Intrinsic, Extrinsic, Demographic, and Institutional Factors Related to
Job Satisfaction of Full- and Part-time Public Community College Faculty

A dissertation presented to
the faculty of
the College of Education of Ohio University

In partial fulfillment
of the requirements for the degree
Doctor of Philosophy

Philip C. Lootens
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This dissertation titled
Intrinsic, Extrinsic, Demographic, and Institutional Factors Related to
Job Satisfaction of Full- and Part-time Public Community College Faculty

by

PHILIP C. LOOTENS

has been approved for
the Department of Counseling and Higher Education
and the College of Education by

______________________________

Valerie Martin Conley
Associate Professor of Counseling and Higher Education

______________________________

Renée A. Middleton
Dean, College of Education
ABSTRACT

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Intrinsic, Extrinsic, Demographic, and Institutional Factors Related to
Job Satisfaction of Full- and Part-time Public Community College Faculty (177 pp.)

Director of Dissertation: Valerie Martin Conley

The purpose of this study was to gain insight into community college faculty job satisfaction of full- and part-time faculty in relation to intrinsic and extrinsic, demographic, and institutional typology factors affecting job satisfaction. Intrinsic, extrinsic, demographic and institutional typology job satisfaction factors were operationalized as predictors by employing the 2004 National Study of Postsecondary Faculty (NSOPF: 04) and the 2005 Carnegie classifications to adapt and extend the model developed by Hagedorn (2002) to public community college faculty. The outcome variables of global job satisfaction were operationalized by using the NSOPF: 04 employment index and the instruction index variables. Independent samples t-tests were conducted to evaluate overall job satisfaction between full- and part-time faculty for both outcome variables. There are significant ($p < .001$) differences in job satisfaction between full- and part-time faculty with the greatest levels of dissatisfaction of full-time faculty in workload ($p < .001$) and of part-time faculty with benefits ($p < .001$). The relationships between predictor and outcome variables were evaluated using weighted least squares multiple regression. The regression models for intrinsic and extrinsic, demographic, and institutional typology were all significant with the intrinsic and extrinsic predictors accounting for 22% of full-time faculty satisfaction variance and 33% of part-time faculty
job satisfaction variance with the employment index. Values of $\beta$ for all intrinsic and extrinsic predictors were significant at least at the $p < .05$ level. A large negative correlation was reflected for the part-time faculty predictor that part-time faculty are treated fairly ($r = -.51$) while negative medium correlations were observed for both full- ($r = -.38$) and part-time ($r = -.42$) faculty for the predictor of opinions that teaching is rewarded and for full-time faculty that part-time faculty are treated fairly. The demographic predictors for full-time faculty accounted for 23% and part-time faculty accounted for 22% of the variance in with the employment index. Implications for practice and areas for further research are discussed.

Approved: _____________________________________________________________

Valerie Martin Conley

Associate Professor of Counseling and Higher Education
I dedicate this dissertation to my loving family:

*My father and mother, Evelyn and Ed, without whom I would neither have life, nor the values that have served me so well,*

*Mary, the love of my life, whose unyielding love, encouragement and support has sustained me throughout 35 years of marriage,*

*My sons, Matt and Ben, and my daughter-in-law, Valentina, for their encouragement and support throughout my program of study.*
ACKNOWLEDGEMENTS

I want to acknowledge the blessings, contributions and support so generously provided to me by my savior, Jesus Christ, my family, the faculty, friends, and the 21 other members of Cycle 8 of the Executive Ph. D. in Higher Education Program at Ohio University. Without the blessings, help, expertise, and encouragement I would not have experienced such a quality experience of personal and professional growth.

I begin acknowledgements with the full proclamation of my gratitude to the Lord for His gifts of intellect, which is so vital to achieving academic success, personal qualities necessary for appreciating the tremendous benefit derived from this academic program, and the tenacity to overcome personal challenges to complete this dissertation. I also want to express my gratitude for His answers to the prayers of my family and friends during my severe illness and recovery from Guillain-Barré syndrome. Further, I would like to express my gratitude to the following individuals.

To the instructional faculty: Dr. Robert Young, Dr. Valerie Martin Conley, Dr. Marc Cutright, Dr. Garry Moden, Dr. Dafina Stewart, Dr. Adah Ward-Randolph, Dr. John Burns, Dr. and Gordon Brooks, thank you for the rich and challenging academic experience.

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the benefit of his sharing the unique perspectives and vast experience acquired only after a highly successful career as a community college educator and academic leader.

To my family, I would like to thank all of them for their support and encouragement throughout the program and their prayers during my recovery from Guillain-Barré syndrome. I especially want to thank my mother, Evelyn, my siblings, Ed and Amelia, Bob and Kathy, and Steve and Mary Kay and their children. I would also like to express my gratitude to my immediate family -- my sons, Matt and Ben, and my daughter-in-law, Valentina. In addition, I also want to express my deepest gratitude and appreciation to my spouse, Mary, for her unending and unquestioning support, encouragement, and understanding that sustained me throughout this program and my illness.

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Last, but certainly not least, I want to thank all of the members of Cycle 8. The diversity of perspective, experience, and commitment to others was of tremendous benefit to me, particularly during the coursework phase. I also want to extend my appreciation to all of them for support during my illness. Moreover, I want to thank Amy Adams for her greatly appreciated help in proofing this dissertation.
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CHAPTER 1: INTRODUCTION

The community college movement began at the beginning of the 20th century as a result of the vision of William Rainey Harper, president of the University of Chicago, and J. Stanley Brown, superintendent of Joliet, Illinois Township High School. They conceived the notion of providing the first two years of a baccalaureate program for prospective students “who desired to remain within the community and still pursue a college education” (Joliet Junior College, 2007, p. 1). With the founding of Joliet Junior College in 1901, Harper and Brown introduced the concept of collegiate education within the local community. During the period of 1901 through 1950 the number of 2-year colleges had expanded to a total of 524 such institutions, and by the time the 2004 National study of Postsecondary Faculty (NSOPF: 04) was conducted during the 2003-04 academic year, the number of 2-year institutions had more than tripled to total some 1,706 colleges (U. S. Department of Education, 2007). The expansion of community colleges was greatest during the period of the mid-1960s well into the 1980s with these institutions serving over 5.2 million students by 1990. When the NSOPF: 04 study was initiated in the fall of 2003, the number of students served by community colleges had grown to over 6.5 million, representing a growth rate of over 15% (Phillippe & Sullivan, 2005) during the previous twelve year period.

In 1970, the Carnegie Foundation for the Advancement of Teaching developed a taxonomy for the classification of higher education institutions in order to refine research conducted by the foundation (Carnegie Foundation for the Advancement of Teaching, 2007). This original taxonomy, which was published in 1973 for other researchers’ use,
disaggregated 4-year institutions based on a number of typological factors, but aggregated 2-year institutions into a single category. Although the classification system for 4-year institutions evolved in the ensuing years, 2-year colleges remained clustered in a single category. In 2005, the Carnegie Foundation announced a new classification system, which disaggregated community colleges into 14 categories based on institutional control, degree of urbanization, and size (Carnegie Foundation for the Advancement of Teaching, 2007). This new classification system for associate degree institutions provides rich context for the study of community colleges and enables much more refined research on community college issues, particularly in relation to these three factors and the variations in institutional goals, financing, and programming. These classifications can be applied to research aimed at community college faculty job satisfaction, thus leading to a richer understanding of faculty job satisfaction at these institutions.

From 1992 to 2003, 1.3 million additional students enrolled at community colleges (American Association of Community Colleges, 2005) while the number of full-time faculty had only increased by approximately 15,000. Significantly, the number of part-time faculty had increased by over 57,000 during this same period, representing approximately 67% of all faculty (Cataldi, Fahimi, & Bradburn, 2005; U. S. Department of Education, 2005). This expansion in the proportion of part-time faculty has had a significant impact on full-time faculty load which is a result of a combination of substantial increases in enrollment and additional administrative responsibilities. Academic advising, curriculum development and revision, and increasing expectations
from the regional accreditation associations for escalating demonstration of achievement of learning outcomes (e.g. Commission on Colleges, Southern Association of Colleges and Schools, 2008; Higher Learning Commission, North Central Association of Colleges and Schools, 2008) have all played a role in increasing full-time faculty workloads. Since community colleges are extremely diverse in programming, governance and control, geography and degree of urbanization, economies, and size (Phillippe & Boggs, 2003), the 2005 Carnegie classifications are extremely useful in understanding these institutions in relation to these parameters.

Since 1960, public community colleges have depended heavily on part-time faculty to deliver educational services (Roueche, Roueche, & Milliron, 1995). This reliance on part-time faculty has had a significant impact on the workload of full-time faculty in terms of advising, curriculum development or revision, and committee work (Nutting, 2003). The degree of reliance on part-time faculty varies from state-to-state. Vermont is an extreme example in which the statewide Community College of Vermont depends solely on part-time instructional staff to educate its nearly 10,000 students in 12 different locations (Vermont Community College, 2005).

The reliance on part-time faculty in community colleges has been evident for nearly 50 years and by 1995, approximately 35% of public community college faculty members were part-time (Leslie & Gappa, 2002). When the NSOPF: 04 was conducted in the fall of 2003, the number of part-time instructional staff employed by public associate’s degree institutions had grown to nearly 242,000, comprising approximately 67% of community college faculty (Cataldi et al., 2005; NSOPF: 04).
For the 979 public 2-year colleges that educate approximately one-half of the college students in the United States (American Association of Community Colleges, 2005), the trend of employing increasing numbers of part-time instructional staff is likely to continue into the foreseeable future. This situation is driven by a number of economic factors that are influencing the stability of these institutions. For example, the level of state support for public 2-year colleges has remained relatively constant over the past several years, but has not kept pace with the rate of inflation for operating and overhead expenses. The financial conditions within which community colleges must operate are not likely to change over the next decade. Competition for state budget resources will intensify in the environment of limited state revenue growth (Boyd, 2002). For institutions with local tax support, the competition with public schools, municipalities, and other locally supported institutions will also intensify (American Association of Community Colleges, 2005), thereby diminishing the likelihood for expanded local revenue. In addition, the tuition costs at 4-year institutions coupled with the lack of availability of student financial aid will continue to pressure increasing numbers of students to initiate their education at a 2-year institution rather than at a 4-year institution. The only practical way that public 2-year colleges can accommodate these increasing numbers of students is to rely more heavily on part-time instructional staff.

Clearly, the importance of part-time instructional staff to the future viability of public 2-year colleges is crucially important. Heavy dependence on part-time instructional staff has been, and will continue to be, integral to the staffing profile of the public 2-year sector of higher education and will increasingly ratchet up the workload of a diminishing
proportion of full-time faculty. As such, it is critical that the presidents, chief academic officers, division deans of these institutions understand the factors that can lead to job satisfaction or dissatisfaction of both part-time and full-time faculty.

**Statement of the Problem**

This study builds on the work of Linda Hagedorn (2000) by adapting her conceptual framework of college and university faculty job satisfaction to the delimited population of full- and part-time public community college faculty. In her work, Hagedorn operationalized many of the variables included in Herzberg’s (1959) dual-factor theory which is framed in the context of intrinsic factors (arising from the nature of the work, itself) that tend to lead to job satisfaction and the extrinsic factors (arising from the employment context) that tend to lead to job dissatisfaction. She adapted and extended the dual factor theory to include demographic, environmental, and change or transfer variables by employing the *1993 National Survey of Postsecondary Faculty* (NSOPF: 93) conducted during the 1992-93 academic year (U.S. Department of Education, National Center for Education Statistics, 1993).

