Race/ethnicity	-.049**			
	Tenure	-7.829e-5			
	Gender	.003			
	Rank	.001			
	Year began current job	-.003			
Model 2			-6.875	.116	.104
	Age	.006**			
	Race/ethnicity	-.037*			
	Tenure	-.013			
	Gender	.003			
	Rank	-.004			
	Year began current job	-.002			
	Satisfaction with decision-making authority over course content and methods	.332***			
		.324***			

\*p<.05    \*\*p<.01    \*\*\*p<.001

Table 17

*Summary of Regression Data by Percentage of Time Spent Teaching: 21-40%*

		21-40%					
		Regression Coefficient		R <sup>2</sup>	Adjusted R <sup>2</sup>	R <sup>2</sup> Change	
		Unstandardized	Standardized	Constant			
Model 1				-10.259	.009	.006	.009
	Age	.004	.056				
	Race/ethnicity	-.043*	-.054*				
	Tenure	-.051	.028				
	Gender	.018	.011				
	Rank	.010	-.017				
	Year began current job	.002	.025				
Model 2				-8.402	.103	.100	.094
	Age	.004	.058				
	Race/ethnicity	-.026	-.032				
	Tenure	-.071**	-.078**				
	Gender	.026	.016				
	Rank	-9.505E-5	.000				
	Year began current job	.001	.008				
	Satisfaction with decision-making authority over course content and methods	.391***	.309***				

\*p&lt;.05    \*\*p&lt;.01    \*\*\*p&lt;.001

Table 18

*Summary of Regression Data by Percentage of Time Spent Teaching: 41-60%*

	41-60%					
	Unstandardized	Standardized	Constant	R <sup>2</sup>	Adjusted R <sup>2</sup>	R <sup>2</sup> Change
Model 1			-13.369	.016	.014	.016
Age	.006**	.084**				
Race/ethnicity	-.059***	-.076***				
Tenure	-.062**	-.067**				
Gender	.003	.002				
Rank	.011	-.016				
Year began current job	.002	.020				
Model 2			-11.810	.108	.106	.091
Age	.006**	.073**				
Race/ethnicity	-.039**	-.051**				
Tenure	-.079***	-.086***				
Gender	.054	.034				
Rank	-.008	-.012				
Satisfaction with decision-making authority over course content and methods	.415***	.304***				

\*p&lt;.05    \*\*p&lt;.01    \*\*\*p&lt;.001

Table 19

*Summary of Regression Data by Percentage of Time Spent Teaching: 61-80%*

		61-80%			
		Constant	R <sup>2</sup>	Adjusted R <sup>2</sup>	R <sup>2</sup> Change
		Regression Coefficient			
	Unstandardized	Standardized			
Model 1			.008	.006	.008
	Age	.042			
	Race/ethnicity	-.045**			
	Tenure	-.044*			
	Gender	.040*			
	Rank	-.021			
	Year began current job	.032			
Model 2			.155	.154	.147
	Age	.054*			
	Race/ethnicity	-.013			
	Tenure	-.063**			
	Gender	.049**			
	Rank	-.037			
	Year began current job	.021			
	Satisfaction with decision-making authority over course content and methods	.387***			

\*p<.05    \*\*p<.01    \*\*\*p<.001

Table 20

*Summary of Regression Data by Percentage of Time Spent Teaching: 81-100%*

		81-100%			
		Regression Coefficient		R <sup>2</sup>	R <sup>2</sup> Change
		Unstandardized	Standardized	Constant	Adjusted R <sup>2</sup>
Model 1				-5.560	.007
	Age	.002	.034		.007
	Race/ethnicity	-.054**	-.059**		
	Tenure	-.021	-.026		
	Gender	.030	.019		
	Rank	-.025	-.047		
	Year began current job	.001	.020		
Model 2				-3.224	.172
	Age	.002	.030		.169
	Race/ethnicity	-.024	-.026		.164
	Tenure	-.020	-.026		
	Gender	.023	.015		
	Rank	-.034**	-.064**		
	Year began current job	.000	.003		
	Satisfaction with decision-making authority over course content and methods	.507***	.408***		

\*p<.05    \*\*p<.01    \*\*\*p<.001

Table 21

*Comparison Summary of Regression Data for Model 2 by Percentage of Time Spent Teaching*

Percentage of Time Spent Teaching	R2	Adjusted R2	R2 Change	Beta	Predictor variable t-test sig.
	0-20%	.116	.112	.104	.324
21-40%	.103	.100	.094	.309	<.001
41-60%	.108	.106	.091	.304	<.001
61-80%	.155	.154	.147	.387	<.001
81-100%	.172	.169	.164	.408	<.001

models. VIF and tolerance statistics reveal that multicollinearity is not a concern.

The addition of percentage of time spent teaching to the regression models increased the ability of the models to explain variance in overall job satisfaction. The largest adjusted  $R^2$  increase was found for the 81 to one hundred percent group (16.4%); the smallest was found for the 41 to 60 percent group (9.1%). The t-tests associated with the Beta value for the predictor variable are significant at  $p < .001$  for all groups.

*Research Question Five.* Research question five asks: When controlling for demographic and job-related characteristics, does the percentage of overall faculty job satisfaction that can be explained by satisfaction with instructional decision-making authority differ by academic discipline? To answer this question, separate regression models were run for each of the eight Biglan discipline groups. The Biglan groups are Hard/Applied/Life (HPL), Hard/Applied/Non-Life (HPN), Hard/Pure/Life (HPL), Hard/Pure/Non-Life (HPN), Soft/Applied/Life (SAL), Soft/Applied/Non-Life (SAN), Soft/Pure/Life (SPL), and Soft/Pure/Non-Life (SPN).

NSOPF:04 asked respondents to report their academic field by selecting one of 138 discipline categories, including the category “other.” Using the work of Biglan (1973a, 1973b) and Malaney (1986) as a guide, Biglan categories for 110 of the 138 academic disciplines were identified. The other academic disciplines could not be placed into a category either because they appeared to fall into more than one category or because the appropriate placement was not clear from the prior research. Removing the cases that could not be placed into a Biglan category reduced the sample size for this question to 11,470. A list of the disciplines included in the sample for research question five, and their assigned Biglan group, can be found in Appendix A. Data on frequency distribution and within-group percentages is presented in Table 22, and

mean responses of overall job satisfaction by Biglan group can be found in Table 23.

Table 22

*Frequency Distribution and Within-Group Percentage of Study Sample by Biglan Group*

Variable	(N=11,470)	Within Group Distribution (%)	
Biglan Group	Hard/Applied/Life (HAL)	790	6.89
	Hard/Applied/Non-Life (HAN)	938	8.18
	Hard/Pure/Life (HPL)	998	8.70
	Hard/Pure/Non-Life (HPN)	1,270	11.07
	Soft/Applied/Life (SAL)	2,191	19.10
	Soft/Applied/Non-Life (SAN)	2,248	19.60
	Soft/Pure/Life (SPL)	1,140	9.94
	Soft/Pure/Non-Life (SPN)	1,895	16.52

Table 23

*Mean Responses of Overall Job Satisfaction by Biglan Group*

Variable	Mean	SD	
Biglan Group	Hard/Applied/Life (HAL)	1.74	.716
	Hard/Applied/Non-life (HAN)	1.79	.757
	Hard/Pure/Life (HPL)	1.75	.723
	Hard/Pure/Non-life (HPN)	1.78	.775
	Soft/Applied/Life (SAL)	1.70	.736
	Soft/Applied/Non-life (SAN)	1.77	.761
	Soft/Pure/Life (SPL)	1.79	.796
	Soft/Pure/Non-life (SPN)	1.76	.785

For each of the eight regression equations, the six control variables were entered in the first block of the regression equation and the predictor variable was entered in the second block.

The results of the individual multiple regression equations are displayed in Tables 24 through 31.

All eight regression models revealed that the models improve the ability to predict overall job satisfaction. When controlling for age, race/ethnicity, tenure, gender, rank, and year began current job, the predictor variable, satisfaction with decision-making authority over course content and methods, explains some of the variance in the dependent variable. The percentage of the variance explained by the predictor variable for each Biglan group, in descending order, is 15.5% for SAL, 12.6% for HPN and SPN, 11.8% for SPL, 11.1% for HAL, 10.7% for HAN, 10.3% for SAN, and 8.6% for HPL. The differences between  $R^2$  and adjusted  $R^2$  for all of the models were small, indicating that the models could be generalized to the population. A comparison summary of the data for the eight regression models is presented in Table 32.

The assumption of independent errors was met for all models, with Durbin-Watson scores ranging from 1.925 (SPN) to 1.996 (HAL). One-way ANOVA was calculated to determine if the models provide significantly better results than would be obtained using the means as estimates. The resulting F scores are HAL:  $F(6,7) = 16.874$ ,  $p < .001$ , HAN:  $F(6,7) = 17.424$ ,  $p < .001$ , HPL:  $F(6,7) = 15.998$ ,  $p < .001$ , HPN:  $F(6,7) = 30.573$ ,  $p < .001$ , SAL:  $F(6,7) = 65.306$ ,  $p < .001$ , SAN:  $F(6,7) = 40.048$ ,  $p < .001$ , SPL:  $F(6,7) = 23.199$ ,  $p < .001$ , SPN:  $F(6,7) = 43.410$ ,  $p < .001$ . F scores above 1.00 indicate that the fit of the regression lines are greater than the inaccuracy within the models. VIF and tolerance statistics reveal that multicollinearity is not a concern.

The addition of academic discipline category to each regression model increased the ability of the model to explain variance in overall job satisfaction. The largest adjusted  $R^2$

Table 24

*Summary of Regression Data by Biglan Category: Hard/Applied/Life*

		Hard/Applied/ Life (HAL)				
		Regression Coefficient			R <sup>2</sup>	R <sup>2</sup> Change
		Unstandardized	Standardized	Constant	Adjusted R <sup>2</sup>	
Model 1				-9.732	.021	.021
Age		-.004	-.058			
Race/ethnicity		-.060*	-.087*			
Tenure		-.038	-.053			
Gender		.017	.011			
Rank		.030	.049			
Year began current job		.010*	.127*			
Model 2				-12.555	.131	.111
Age		-.003	-.045			
Race/ethnicity		-.042	-.061			
Tenure		-.053	.029			
Gender		-.015	-.009			
Rank		.022	.035			
Year began current job		.010**	.130**			
Satisfaction with decision-making authority over course content and methods		.329***	.335***			

\*p&lt;.05    \*\*p&lt;.01    \*\*\*p&lt;.001

Table 25

*Summary of Regression Data by Biglan Group: Hard/Applied/Non-life*

	Hard/Applied/Non-life (HAN)				
	Regression Coefficient	Constant	R <sup>2</sup>	Adjusted R <sup>2</sup>	R <sup>2</sup> Change
	Unstandardized	Standardized			
Model 1			.009	.002	.009
Age	.005	.074			
Race/ethnicity	-.034	-.054			
Tenure	-.024	-.028			
Gender	.019	.009			
Rank	-.018	-.032			
Year began current job	-.002	-.024			
Model 2			.116	.109	.107
Age	.007*	.092*			
Race/ethnicity	-.013	-.021			
Tenure	-.034	-.039			
Gender	.007	.003			
Rank	-.015	-.027			
Year began current job	-.003	-.045			
Satisfaction with decision-making authority over course content and methods	.415***	.330***			

\*p&lt;.05 \*\*p&lt;.01 \*\*\*p&lt;.001

Table 26

*Summary of Regression Data by Biglan Group: Hard/Pure/Life*

		Hard/Pure/Life (HPL)				
		Regression Coefficient			R <sup>2</sup>	R <sup>2</sup> Change
		Unstandardized	Standardized	Constant	Adjusted R <sup>2</sup>	
Model 1				-.494	.016	.016
	Age	.001	.016			
	Race/ethnicity	-.061**	-.083**			
	Tenure	-.036	-.044			
	Gender	.007	.005			
	Rank	.025	.044			
	Year began current job	.000	-.006			
Model 2				.153	.102	.086
	Age	.002	.028			
	Race/ethnicity	-.083***	-.113***			
	Tenure	-.029	.035			
	Gender	-.026	-.016			
	Rank	.032	.057			
	Year began current job	.000	-.010			
	Satisfaction with decision-making authority over course content and methods	.332***	.296***			

\*p&lt;.05    \*\*p&lt;.01    \*\*\*p&lt;.001

Table 27

Summary of Regression Data by Biglan Category: *Hard/Pure/Non-life*

		Hard/Pure/Non-life (HPN)					
		Regression Coefficient		R <sup>2</sup>	R <sup>2</sup> Change		
		Unstandardized	Standardized	Constant	Adjusted R <sup>2</sup>		
Model 1				-15.409	.019	.014	.019
Age		.003	.040				
Race/ethnicity		-.045*	-.061*				
Tenure		-.070	-.077				
Gender		.063	.033				
Rank		-.031	-.054				
Year began current job		.006	.089				
Model 2				-12.533	.145	.140	.126
Age		.003	.042				
Race/ethnicity		-.013	-.017				
Tenure		-.069	.075				
Gender		.050	.026				
Rank		-.038	-.065				
Year began current job		.004	.061				
Satisfaction with decision-making authority over course content and methods		.440***	.360***				

\*p&lt;.05    \*\*p&lt;.01    \*\*\*p&lt;.001

Table 28

*Summary of Regression Data by Biglan Category: Soft/Applied/Life*

	Soft/Applied/ Life (SAL)				
	Regression Coefficient	Constant	R <sup>2</sup>	Adjusted R <sup>2</sup>	R <sup>2</sup> Change
	Unstandardized	Standardized			
Model 1			.016	.013	.016
Age	.006**	.079**			
Race/ethnicity	-.040*	-.049*			
Tenure	-.037	-.048			
Gender	.081*	.053*			
Rank	-.033*	-.064*			
Year began current job	.001	.012			
Model 2			.171	.168	.155
Age	-.003*	-.046*			
Race/ethnicity	-.029	-.035			
Tenure	-.049**	.064**			
Gender	.075*	.049*			
Rank	-.030*	-.056*			
Year began current job	.001	.009			
Satisfaction with decision-making authority over course content and methods	.508***	.396***			

\*p&lt;.05    \*\*p&lt;.01    \*\*\*p&lt;.001

Table 29

*Summary of Regression Data by Biglan Category: Soft/Applied/Non-life*

		Soft/Applied/Non-life (SAN)				
		Regression Coefficient			R <sup>2</sup>	R <sup>2</sup> Change
		Unstandardized	Standardized	Constant	Adjusted R <sup>2</sup>	
Model 1				-3.534	.008	.008
Age		.003	.038			
Race/ethnicity		-.058**	-.072**			
Tenure		-.038	-.044			
Gender		.022	.014			
Rank		-.006	-.010			
Year began current job		3.742E-6	.000			
Model 2				-4.381	.111	.103
Age		.003	.046			
Race/ethnicity		-.034*	-.042*			
Tenure		-.043	.050			
Gender		.034	.021			
Rank		-.008	-.014			
Year began current job		.001	-.006			
Satisfaction with decision-making authority over course content and methods		.445***	.332***			

\*p<.05    \*\*p<.01    \*\*\*p<.001

Table 30

*Summary of Regression Data by Biglan Category: Soft/Pure/Life*

		Soft/Pure/Life (SPL)				
		Regression Coefficient			R <sup>2</sup>	R <sup>2</sup> Change
		Unstandardized	Standardized	Constant	Adjusted R <sup>2</sup>	
Model 1				-2.708	.008	.008
	Age	.001	.019			
	Race/ethnicity	-.047	-.051			
	Tenure	-.056	-.061			
	Gender	.079	.049			
	Rank	.002	.004			
	Year began current job	.001	.013			
Model 2				-5.720	.125	.118
	Age	.003	.037			
	Race/ethnicity	-.032	-.035			
	Tenure	-.068*	.032*			
	Gender	.071	.044			
	Rank	-.014	-.022			
	Year began current job	.001	.012			
	Satisfaction with decision-making authority over course content and methods	.497***	.345***			

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

Table 31

*Summary of Regression Data by Biglan Group: Soft/Pure/Non-life*

		Soft/Pure/Non-Life (SPN)				
		Regression Coefficient			R <sup>2</sup>	R <sup>2</sup> Change
		Unstandardized	Standardized	Constant	Adjusted R <sup>2</sup>	
Model 1				-11.645	.012	.012
	Age	.005*	.074*			
	Race/ethnicity	-.056**	-.021**			
	Tenure	-.026	-.030			
	Gender	.053	.033			
	Rank	-.014	-.025			
	Year began current job	.002	.022			
Model 2				-13.711	.139	.126
	Age	.006**	.087**			
	Race/ethnicity	-.030	-.033			
	Tenure	-.055	-.063			
	Gender	.059	.038			
	Rank	-.034	-.059			
	Year began current job	.001	.020			
	Satisfaction with decision-making authority over course content and methods	.501***	.362***			

\*p&lt;.05    \*\*p&lt;.01    \*\*\*p&lt;.001

Table 32

*Comparison Summary of Regression Data for Model 2 by Biglan Group*

Biglan Group	R2	Adjusted R2	R2 Change	Predictor variable	
				Beta	t-test sig.
Hard/Applied/Life	.131	.123	.111	.335	<.001
Hard/Applied/Non-Life	.116	.109	.107	.330	<.001
Hard/Pure/Life	.102	.095	.086	.296	<.001
Hard/Pure/Non-Life	.145	.140	.126	.360	<.001
Soft/Applied/Life	.171	.168	.155	.396	<.001
Soft/Applied/Non-Life	.111	.108	.103	.332	<.001
Soft/Pure/Life	.125	.120	.118	.345	<.001
Soft/Pure/Non-Life	.139	.136	.126	.362	<.001

increase was found for the SAL group (15.5%); the smallest was found for the HPL group (8.6%). The t-tests associated with the Beta value for the predictor variable are significant at  $p < .001$  for all Biglan disciplinary groups.

### *Summary*

The findings presented in this chapter provide an important contribution to the literature on faculty job satisfaction. In particular, these results indicate that when controlling for the following demographic variables - age, race/ethnicity, tenure, gender, and the following job-related variables – rank and year began current job, primary job activity, percentage of time spent teaching, and academic discipline explain some of the variance in overall faculty job satisfaction. The importance of these findings to the literature, the implications for college and university administrators, and the limitations of the study will be explored in the following chapter.

## Chapter 5: Conclusion

### *Review of Study Approach*

This study used data from the 2004 National Study of Postsecondary Faculty to examine differences in faculty job satisfaction by primary job activity, percentage of time spent teaching, and academic discipline. Specifically, differences in the amount of overall job satisfaction that can be explained by instructional authority, operationalized for this study as satisfaction with decision-making authority over course content and methods, were explored. The sample for this study included all full-time faculty members at four-year institutions who had faculty status as defined by their institution and who spent some of their time on instructional activities.

### *Summary and Interpretation of Study Findings*

*Research Question 1 and Hypothesis 1.* Research question one asked: Is there a correlation between the following demographic and job-related characteristics and overall job satisfaction: age, race, gender, tenure, rank, and year began current job? Hypothesis One stated: The following demographic and job-related characteristics - age, race, gender, tenure status, rank, and year began current job - have a correlational relationship to overall faculty job satisfaction. These variables were selected based on a literature review of previous faculty job satisfaction studies. The data confirmed that all six variables are correlated to overall faculty job satisfaction, but the correlations for only five of the six variables were statistically significant. The correlation between rank and overall job satisfaction was not significant at  $p < .05$ . These results support prior research studies indicating that age (Winkler, 1982), race/ethnicity (Seifert & Umbach, 2008), gender (Isaac, 1997; Seifert & Umbach, 2008; Winkler, 1982), tenure status (Isaac, 1997; Winkler, 1982), and year began current job (Neal, 1990) are significantly related to faculty job satisfaction.

Some of the statistically significant control variables had only small effect sizes on the

dependent variable. The effect sizes for all demographic and job-related variables, with the exception of year began current job, were small. Year began current job had a medium effect size on overall job satisfaction. It is possible that the small effect sizes are a byproduct of the large sample size (Slavin & Smith, 2009). Further research on the relationship between the six variables used in Model 1 and overall job satisfaction is warranted.

*Research Question 2 and Hypothesis 2.* Research question two asked: When controlling for demographic and job-related characteristics, what percentage of overall faculty job satisfaction can be explained by satisfaction with decision-making authority over course content and methods? Hypothesis Two stated: After controlling for the effects of demographic characteristics and job-related factors, satisfaction with instructional decision-making authority will significantly predict levels of overall faculty job satisfaction. Data analysis revealed that the control variables explained only one percent of the variance in the dependent variable. Also, in Model 1, for which the control variables were entered into the regression equation using the block method, only the unstandardized and standardized Betas for age, race/ethnicity, tenure, and gender were statistically significant. In Model 2, rank joined age, race/ethnicity, tenure, and gender in having statistically significant unstandardized and standardized Betas. The percentage of variance in the dependent variable explained by the addition of the predictor variable to the model is 11.9%.