Hagedorn’s (2000) construct is the most adaptable model for the study of community college faculty job satisfaction and, as such, forms the foundation for this study. In her model, Hagedorn employed NSOPF: 93 data to apply and expand Herzberg’s dual-factor theory to address the university faculty context (Table 1). More importantly, the extensive, validated, and comprehensive NSOPF: 93 survey provided an extremely rich data source for her study. In addition, the large sample size provided exceptional statistical power. The model was demonstrated to be significant. In her
model, Hagedorn proposed a conceptual framework consisting of “mediators”, that is, factors providing the context of job satisfaction; demographics; and “triggers” that is, important occurrences in a faculty member’s personal or professional life (p. 6). The NSOPF: 93 variables chosen by Hagedorn to conceptualize her model of faculty job satisfaction are presented in Table 1. Given the increasing importance of the role of community colleges in providing access to higher education and the impending retirements of large numbers of faculty (Conley, 2005; Shults, 2001), the issue of job satisfaction becomes progressively more critical for community college administrators to understand. As Hagedorn stated in 2000, “To the casual observer, faculty satisfaction is at best a trivial concern easily superseded by the more urgent concerns of student outcomes, such as academic achievement, and financial efficiency” (p. 5). Her observation was an ominous prediction of the conditions of faculty in the first decade of the 21st century and highlights the imperative for the study of faculty job satisfaction. Community college academic administrators can no longer regard faculty satisfaction as “trivial” given the increased workload of full-time faculty and the magnitude in numbers of part-time faculty in the community college classrooms.

Hagedorn’s (2000) adaptation of Herzberg’s dual-factor theory has a sound basis in the literature and is adaptable in large part to community college faculty (e.g., Hagedorn, 2000; Castillo & Cano, 2004). Because a central reason for this current research is to improve the understanding of the factors related to full- and part-time community college faculty job satisfaction, Hagedorn’s work serves as a functional
framework as it is both relevant and sufficiently malleable to apply to community colleges.

Table 1:

*Conceptual Framework of Hagedorn’s Model of Faculty Job Satisfaction*

<table>
<thead>
<tr>
<th>Motivators and hygienes</th>
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<td>Achievement</td>
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<td>Recognition</td>
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<td>Work itself</td>
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<td>Responsibility</td>
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<td>Advancement</td>
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<td>Salary</td>
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<th>Demographic factors</th>
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<td>Gender</td>
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<td>Ethnicity</td>
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<td>Institutional type</td>
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<td>Academic discipline</td>
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Table 1 (Continued):

*Conceptual Framework of Hagedorn’s Model of Faculty Job Satisfaction*\(^a\)

<table>
<thead>
<tr>
<th>Environmental conditions</th>
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<tr>
<td>Collegial relationships</td>
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<tr>
<td>Item(s) measuring collegial relationships</td>
</tr>
<tr>
<td>(not available in the [NSOPF: 93] data set)</td>
</tr>
<tr>
<td>Student quality or relationships</td>
</tr>
<tr>
<td>Satisfaction with student quality</td>
</tr>
<tr>
<td>Administration</td>
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<tr>
<td>Satisfaction with administrative decisions</td>
</tr>
<tr>
<td>Institutional climate or culture</td>
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<tr>
<td>Perceived improvement in aspects of college</td>
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<th>Triggers</th>
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<tr>
<td>Change in life stage</td>
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<td>Ranges of 35 or less, 36-54, and 55 + years</td>
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<tr>
<td>Change family circumstances</td>
</tr>
<tr>
<td>Marital status: single, never married, married</td>
</tr>
<tr>
<td>or separate, and divorced</td>
</tr>
<tr>
<td>Change in rank or tenure</td>
</tr>
<tr>
<td>Sample split - &lt; 5 years or 5 + years</td>
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<tr>
<td>Transfer to new institution</td>
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<td>Sample split - 4 years or 10 years or longer</td>
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<td>Change in perceived justice</td>
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<td>Perceptions of gender or ethnic perceptions</td>
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<td>Change in mood or emotional state</td>
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<tr>
<td>Items on change in mood or emotional state</td>
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<td>(not available in NSOPF: 93)</td>
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\(^a\)Hagedorn (2000)
This study employs the NSOPF: 04, which was conducted during the 2003-04 academic year, to adapt Hagedorn’s (2000) conceptual framework of faculty job satisfaction to full- and part-time faculty employed at public 2-year colleges. It examines the relationship between the intrinsic and extrinsic, demographic, the institutional typology predictor variables associated with faculty job satisfaction and the outcome variables of satisfaction with the employment index and the instruction index.

Predictor Variables

*Intrinsic and Extrinsic Factors*

The elements of job satisfaction that arise from the nature of the work itself have been described in the literature as “motivators” (Herzberg et al., 1959, p. 114) or as “intrinsic factors” (Iiacqua & Schumacher, 2001, p. 51; Tietjen & Myers, 1998, p. 226) that tend to influence job satisfaction. They include the specific nature of the work, recognition, achievement, and the possibility of growth, advancement, and responsibility.

Herzberg et al. (1959, p. 113) also described certain “extrinsic” (Iiacqua & Schumacher, 2001, p. 51; Tietjen & Myers, 1998, p. 226) factors or “hygienes” that tend to influence job dissatisfaction. They include salary, benefits, and institutional environment. Although faculty may be quite satisfied with the intrinsic nature of their work, the environmental conditions within which they must work can lead to dissatisfaction and as such are important to key community college administrators’ perspectives on faculty job satisfaction.
Demographic Factors

As this nation moves increasingly toward a more diverse population and strives to attract more citizens to participate in higher education, the importance of including all citizens is of immense consequence. There is a relationship between the demographic variables of gender, age, race/ethnicity, and union status, with the factors influencing job satisfaction (Corbin, 2001; Feldman & Turnley, 2001; Hagedorn, 1996; House & Wigdor, 1967; Laden & Hagedorn, 2000; Olsen, Maple, & Stage, 1995; Townsend, 1998). In the community college setting, it is also possible that there is a relationship between the nature of the teaching field of the faculty member and job satisfaction. Faculty that teach in the liberal arts disciplines possess more traditional academic preparation; whereas, career faculty may have credentials of applied academic degrees and typically are required to have work experience in the field of instruction. The demographic factors of gender, career stage, race/ethnicity, union status, and teaching field examined in this study are operationalized using the NSOPF: 04 variables of gender, age, race/ethnicity, union membership, and the teaching fields of liberal arts or career programs.

Institutional Typological Factors

In 1970, the Carnegie Commission on Higher Education initially developed a system of classification of colleges and universities in relationship to previous research efforts (The Carnegie Foundation for the Advancement of Teaching, 2007). Although the system has evolved over the years since, the basic classification of 2-year colleges had remained virtually unchanged (Hardy & Katsinas, 2007) until the most recent revision that was announced in 2005 (Carnegie Foundation for the Advancement of Teaching).
Based largely on previous research (Katsinas & Lacey, 1996), the Carnegie Foundation for the Advancement of Teaching (2007) announced an expanded classification system for 2-year institutions that accounted for institutional control, degree of urbanization, and size. The data to support this classification system are available from the Integrated Postsecondary Education Data System (IPEDS), NCES, and the U. S. Census Bureau (Hardy & Katsinas, 2007; Merisotis & Shedd, 2003).

Research Questions

Four research questions are investigated in this study.

1. Is there a difference in overall job satisfaction between full- and part-time community college faculty?

2. Does job satisfaction of community college faculty relate to the intrinsic and extrinsic job satisfaction factors of teaching rewards; fair treatment of part-time, female, or racial/ethnic minority faculty; or satisfaction with the choice of a teaching career field, controlling for job status?

3. Does job satisfaction of community college faculty relate to the demographic factors of gender, race/ethnicity, career stage, union status, or teaching field, controlling for job status?

4. Does job satisfaction of community college faculty relate to institutional size or degree of urbanization, controlling for job status?

Significance of the Study

The dependence on part-time faculty in community colleges is integral to both their history and their future. It is extremely important that the academic leaders in these
institutions understand the institutional impact of these trends. Since the principal focus of community colleges is providing learning opportunities for students intending to either transfer to baccalaureate programs or to gain education in career programs, factors impacting on teaching and learning are of great importance. In their 2001 article in the *Psychological Bulletin*, Judge, Thoreson, Bono, and Patton reviewed 378 published works on the various elements related to job satisfaction and performance. These authors concluded that there is a relationship between job satisfaction and performance ($r = .30$). Given the relationship of job satisfaction and performance, it is extremely important that the academic leaders in community colleges understand the various elements of the theoretical frameworks related to job satisfaction since such understanding provides a solid basis for making decisions related to faculty.

A number of studies have described the elements of faculty job satisfaction (Anthony & Valadez, 2002; Conley & Leslie, 2002; Hagedorn, 2000; Iiacqua, & Schumacher, 2001; Rosser, 2004; Rosser, 2005; Toutkoushian & Bellas, 2003); however, most of these studies are focused either on the entirety of faculty in higher education or on faculty in the 4-year sector only. Since community colleges have expanded their reliance on part-time faculty over the last decade, it is quite possible that there are essential factors related to the overall job satisfaction of both full- and part-time faculty and overall job satisfaction. For example, full-time faculty employment numbers have remained relative constant (Phillippe & Boggs, 2005) over this period while the number of students enrolling in community colleges has expanded dramatically (Cataldi, Fahami, & Bradburn, 2005; Phillippe & Sullivan, 2005). From 1992 to 2003, 1.3 million
additional students enrolled at community Colleges while growth in part-time faculty exceeded growth in numbers of full-time faculty by a ratio of 3:1 (American Association of Community Colleges, 2005).

This study employs Herzberg’s dual-factor theory (Herzberg et al., 1959) as a foundational theoretical framework to examine community college full-time and part-time faculty satisfaction with the demographic and intrinsic extrinsic factors that contribute to overall job satisfaction as presented by Hagedorn (2000). It employs NSOPF: 04 and adapts Hagedorn’s model for job satisfaction from the 4-year model to one more applicable to community colleges. It also extends the model to include the 2005 Carnegie Foundation for the Advancement of Teaching (2007) expanded classification model for community colleges that disaggregates associate degree colleges by accounting for institutional control, size, and degree of urbanization.

The results of this study will serve to inform academic administrators in community colleges of the relationship of the contributing elements of job satisfaction and overall job satisfaction. These results will be useful in providing presidents, chief academic officers, and division deans with a basis for decision-making in terms of resource allocation, support, programming, and improvements in institutional climate.

Limitations of the Study

The most significant limitation to this study is that it is an ex post facto study that employs the existing NSOPF: 04 survey results obtained before the research questions for the present research were developed. Accordingly, this analysis does not allow for the survey questions to be specifically crafted to the research questions. In addition, the
variables that were used in NSOPF: 04 were not aligned with the theoretical framework for the present study, thereby presenting some limits to the theoretical framework of the analysis. Additionally, there has been an approximate 5-year period of time between the conduct of NSPOF: 04 during the fall of 2003 academic term and the spring of 2009 when the present research was concluded. During this 5-year period, changes may have occurred that are not reflected in this study. Finally, National Center for Education Statistics’ online Data Analysis System does not provide all the tools to examine the fit of regression models including, detection of outliers and influential cases (scatter plots), variance, similarity of residuals across levels of predictor values (homoscedasticity), or the reliability of the model (Field, 2005)

Delimitations of the Study

This study examines job satisfaction for faculty in public community colleges using NSOPF: 04 by employing questions from the survey to operationalize the intrinsic, extrinsic, institutional typological factors, and selected demographic factors associated with job satisfaction. Sections of the NSOPF: 04 Faculty Questionnaire Facsimile (Appendix A) included in this research were the employment, satisfaction, climate, instruction, institution, and demographic sections of these studies.