*Research Question 3 and Hypothesis 3.* Research question three asks: When controlling for demographic and job-related characteristics, does the percentage of overall faculty job satisfaction that can be explained by satisfaction with decision-making authority over course content and methods differ by primary job activity? Hypothesis three states: After controlling for the effects of demographic characteristics and job-related factors, the predictive value of

satisfaction with instructional decision-making authority on overall faculty job satisfaction will differ significantly by primary job activity. The effect an individual job facet has on job satisfaction is related to the importance of the individual facet (Locke, et al., 1984). It was predicted, therefore, that faculty whose primary job activity is teaching place more importance on decision-making authority over course content and methods than other faculty and therefore the predictive value of satisfaction with decision-making authority over course and methods would be highest for this group.

Research results revealed that the addition of primary job activity to each regression model increased the ability of the model to explain variance in overall job satisfaction. However, when comparing the increase in predictive ability added by primary job activity, the adjusted  $R^2$  for the teaching group was only the third highest. The primary job activity that resulted in the greatest increase to the models' predictive ability is public service, followed by clinical service. That the percentage of overall job satisfaction explained by satisfaction with decision-making authority over course content and methods is not highest for faculty whose primary job is teaching raises two important questions that are beyond the scope of this study: 1) how much time do faculty whose primary job activities are public service or clinical service spend on instructional activities? and 2) are faculty with these primary job activities concentrated in certain academic fields?

Although the prediction that the predictive value of satisfaction with authority over course content and methods would be highest for the teaching group was not supported by the data, the findings for research question three support the hypothesis that after controlling for the effects of demographic characteristics and job-related factors, the predictive value of satisfaction with instructional decision-making authority on overall faculty job satisfaction will differ

significantly by primary job activity.

*Research Question 4 and Hypothesis 4.* Research question four asks: When controlling for demographic and job-related characteristics, does the percentage of overall faculty job satisfaction that can be explained by satisfaction with decision-making over course content and methods differ by the percentage of time spent on instructional activities? Hypothesis four states: After controlling for the effects of demographic and job-related characteristics, the predictive value of satisfaction with instructional decision-making authority will differ significantly by percentage of time spent teaching. The data identified differences in the percentage of the dependent variable that can be explained by the predictor variable and for the group that spends the most time on teaching activities (81-one hundred percent), the predictor variable explains the most variance (16.4%) in the dependent variable. This finding is consistent with the work of Locke, Fitzpatrick, and White (1984), who stated “the more important the job aspect, the more effect that aspect has on job satisfaction” (p. 121).

Given the great importance faculty place on autonomy, 16.4% as the percentage of the dependent variable that can be explained by the predictor variable for faculty who spend 81-one hundred percent of their time spent on instructional activities appears to be low. A question beyond the scope of this study is what other job facets contribute to this group’s overall job satisfaction, and to what extent?

*Research Question 5 and Hypothesis 5.* Research question five asks: When controlling for demographic and job-related characteristics, does the percentage of overall faculty job satisfaction that can be explained by satisfaction with decision-making authority over course content and methods differ by academic discipline? Hypothesis Five states: After controlling for the effects of demographic characteristics and job-related factors, the predictive value of

satisfaction with instructional decision-making authority on overall faculty job satisfaction will differ significantly by academic discipline. The data identify differences in the percentage of overall job satisfaction that can be explained by satisfaction with decision-making authority over course content and methods. The predictor variable explains the most variance in the dependent variable for the Soft/Applied/Life (SAL) Biglan group at 15.5%.

That faculty job satisfaction differs by academic discipline supports prior research, which not only identifies this relationship (Eison, 1976), but also reveals relationships between academic discipline and other several other factors (Smart & Elton, 1982, 1978; Muffo & Langston, 1981; and Cresswell & Bean, 1981). As reported by Becher (1987) and Light (1974), our knowledge of academia increases when we study disciplinary differences.

#### *Implications of Findings for Theory and Practice*

The literature review in Chapter Two identifies many demographic and job-related factors that affect faculty job satisfaction, and the findings presented in this study are consistent with this literature. Faculty job satisfaction is important because low levels of employee satisfaction can result in absenteeism, turnover, burnout, poor job performance, and behavior that intentionally hurts the organization (Spector, 1997), while satisfied employees have better retention, improve the ability of the institution to recruit new faculty, and result in better use of faculty time because less time is spent on job searches for new faculty (Gappa et al., 2007).

The results of this research suggest that the authority to make decisions about course content and methods plays a role in overall faculty job satisfaction, which is consistent with the literature on faculty autonomy. According to Finkelstein (1984), autonomy is one of “the norms that guide the academic career” (p. 5), and faculty believe that authority over course content and methods, as well as authority over course schedules, prerequisites, and requirements, should be

held by individual faculty (Copur, 1990).

The job satisfaction findings in this paper should be acknowledged and understood by college and university administrators and policy makers, for many of the factors that affect faculty job satisfaction are influenced, or partially or fully controlled, by these groups. Without this understanding, administrators and policy makers face the risk of making decisions without an awareness of how, and to what extent, these decisions may negatively affect faculty job satisfaction. The findings should also be of interest to faculty unions in their efforts to improve faculty work environments.

#### *Limitations of the Study*

Several important limitations of this study limit the conclusions that can be drawn from the research. First, although secondary data analysis of large data sets is an important tool in social science research, it is not without pitfalls. For example, the National Center for Education Statistics utilized simple random sampling for NSOPF:04. This reduced, but did not eliminate, the possibility of sampling bias. In addition, faculty data were self-reported, which may have affected the validity of the data.

Secondly, the study results cannot be used to make assumptions about overall faculty job satisfaction and the factors that influence this for faculty who are part-time, who work at two-year colleges, and who did not spend at least one percent of their time in Fall of 2003 on teaching activities. This study specifically included only those faculty who were full-time, had faculty status as defined by their institutions, worked at four-year institutions, and spent at least one percent of their time on teaching activities in Fall of 2003.

The third limitation is that the study results cannot be used to make assumptions about overall job satisfaction for faculty employed at four-year private colleges and universities and

faculty employed at four-year public colleges and universities. This study did not look at the data for these two sectors of higher education but rather looked at four-year institutions in total.

Fourthly, one of the response categories for primary job activity is “on sabbatical.” The expectation is that faculty who were on sabbatical during fall 2003 would select this response. The problem this creates for data analysis is that the data do not indicate what the respondents’ primary job activity is at the college, only that they were on sabbatical for the academic term studied for NSOPF:04. Therefore, faculty who reported “on sabbatical” have actual primary job activities at their institutions of teaching, research, public service, clinical service, administration, and other. The inclusion of “on sabbatical” as a response category most likely affected the data for the other response categories.

The fifth limitation is that for the purpose of addressing research question number four the variable percentage of time spent teaching was collapsed into five categories not by NSOPF:04 researchers, but rather by the author of this study. The five categories were not selected according to any prior research and theory that might be found in the literature. Rather, the range of responses was simply divided by five. Would the research results have been different if the categories were conceptualized using an alternative grouping?

Finally, although the data used for this research is from the most recent National Study of Postsecondary Faculty conducted by the National Center for Education Statistics, the data are eight years old. It is therefore possible that this research does not reflect current levels of faculty job satisfaction nor the extent to which demographic variables, job-related variables, and satisfaction with decision-making authority over course content and methods affect overall faculty job satisfaction.

### *Recommendations for Further Study*

The findings, interpretations, and limitations of this study strongly suggest the need for further study of the relationship between overall faculty job satisfaction and primary job activity, percentage of time spent teaching, and academic discipline. One important issue that this study does not address is differences or similarities in overall faculty job satisfaction over time. It is therefore recommended that this same research be conducted using data from the three prior NSOPF data sets (1988, 1993, and 1999).

Another recommendation is that this study be repeated for part-time faculty so that any differences between part-time and full-time faculty can be identified. To compare NSOPF:04 data on part-time faculty with the data from this study of full-time faculty, the new sample would need to consist of part-time faculty at four-year institutions with faculty status as defined by their institution who worked full-time and spent at least 1% of their time on instructional activities.

It is also recommended that this study be repeated using data by institutional type. Rather than use one study sample, multiple study samples could be used, with each sample representing a different type of higher education institution. This research should prove more useful to administrators and policy-makers at individual institutions when considering the possible effects of existing or proposed policies on faculty job satisfaction, for the data specific to institutional type should provide truer estimates of faculty job satisfaction. Comparison by sector (e.g., public four-year, private four-year, public two-year) is probably not the most effective way to compare institutions, for there can be great differences between institutions within the same sector. For example, the four-year public sector includes both small- to medium-sized, regional institutions as well as very large flagship institutions, and the four-year private sector includes small, liberal arts institutions that offer baccalaureate study only as well as much larger

institutions that offer a broad range of bachelor's, master's, and doctoral degrees.

A better way to compare like institutions would be to consider institutions by their Carnegie Classification. NSOPF:04 used the 2000 Carnegie Classification to identify institution type. These classifications are Doctoral-Extensive, Doctoral-Intensive, Master's I, Master's II, Comprehensive, Baccalaureate-Liberal Arts, Baccalaureate – General, Baccalaureate/Associate, and Associate. It should be noted that in addition to the nine classifications used by NSOPF:04, the 2000 Carnegie Classifications also included nine types of specialized institutions, such as law schools, medical schools, and theological seminaries (Carnegie Foundation for the Advancement of Teaching, 2000).

The findings for Research Question 3 revealed that the percentage of overall job satisfaction that can be explained by satisfaction with decision-making authority over course content and methods was not highest for faculty whose primary job activity is teaching, but rather highest for faculty whose primary job activity is public service or clinical service. Additional research is needed to determine why. Examples of data that should be analyzed in future research include the percentage of time that public service and clinical service faculty spend on instructional activities, and whether, and to what extent, these faculty are concentrated in certain academic fields.

Another recommendation for further study is to repeat the statistical analysis for Research Question 4 using one or more alternative classifications of percentage of time spent teaching to determine if the data yield different results than the groupings used for this study, which simply divided 0% - one hundred percent by five. In addition, research should identify what job factors, in addition to satisfaction with decision-making authority over course content and method, comprise the overall job satisfaction of faculty who spend the greatest amount of time on

instructional activities.

The final recommendation is if the National Center for Education Statistics does not continue the NSOPF program, a new national survey of faculty job satisfaction should be developed and implemented. An understanding of the factors that contribute to faculty job satisfaction, the extent to which faculty are satisfied, and differences in job satisfaction is very important because of the impacts faculty job satisfaction levels have on colleges and universities (Schuster & Finklestein, 2006).

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## APPENDIX A NSOPF:04 Academic Disciplines by Biglan Group

### Hard/Applied/Life (HAL)

Agriculture and related sciences  
Biomedical/medical engineering  
Dentistry  
Medicine, including psychiatry  
Osteopathic medicine/osteopathy  
Podiatric medicine/podiatry

### Hard/Applied/Non-Life (HPN)

Chemical engineering  
Civil engineering  
Computer engineering  
Computer programming  
Computer science  
Computer software and media applications  
Computer systems analysis  
Computer systems networking/telecommunication  
Computer/information science/support services, other  
Computer/information technology administration/management  
Electrical/electronics/communications engineering  
Engineering, other  
Environmental/environmental health engineering  
Mechanical engineering  
Pharmacy/pharmaceutical sciences administration

### Hard/Pure/Life (HPL)

Biochemistry/biophysics/molecular biology  
Biology and biomedical sciences, other  
Botany/plant biology  
Genetics  
Microbiological sciences and immunology  
Physiology, pathology, and related sciences  
Zoology/animal biology

### Hard/Pure/Non-Life (HPN)

Astronomy and astrophysics  
Atmospheric sciences and meteorology  
Chemistry  
Geological and earth sciences/geosciences

Hard/Pure/Non-Life (HPN), continued

Mathematics  
Physical sciences, other  
Physics  
Statistics

Soft/Applied/Life (SAL)

Adult and continuing education/teaching  
Allied health and medical assisting services  
Allied health diagnostics, intervention, treatment professions  
Bilingual and multicultural education  
Chiropractic  
Clinical/medical lab science/allied  
Curriculum and instruction  
Dental support services/allied  
Early childhood education and teaching  
Education, other  
Education/school psychology  
Educational administration/supervision  
Educational assessment  
Educational/instructional media design  
Elementary education and teaching  
Family/consumer sciences, human services  
Health and medical administrative services  
Health and physical education/fitness  
Health/related clinical services, other  
Higher education  
Human resource management and services  
Mental/social health services and allied  
Natural resources and conservation  
Nursing  
Optometry  
Rehabilitation and therapeutic professions  
Secondary education and teaching  
Social work  
Special education and teaching  
Student counseling/personnel services  
Teacher education: specific levels, other  
Teacher education: specific subject areas

Soft/Applied/Non-Life (SAN)

Accounting and related services  
Architecture and related services

Soft/Applied/Non-Life (SAN), continued

Art history, criticism, and conservation  
Business administration/management/operations  
Business operations support/assistance  
Business/management/marketing/related, other  
Commercial and advertising art  
Communication/journalism/related programs  
Dance  
Design and applied arts  
Drama/theatre arts and stagecraft  
Economics  
Film/video and photographic arts  
Finance/financial management services  
Fine and studio art  
Management information systems/services  
Marketing  
Music history, literature, and theory  
Music, general  
Public administration  
Visual and performing arts, other

Soft/Pure/Life (SPL)

Anthropology (except psychology)  
Archeology  
Area/ethnic/cultural/gender studies  
Behavioral psychology  
Clinical psychology  
Criminology  
Demography and population studies  
International relations and affairs  
Political science and government  
Psychology, other  
Social sciences, other  
Sociology  
Urban studies and affairs

Soft/Pure/Non-Life (SPN)

English language and literature/letters  
Foreign languages/literature/linguistics  
Geography and cartography  
History  
Philosophy  
Religion/religious studies

## APPENDIX B NSOPF:04 Faculty Survey Instrument

The following survey text, including formatting, was retrieved directly from the National Center for Education Statistics website at:

[http://nces.ed.gov/surveys/nsopf/pdf/2004\\_Faculty\\_Questionnaire.pdf](http://nces.ed.gov/surveys/nsopf/pdf/2004_Faculty_Questionnaire.pdf)

### **NSOPF:04 Faculty Instrument Full-Scale Study Facsimile**

*Note: The 2004 NSOPF questionnaire was administered as a web-based instrument. This facsimile presents the exact wording of all possible items on the questionnaire. It also indicates which individuals were asked each item, making it possible to identify the skip patterns used in the questionnaire.*

## ► SECTION A: Nature of Employment

**Form:** Q1 **Label:** Instructional duties, any

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

During the 2003 Fall Term, did you have any instructional duties at [FILL INSTNAME], such as teaching students in one or more credit or noncredit courses, or advising or supervising students' academic activities?

(By instructional duties, we mean teaching credit or noncredit courses, advising or supervising students' academic activities, serving on undergraduate or graduate thesis or dissertation committees, supervising independent study or one-on-one instruction, etc., during the 2003 Fall Term.)

0 = No

1 = Yes

**Form:** Q2 **Label:** Instructional duties related to credit courses/activities

**Form Administered To:**

Faculty with instructional duties, Fall 2003

**StemWording:**

Did any of your instructional duties include teaching students in **credit** courses, or advising students or supervising students' academic activities for which they received **credit** during the 2003 Fall Term?

0 = No

1 = Yes

**Form:** Q3 **Label:** Faculty status

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

During the 2003 Fall Term at [FILL INSTNAME], did you have faculty status as defined by that institution?

0 = No

1 = Yes

**Form:** Q3X **Label:** Confirm study ineligibility

**Form Administered To:**

Sample members without faculty status and with no instructional duties during the 2003 Fall term

**StemWording:**

Just to confirm, you did not have faculty status and you did not teach any classes, or advise or supervise any students at [FILL INSTNAME] during the 2003 Fall Term?

1 = Agree: NOT faculty and DID NOT have any instructional duties

2 = Disagree: Had faculty status and/or had instructional duties

**Form:** Q4 **Label:** Principal activity

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

Was your **principal activity** at [FILL INSTNAME] during the 2003 Fall Term. . .

(If you had equal responsibilities, please select one.)

- 1 = Teaching
- 2 = Research
- 3 = Public service
- 4 = Clinical service
- 5 = Administration (e.g., Dean, Chair, Director, etc.)
- 6 = On sabbatical from this institution
- 7 = Other activity (e.g., technical activity such as programmer or technician; other institutional activities such as library services; subsidized performer, artist-in-residence, etc.)

**Form:** Q5 **Label:** Employed full or part time at this institution

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

During the 2003 Fall Term, did [FILL INSTNAME] consider you to be employed full time or part time?

- 1 = Full time
- 2 = Part time

**Form:** Q6 **Label:** Part-time employment is primary employment

**Form Administered To:**

Part-time faculty and instructional staff

**StemWording:**

Do you consider your part-time position at [FILL INSTNAME] to be your primary employment?

- 0 = No
- 1 = Yes

**Form:** Q8 **Label:** Part-time but preferred full-time position

**Form Administered To:**

Part-time faculty and instructional staff

**StemWording:**

Would you have preferred a full-time position for the 2003 Fall Term at [FILL INSTNAME]?

- 0 = No
- 1 = Yes

**Form:** Q9 **Label:** Year began current job

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

In what year did you start working at the job you held during the 2003 Fall Term at [FILL INSTNAME]? Consider promotions in rank as part of the same job.

\* Year:

**Form:** Q10 **Label:** Rank

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

During the 2003 Fall Term, was your academic rank, title, or position at [FILL INSTNAME] . . . (If no ranks are designated at your institution, select "Not applicable.")

- 0 = Not applicable (No formal ranks are designated at this institution)
- 1 = Professor
- 2 = Associate professor

- 3 = Assistant professor
- 4 = Instructor
- 5 = Lecturer
- 6 = Other title (e.g., Administrative, Adjunct, Emeritus, other)

**Form:** Q11 **Label:** Rank, year attained professor or associate professor

**Form Administered To:**

Faculty and instructional staff who hold the rank of professor or associate professor

**StemWording:**

In what year did you first achieve the rank of [FILL Q10] at **any** institution?

\* Year:

**Form:** Q12 **Label:** Tenure status

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

During the 2003 Fall Term at [FILL INSTNAME], were you . . .

- 1 = Tenured
- 2 = On tenure track but not tenured
- 3 = Not on tenure track
- 4 = Not tenured because institution had no tenure system

**Form:** Q13 **Label:** Tenure, year attained at any postsecondary institution

**Form Administered To:**

Tenured faculty and instructional staff

**StemWording:**

In what year did you first achieve tenure at **any** postsecondary institution?

\* Year:

**Form:** Q14 **Label:** Union status

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

Are you a member of a union or other bargaining association that is legally recognized to represent the faculty at [FILL INSTNAME]?

- 0 = No
- 1 = Yes

**Form:** Q15 **Label:** Union status, reason not a member

**Form Administered To:**

Faculty and instructional staff who are not members of a union

**StemWording:**

Is that because a union is not available, you are not eligible to join, or you decided not to join?

- 1 = Don't know
- 1 = Union is not available
- 2 = Union is available, but I am not eligible
- 3 = I am eligible, but I decided not to join

**Form:** Q16VS **Label:** Principal field of teaching-verbatim

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

What is your principal field or discipline of teaching at [FILL INSTNAME]?

(Enter the name of the principal field or discipline in the box below. This name will be used to match against a list of academic fields, so please be specific and do not use abbreviations or acronyms. If you have no principal field, select the "Not applicable" box.)

\* Name of principal field/discipline of teaching:

\* Not applicable (No principal teaching field or discipline)

**Form:** Q16AC **Label:** Principal field of teaching-autocode

**Form Administered To:**

Faculty and instructional staff who provided a verbatim field of teaching

**StemWording:**

Please select the code below to confirm your field of teaching: [FILL Q16VS]

**If you do not agree with this code, select "None of these codes"**

**to manually code the field.**

**Autocoding Explanation:** Using the verbatim string of the respondent's teaching field (provided in Q16VS), item Q16AC matches the string to selected categories from the Classification of Instructional Programs (CIP), the federal statistical standard for classifying instructional program. CIP descriptions that match the verbatim string appear on the screen, and the respondent selects the code that best describes the teaching field. (See pages C-28 through C-30 for a list of codes and descriptions) Strings that do not match the CIP descriptions are routed to Q16CD for manual coding. The respondent can also modify the verbatim string and redo the match or manually code the teaching field in Q16CD. (Additional information on CIP can be found at <http://nces.ed.gov/pubs2002/2002165.pdf>.)

**Form:** Q16CD

**Name:** Q16CD2 **Label:** Principal field of teaching-general code

**Name:** Q16CD4 **Label:** Principal field of teaching-specific code

**Form Administered To:**

Faculty and instructional staff who provided a verbatim field of teaching, but whose results were not autocoded

**StemWording:**

Please help us to categorize "[FILL Q16VS]" using the drop-down list boxes.

**(Coding Directions:** Please select a general area and then the specific discipline within the general area. Use the arrow at the right side of the first dropdown box to display the general areas. Click to select the desired general area, and then select the desired specific discipline within the area from the second dropdown box.)