Definitions of Terms

The following definitions are used in this study:

1. *Full-time faculty* is defined as those individuals who are classified as full-time faculty by their institution and taught at least one credit course during the fall term 2003 when the NSOPF: 04 survey was conducted.
2. *Part-time faculty* is defined as those individuals who are classified as part-time faculty by their institution(s) and who were teaching at least one credit course during the fall term when the NSOPF: 04 study was conducted.

3. *Job status* is defined as the classification of a faculty member by his or her institution as either full-time or part-time.

4. *Community colleges* are defined as those public controlled associate degree-granting institutions as reported to IPEDS according to the 2000 Carnegie classifications. These institutions included comprehensive community colleges, technical/vocational colleges, and university branch campuses that are reported separately to IPEDS from their main institution.

5. *Overall job satisfaction* is a global perspective of a faculty member regarding his or her relative contentment with the satisfaction index (sum) of employment items (X01Q62) and the satisfaction index (sum) of instruction items (X01Q62) indices as derived in NSOPF: 04.

6. *Satisfaction with employment index* is comprised of the sum of NSOPF: 04 satisfaction scores for workload (Q62A), salary (Q62B), benefits (Q62C), and job overall (Q62D).

7. *Satisfaction with instruction index* is comprised of the sum of NSOPF: 04 satisfaction scores for authority to make [academic] decisions (Q61A), instructional technology (Q61B), equipment/facilities (Q61C), and support for teaching improvement (Q61D).
8. *Satisfaction with intrinsic and extrinsic job satisfaction factors* is comprised of the NSOPF: 04 opinion scores for teaching is rewarded (Q82A), part-time faculty treated fairly (Q82B), female faculty are treated fairly (Q82C), racial minority faculty are treated fairly (Q82D), and opinion about choosing an academic career again (Q83).

9. *Teaching field* is derived by combining the principal field of teaching, general area codes employed in the NSOPF: 04 faculty study into the two teaching field categories of liberal arts leading to associate of arts or sciences degrees or career programs leading to associate of applied business or science degrees.

10. *Full-time equivalent (FTE) enrollment* is based on full- and part-time enrollment based on IPEDS data for full-time enrollment plus one-third of IPEDS data for part-time enrollment (Carnegie Foundation for the Advancement of Teaching, 2007b; Heuer, et al., 2005).

11. *Institutional size* employs the NSOPF: 04 variable of full-time equivalent (FTE) undergraduate enrollment (X13Q0) which was derived from IPEDS data for fall 2003 FTE undergraduate enrollments. The five NSOPF: 04 enrollment ranges were aggregated into the following three ranges:

   a. *Small community colleges* reported fall 2003 enrollment (FTE) of less than 2,000 (This variable range was derived from NSOPF: 04 by aggregating the continuous variable of undergraduate enrollment in the ranges of 1-1,999),
b. *Medium community colleges* reported fall 2003 FTE enrollment in the range of 2,000 to 4,999,

c. *Large community colleges* reported fall 2003 FTE enrollment of 5,000 or more FTE. (This variable range was derived from NSOPF: 04 by aggregating the continuous variable of undergraduate enrollment in the ranges of 5,000 to 9,999 and at least 10,000 FTE).

12. *The degree of urbanization* is derived from IPEDS by NSOPF: 04 using the U.S. Census Bureau’s initial locale codes comprised of seven institutionally reported locales of rural, small, and large towns; mid-size city, urban fringe of mid-size city, large city, and urban fringe of large city. The NSOPF: 04 labels have been aggregated into the four categories of rural, town, mid-size city, and large city for this study Carnegie Foundation for Advancement of Teaching, 2007).

13. *Career stages* are defined as early career stage (35 years of age or younger), mid-career stage (over 35 years of age to 54 years of age), or late career stage (55 years of age and older). These age ranges are also the same as those used by Hagedorn (2000).

**Organization of the Study**

This dissertation is comprised of five distinct chapters: Introduction; Review of the Literature; Methodology; Analysis of Data; and Summary, Conclusions, and Recommendations. Chapter One, Introduction, provides a statement of the research problem, the research questions investigated, the significance of the study, the limitations
and delimitations of the study, the definitions of terms, and finally the organization of the study. The second chapter presents a review and synthesis of the pertinent historic and current literature relevant to the study of part-time faculty satisfaction in community colleges in the United States. Chapter Three delineates the methodological procedures employed in the conduct of this research including population characteristics and the methodologies used in NSOPF: 04. In addition, Chapter Three provides a description of the methodology and analytical procedures employed in this study. Chapter Four contains an analysis of the data gleaned in this study and is presented in the same order as were the research questions in Chapter One. The fifth and final chapter contains a summary of the dissertation research, results, findings and conclusions, implications for practice, and recommendations for future research.
CHAPTER 2: REVIEW OF THE LITERATURE

Introduction to the Literature

Since 1960, public community colleges have depended heavily on part-time faculty to deliver educational services (Roueche et al., 1995). This reliance on part-time faculty has a significant impact on the workload of full-time faculty in terms of advising, curriculum development or revision, and committee work (Nutting, 2003). In 1995, approximately 35% of public community college faculty members were part-time (Leslie & Gappa, 2002). When the NSOPF: 04 study was conducted in the Fall of 2003, the number of part-time instructional staff employed by public associate’s degree institutions had grown to nearly 67%, comprising approximately 242,000 part-time faculty members. (Cataldi et al., 2005; NSOPF: 04). As these shifts in faculty employment from full-time to part-time continue to evolve, it is imperative that chief academic officers, division deans, and department heads understand and manage the factors related to both full- and part-time faculty job satisfaction to ensure optimal learning opportunities for students.

There have been an extensive number of studies aimed at evaluating faculty job satisfaction in institutions of higher education, yet “…[these studies] shed little light on the satisfaction that part-time faculty members derive from their roles” (Anthony & Valadez, 2002, p.42). Some of these studies have focused on in-depth analyses of satisfaction factors for full-time university faculty (Hagedorn, 1996; Olsen, 1993; Rosser, 2005), whereas many of the studies of community college faculty job satisfaction are merely descriptive (e.g. Roueche et al., 1995). In 2000, Hagedorn published a theoretical
model of job satisfaction that was based, in a large part, on the dual-factor theory of job satisfaction, commonly referred to as “Herzberg’s dual-factor theory”, (Herzberg, Maunser, & Snyderman, 1959). Hagedorn’s model expanded Herzberg’s model and adapted it to full-time university faculty job satisfaction. This research is organized around Hagedorn’s university model by adapting and applying it to community college faculty job satisfaction to test the applicability of the model in the community college setting.

Clearly, the satisfaction of part-time instructional staff is important to the future viability of public 2-year colleges. Heavy dependence on part-time instructional staff has been, and will continue to be, integral to their staffing profile and will increasingly ratchet up the workload of a diminishing proportion of full-time faculty. As the proportion of part-time to full-time faculty continues to increase, it is critical that the leadership of these institutions understand the factors that can lead to job satisfaction or dissatisfaction of both part-time and full-time faculty.

Historical Context

There are numerous reasons for the rapid expansion in the use of part-time faculty. First, compensation is significantly lower for part-time faculty than for that of their full-time counterparts (Branachowski, 1996; Gappa & Leslie, 1993; Roueche et al., 1995). This pay differential provides a powerful incentive for community colleges to employ increasing numbers of part-time faculty, especially given the current economic environment. Second, staffing flexibility is an advantage to colleges since part-time faculty members are often contracted term-by-term or on an annual basis (Branachowski,
1996; Gappa & Leslie; 1993, Roueche et al., 1995); hence, the college has no on-going obligation to continue their employment. The third reason is that part-time faculty members provide enhanced expertise via professional practitioners bringing to the classroom current knowledge and a depth of experience in the field, particularly in career disciplines (Branachowski, 1996; Gappa & Leslie, 1993). The increase in the utilization of part-time faculty makes the importance of understanding the elements that lead to job satisfaction or dissatisfaction of all faculty paramount for community college administrators.

Community College Context

Programs

The commonalities evident in community colleges are driven by their very nature. A primary focus of an individual community college is service to the needs of the community, students, agencies, businesses, and industries that the college was charted to serve (Cohen & Brawer, 1993; McPhail & McPhail, 2006). Academic programs typically provided by community colleges consist of developmental education in adult literacy, English, and mathematics (Boylan, Bonham, & White, 1999), and are designed to develop students’ skills in order to prepare them for success in college credit course work. Credit transfer-oriented programs (Downey, Pusser, & Turner, 2006; Eggleston & Laanan, 2001) and credit career/vocational (career) programs (Erwin, 2005; Lundquist & Nixon, 1998) constitute the majority of offerings in community colleges. Non-credit workforce, economic development programs, as well as certifications (Erwin, 2005) and life-long learning programs (Dougherty & Townsend, 2006; Downey et al., 2006)
provide educational opportunities for service area residents to meet employment or personal interest needs. The uniqueness of service area economic and social demographics necessarily should, and does, influence the nature, type, and extent of various programs offered by these community-responsive institutions (Lynch, Palmer, and Grubb, 1991).

Associate of arts and associate of science transfer degree programs provide opportunities for students to complete the first 2 years of associate degree programs that are closely aligned with the first 2 years of university degree programs to which students intend to transfer (Arnold, 2001; Furlong, 2003). These completion programs may be offered by a 4-year institution on its own campus, completed via distance learning, offered on the community college campus by the baccalaureate institution, or as seen in recent years, even by the community college itself (Floyd, 2006). Another dimension that adds to the programming diversity of community colleges is the university branch campus that offers associate’s degrees that are specifically designed to transfer to the main campus of the university (e.g. The Pennsylvania State University, 2007).

Additionally, the phenomenon of dual enrollment programs, which enable high school students to enroll in college courses concurrently with their high school program (Andrews, 2000; Karp, Bailey, Hughes, & Fermin, 2004; U.S. Department of Education, 2005), and the extent of participation in these opportunities add yet another dimension to the programming diversity of community colleges.

In addition to baccalaureate degree-oriented programs, community colleges offer career-oriented degree programs leading to the associate of applied business or associate
of applied science degrees in career-focused majors that have been developed with the advice of local service area employers (Dougherty & Bakia, 2000; Lundquist & Nixon, 1998; Orr, 2001). The nature of such programs may vary widely, depending on the needs of local employers (e.g. Erwin, 2005). These career programs, along with workforce and economic development programs, contribute greatly to the programmatic diversity of community colleges, particularly in relation to their relative urbanization and their geographical location (Dougherty & Bakia). This element of local relevance in the community college mission demands that faculty are current in their academic fields and that they possess significant experience as practitioners in their respective fields. This aspect of the community college is an important impetus for the employment of practitioners as part-time faculty and is greatly influenced by state and local governance perspectives and financial support (Dougherty & Townsend, 2006).

**Characteristics of Community College Faculty**

Responses of faculty to NSOPF: 04 illustrate the following profile of community college faculty.

1. Seven percent of full-time faculty are under the age of 35, 56% are between the ages of 35-54, and 37% are 55 or older; whereas, 13% of part-time faculty are under the age of 35, 53% are between the ages of 35-54, and 35% are 55 or older.

2. In terms of gender, the proportion of full- and part-time faculty is the same, with 33% males and 67% females in both full- and part-time positions.
3. Eighty-one percent of full-time faculty members are White, and 84% of part-time faculty members are White.

4. Nineteen percent of full-time faculty hold a doctoral or first professional degree, 62% hold a master’s degree, 12% hold a bachelor’s degree, and 6% hold an associate’s degree or less. Thirteen percent of part-time faculty hold a doctoral or first professional degree, 51% hold a master’s degree, 22% hold a bachelor’s degree, and 14% hold an associate’s degree or less.