\* General Area:

- 01 = Agriculture/natural resources/related 17 = Library science
- 02 = Architecture and related services 18 = Mathematics and statistics
- 03 = Area/ethnic/cultural/gender studies 19 = Mechanical/repair technologies/techs
- 04 = Arts--visual and performing 20 = Multi/interdisciplinary studies
- 05 = Biological and biomedical sciences 21 = Parks/recreation/leisure/fitness studies
- 06 = Business/management/marketing/ related 22 = Precision production
- 07 = Communication/journalism/comm. Tech 23 = Personal and culinary services
- 08 = Computer/info sciences/support tech 24 = Philosophy, religion & theology
- 09 = Construction trades 25 = Physical sciences
- 10 = Education 26 = Psychology
- 11 = Engineering technologies/technicians 27 = Public administration/social services
- 12 = English language and literature/letters 28 = Science technologies/technicians
- 13 = Family/consumer sciences, human sciences 29 = Security & protective services
- 14 = Foreign languages/literature/linguistics 30 = Social sciences (except psych) and history

15 = Health professions/clinical sciences 31 = Transportation & materials moving  
16 = Legal professions and studies 32 = Other

\* Specific Discipline:

0101 = Agriculture and related sciences 1102 = Chemical engineering  
0102 = Natural resources and conservation 1103 = Civil engineering  
0201 = Architecture and related services 1104 = Computer engineering  
0301 = Area/ethnic/cultural/gender studies 1105 = Electrical/electronics/comms engineering  
0401 = Art history, criticism & conservation 1106 = Engineering technologies/technicians  
0402 = Design & applied arts 1107 = Environmental/environmental health eng  
0403 = Drama/theatre arts and stagecraft 1108 = Mechanical engineering  
0404 = Fine and studio art 1109 = Engineering, other  
0405 = Music, general 1201 = English language and literature/letters  
0406 = Music history, literature, and theory 1301 = Family/consumer sciences, human sciences  
0407 = Visual and performing arts, other 1401 = Foreign languages/literature/linguistics  
0408 = Commercial and advertising art 1501 = Alternative/complementary medicine/sys  
0409 = Dance 1502 = Chiropractic  
0410 = Film/video and photographic arts 1503 = Clinical/medical lab science/allied  
0501 = Biochem/biophysics/molecular biology 1504 = Dental support services/allied  
0502 = Botany/plant biology 1505 = Dentistry  
0503 = Genetics 1506 = Health & medical administrative services  
0504 = Microbiological sciences & immunology 1507 = Allied health and medical assisting services  
0505 = Physiology, pathology & related sciences  
1508 = Allied health diagnostic, intervention, treatment professions  
0506 = Zoology/animal biology 1509 = Medicine, including psychiatry  
0507 = Biological & biomedical sciences, other 1510 = Mental/social health services and allied  
0601 = Accounting and related services 1511 = Nursing  
0602 = Business admin/management/operations 1512 = Optometry  
0603 = Business operations support/assistance 1513 = Osteopathic medicine/osteopathy  
0604 = Finance/financial management services 1514 = Pharmacy/pharmaceutical sciences/admin  
0605 = Human resources management and svcs 1515 = Podiatric medicine/podiatry  
0606 = Marketing 1516 = Public health  
0607 = Business/mgt/marketing/related, other 1517 = Rehabilitation & therapeutic professions  
0608 = Management information systems/services 1518 = Veterinary medicine  
0701 = Communication/journalism/related pgms 1519 = Health /related clinical services, other  
0702 = Communication technologies/technicians and support services 1601 = Law  
0801 = Computer/info tech administration/mgmt 1602 = Legal support services  
0802 = Computer programming 1603 = Legal professions and studies, other  
0803 = Computer science 1701 = Library science  
0804 = Computer software and media applications 1801 = Mathematics  
0805 = Computer systems analysis 1802 = Statistics  
0806 = Computer systems networking/telecomm 1901 = Mechanical/repair technologies/techs  
0807 = Data entry/microcomputer applications 2001 = Multi/interdisciplinary studies  
0808 = Data processing 2101 = Parks, recreation and leisure studies  
0809 = Information science/studies 2102 = Health and physical education/fitness  
0810 = Computer/info sci/support svcs, other 2201 = Precision production  
0901 = Construction trades 2301 = Culinary arts and related services  
1001 = Curriculum and instruction 2302 = Personal and culinary services  
1002 = Educational administration/supervision 2401 = Philosophy  
1003 = Educational/instructional media design 2402 = Religion/religious studies  
1004 = Special education and teaching 2403 = Theology and religious vocations  
1005 = Student counseling/personnel services 2501 = Astronomy & astrophysics  
1006 = Education, other 2502 = Atmospheric sciences and meteorology  
1007 = Early childhood education and teaching 2503 = Chemistry  
1008 = Elementary education and teaching 2504 = Geological & earth sciences/geosciences  
1009 = Secondary education and teaching 2505 = Physics  
1010 = Adult and continuing education/teaching 2506 = Physical sciences, other  
1011 = Teacher ed: specific levels, other 2601 = Behavioral psychology  
1012 = Teacher ed: specific subject areas 2601 = Behavioral psychology

1013 = Bilingual & multicultural education 2602 = Clinical psychology  
1014 = Ed assessment 2603 = Education/school psychology  
1015 = Higher education 2604 = Psychology, other  
1101 = Biomedical/medical engineering 2701 = Public administration  
2702 = Social work 3004 = Demography & population studies  
2703 = Public administration & social svcs other 3005 = Economics  
2801 = Science technologies/technicians 3006 = Geography & cartography  
2901 = Corrections 3007 = History  
2902 = Criminal justice 3008 = International relations & affairs  
2903 = Fire protection 3009 = Political science and government  
2904 = Police science 3010 = Sociology  
2905 = Security and protective services, other 3011 = Urban studies/affairs  
3001 = Anthropology (except psychology) 3012 = Social sciences, other  
3002 = Archeology 3101 = Transportation & materials moving  
3003 = Criminology 3201 = Other

## ► SECTION B: Academic/Professional Background

**Form:** Q17a1 **Label:** Highest degree

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

What is the highest degree you have completed? Do not include honorary degrees.

(If you have none of the degrees or awards, select "Not applicable.")

0 = Not applicable (Do not hold a degree)

1 = Doctoral degree (Ph.D., Ed.D., etc.)

2 = First-professional degree (M.D., D.O., D.D.S. or D.M.D., LL.B., J.D., D.C. or D.C.M., Pharm.D., Pod.D. or D.P., D.V.M., O.D., M.Div. or H.H.L. or B.D.)

3 = Master of Fine Arts, Master of Social Work (M.F.A., M.S.W.)

4 = Other master's degree (M.A., M.S., M.B.A, M.Ed., etc.)

5 = Bachelor's degree (B.A., A.B., B.S., etc.)

6 = Associate's degree or equivalent (A.A., A.S., etc.)

7 = Certificate or diploma for completion of undergraduate program (other than associate's or bachelor's)

**Form:** Q17a1b **Label:** Hold PhD in addition to professional degree

**Form Administered To:**

Faculty and instructional staff whose highest degree is a first-professional degree

**StemWording:**

Do you also hold a Ph.D. or other doctorate?

0 = No

1 = Yes

**Form:** Q17a2 **Label:** Highest degree date awarded

**Form Administered To:**

Faculty and instructional staff who hold a degree

**StemWording:**

In what year did you receive your [FILL Q17A1 or Q17A1B]?

(If you have more than one degree at the same level, please select the most recent degree.)

\* Year received:

**Form:** Q17a3VS **Label:** Highest degree field-verbatim

**Form Administered To:**

Faculty and instructional staff who hold a degree

**StemWording:**

In what field or discipline was your **[FILL Q17A1 or Q17A1B]**?

(Enter the name of your degree field or discipline. This name will be used to match against a list of academic fields, so please be specific and do not use abbreviations or acronyms.)

**Form:** Q17a3AC **Label:** Highest degree field-autocode

**Form Administered To:**

Faculty and instructional staff who provided a verbatim highest degree field

**StemWording:**

Please select the appropriate code for your **[FILL Q17A1 or Q17A1B]** field: **[FILL Q17a3VS]**. If you do not agree with these codes, select "None of these codes" to manually code the field.

**Autocoding Explanation:** Using the verbatim string of the respondent's highest degree field (provided in Q17A3VS), item Q17A3AC matches the string to selected CIP categories (see pages C-28 through C-30 for a list of codes and descriptions). Descriptions that match the verbatim string appear on the screen, and the respondent selects the code that best describes the degree field. Strings that do not match the CIP descriptions are routed to Q17A3CD for manual coding. (The respondent can also modify the verbatim string and redo the match or manually code the teaching field in Q17A3CD.)

**Form:** Q17a3CD

**Name:** Q17a3C2 **Label:** Highest degree field-general code

**Name:** Q17a3C4 **Label:** Highest degree field-specific code

**Form Administered To:**

Faculty and instructional staff who provided a verbatim highest degree field, but whose results were not autocoded

**StemWording:**

Please help us categorize "[FILL Q17a3VS]" using the drop-down list boxes below.

[IF Q16CD ≥ 0]

(Select one from the list of disciplines you've already told us about:)

[ENDIF]

**(Coding Directions:** Please select a general area and then the specific discipline within the general area. Use the arrow at the right side of the first dropdown box to display the general areas. Click to select the desired general area, and then select the desired specific discipline within the area from the second dropdown box.)

\* General Area:

\* Specific Discipline:

**Note:** Please refer to the complete list of instructional program codes on pages C-28 through C-30.

**Form:** Q17a4

**Name:** Q17a4ST **Label:** Highest degree institution-state

**Name:** Q17a4C **Label:** Highest degree institution-city

**Name:** Q17a4N **Label:** Highest degree institution-name

**Name:** Q17a4I **Label:** Highest degree institution-IPEDS

**Form Administered To:**

Faculty and instructional staff who hold a degree

**StemWording:**

Please help us code the postsecondary institution that awarded your **[FILL Q17A1 or Q17A1B]** by providing the state and city in which it was located.

**(Steps:**

1. Please select the state in which the school was located. If the school was located in another

country, select "foreign country."

2. Enter the name of the city in which the institution was located. You can also use the "Browse" link to identify the city.

3. Select the "Continue" button to list the schools located in that state and city.

4. Select the desired school.

**Problems?** Try searching for the school by state without listing a city. If you still can't find the school, select the "Unable To Find School in List" button at the bottom of the search results.)

\* State/Foreign:

1 = Alabama 21 = Maryland 41 = South Carolina

2 = Alaska 22 = Massachusetts 42 = South Dakota

3 = Arizona 23 = Michigan 43 = Tennessee

4 = Arkansas 24 = Minnesota 44 = Texas

5 = California 25 = Mississippi 45 = Utah

6 = Colorado 26 = Missouri 46 = Vermont

7 = Connecticut 27 = Montana 47 = Virginia

8 = Delaware 28 = Nebraska 48 = Washington

9 = District of Columbia 29 = Nevada 49 = West Virginia

10 = Florida 30 = New Hampshire 50 = Wisconsin

11 = Georgia 31 = New Jersey 51 = Wyoming

12 = Hawaii 32 = New Mexico 52 = Puerto Rico

13 = Idaho 33 = New York 54 = American Samoa

14 = Illinois 34 = North Carolina 55 = Guam

15 = Indiana 35 = North Dakota 56 = Federated States of Micronesia

16 = Iowa 36 = Ohio 57 = Marshall Islands

17 = Kansas 37 = Oklahoma 58 = Northern Mariana Islands

18 = Kentucky 38 = Oregon 59 = Palau

19 = Louisiana 39 = Pennsylvania 60 = U.S. Virgin Islands

20 = Maine 40 = Rhode Island 63 = Foreign Country

\* City:

\* School Name:

**Form:** Q17d1 **Label:** Bachelor's degree date awarded

**Form Administered To:**

Faculty and instructional staff who reported their highest degree as master's level or above

**StemWording:**

In what year did you receive your bachelor's degree?

(If you have more than one degree at this level, please select the first degree.)

\* Year received:

\* Not applicable (Do not hold a bachelor's degree)

**Form:** Q18 **Label:** Other current jobs, number of jobs

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

While you were employed at [FILL INSTNAME], how many **other** jobs did you hold during the 2003 Fall Term? Please do not consider any outside consulting jobs. (If none, select "0.")

0 = 0

1 = 1

2 = 2

3 = 3

4 = 4

5 = 5 or more

**Form:** Q19a1 **Label:** Other current jobs, full-time employment

**Form Administered To:**

Faculty and instructional staff with other employment (excluding consulting)

**StemWording:**

[IF Q18>1]

Were you employed full time at any of these other jobs during the 2003 Fall Term?

[ELSE]

Were you employed full time at this other job during the 2003 Fall Term?

[ENDIF]

0 = No

1 = Yes

**Form:** Q19b1 **Label:** Other current jobs, number in postsecondary instruction

**Form Administered To:**

Faculty and instructional staff with other employment (excluding consulting)

**StemWording:**

How many of these other jobs involved instruction at another postsecondary institution during the 2003 Fall Term? (If none, select "0.")

0 = 0

1 = 1

2 = 2

3 = 3

4 = 4

5 = 5 or more

**Form:** Q21 **Label:** First postsecondary job, current job is first

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

Is the job you held at [FILL INSTNAME] during the 2003 Fall Term the first faculty or instructional staff position you have held at a postsecondary institution? Do not include teaching assistant or research assistant positions while you were working on your degree.

0 = No

1 = Yes

**Form:** Q23 **Label:** First postsecondary job, year began

**Form Administered To:**

Faculty and instructional staff who have worked at another postsecondary institution

**StemWording:**

In what year did you begin your first faculty or instructional staff position at a postsecondary institution?

(Do not include time when you were a teaching or research assistant.)

\* Year:

**Form:** Q24 **Label:** First postsecondary job, part or full time

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

[IF Q21=1]

When you first started your job at [FILL INSTNAME], were you employed full time or part time?

[ELSE]

Were you employed full time or part time at your **first** faculty or instructional staff position?

[ENDIF]

(Do not consider teaching or research assistant positions.)

1 = Full time

2 = Part time

**Form:** Q26 **Label:** First postsecondary job, tenure status

**Form Administered To:**

Faculty and instructional staff whose first job was full-time except if this is their first postsecondary institution position and there is no tenure system at this institution

**StemWording:**

[IF Q21=1]

When you began working at [FILL INSTNAME], was your tenure status. . .

[ELSE]

When you began working at your **first** faculty or instructional staff job at a postsecondary institution, was your tenure status. . .

[ENDIF]

1 = Tenured

2 = On tenure track but not tenured

3 = Not on tenure track

4 = Not tenured because institution had no tenure system

**Form:** Q27 **Label:** Other jobs, any outside postsecondary since degree

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

Since receiving your highest degree, have you held any positions outside of postsecondary institutions?

0 = No

1 = Yes

**Form:** Q28 **Label:** Other jobs, sector of previous job

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

Now we would like to know about the job you held prior to starting your current job at

[FILL INSTNAME]. Was the job in a . . .

(By "Current Job" we mean the position you held at [FILL INSTNAME] during the 2003 Fall Term.)

0 = Not applicable (No job immediately prior to this one)

1 = 4- or 2-year postsecondary institution

2 = Other educational institution

3 = Government (federal, state, local) or military organization

4 = Foundation or other nonprofit organization

5 = For profit business or industry

6 = Other

## ► SECTION C: Instructional Responsibilities and Workload

**Form:** Q31

**Name:** Q31a **Label:** Hours per week on paid tasks at institution

**Name:** Q31b **Label:** Hours per week on unpaid tasks at institution

**Name:** Q31c **Label:** Hours per week on paid tasks outside of institution

**Name:** Q31d **Label:** Hours per week on unpaid tasks outside of institution

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

This next section of the questionnaire relates to your responsibilities on the job and your workload.

**On average**, how many **hours per week** did you spend at each of the following work activities during the 2003 Fall Term?

(Enter average number of hours. If not sure, give your best estimates. If none, enter "0." If less than one hour, enter "1.")

\* a. All **paid activities at [FILL INSTNAME]** (e.g., teaching, clinical service, class preparation, research, administration)

\* b. All **unpaid activities at [FILL INSTNAME]** (e.g., club assistance, recruiting, attending institution events)

\* c. Any other paid activities **outside [FILL INSTNAME]** including consulting, working at other jobs, teaching at other schools

\* d. Unpaid professional service activities **outside [FILL INSTNAME]** related to your work. (Do not include volunteer work unrelated to your profession.)

**Form:** Q32

**Name:** Q32a **Label:** Percent time spent on instruction, undergraduate

**Name:** Q32b **Label:** Percent time spent on instruction, graduate/first-professional

**Name:** Q32c **Label:** Percent time spent on research activities

**Name:** Q32d **Label:** Percent time spent on other unspecified activities

**Form Administered To:**

Faculty and instructional staff who worked at least one hour per week at the target institution

**StemWording:**

[IF Q31A AND Q31B AND Q31C AND Q31D = BLANK]

For the hours you worked during the 2003 Fall Term at [FILL INSTNAME],

[ELSE]

For the [FILL Q31A + Q31B] hours per week you worked during the 2003 Fall Term at [FILL INSTNAME],

[ENDIF]

we would like you to allot this time—using percentages—into four broad categories:

**Instruction with undergraduates, Instruction with graduate and first-professional students, Research, and Other Activities.** (If you are not sure, give your best estimate. The percentages should sum to 100%. If none for a category, enter "0".)

What percentage of your time was spent on. . .

\* a. **Instructional Activities with Undergraduates**, including teaching and preparing for classes, advising, and supervising students at this institution?

\* b. **Instructional Activities with Graduate and First Professional students**, including teaching and preparing for classes, advising, and supervising students at this institution?

\* c. **Research Activities**, other forms of scholarship, or grants at this institution?

\* d. **All Other Activities** at this institution like administration, professional growth, service, and other activities not related to teaching or research.

**Form:** Q35a

**Name:** Q35a1 **Label:** Number of classes taught, credit

**Name:** Q35a2 **Label:** Number of classes taught, noncredit

**Form Administered To:**

Faculty and instructional staff with instructional duties, Fall 2003

**StemWording:**

Next, we would like to ask you about the classes or sections you taught during the 2003 Fall Term at [FILL INSTNAME]. **Please do not include individualized instruction.** Questions about independent study, intern supervision, and one-on-one instruction in performance, clinical, or research settings come later. **(If none, select "no classes.")**

How many. . .

\* a. Classes/sections **for credit** towards degree did you teach?

\* b. Classes/sections **not for credit** towards degree did you teach?

(Guidance on Counting Classes

Count multiple sections of the same course separately. For example, Sociology 101 taught to two different groups of students would count as two classes.

Count lab or discussion sections as part of the same class unless they have separate credits assigned to them. For example, a biology class with lectures, labs, and discussion sections each week counts as one class.)

0 = No classes

1 = 1 class

.

.

.

19 = 19 classes

20 = 20 or more classes

**Form:** Q35b

**Name:** Q35b **Label:** Number of classes taught, remedial

**Name:** Q35c **Label:** Number of classes taught, distance education

**Form Administered To:**

Faculty and instructional staff who taught at least one class

**StemWording:**

Of the [FILL Q35A] classes you taught at [FILL INSTNAME] in the 2003 Fall Term, (By **remedial or developmental classes**, we mean courses in reading, writing, math, or other courses for students lacking the skills necessary to perform college-level work at the level required **by your institution**. Some institutions refer to these courses as compensatory, basic skills, or some other term.

By **distance education**, we mean classes where students and instructors are separated primarily or exclusively by distance or time.)

\* a. How many were remedial or developmental classes?

\* b. How many were taught through distance education, either exclusively or primarily?

0 = No classes

1 = 1 class

.

.

.

19 = 19 classes

20 = 20 or more classes

**Form:** Q36 **Label:** Teaching assistant in any credit class

**Form Administered To:**

Faculty and instructional staff who taught at least one class for credit

**StemWording:**

[IF Q35A1=1]

Did you have teaching assistants, readers, graders, or lab assistants for the credit class you taught during the 2003 Fall Term at [FILL INSTNAME]?

[ELSE]

Did you have teaching assistants, readers, graders, or lab assistants for any of the credit classes you taught during the 2003 Fall Term at [FILL INSTNAME]?

[ENDIF]

0 = No

1 = Yes

**Form:** Q37 (loops for up to 5 classes)

**Name:** Q37a<sub>i</sub> (i = 1 to 5) **Label:** Number of weeks taught, i-th credit class

**Name:** Q37b<sub>i</sub> (i = 1 to 5) **Label:** Number of credit hours, i-th class

**Name:** Q37c<sub>i</sub> (i = 1 to 5) **Label:** Number of hours taught per week, i-th class

**Name:** Q37d<sub>i</sub> (i = 1 to 5) **Label:** Number of students, i-th class

**Name:** Q37e<sub>i</sub> (i = 1 to 5) **Label:** Primary level of students, i-th class

**Name:** Q37f<sub>i</sub> (i = 1 to 5) **Label:** Teaching assistant, i-th class

**Form Administered To:**

Faculty and instructional staff who taught at least one class for credit

**StemWording:**

[IF Q35A1>5]

You reported earlier that you taught [FILL Q35A1] classes for credit during the 2003 Fall Term at [FILL INSTNAME]. We have space for you to describe 5 of these classes. Please describe the ones you feel are most relevant for your instructional activities. We will call them classes A to E.

[IF Q35A1 >1 AND Q35A1 ≤ 5]

You reported earlier that you taught [FILL Q35A1] classes for credit during the 2003 Fall Term at [FILL INSTNAME]. Please answer the following questions for each of these classes, we will call A to [FILL B (IF Q35A1=2) OR C (IF Q35A1=3) OR D (IF Q35A1=4) OR E (IF Q35A1=5)].