5. Sixty-four percent of full-time faculty are either tenured or on a tenure track, whereas only 5% of part-time faculty are either tenured or on a tenure track.

6. Thirty-four percent of full-time faculty have been in their positions for five years or less, 18% for 6 to 10 years, and 49% more than 10 years. Fifty-nine percent of part-time faculty members have been in their positions for 5 or less years, 18% for 6 to 10 years, and 23% for more than 10 years.

Critical Review of Relevant Literature

Theoretical Framework of Job Satisfaction

The rapidly expanded employment of part-time faculty, the impact of these faculty on the delivery of academic services, the resulting decrease in the extent of interaction with students, and the increased workload implications for full-time faculty all suggest that community college administrators need to possess a fundamental understanding of the institutional conditions that affect both full- and part-time faculty
and their job satisfaction. A foundational element in achieving this understanding is an appreciation of job satisfaction theory.

Much like community colleges, the study of the factors related to job satisfaction and motivation is relatively new in the empirical literature. Perhaps the first truly substantive and far-reaching discussions of motivation were presented by Maslow (1954) in his seminal book *Motivation and Personality*, in which he characterized individual needs in a humanistic hierarchy including physiological safety, love, affection, belongingness, esteem, and self-actualization needs. His work was foundational to the work of Herzberg et al. (1959) in their qualitative research study which employed critical incident methodology developed by Flanagan (as cited in Soliman, 1970) to determine job satisfaction elements. Their investigation involved interviewing accountants and engineers using critical incident methodology. The study led to the generation of the “dual-factor theory of motivation” which was first published in the book *The Motivation to Work* (Herzberg, Maunser, & Snyderman, 1959).

The Herzberg et al. (1959) dual-factor theory (Herzberg’s dual factor theory) asserted that the elements of job satisfaction arise from the nature of the work itself and described these factors as “motivators” (p.114). These factors have also been described as “intrinsic factors” in the more recent literature (e.g., Iiaqua, & Schumaker, 2001, p. 52; Tietjen & Myers, 1998, p. 226). Herzberg also identified workplace factors that arose due to the work environment or conditions of employment and described these factors as “hygienes” (p. 113). These factors have also recently been described as “extrinsic factors” (e.g., Iiaqua, & Schumaker, p. 52; Tietjen & Myers, p. 226). According to
Herzberg’s theory, motivators tend to lead to job satisfaction, whereas hygienes tend to lead to job dissatisfaction. Both motivators and hygienes operate as separate phenomena, that is, a decrease in job dissatisfaction does not lead to an improvement in job satisfaction. Likewise, changes in job satisfaction act independently from dissatisfaction. Herzberg’s theory came under critical review during the ensuing years after the initial publication (e.g. Locke, 1973; Soliman, 1970; & Vroom, 1964) yet is still very much a viable theory of job satisfaction, particularly for professional employees.

Vroom (1964) studied the perspectives of assembly-line workers and found that the principal reason specified by the study population of employees for disliking their jobs was related to job “content” (intrinsic factors); whereas the findings of Herzberg et al. (1959) found that such factors related to the nature of the job itself led to enhanced satisfaction. Vroom continued on to conclude that more research should be conducted with larger, more varied types of populations with the same methodologies observing that:

One could also argue the relative frequency with which job-content or job contextual features will be mentioned as sources of job satisfaction or dissatisfaction is dependent upon the nature of the content and the context of the work roles of the respondents. (p. 128).

He also reasoned that more narcissistic human nature of workers may lead them to believe that intrinsic factors of satisfaction are derived primarily due to employee’s own contributions or successes; whereas, the sources of dissatisfaction are generated by organizational environmental factors. This study represented a very different employee
population, i.e. assembly line workers, as opposed to professional-level workers interviewed in Herzberg et al. (1959). Obviously, the very nature of work and the work environment is vastly different between these two groups thus, illuminating the importance of exercising care in the application of job satisfaction theory to specific work roles.

The nature of satisfiers and dissatisfiers was also researched by Locke (1973) using samples of both white- and blue-collar workers as did Vroom (1964), employing two sub-sets of each employee category with interviews occurring at different times. He used the “event-agency” classification system developed by Schneider and Locke (1971) which was proposed in their earlier study (as cited by Schneider and Locke, 1971) for organizing satisfiers and dissatisfiers. Locke’s findings supported those of Vroom (1964) in that the intrinsic factors of job satisfaction for both white- and blue-collar workers were due to the perspectives of employees’ that their contributions and accomplishments led to relative job satisfaction. Job dissatisfaction was attributed “…to the fact that the opportunities for other persons to cause dissatisfaction are greater than their opportunities to cause satisfaction” (Locke, p 75).

In 1970, Soliman studied the nature of the two-factor theory of satisfaction in a study employing a four-part questionnaire and the technique employed by Herzberg et al. (1959) with populations of public school teachers and employees at a mental health facility. He determined that the use of the same techniques as Herzberg et al. (1959) resulted in the identification of the same factors of job satisfaction that Herzberg identified. He also concluded that there are two sets of factors of job satisfaction, but that
they were not independent; rather, they were extremes on the ends of the same metric. Perhaps more importantly, he asserted that “The theory was found to be a function of its own particular methodology…” (Soliman, 1970, p. 459). This observation was consistent with several other studies in that time frame.

The application of Herzberg’s theory in the study of faculty job satisfaction employing the critical incident methodology was investigated by a number of authors that reached mixed conclusions regarding its application to faculty in higher education (see Cohen, 1974). In 1974, Cohen investigated the application of Herzberg’s theory as opposed to the more conventional idea that satisfaction and dissatisfaction are extremes along the same linear scale employing a population of community college instructors representing small and large institutions in two different states. He found that “Data collected in these three different settings in the summer of 1973 tend to support the two-factor-theory” (Cohen, 1974, p. 372).

In spite of these criticisms, no study has substantially demonstrated that Herzberg’s construct was essentially flawed (Basset-Jones & Lloyd, 2005). The dual-factor theory continues to serve as a conceptual framework for higher education faculty job satisfaction studies (e.g. Flowers, 2005; Hagedorn, 2000). There have been numerous studies of faculty satisfaction involving a wide variety of variables and approaches (Anthony & Valadez, 2002; Castill & Cano, 2004; Feldman & Turnley, 2001; Toutkoushian & Bellas, 2003; Valadez & Anthony, 2001). Many of these studies were either descriptive (e.g. Flowers, 2005) or did not conceptualize the research approach in terms of a theoretical framework (e.g. Anthony & Valadez, 2002). These studies provide
interesting information, but do not provide the foundation necessary for practitioners to take actions to improve faculty job satisfaction.

In their 2002 study that examined part-time university faculty satisfaction, Anthony and Valadez focused on four questions:

1. Do part-time faculty really wish they could be full-time and on tenure track?
2. Are part-time non-tenure-track faculty members universally dissatisfied?
3. Are their full-time tenure-track counterparts more satisfied?
4. Might many part-time non-tenure-track faculty actually choose this status because of its flexibility and professional emphasis on teaching? (p. 42).

These researchers employed data from the 1993 National Survey of Postsecondary Faculty (NSOPF: 93); however, they did not nest their study in a theoretical context. They concluded that part-time faculty responded (to a greater extent than full-time faculty) that given the opportunity, they would choose an academic career again. Full-time faculty members were more concerned about job security, tenure, pay, and benefits than were their part-time counterparts. These authors suggested that “Future studies on part-time faculty must continue to explore the differences in levels of satisfaction between part- and full-time faculty members, but also must address whether the dimensions of satisfaction are the same for these two groups” (Anthony and Valadez, 2002, p. 55).

There have been other studies that conceptualized job satisfaction employing data from NSOPF: 93 (e.g. Toutkousian and Conley, 1995). Hagedorn (2000) employed NSOPF: 93 to operationalize Herzberg’s dual-factor theory and to extend it to the study
of faculty job satisfaction in the university setting. In her 2000 research, Hagedorn’s theoretical model of university job satisfaction included Hezberg’s motivators and hygienes along with “demographics” and “environmental conditions” under the category she termed mediators. She also created an additional factor category of triggers, which reflected the affective elements of job satisfaction and in a multiple regression model. She stated that:

The results indicated that the model was highly significant (p<.0001) and explained close to half (49.4 percent) of the variance of job satisfaction. The most highly predictive mediators were the work itself, salary, relationships with administration, student quality and relationships, and institutional climate and culture” (p. 13).

This work demonstrated the on-going viability of Herzberg’s theory in terms of motivators and hygienes, particularly since it employed an extensive national sample of faculty and an extensively validated survey. In a later study, James A. Iiacqua (2001) found that the variables of tenure, rank, years teaching, and age were significantly related to job satisfaction; however, this finding has limited generalizability since the faculty sample was limited to faculty at a private business college and only 83 out of 137 sampled faculty responded to the survey.

Rosser (2005) developed a conceptual model involving work life and satisfaction of two university faculty groups, over time, based on her earlier structural equation modeling work with faculty satisfaction with “worklife” and satisfaction overall (Rosser, 2004). This model was essentially an extension of Herzberg’s dual-factor model and
employed NSOPF: 93 and the 1999 National Survey of Postsecondary Faculty data sets (U.S. Department of Education, 1999; U.S. Department of Education, 1993). Her model investigated trends in faculty satisfaction with work life including advising and course work load, quality of students, and benefits and security, as well as overall job satisfaction over the six year period between these two studies using structural equation modeling. She concluded that both groups of faculty respondents were satisfied overall with the dimensions of work life and overall job satisfaction. However, the respondents to the NSOPF: 99 survey were significantly (p < 01) more satisfied than the NSOPF: 93 respondents.

Demographic Factors Related to Job Satisfaction

The relationship of the demographic factors of gender, age, and race with job satisfaction has been well documented in the literature (Corbin, 2001; Feldman & Turnley, 2001; Hagedorn & Laden, 2002; House & Wigdor, 1967; Laden & Hagedorn, 2000; Okpara, Squillance, & Erondu, 2005; Olsen, Maple, & Stage; 1995; Townsend, 1998). As this nation moves increasing toward a more diverse population and strives to attract more citizens to participate in higher education, the importance of including all citizens is of immense consequence as is the presence of minorities in the creation of a representatively diverse faculty.

Using data from NSOPF: 93, Toutkoushian, and Bellas (2003) found that women employed either full- or part-time were not as satisfied with the extrinsic factors of job satisfaction factors of salary and benefits nor overall job satisfaction as were men. Perna (2003), in her analysis of NSOPF: 93 data, concluded that the lower salaries for women
in relation to men teaching at community colleges were accounted for by the factors of institutional type, employment status, salary, academic rank, and tenure. However, it appears that there continues to be a gender-based salary differential with university faculty. Toutkoushian and Conley (2005) in their analysis of faculty responses to the NSOPF: 99 study concluded that, although progress had been made in gender-based salary gaps since 1969, “women still on average earn between 4% and 6% less than men in academe” (p. 23). Further Hagedorn & Laden (2002) employed the NSOPF: 93 data set and found that “women faculty do not report higher levels of dissatisfaction” (p.75) and that there is “evidence of difference in perceptions of discrimination reported significantly higher by women than men and even statistically higher by women faculty of color” (p. 75).

In addition to gender, there is a positive linear relationship between faculty age and job satisfaction (see Rhodes, 1983 for an extensive review of the historic literature). This age-related variation in job satisfaction was not evident in the NSOPF: 99 study for full-time community college faculty (Hardy & Laanan, 2006). It is apparent that additional research is needed to clarify the relationship between gender, age, and job satisfaction and to provide a deeper understanding of the factors of race and ethnicity and their influence on job satisfaction.

Feldman and Turnley (2001) studied the effect of career stage on part-time faculty job satisfaction at a publicly controlled university utilizing both quantitative and qualitative methodologies. They found that many part-time faculty members are drawn to accept contingent positions because of the flexibility afforded, the opportunity for
interaction with colleagues and students, as well as job autonomy and challenge. They also found that the issues of advancement, pay and benefits, and supervision were either neutral nor of concern. In addition, this study demonstrated that late career-stage part-time faculty (50 years of age or older) were significantly more satisfied with their jobs than were younger faculty. The generalizability of this study is questionable because the sample was from one university and included only 105 respondents. However, it does provide a basis for future research relative to career stage and part-time faculty. Pond and Geyer (1987) also examined the relationship between work options and age for 226 mental health employees and concluded that there was a positive relationship between work options and age; however, they also concluded that additional research should be conducted to more completely examine this relationship.

The race of faculty members may also be a factor related to job satisfaction In an analysis of NSOPF: 93 data, Perna (2003) concluded that there were few unexplained variations between racial or ethnic minority faculty in community colleges, but under-representation of non-White faculty should be addressed. Using the 2000 Center for the Study of Community Colleges Faculty Survey, Bower (2002) found similar results to those of Perna (2003) with regard to issues related to campus climate for minority faculty. Still, in other studies, racial differences between 2-year and 4-year White and non-White faculty have been found to exist. Results from the NSOPF: 99 indicated that 50.3% of African American full- and part-time faculty at community colleges responded that they were very satisfied with their jobs overall, whereas only 33% of African American faculty at 4-year institutions were very satisfied with their jobs,
overall (Flowers, 2005). Although this study provided informative descriptive information on a number of factors that contributed to overall job satisfaction and that it employed Herzberg’s dual-factor theory as framework, it provided little insight into the correlational aspects of those factors with overall job satisfaction of African American faculty. Given the importance of a faculty that is representative of community college student demographic characteristics, additional research is required in order to better understand the unique factors of racial or ethnic minority faculty job satisfaction.

More recently, the Harvard Graduate School of Education initiated a study entitled “The Collaborative on Academic Careers in Higher Education” (2007) which surveys university tenure-track faculty job satisfaction. The study, which was initiated in 2003, has published reports from the 2005-2006 and 2006-2007 academic years. In the 2007 study, faculty from 26 four-year colleges and universities were surveyed on a number of questions. The two questions most relevant to this research were the nature of the work and global satisfaction. Their findings included issues that may have application to the community college sector. For example, minority faculty were significantly less satisfied with compensation than were White or female faculty. The results of this study further provide an impetus to investigate faculty satisfaction.

In the community college setting, there are additional demographic factors affecting job satisfaction in addition to those describing individual characteristics. The presence of faculty unions appears to influence intrinsic and extrinsic factors of job satisfaction as well. The presence of unions has been shown to impact the intrinsic factors of salary, benefits, and conditions of work. Faculty unionization has resulted in higher
faculty salaries at the secondary school level (Duplantis, Chandler, & Geske, 1995, p. 175) and at unionized universities, salaries have been demonstrated to be greater for unionized institutions than for non-union institutions (Morgan & Kearney, 1977). Central reasons for the salary differences between union and non-union institutions may be due to the prospect of arbitration if collective bargaining fails to achieve agreement on salary, benefits, or conditions of work and the inflexibility in adjusting salaries or annual raises during the term of the negotiated contract.

The teaching field of community college faculty may also have an impact on faculty job satisfaction. This area has not been investigated but the differences in background of liberal arts faculty and career program faculty and the credentials for employment are typically different. Liberal arts faculty typically have academic credentials traditionally found in similar fields at the 4-year level; whereas, career program faculty typically must have work experience in the career area and in many cases may not hold graduate degrees.

**Institutional Typology**

With the rising enrollments of community colleges and their increasing importance to higher education, there has been a concomitant increase in research oriented on understanding community college issues. The vast majority of this research has employed single institution samples, small samples of institutions, or state-wide system samples for analysis (Rosser, 2005) making it difficult to compare results of various studies. In addition, this lack of comparability between studies limits the generalizability of results. These limitations of historic research are exacerbated by the
fact that many community college surveys achieve low response rates (Katsinas, 2003), which raises further questions of validity.

Community colleges are very uniform in their missions, but extremely diverse in programming, governance and control, geography and degree of urbanization, economic environments, and size (Phillippe & Boggs, 2003). This diversity becomes evident when these institutions are examined more closely.

**Governance and Control**

The factors of individual state community college governance models and the nature of institutional control vary widely across different states (Education Commission of the States, 1997; Richardson, Baccacco, Callan, & Finney, 1998; Richardson & de los Santos, 2001; Tollefson, 1996) and often vary widely within a state. For example, Vermont has a state-wide system (Vermont Community College, 2005) that is composed entirely of part-time faculty, Kentucky has a state-wide community college system (Kentucky Community and Technical College System, 2007), as does California (California Community Colleges, 2007). In other states, such as Ohio, community colleges are considerably varied and include technical colleges that are focused on providing career programs with limited transferability, university branch campuses that provide both career and transfer-oriented programs (Ohio Board of Regents, 1998). are focused on university transfer programs, and comprehensive community colleges that

There are four taxonomies for the classification of governance of public 2-year colleges, which were summarized by Lovell and Trouth (2002). These taxonomies are:
1. Classification of states as consolidated governing board states, coordinating board states, or planning or service agency states (Education Commission of the States, 1997).

2. Classification based on which state board has responsibility for community colleges, including state board of education, state board of higher education or commission, statewide community college coordinating boards, statewide community college governing boards, or state boards of regents.

3. Classification based on three structural dimensions of statewide systems including federal systems, unified systems, or segmented systems.

4. Classification based on seven structural dimensions of statewide community college structures including federal-federal, federal-unified, federal-segmented, unified, segmented-federal, segmented unified, and segmented-segmented.

In addition to state governance, some community colleges have boards of trustees that are elected by the constituents of the service area (California Community Colleges, 2007), whereas others have boards of trustees that are appointed by the governor (Edison Community College, 2008; Lovell & Trouth, 2002), and yet others have a combination of elected and appointed members of their boards of trustees (Sinclair Community College, 2008). The nature, composition, and local accountability greatly influence institutional policies, programs, and finances.

Another dimension that contributes to the diverse nature of 2-year institutions is
institutional control. A review of the 2005 Carnegie Classifications illustrates the degree of variety of the control of these institutions. This classification system includes the categories of public, public special use, private not-for-profit, private for-profit, public 2-year colleges under universities, public 4-year, primarily associate’s private, 4-year-not for profit-primarily associate’s, and private 4-year for profit- primarily associate’s (The Carnegie Foundation for the Advancement of Teaching, 2005). In an analysis of the issues related to 2-year college classification, Phillippe and Boggs (2003) highlighted the issue of governance by observing that independently and publicly controlled institutions “need to be analyzed separately” (p. 83). Obviously, the issues relative to diversity of institutional governance and control significantly influence institutional climate, thus adding yet another level of variation to be considered when researching community college issues.

Geography and Degree of Urbanization

The location of community colleges, and hence the resultant programming, are largely driven by the economic, social, political, and geographic dimensions (Fulharty & Scaggs, 2007; Katsinas, 2003; Phillippe & Boggs, 2003) of their respective locales. In an article written in the journal New Directions for Community Colleges, Phillippe and Boggs (of the American Association of Community Colleges) in 2003 emphasized that “the institution’s community context is a critical factor for consideration in classification” (p. 84). Further, they observed that the context of region and degree of urbanization are also important factors to consider in understanding community colleges. Katsinas (2003) captured the impact of geography in the following observation:
Geographical service delivery areas for community colleges are typically defined by state statute or regulation through state coordinating boards, compelling evidence to use geography as a criterion in classification of public community colleges. Beyond the legal status lie practical issues implicit in the application of the Baldrige criteria…what works in a multicampus suburban or urban setting will not necessarily work in a rural setting. (p. 22)

In addition to the geographical influences on community colleges, the degree of urbanization and the associated ethnic, social, and economic elements (Fulharty & Scaggs, 2007) on their local constituency add a further dimension to the complexity and variation among these institutions. Drawing on data from the U.S Census Bureau, Fluharty and Scaggs observed that the poverty rates in rural areas are significantly higher than in metropolitan areas of the country. This fact impacts both full- and part-time faculty in that support systems in rural areas, such as child care and transportation, are less likely to exist and thus introduce additional obstacles that faculty have to overcome in order to continue in their work activities. In addition, rural community colleges receive a minor fraction of obtainable federal funds, which limits the economic capability of these institutions and produces “increasingly fragile institutions serving increasingly fragile communities” (Fluharty & Scaggs, p. 19). This economic facet undoubtedly leads to a faculty staffing shift that moves away from staffing with full-time faculty to increased staffing of part-time faculty, which may or may not be qualified for collegiate teaching, particularly in the liberal arts and sciences fields.
Depending upon the geographical location of these institutions, the racial and ethnic composition of communities served varies widely, as does the need for a faculty that is representative of this diversity. Fourteen million students participate in various community college programs, including an estimated 48% of African American, 58% of Hispanic, and 50% of Native American students attending higher education institutions nationally (Wilds & Wilson, 1998). The academic support systems, student services, and programmatic needs for these underrepresented groups in higher education add other parameters to the variation among community colleges (Merisotis & Shedd, 2003).

**Economics and Size**

There are five principal factors that impact the cost economics of community college delivery of educational services. These factors provide much of the inertia for the expansion in the use of part-time faculty. The first factor is static state funding support for community colleges. State funding has not provided for inflationary pressures (Boyd, 2002). Many institutions have attempted to increase revenues to offset inflation by raising tuition and fees but in many states, such as Ohio, the legislature has responded by placing a cap on the annual increases in student tuition and fees, thus limiting the degree to which inflation costs can be recovered. A second factor is the age of faculty. In the academic year of 1998-99, 50% of community college faculty who left their institutions, retired (Conley, 2005). As older community college faculty retire and are replaced with younger faculty, it is important to understand the dimensions of age on faculty satisfaction.

The third economic factor is evident when community college enrollments are considered. In the period from 1965 to 1993, there was a 476% (representing 5.5 million
individuals) increase in the number of students attending community colleges (Phillippe & Sullivan, 2005) and by 2003, the number of students attending community colleges increased an additional 18%, representing over 6.5 million individuals (American Association of Community Colleges, 2005). Many of the financial resources generated as a result of this rapid growth were employed to expand facilities to accommodate enrollment growth or to build information technology infrastructure in the period from 1990 forward. The resultant impact of these fiscal pressures (coupled with static state support) on community colleges was to absorb increased faculty staffing demands by expanding the number of part-time faculty.

The fourth economic factor, in some states such as Ohio, is the requirement for full-time faculty leadership for career programs (see Ohio Board of Regents, 1998). Further, accreditation agencies (e.g., Accrediting Board for Engineering Technology, 2007; National Accrediting Agency for Laboratory Sciences, 2007; National League for Nursing, 2006) require minimum full-time staffing standards for initial and continuing accreditation. Since health care is the largest industry in the U.S. and that “eight out of 20 occupations that are projected to grow the fastest are in health care” (U.S. Department of Labor, 2007) and that virtually all health care occupational preparation programs have accreditation in some form or another, these external forces will continue to restrict community colleges in their staffing flexibility in order to meet emerging community needs. The resultant consequence will be to shift available full-time positions from the liberal arts disciplines to meet emerging career program requirements. The secondary effect will be an increase in the proportion of part-time positions in the liberal arts
disciplines. These effects will be amplified due to salary differentials between career program faculty and liberal arts and science faculty (Melguizo, & Strober, 2007).