[IF Q35A1=1]

For the credit class that you reported teaching at [FILL INSTNAME] during the 2003 Fall Term, please answer the following questions.

[ENDIF]

\* a. How many weeks did **you** teach the class?

0 0 weeks

1 1 week

..

..

..

24 24 weeks

25 25 weeks

\* b. How many credits were attached to the class?

\* c. How many hours did **you** teach the class per week?

(Do not include preparation time.)

\* d. How many students were enrolled in the class?

\* e. Were the students in this class primarily undergraduate, graduate, or first professional (e.g., dental, medical, law, theology)?

1 = Undergraduate

2 = Graduate

3 = First professional

\* f. Did you have a teaching or lab assistant, reader, or grader assigned to this class?

0 = No

1 = Yes

**Form:** Q38

**Name:** Q38a **Label:** Undergrad class, multiple choice midterm/final exams

**Name:** Q38b **Label:** Undergrad class, essay midterm/final exams

**Name:** Q38c **Label:** Undergrad class, short answer midterm/final exams

**Name:** Q38d **Label:** Undergrad class, term/research papers

**Name:** Q38e **Label:** Undergrad class, multiple drafts of written work

**Name:** Q38f **Label:** Undergrad class, oral presentations

**Name:** Q38g **Label:** Undergrad class, group projects

**Name:** Q38h **Label:** Undergrad class, student evaluations of each others^ work

**Name:** Q38i **Label:** Undergrad class, laboratory/shop/studio assignments

**Name:** Q38j **Label:** Undergrad class, service learn/co-op interactions with business

**Form Administered To:**

Faculty and instructional staff who taught an undergraduate credit class

**StemWording:**

[IF Q37EI=1 FOR EXACTLY ONE OF THE Q37Ei, WHERE i=1 TO 5 OR  
(IF Q32A>0 AND Q32B=0 OR BLANK AND Q35A1=1)]

For the **undergraduate** class you taught for credit during the 2003 Fall Term at [FILL INSTNAME], did you use any of the following?

[ELSE]

For the **undergraduate** classes you taught for credit during the 2003 Fall Term at [FILL INSTNAME], did you use any of the following?

[ENDIF]

Did you use. . .

\* a. Multiple-choice midterm or final exam?

\* b. Essay midterm or final exam?

\* c. Short-answer midterm or final exam?

\* d. Term/research papers and writing assignments?

\* e. Multiple drafts of written work?

\* f. Oral presentations by students?

\* g. Group and team projects producing a joint product?

\* h. Student evaluations of each other's work?

\* i. Laboratory, shop, or studio assignments?

\* j. Service learning, co-op experiences or assignments requiring interactions with the community or business/industry?

1 = Used in all classes

2 = Used in some classes

3 = Not used

**Form:** Q39 **Label:** Website for any instructional duties

**Form Administered To:**

Faculty and instructional staff who had instructional duties

**StemWording:**

During the 2003 Fall Term at [FILL INSTNAME], did **you** have one or more web sites for any of your teaching, advising, or other instructional duties?

(Web sites used for instructional duties might include the syllabus, readings, assignments, and practice exams for classes; might enable communication with students via listservs or online forums; and might provide real-time computer-based instruction.)

0 = No

1 = Yes

**Form:** Q41 **Label:** Hours per week, e-mailing students

**Form Administered To:**

Faculty and instructional staff who had instructional duties

**StemWording:**

During the 2003 Fall Term at [FILL INSTNAME], how many hours per week did you spend communicating by e-mail (electronic mail) with your students? (If none, enter "0.")

\* Hours per week:

**Form:** Q46 **Label:** Individual instruction, any

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

During the 2003 Fall Term, did you provide individual instruction **for credit** to any student at [FILL INSTNAME]? By individual instruction, we mean independent study, supervising student teachers or interns, and one-on-one instruction like working with students in a clinical or research setting. Do not include dissertation or thesis committee work.

0 = No

1 = Yes

**Form:** Q47

**Name:** Q47a1 **Label:** Individual instruction, number undergraduate students

**Name:** Q47a2 **Label:** Individual instruction, number graduate students

**Name:** Q47a3 **Label:** Individual instruction, number first-professional students

**Form Administered To:**

Faculty and instructional staff who provided individual instruction to students

**StemWording:**

[IF Q32A>0 AND Q32B=0 OR BLANK]

How many undergraduate students received individual instruction for credit from you during the 2003 Fall Term?

[ELSE]

Of the students who received individual instruction for credit from you during the 2003 Fall Term, how many were . . .

[ENDIF]

(If none, enter "0.")

\* Undergraduate students

\* Graduate students

\* First-professional students (e.g., dental, medical, law, theology)

**Form:** Q47b

**Name:** Q47b1 **Label:** Individual instruction, hours with undergraduates

**Name:** Q47b2 **Label:** Individual instruction, hours with graduate students

**Name:** Q47b3 **Label:** Individual instruction, hours with first-professional students

**Form Administered To:**

Faculty and instructional staff who provided individual instruction to undergraduate, graduate, or first-professional students

**StemWording:**

Of the students who received individual instruction for credit from you during the 2003 Fall Term, what was the **total number of hours** you spent each week with your. . .

(If less than one hour, enter "1.")

\* Undergraduate students

\* Graduate students

\* First-professional students

**Form:** Q48

**Name:** Q48 **Label:** Hours per week, thesis/dissertation committees

**Name:** Q49 **Label:** Hours per week, administrative committees

**Name:** Q50 **Label:** Hours per week, with advisees

**Name:** Q51 **Label:** Hours per week, office hours

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

The next items ask about the average number of hours each week during the 2003 Fall Term at [FILL INSTNAME] that you did the following activities.

(If none, enter "0." If less than one hour, enter "1." If not sure, give your best estimate.)

How many hours per week did you spend. . .

\* On undergraduate and graduate thesis or dissertation committees, comprehensive exams or orals committees, or examination or certification committees?

\* On administrative committee work? Please include curriculum, personnel, governance, and other committees at the department, division, institution, and system levels.

\* With students you were assigned to advise? (Do not include hours spent working with students on their theses, dissertations, or independent studies.)

\* In regularly scheduled office hours in person or online?

## ► SECTION D: Scholarly Activities

**Form:** Q52a

**Name:** Q52aa **Label:** Career articles, refereed journals

**Name:** Q52ab **Label:** Career articles, nonrefereed journals

**Name:** Q52ac **Label:** Career book reviews, chapters, creative works

**Name:** Q52ad **Label:** Career books, textbooks, reports

**Name:** Q52ae **Label:** Career presentations

**Name:** Q52af **Label:** Career exhibitions, performances

**Name:** Q52ag **Label:** Career patents, computer software

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

Next, we would like to consider your scholarly activities. During your entire career, how many of the following have you completed?

(If not sure, give your best estimates.)

\* Articles published in **refereed** professional or trade journals; or creative works published in juried media?

\* Articles published in **nonrefereed** professional or trade journals; or creative works published in **nonjuried** media or in-house newsletters?

- \* Published reviews of books, articles, or creative works; or chapters in edited volumes?
- \* Textbooks, other books; monographs; research or technical reports disseminated internally or to clients?
- \* Presentations at conferences, workshops, etc.?
- \* Exhibitions or performances in the fine or applied arts?
- \* Patents and computer software products?

(For publications, include only works that have been accepted for publication. Count multiple publications/presentations of the same work only once. Include electronic publications that are not published elsewhere in the appropriate categories.)

**Form:** Q52b

**Name:** Q52ba **Label:** Recent articles, refereed journals

**Name:** Q52bb **Label:** Recent articles, nonrefereed journals

**Name:** Q52bc **Label:** Recent book reviews, chapters, creative works

**Name:** Q52bd **Label:** Recent books, textbooks, reports

**Name:** Q52be **Label:** Recent presentations

**Name:** Q52bf **Label:** Recent exhibitions, performances

**Name:** Q52bg **Label:** Recent patents, computer software

**Form Administered To:**

Faculty and instructional staff who have presented or published during their career

**StemWording:**

We would like to consider the level of your scholarly activities during the last **two years**.

\* Of the [FILL Q52aa] articles or creative works published in refereed journals or juried media in your career, how many were done in the last two years?

\* Of the [FILL Q52ab] articles or creative works published in nonrefereed journals or nonjuried media in your career, how many were done in the last two years?

\* Of the [FILL Q52AC] reviews of books, articles, or creative works; chapters in edited volumes published in your career, how many were in the last two years?

\* Of the [FILL Q52AD] textbooks, other books; monographs; and client reports you published during your career, how many were done in the last two years?

\* Of the [FILL Q52ae] presentations you made at conferences or workshops in your career, how many were made in the last two years?

\* Of your [FILL Q52af] career exhibitions or performances, how many were in the last two years?

\* Of your [FILL Q52ag] career patents, software products, or other works, how many were done in the last two years?

**Form:** Q53 **Label:** Scholarly activity, any

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

Do you have any scholarly activities such as research, proposal development, creative writing, or other creative works in the 2003–04 **academic year**?

0 = No

1 = Yes

**Form:** Q54VS **Label:** Scholarly activity, principal field-verbatim

**Form Administered To:**

Faculty and instructional staff who have scholarly activities and did not provide principal field of teaching (Q16VS)

**StemWording:**

What is your principal field or discipline of scholarly activity?

(Enter the name of your principal field/discipline of scholarly activity. This name will be used to match against a list of academic fields, so please be specific and do not use abbreviations or acronyms.)

\* Name of principal field/discipline of scholarly activity:

**Form:** Q54AC **Label:** Principal field of scholarly activity-autocode

**Form Administered To:**

Faculty and instructional staff who provided a verbatim field of scholarly activity

**StemWording:**

Please select the appropriate code for your field of scholarly activity: **[FILL Q54VS]**.

If you do not agree with these codes, select "None of these codes" to manually code the field.

**Autocoding Explanation:** Using the verbatim string of the respondent's field of scholarly activity (provided in Q54VS), item Q54AC matches the string to selected CIP categories (see pages C-28 through C-30 for a list of codes and descriptions). Descriptions that match the verbatim string appear on the screen, and the respondent selects the code that best describes the field. Strings that do not match the CIP descriptions are routed to Q54CD for manual coding. (The respondent can also modify the verbatim string and redo the match or manually code the scholarly field in Q54CD).

**Form:** Q54CD

**Name:** Q54CD2 **Label:** Principal research field-general code

**Name:** Q54CD4 **Label:** Principal research field-specific code

**Form Administered To:**

Faculty and instructional staff who provided a verbatim field of scholarly activity, but whose results were not autocoded

**StemWording:**

Please help us to categorize "[FILL Q54VS]" using the drop-down list boxes below.