These staffing effects are likely to be magnified if there continues to be a movement toward unionization of part-time faculty. Historically, the unionization of faculty has been motivated by dissatisfaction with the conditions of employment (Castro, 2000). States such as Washington already have part-time faculty union representation (The National Education Association, 2007). Historically, faculty unionization has had “significant effects on teachers’ salaries and on school district expenditures” (Duplantis, Chandler, & Geske, 1995, p. 175). Full-time faculty salaries at unionized universities have been demonstrated to be greater for unionized institutions when compared with non-union institutions (Morgan & Kearney, 1977). A central reason for the salary disparity between union and non-union institutions may be due to the pressure exerted on institutions by the prospect of arbitration if collective bargaining fails to achieve agreement on salary and the inflexibility in adjusting salaries or annual raises during the term of the negotiated contract.

The relevance of career programs in the community college demands that faculty remain current in their academic fields and that they possess significant experience as practitioners in their respective fields. This dimension of career-field-related experience introduces factors that are not traditionally germane in the community college setting.

As the numbers of part-time faculty continue to grow, and with the prospect of expanded unionization efforts potentially looming, this situation could present the ironic condition in which the efforts of community college administrators to conserve fiscal
resources by employing greater numbers of part-time faculty could lead to the unintended consequence of actually increasing expenses due to part-time faculty unionization.

Finally, the issue of institutional size contributes to community college diversity. The following statement by Katsinas (2003) succinctly and lucidly summarizes this dimension of diversity.

As the work of the Ford Foundation’s Rural Community College Initiative and the American Association of Community Colleges’ Rural Policy Roundtables reveals, small rural community colleges, with few exceptions, face special problems related to economy of scale and geographic isolation. It simply costs more to deliver high-quality services in a sparsely populated rural area and the lack of economies of scale dramatically affects curriculum development and institutional planning (p. 25).

The impact of economic considerations for community colleges, as with private business ventures, provides significant challenges to overcome to remain viable enterprises.

2005 Carnegie Classification of Community Colleges

In 1970, Carnegie Commission on Higher Education initially developed a system of classification of colleges and universities in relationship to previous research efforts (The Carnegie Foundation for the Advancement of Teaching, 2007). Although the system has evolved over the years since, the basic classification of 2-year colleges had remained virtually unchanged (Hardy & Katsinas, 2007) until the most recent revision that was announced in 2005 (Carnegie Foundation for the Advancement of Teaching). In a 2003
article, the inadequacy of the approach to classification of the 2-year sector was summed up by the following observation:

From the beginning, a shortcoming of the [Carnegie] classification has been its failure to capture variation in the two-year sector of higher education. All two-year institutions have consistently been lumped together in a single category. (McCormick & Cox, 2003, p. 7)

According to Hardy and Katsinas (2007) one of the greatest limiting factors to addressing this shortcoming rested with the difficulty “for researchers to manipulate large computer databases created by the federal government including the U.S. Department of Education’s Integrated Postsecondary Education Data System …” (p. 5) prior to the turn of the century.

In 2003, the journal New Directions for Community Colleges focused its summer issue on a range of research related to the classification of community colleges. Various perspectives were presented in this volume, including classification systems of community colleges based on purposes of the college (McCormick & Cox, 2003) institutional control, geography, governance, and size (Cohen, 2003; Katsinas, 2003); experiential enrollment, program completion, faculty, staff, finances, and academic libraries (Merisotis & Shedd, 2003); curricular characteristics (Schuyler, 2003); and a market-price model (Shaman & Zemsky, 2003). Phillippe and Boggs (2003), both employed by the American Association of Community Colleges, commented that although each of the systems are incomplete “the authors [above] provide a basis for guiding further discussion and development” (p. 85).
Based on the previous research, the Carnegie Foundation for the Advancement of Teaching (2007) announced an expanded classification system for 2-year institutions that accounted for institutional control, geographical region, degree of urbanization, and size. The data to support this classification system is available from the Integrated Postsecondary Education Data System (IPEDS), NCES, and the U.S. Census Bureau (Hardy & Katsinas, 2007; Merisotis & Shedd, 2003). This typology was largely based on the work of Stephen G. Katsinas and Vincent A. Lacey (Katsinas & Lacey, 1996).

The 2005 Carnegie classification typology is an important recognition of the principal elements that influence the forces shaping the mission of individual community colleges while maintaining a prudent degree of parsimony in relation to the available Advancement of Teaching (2005) classifications for community colleges are:

1. Associate: Assoc/Pub-R-S - Associate’s Public Rural-serving Small,
2. Associate: Assoc/Pub-R-S - Associate’s Public Rural-serving Medium,
3. Assoc/Pub-R-S: Associate’s - Public Rural-serving Large,
4. Assoc/Pub-S-SC: Associate’s - Public Suburban-serving , Single Campus,
5. Assoc/Pub-S-MC: Associate’s - Public Suburban-serving Multicampus,
6. Assoc/Pub-U-SC - Associate’s - Public Urban-serving Single Campus,
7. Assoc/Pub-U-MC - Associate’s - Public Urban-serving Multicampus,
8. Assoc/Pub-Spec: Associate’s - Public Special Use,
9. Assoc/PvtNFP: Associate’s - Private Not-for-profit,
10. Assoc/PrivFP: Associate’s - Private For-profit,
11. Assoc/Pub2in4: Associate’s - Public 2-year Colleges under Universities,
12. Assoc/Pub4: Associate’s - Public 4-year, Primarily Associate’s

13. Assoc/PrivNFP4: Associate’s - Private Not-for-profit 4-year, Primarily Associate’s

14. Assoc/PrivFP4: Associate’s - Private For-profit 4-year, Primarily Associate’s

The creation of these 14 categories provides for many of the dimensions of community college typology. The 2005 Carnegie classifications along with the economics and size considerations provide a finer degree of resolution to research lens.

Summary

The two-fold increase in the employment of part-time faculty in the 10-year period between 1995 and 2005, the rapid increase in the numbers of students attending community colleges, and the stasis in the number of full-time faculty positions presents significant challenges for community college administrators. Understanding and managing the factors leading to increased job satisfaction and decreased job dissatisfaction can lead to improvement in performance, retention, attitudes, and ultimately student success.

The review of the literature has illuminated several thematic dimensions relative to the study of community college faculty job satisfaction. First, most of the literature regarding faculty satisfaction is either based on limited samples, involves university faculty, is a composite of all faculty, or compares university and community college faculty satisfaction. The need for additional research on current community full- and part-time faculty is urgent -- especially given the shifts in faculty staffing patterns over the last
15 years. Second, the institutional context is highly variable between the various community colleges, in terms of programs offered, state governance structure, the nature of institutional control, geographical location, degree of urbanization, economic environment of the institution, and the size of the institution. Studies relative to faculty job satisfaction should account for as many of these factors as possible. Finally, it is important to understand the intrinsic, extrinsic, demographic, and institutional typological factors affecting faculty job satisfaction and their relationship to any theoretical framework that forms the basis for practice.

In the review of the literature, extant studies regarding faculty satisfaction address many important issues, but remain inadequate to address community college job satisfaction. Since the majority of these studies were conducted by researchers interested in university faculty job satisfaction, issues uniquely related to community college job satisfaction were not incorporated. Although there are varying components of job satisfaction among previous studies, none have addressed the issues of geography and degree of urbanization - factors that have a profound impact on community colleges. This study will synthesize the findings of previous studies and add the factors of geography and degree of urbanization to further clarify community college faculty satisfaction. The most grounded and comprehensive model of job satisfaction is the model presented by Hagedorn (2000). In her model, she employed NSOPF: 93 data expanding Herzberg’s dual-factor theory to address the university faculty context. More importantly, she employed the extensive, validated, and comprehensive NSOPF: 93 study and found her model to be highly significant (p < .001).
The variables selected by Hagedorn certainly apply to full-time university faculty, but many are not relevant to the nature of community college full- and part-time faculty responsibilities. The theoretical framework employed by Hagedorn is more ubiquitous and is definitely applicable to the community college setting. The adaptation of her model to the community college context, along with the addition of geography and degree of urbanization, shows great promise for a richer understanding of community college faculty job satisfaction as well as providing a sound foundation for the pursuit of subsequent research relative to community college job satisfaction. A thorough review of the faculty job satisfaction literature demonstrates numerous approaches to the study of this issue, but none of those studies is as relevant to a study of community college faculty as is Hagedorn’s work.
CHAPTER 3: METHODOLOGY

Introduction to the Methodology

The purpose of this chapter is to summarize the design and methodologies used in this research study of the relationships between intrinsic and extrinsic, demographic, and institutional factors and job satisfaction of public community college faculty. The nationally representative 2004 National Study of Postsecondary Faculty (NSOPF: 04) of faculty and instructional staff from institutions across all Carnegie classifications (U.S. Department of Education, National Center for Education Statistics, 2004) was used as the data source since. NSOPF: 04 provides a validated, robust and publicly accessible source of data related to postsecondary faculty in the United States. Four null hypotheses and 6 sub-null hypotheses were developed to answer the 4 research questions for this research. Additionally the National Center for Education Statistics Website provided the publicly accessible online data analysis tools required to conduct the appropriate statistical analyses necessary to test the null hypotheses and to answer the research questions (U.S. Department of Education, 2004).

Research Questions

1. Is there a difference in overall job satisfaction between full- and part-time community college faculty?

2. Does job satisfaction of community college faculty relate to the intrinsic and extrinsic job satisfaction factors of teaching rewards; fair treatment of part-time, female, or racial/ethnic minority faculty; or satisfaction with the choice of a teaching career field, controlling for job status?
3. Does job satisfaction of community college faculty relate to the demographic factors of gender, race/ethnicity, career stage, union status, or teaching field, controlling for job status?

4. Does job satisfaction of community college faculty relate to institutional size or degree of urbanization, controlling for job status?

Null Hypotheses

The following four null and six sub-null hypotheses identified for this study were derived from the major research questions indicated above.

H₁: There is no significant difference in overall job satisfaction between full- and part-time community college faculty.

H₂: There is no significant relationship between overall job satisfaction and community college faculty opinions regarding intrinsic and extrinsic job factors, controlling for job status.

H₂a: Full-time community college faculty job satisfaction and full-time faculty opinions regarding teaching is rewarding; that part-time, female, and racial minority faculty are treated fairly; and that if given the opportunity again, they would choose an academic career are not related.

H₂b: Part-time community college faculty job satisfaction and part-time faculty opinions regarding teaching is rewarding; that part-time, female, and racial minority faculty are treated fairly; and that if given the opportunity again, they would choose an academic career are not related.
H₃: There is no significant relationship between overall job satisfaction and community college faculty demographic factors, controlling for job status.

H₃ᵃ: Full-time community college faculty job satisfaction and gender, race/ethnicity, career stage, union membership, and teaching field are not related.

H₃ᵇ: Part-time community college faculty job satisfaction and gender, race/ethnicity, career stage, union membership, and teaching field are not related.

H₄: There is no significant relationship between overall job satisfaction and community college institutional typology factors, controlling for job status.

H₄ᵃ: Full-time community college faculty job satisfaction and institutional size and degree of urbanization are not related.

H₄ᵇ: Part-time community college faculty job satisfaction and institutional size and degree of urbanization are not related.

The descriptions of the methods used to identify the institutional universe and target populations of institutions and faculty to be surveyed, the data collection procedures employed, and the instrumentation, as well as the operational definitions of NSOPF: 04 variables in relation of the theoretical context of this research are addressed in the following sections. The sources of data and the statistical methodologies employed are also discussed in sections in this chapter. A complete review of the methodology used in NSOPF: 04 is presented in the 2004 National Study of Postsecondary Faculty (NSOPF: 04) Methodology Report (Heuer et al., 2005).
Population and Sample Selection

The population of institutions eligible for sampling in NSOPF: 04 was comprised of all Title IV participating associates or higher degree-granting institutions of higher education that met established NSOPF: 04 eligibility criteria (Heuer et al., 2005) including:

“…located in the 50 states or the District of Columbia; classified as participating in Title IV student aid programs; public or private not-for-profit; 2- or 4-year degree-granting; offers educational programs designed for students beyond high school; academically, occupationally, or vocationally oriented; and makes programs available to the public” (p. 8).

Of the total of 1,130 community colleges that were identified as meeting the eligibility criteria, 330 were identified as eligible for the sample population. The non-weighted response rate was 89.1% representing 290 institutions.

Faculty eligible for participation in the NSOPF: 04 study consisted of individuals having teaching responsibilities as a element of their job responsibilities (e.g. instructional, research, or administrative faculty) in contrast to those ineligible faculty that did not have instructional responsibilities (Heuer et al., 2005). The eligible faculty population included persons who:

1. Were permanent, temporary, adjunct, visiting, acting, or postdoctoral appointees,

2. Were employed full- or part-time by the institution; taught credit or noncredit classes,
3. Were tenured, non-tenured but on tenure track, or non-tenured and not on tenure track;

4. Provided individual instruction, served on thesis or dissertation committees, advised, or otherwise interacted with first-professional, graduate, or undergraduate students, were in professional schools,… or were on paid sabbatical leave (p. 9).

The faculty sampling protocol involved a 3 stage process beginning with the initial lists of eligible faculty provided by each sample institution. The second step employed a stratified approach to ensure adequate representation of all race/ethnicity categories and was also modified to minimize cost while achieving variances comparable to previous NSOPF surveys. Final adjustments were made to ensure that a minimum of 10 faculty per institution were selected and, if possible, at least one faculty member of these 10 represented each race/ethnicity category and that the job status strata were represented as well (Heuer et al., 2005). Of the total of 8,770 community college faculty that were eligible to participate in the study, 6,420 completed the survey for a completion rate of 73.1%. The aggregate response rate for all institutions surveyed, by employment status, was 80.6% for full-time faculty and 68.7% for part-time faculty.

Data Collection Procedures

In order to ensure methodological consistency with prior NSOPF studies sample institutions were asked to provide names and home addresses for faculty employed at their institutions (Abraham et. al, 2002). Coordinators from each sample institution, typically chief academic officers, were identified to follow-up with non-respondents.
Following the initial mailing of the survey, follow-up efforts were made to ensure maximum response rates. These efforts included a post-card prompt, second mailing, third mailing, and a telephone prompt. In addition, as in previous NSOPF studies, efforts were made to ensure that all demographic sub-groups were appropriately represented during the follow-up phase.

Instrumentation

As was the practice in prior NSOPF studies, the instrument for NSOPF: 04 (Appendix A) was adapted from the 1999 (NSOPF: 99) survey (U.S. Department of Education, National Center for Education Statistics, 1999) in several ways including shortening the instrument, employing a web-based instrument with telephonic interviews to follow-up on non-respondents, and was updated with a focus toward developing trends while maintaining comparability with previous NSOPF studies (Heuer et al., 2004). The NSOPF: 04 sampling protocols included weighting of underrepresented racial or ethnic faculty to ensure valid representation of these groups in the survey. In addition, an extensive field-test involving the sampling of faculty from 150 institutions (77% response rate) was conducted to validate the instrument and procedures (Heuer, et al.).

Operational Definition of the Variables

Outcome Variables

Herzberg et al. (1959) did not employ outcome variables in their model since it was a qualitative study. In Hagedorn’s publication of her model in 2000, the NSOPF: 93 neither the variables nor algorithms, if any, used to operationalize the outcome variable of “global job satisfaction” were specified thus it was not possible to evaluate the
possibility of replication or adaptation for this study. NSOPF: 04 created two relevant derived variables that do reflect overall job satisfaction: the employment satisfaction index and the instructional support index. Responses selected by survey participants for the individual categorical variables were coded as 1 (very satisfied), 2 (somewhat satisfied), 3 (somewhat dissatisfied), or 4 (very dissatisfied). The two aggregate continuous variables were generated by re-coding the individual variables to 0-3 with 0 for very dissatisfied, 1 for somewhat dissatisfied, 2 for somewhat satisfied, and 3 for very satisfied. The recoded scores were then summed and divided by the number of scores to derive the resultant satisfaction means. These results are consistent with the theoretical framework of Herzberg et al. (1959) and of Hagedorn (2000), hence, were selected as the outcome variables to operationalize overall job satisfaction for a model of job satisfaction for community college faculty. Tables 2 and 3 summarize the NSOPF: 04 derived variables and the individual variables contributing to them.

**Predictor Variables**

Many of the intrinsic (motivators) and extrinsic (hygienes) factors of job satisfaction that were identified by Herzberg et al. (1959) and Hagedorn (2000) were operationalized in Hagedorn’s work by employing corresponding questions from the, 1993 National Study of Postsecondary Faculty (NSOPF: 93). In NSOPF: 04; however, as is evident in Table 2, several of these intrinsic and extrinsic predictor factors were components of the two outcome variables.

Hagedorn operationalized the factor of recognition by employing the NSOPF: 93 variables of chairperson status and work in funded or creative endeavors. These variables
Table 2

*Community College Faculty Job Satisfaction with Items Comprising the Outcome Variable of Satisfaction with the Employment Index*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Name</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with employment index</td>
<td>XO1Q62</td>
<td>Satisfaction index of employment items</td>
</tr>
<tr>
<td>Employment items</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workload</td>
<td>Q62A</td>
<td>Satisfaction with workload</td>
</tr>
<tr>
<td>Salary</td>
<td>Q62B</td>
<td>Satisfaction with salary</td>
</tr>
<tr>
<td>Benefits</td>
<td>Q62C</td>
<td>Satisfaction with benefits</td>
</tr>
<tr>
<td>Job overall</td>
<td>Q62D</td>
<td>Satisfaction with job overall</td>
</tr>
</tbody>
</table>

Note: The source of variables was the National Center for Education Statistics Data Analysis System, 2004 Study of Postsecondary Faculty Questionnaire.

are appropriate for the university context but are much less appropriate for community colleges since department chairs are often administratively appointed and endeavors that are funded or creative are generally not part of the job expectations for community college faculty.

Recognition in the community college is typically related to teaching. A variable that was not present in NSOPF: 93 but was available in NSOPF: 04 was the variable of opinion that teaching is rewarded. Teaching is the principal focus for faculty in the
Table 3

**Community College Faculty Job Satisfaction with Items Comprising the Outcome Variable of Satisfaction with the Instruction Index**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Name</th>
<th>Satisfaction label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with instruction</td>
<td>XO1Q61</td>
<td>Index of instruction items</td>
</tr>
<tr>
<td>index</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instruction items</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authority for course decisions</td>
<td>Q61A</td>
<td>Authority to make decisions</td>
</tr>
<tr>
<td>Instructional technology</td>
<td>Q61B</td>
<td>Technology-based activities</td>
</tr>
<tr>
<td>Equipment and facilities</td>
<td>Q61C</td>
<td>Equipment and facilities</td>
</tr>
<tr>
<td>Teaching improvement</td>
<td>Q61D</td>
<td>Support for teaching improvement</td>
</tr>
</tbody>
</table>

*Note: The source of variables was the National Center for Education Statistics Data Analysis System, 2004 National Study of Postsecondary Faculty Questionnaire.*

Community college. If one’s principal work is valued, and hence rewarded, enhanced job satisfaction will result (Grawitch, Trares, & Kohler, 2007; Herzberg et al., 1959), hence, the NSOPF:04 variable of opinion that teaching is rewarded was used in the present research to operationalize recognition. The factor of opinion about choosing an academic career again was available in both NSOPF studies but was only operationalized as an intrinsic and extrinsic variable the present study. The opinion regarding the decision to choose an academic career again provides holistic insight into the intrinsic factors related
to the job itself thus was selected as an intrinsic and extrinsic variable for this research. It was not clear why this variable was not included in Hagedorn’s (1959) model.

Several extrinsic factors related to work conditions (Herzberg et al., 1959) were employed by Hagedorn (2000) as “triggers.” These included the fair treatment of female and racial/ethnic minority faculty. These, plus the additional variable of the opinion that part-time faculty are treated fairly (a new variable in NSOPF: 04) incorporated as indicators of the work environment. Hagedorn also employed “triggers” (p. 7) as a variable classification in her study but the majority of these did not represent factors of change--rather point-in-time perspectives. These factors are important, but are better employed in some other categorization of job satisfaction. The remaining triggers identified by Hagedorn included transfer to a new institution, change in rank, and change in emotional state. The first two of these triggers are relevant to the university context, but are not globally paramount in the community college context. The variable regarding emotional state was not operationalized in Hagedorn’s work because it was not addressed in the NSOPF: 93 study. The 2005 Carnegie classification of 2-year colleges which expanded the historic associate’s degree institution classifications from single category to 14 categories provides deeper insight into the institutional dimensions of job satisfaction, particularly in the context of institutional size and degree of urbanization.

In addition to the intrinsic and extrinsic variables identified above, Hagedorn created a separate category that extended her job satisfaction model from that of Herzberg et al. (1959). She termed this new category “environmental conditions” (Hagedorn, 2000, p. 13). These included collegial relationships, student quality or
relationships, administration, and institutional culture or climate. Collegial relationships were not addressed in NSOPF: 04 so it was not possible to include this environmental element in this study. As discussed in Chapter Two, student quality is not an appropriate variable for the community college context so it was also omitted as a variable. The derived variable related to administrative decisions created in Hagedorn’s work was not reflected in this study because the composition of aggregated responses. The variable composition and method employed for derivation were not identified, hence it was not possible to address in this research.

The environmental variables related to community college institutional climate that were reflected in NSOPF: 04 were discussed earlier. A summary of the job satisfaction components identified in the Herzberg et al. model that were foundational to the Hagedorn model, as well as adaptation of these models to a community college faculty model for the present research, are presented in Table 4.

The demographic factors employed by Hagedorn (2000) in her model included the NSOPF: 93 variables of gender and race/ethnicity (African American and Hispanic) as demographic variables. She selected these categories based on her assessment of the literature theorizing that “… gender, and ethnicity may function to pull faculty members away from academic pursuits and create interference with the job” (p. 9). The classifications of White and non-White were employed in this research because of the void in parallel job satisfaction-race/ethnicity interactions in the extant literature uniquely focused on community college job satisfaction. The categories of White and non-White are more overarching, thus providing a more global basis for future research.
### Table 4

*Comparison of Intrinsic and Extrinsic Variables from Job Satisfaction Studies by Herzberg et al\(^a\), Hagedorn\(^b\), and Variables Operationalized for Community Colleges*

<table>
<thead>
<tr>
<th>Conceptual Frameworks of Job Satisfaction models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herzberg et al</td>
</tr>
<tr>
<td>Personal growth</td>
</tr>
<tr>
<td>Compensation</td>
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<tr>
<td>Supervision</td>
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<tr>
<td>Work conditions</td>
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<tr>
<td>Administration policies</td>
</tr>
<tr>
<td>Relationships</td>
</tr>
<tr>
<td>Salary and benefits</td>
</tr>
<tr>
<td>Security</td>
</tr>
</tbody>
</table>

\(^a\) Herzberg et al. (1959) was a qualitative study. \(^b\)Hagedorn (2000) used NSOPF: 93.