[IF Q17A3AC ≥ 0]

(Select one from the list of disciplines you've already told us about:)

[ENDIF]

**Coding Directions:** Please select a general area and then the specific discipline within the general area. Use the arrow at the right side of the first dropdown box to display the general areas. Click to select the desired general area, and then select the desired specific discipline within the area from the second dropdown box.)

\* General area:

\* Specific Discipline:

**Note:** Please refer to the complete list of instructional program codes on pages C-28 through C-30.

**Form:** Q56 **Label:** Scholarly activity, description

**Form Administered To:**

Faculty and instructional staff engaged in scholarly activity

**StemWording:**

How would you describe your principal scholarly activity during the **2003–04 academic year**? Is it. . .

1 = Basic research

2 = Applied or policy-oriented research or analysis

3 = Literary, performance, or exhibitions

4 = Program and curriculum design and development

5 = Other

**Form:** Q55 **Label:** Scholarly activity, any funded

**Form Administered To:**

Faculty and instructional staff engaged in scholarly activity

**StemWording:**

During the **2003–04 academic year**, are any of your scholarly activities at [FILL INSTNAME] **funded**? Do not include consulting services and research included as part of your basic salary.

0 = No

1 = Yes

## ► SECTION E: Job Satisfaction

**Form:** Q61

**Name:** Q61a **Label:** Satisfaction with authority to make decisions

**Name:** Q61b **Label:** Satisfaction with technology-based activities

**Name:** Q61c **Label:** Satisfaction with equipment/facilities

**Name:** Q61d **Label:** Satisfaction with institutional support for teaching improvement

**Name:** Q62a **Label:** Satisfaction with workload

**Name:** Q62b **Label:** Satisfaction with salary

**Name:** Q62c **Label:** Satisfaction with benefits

**Name:** Q62d **Label:** Satisfaction with job overall

**Form Administered To:**

All faculty and instructional staff with instructional responsibilities (Q61a–Q61d); All faculty and instructional staff (Q62a–Q62d)

**StemWording:**

[IF Q1=1 OR Q46=1 OR Q48>0 OR Q35A1>0 OR Q35A2>0]

With regard to your job at [FILL INSTNAME] during the 2003 **Fall Term**, would you say you were very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied with. . .

**NSOPF:04 Faculty Instrument Facsimile**

**30**

[ELSE]

With regard to your job at [FILL INSTNAME], would you say you are very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied with. . .

[ENDIF]

- \* The authority you had to make decisions about content and methods in your instructional activities
- \* The institutional support for implementing technology-based instructional activities
- \* Quality of equipment and facilities available for classroom instruction
- \* Institutional support for teaching improvement (including grants, release time, and professional development funds)
- \* Your workload
- \* Your salary
- \* The benefits available to you
- \* Your job at this institution, overall

**Form:** Q65

**Name:** Q64 **Label:** Retired from another position

**Name:** Q65 **Label:** Retire from all paid employment, planned age

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

\* Have you retired from another position?

0 = No

1 = Yes

\* At what age do you think you are most likely to retire from all paid employment?  
(Enter age or select "Don't know.")  
Years of age/Don't know

## ► SECTION F: Compensation

**Form:** Q66

**Name:** Q66a **Label:** Amount of income from basic salary from institution

**Name:** Q66b **Label:** Amount of income from other income from institution

**Name:** Q66c **Label:** Amount of income from other academic institution

**NSOPF:04 Faculty Instrument Facsimile**

**31**

**Name:** Q66d **Label:** Amount of income from consulting or freelance work

**Name:** Q66e **Label:** Amount of income from other employment

**Name:** Q66f **Label:** Amount of income from other unspecified sources

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

We are almost finished. The next questions will be about your compensation and about your background. Your responses to these items—as with all items on this instrument—are voluntary and strictly confidential. They will be used only in statistical summaries.

**For the 2003 calendar year**, please estimate your gross compensation before taxes. Do not include non-monetary compensation.

(Enter dollar amount. If not sure, give your best estimates. If not applicable, enter "0.")

**First, your compensation from [FILL INSTNAME]:**

a. What is your basic salary during the calendar year from this institution?

b. How much compensation did you receive from other income from this institution not included in basic salary (e.g., for summer session, overload courses, administration, research, coaching sports, etc.)?

**Next, your compensation from other sources**

c. How much were you paid for employment at another postsecondary institution?

d. How much were you paid for outside consulting or freelance work?

e. How much were you compensated for any other employment besides consulting and another postsecondary institution (e.g., speaking fees and honoraria, self-owned business, legal/medical/psychological services, professional performances/exhibitions)?

f. How much income did you receive from any other source (e.g., investment income, royalties/commissions, pensions, real estate, loans, alimony, or child support)?

**Form:** Q66b **Label:** Amount of total individual income (range)

**Form Administered To:**

Faculty and instructional staff who did not complete all compensation item amounts

**StemWording:**

The following ranges may make it easier for you to estimate **your total income from all sources** for the 2003 calendar year.

(Your responses to these items are strictly confidential. They will be used only in statistical summaries.)

1 = \$1–24,999

2 = \$25,000–49,999

3 = \$50,000–74,999

- 4 = \$75,000–99,999
- 5 = \$100,000–149,999
- 6 = \$150,000–199,999
- 7 = \$200,000–300,000
- 8 = More than \$300,000

**Form:** Q67 **Label:** Type of contract, length of unit

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

Is your basic salary at [FILL INSTNAME] this academic year based on a 9– or 10–month contract, an 11– or 12–month contract, or some other arrangement?

(Please answer based on the length of your contract and how long you work rather than on the number of months you are paid.)

- 1 = 9– or 10–month contract
- 2 = 11– or 12–month contract
- 3 = Other, for example, by course or credit hour

**Form:** Q68 **Label:** Income paid per course/credit unit or term

**Form Administered To:**

Faculty and instructional staff paid on something other than a 9–, 10–, 11–, or 12–month contract

**StemWording:**

What was the basis of your pay? Was it by. . .

- 1 = Course
- 2 = Credit hour
- 3 = Academic term
- 4 = Other (e.g., per student, hourly rate)

**Form:** Q69 **Label:** Amount of income paid per course/credit unit or term

**Form Administered To:**

Faculty and instructional staff paid by course, credit hour, or academic term

**StemWording:**

How much were you paid per [FILL Q68]?

**Form:** Q70a **Label:** Amount of total household income

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

[IF RESPONDED TO ALL PARTS OF Q66AA-Q66AF]

You told us before that **your** income from all sources for the 2003 Calendar year was \$[FILL Q66ASUM]. What was your total **household income** before taxes for that same year?

[ELSE IF Q66B ≥ 1 and Q66B ≤ 8]

You told us before that **your** income from all sources for the 2003 Calendar year was [FILL Q66B].

What was your total **household income** before taxes for that same year?

[ELSE]

For the 2003 calendar year, what was your total household income before taxes?

[ENDIF]

(By household income, we mean the total income received by all persons, including yourself, residing in the house during the 2003 calendar year, but excluding minors and full-time students. Please include income from employment and from other sources including your spouse or partner,

self-employment, interest earnings, alimony or child support, insurance benefits, and pension payments.)

\* Enter amount:

**Form:** Q70b **Label:** Amount of total household income (range)

**Form Administered To:**

Faculty and instructional staff who did not provide their household income

**StemWording:**

The following ranges may make it easier for you to report your total household income.

Was your income between. . .

(Your responses to these items are strictly confidential. They will be used only in statistical summaries.)

-1 = Don't know

1 = \$1–24,999

2 = \$25,000–49,999

3 = \$50,000–74,999

4 = \$75,000–99,999

5 = \$100,000–149,999

6 = \$150,000–199,999

7 = \$200,000–300,000

8 = More than \$300,000

## ► SECTION G: Sociodemographic Characteristics

**Form:** Q71 **Label:** Gender

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

The last few questions ask you to describe yourself and your opinions about your job.

Are you . . .

1 = Male

2 = Female

**Form:** Q72 **Label:** Age, year of birth

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

In what year were you born?

\* Enter year:

**Form:** Q73 **Label:** Race/ethnicity, Hispanic/Latino

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

Are you Hispanic or Latino?

0 = No

1 = Yes

**Form:** Q74

**Name:** Q74a **Label:** Race, American Indian or Alaska Native

**Name:** Q74b **Label:** Race, Asian

**Name:** Q74c **Label:** Race, Black or African American

**Name:** Q74d **Label:** Race, Native Hawaiian or other Pacific Islander

**Name:** Q74e **Label:** Race, White

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

Please select **one or more** of the following choices to best describe your race. Are you. . .

(Select all that apply.)

\* American Indian or Alaska Native

\* Asian

\* Black or African American

\* Native Hawaiian or Other Pacific Islander

\* White

0 = No

1 = Yes

**Form:** Q75 **Label:** Disability, any

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

Do you have a long-lasting condition that substantially limits one or more of your major life activities?

(By this we mean do you have a physical, visual, auditory, mental, emotional, or other disabling condition that limits your ability to see, hear, or speak; to learn, remember, or concentrate; to dress, bathe, or get around the house, or to get to school or around campus.)

0 = No

1 = Yes

**Form:** Q77 **Label:** Marital status, fall 2003

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

On November 1, 2003, were you . . .

1 = Single **and never married**

2 = Married

3 = Living with partner or significant other

4 = Separated, divorced, or widowed

**Form:** Q79 **Label:** Dependent children, number

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

How many dependent children do you support?

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

\* Number of dependent children:

0 = None

1 = 1

2 = 2

.

.

9 = 9

10 = 10 or more dependents

**Form:** Q80

**Name:** Q80 **Label:** Born in United States

**Name:** Q81 **Label:** Citizenship status

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

Were you born in the United States?

0 = No

1 = Yes

Are you a United States citizen?

0 = No

1 = Yes

## ► SECTION H: Opinions

**Form:** Q82

**Name:** Q82a **Label:** Opinion: teaching is rewarded

**Name:** Q82b **Label:** Opinion: part-time faculty treated fairly

**Name:** Q82c **Label:** Opinion: female faculty treated fairly

**Name:** Q82d **Label:** Opinion: racial minorities treated fairly

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

Do you strongly agree, somewhat agree, somewhat disagree, or strongly disagree that at [FILL INSTNAME]. . .

\* a. Good teaching is rewarded

\* b. Part-time faculty are treated fairly

\* c. Female faculty members are treated fairly

\* d. Faculty who are members of racial or ethnic minorities are treated fairly

1 = Strongly Agree

2 = Somewhat Agree

3 = Somewhat Disagree

4 = Strongly Disagree

**Form:** Q83 **Label:** Opinion about choosing an academic career again

**Form Administered To:**

All faculty and instructional staff

**StemWording:**

Finally, if you had it to do over again, would you still choose an academic career?

0 = No

1 = Yes