Hagedorn (2000) also included institutional type and academic discipline as demographic factors by employing the 2000 Carnegie classification system (Carnegie Foundation for the Advancement of Teaching, 2007) to operationalize institutional type and the NSOPF: 93 variable X01Q16 (principal teaching field) response choices for academic disciplines, employing a Biglan type classification system (Table 1) to
operationalize academic discipline. For the purposes of this study, teaching field was used to capture academic disciplines. Teaching fields were derived for this work by combining responses to NSOPF: 04 survey question Q16CD4 -- Principal Field of Teaching--Specific Code, General Area (Appendix A) to bifurcate teaching fields into those leading to liberal arts or career programs. The use of these variables is appropriate for research with community colleges since the focus, credentials, and prior experience of faculty are different for these two categories. Liberal arts faculty have the academic preparation that is similar to that of 4-year faculty in those disciplines; whereas, career program faculty typically may hold appropriate or applied degrees and are expected to possess work experience in the teaching field.

In addition to gender and race/ethnicity, both career stage and union membership of faculty have been shown to influence the extrinsic factor of salary, hence, may also influence the job satisfaction. Career stage has been demonstrated to impact the job satisfaction of non-tenure-track faculty at a large public institution (Feldman and Turnley, 2001) and age has been shown to be significantly correlated with the overall job satisfaction of 4-year, full-time faculty (Okpara, Squillace, & Erond, 2005). Okpara, Squillace, & Erond also found that age significantly interacts with gender with this population to influence job satisfaction. Hagedorn’s (2000) model did not include the dimension of career stage per se (i.e. the interaction between the relative progression through a professional career and job satisfaction) but did address “changes in life stages” (p. 14) as a component of the model. Career stage, operationalized by age, was included
in the model for the present research to explore further the interactions of this variable with job satisfaction.

Historically, faculty unionization has had “significant effects on teachers’ salaries” (Duplantis, Chandler, & Geske, 1995, p. 175) and full-time faculty salaries at unionized universities have been demonstrated to be greater for unionized institutions when compared with non-union institutions (Morgan & Kearney, 1977). It is for this reason that the variable of union membership was included in this research. The predictor demographic variables employed in this study, as operationalized from NSOPF: 04, are presented in Table 5.

Hagedorn (2000) also used institutional type as a demographic variable in her study employing the then extant 2000 Carnegie classification system. This system, as with all previous revisions, aggregated all associates degree granting institutions into a single category. The 2005 Carnegie classification system disaggregates associate degree granting institutions by factors of institutional control, size, and degree of urbanization. The factors of institutional size and degree of urbanization were used to operationalize the dimension of institutional typology and a unique predictor variable category of institutional typology was created as a component of job satisfaction.

As discussed in Chapter 2, the variables of institutional size and setting are extremely relevant for community colleges, but were not addressed in Herzberg’s dual-factor theory (Herzberg et al., 1959) or in Hagedorn’s (2000) model of faculty job satisfaction. Hagedorn did employ the 2000 Carnegie classifications (p. 7) to operationalize institutional type for the 4-year institutions; the focus of that model.
Table 5

 Operationalization of the Demographic Predictor Variables Influencing the Job Satisfaction of Community College Faculty

<table>
<thead>
<tr>
<th>Variable</th>
<th>Name</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Q71</td>
<td>Gender (male or female)</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td>X03Q74</td>
<td>Race/ethnicity recoded (White or non-White)</td>
</tr>
<tr>
<td>Career stage</td>
<td>X03Q72</td>
<td>Age, matches NSOPF: 93 distribution</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Early career - under 35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mid-career - 35-54</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Late career - 55-years of age or older</td>
</tr>
<tr>
<td>Union status</td>
<td>Q14</td>
<td>Union status</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not a union member</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Union member</td>
</tr>
</tbody>
</table>

Note. The source of variables was the National Center for Education Statistics Data Analysis System, 2004 National Study of Postsecondary Faculty. Non-White race/ethnicity variables were aggregated to a single variable of non-White. Career stage variables were aggregated into early, mid-, and late career stages.
The Carnegie classifications prior to the release of the 2005 classifications aggregated all associate’s degree granting institutions into a single category. Katsinas (2003) purposed a stratified model that included the factors of institutional control, size, and setting. The public control of community colleges by states arises from the chartering of these colleges by states and through state financial support from public funds. Legal relationships existing between institutions and states for different control categories (e.g. private, proprietary, or tribal colleges) differ widely from state controlled institutions. The Carnegie Foundation for the Advancement of Teaching (2007) adopted the Katsinas (2003) model for the classification of associate’s colleges.

Institutional size is an important dimension of community college focus in that it has a direct influence on the number of academic course offerings and career programs that can be arrayed for potential students. In addition, the size of an institution places limitations on the efficiencies enjoyed by larger institutions due to economies of scale. The predictor variable size categories selected for this study are presented in Table 6. The setting of rural, suburban, or urban greatly influences the nature of the student population and also influences other factors such as finance and program offerings (Elsner, 2003; Vineyard, 1979). These factors may influence faculty job satisfaction. As Katsinas (2003) observed “…what works in a multicampus suburban or urban setting will not necessarily work in a rural setting” (p. 22). The 2005 Carnegie classification system adopted the designated geographic locales of community colleges as proposed by Katsinas. These categories include: rural, suburban, and urban. Within each of these three categories are sub-categories that further distinguish between institutions according to
Table 6

Operationalization of the Typological Predictor Variables Employing the 2005 Carnegie Classifications of Size and Degree of Urbanization Categories

<table>
<thead>
<tr>
<th>Variable Description</th>
<th>Variable Code</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional size</td>
<td>X13Q0</td>
<td>Enrollment, undergraduate</td>
</tr>
<tr>
<td>Small</td>
<td></td>
<td>Less than 2,000 FTE</td>
</tr>
<tr>
<td>Medium</td>
<td></td>
<td>2,000 to 4,999 FTE</td>
</tr>
<tr>
<td>Large</td>
<td></td>
<td>Above 5,000 FTE</td>
</tr>
<tr>
<td>Degree of urbanization</td>
<td>X09Q0</td>
<td>Degree of urbanization</td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td>Rural, small town, and large town</td>
</tr>
<tr>
<td>Suburban</td>
<td></td>
<td>Urban fringe of large and mid-size city</td>
</tr>
<tr>
<td>Urban</td>
<td></td>
<td>Mid-size city and large city</td>
</tr>
</tbody>
</table>

Note. The source of variables was the National Center for Education Statistics, Data Analysis System, 2004 National Study of Postsecondary Faculty.


to size (rural) or number of campuses (suburban and urban) in the college or system. For the purposes of this research, these categories are employed as the degree of urbanization
(Table 6) by aggregating NSOPF: 04 variable categories to align with Katsinas model.

Sources of Data

The National Center for Education Statistics (NCES) data file for NSOPF: 04 was used as the data source for this study for all intrinsic, extrinsic, demographic, and institutional typological factors. The NSOPF: 04 data file is the richest, most current, and the most accessible source of information regarding faculty job satisfaction, as well as many other factors related to postsecondary faculty. This national study included a final sample of 6,664 faculty of which 1,597 were full-time (34%) and 3,067 (66%) were part-time. (Heurer, et al., 2006) The online Data Analysis System (DAS) provides both researchers and practitioners the capability to access and analyze the data from this and multiple other studies via the Internet and without the additional burden of the cost of software for personal computers or other reference sources. NSOPF 04 and the DAS analysis tool, both of which are available on the National Center for Education Statistics (NCES) website (U.S. Department of Education, National Center for Education Statistics, Data Analysis System, 2005) were selected as the data source and analysis tool for this research.

Data Filters

The target population for this research was public 2-year college faculty members who taught at least one course during the time that they responded to the NSOPF: 04 questionnaire. The data file was filtered to isolate public associate’s degree institutions and those community college employees who reported that they were classified by their institutions as faculty and who taught one or more courses in the fall of 2003. In addition,
the data were filtered by employment status to isolate full- or part-time faculty for the weighted least squares multiple regressions. The rationale for this filtering procedure is based on the fact that the goals and objectives of public, private, and proprietary institutions are widely divergent as are the extrinsic factors affecting job satisfaction in different institutional types. In addition, some community college employees may be classified as faculty by their institutions but approximately 20% (NSOPF: 04) of those so classified, do not teach (e.g. counselors or librarians). Faculty, as defined in Chapter 1, were individuals so classified by their institutions as faculty and who were teaching at least one course during the fall term of 2003 when the NSOPF: 04 study was conducted.

Statistical Methodologies

Descriptive Statistics

The descriptive statistics generated for this study used the DAS Tables analysis feature for data production. The percentage distribution of full-time, part-time and all faculty responses for question response options were calculated for predictor variables. In addition the full- and part-time faculty means and standard errors were calculated by DAS and were included with the results for independent means $t$-tests.

Independent Samples $T$-Tests

The independent samples $t$-test was selected as the statistical method to test null hypothesis $H_1$ for both outcome variables (employment and instruction indices). In order to provide deeper insight into the perspectives of full-time versus part-time faculty, $t$-tests were also conducted for all variables comprising the outcome indices. Values of $t$ that were in the range of 1.96 to 2.57 were considered statistically significant at the $p < .05$
level, values of $t$ in the range of 2.58 to 3.38 were considered to be significant at the $p < .01$ level, and values of $t$ that were 3.39 or higher were considered to be significant at the $p < .001$ level.

**Weighted Least Squares Multiple Regression**

The null hypotheses $H_2$, $H_3$, and $H_4$ were tested using weighted least squares multiple regressions. Since the identified predictor variables are all categorical, dummy coding was used in DAS to transform the categorical variables prior to conducting the regression analyses. The reference variable was selected from each categorical type based on the largest relative magnitude of case responses for that variable type (Field, 2005; NSOPF: 04). Significance for the regression models was determined using the $t$ statistic generated by DAS for each regression model. The $t$ statistic calculation employed by DAS uses the two aggregated percentages of agree (strongly agree or somewhat agree) or disagree (somewhat disagree or strongly disagree) and the corresponding standard errors to generate a value of $t$. The critical values of $t$ used to determine levels of statistical significance were: a $t$ value equal to or greater than 1.96 was significant at the $p < .05$ level, values of $t$ in the range of 2.58 – 3.38 were significant at the $p < .01$ level, and values of $t$ that were 3.39 or higher were significant at the $p < .001$ level (Field, 2005). Multicolinearity was assessed using variable inflation factors for each variable in each regression. Variable inflation factors approaching the value of 10 more indicate the likelihood of problematic multicolinearity among the model’s predictor variables.
The coefficient of multiple determination (R²) was employed to explain the amount of variance in the outcome variables that could be attributed to predictor variables in the model. Missing cases were excluded from the regression models, as were zeros. The general form of the linear regression prediction equation is:

\[ \hat{Y} = B_1X_1 + B_2X_2 \ldots + B_nX_n + B_0 \]

Where:
- \( \hat{Y} \) is the predicted outcome variable,
- \( B_1, B_2, \ldots B_n \) are the unstandardized regression coefficients,
- \( B_0 \) is the intercept of the regression line, and,
- \( X_1, X_2 \ldots X_n \) represent predictor variables in the regression equation.

**Bivariate Correlations**

Bivariate correlations (correlations) for each regression model were conducted for full- and part-time faculty and the outcome and predictor model variables. Correlations in the range of .10 to .29 were considered small effects; correlations in the range of .30 to .49 were considered medium effects; and correlations of .50 or greater were considered large effects (Field, 2005 & Green & Salkind, 2005).

**Statistical Assumptions**

The statistical assumptions for t-tests, bivariate correlations, and multiple regressions are that the scores are normally distributed in each sample and the cases represent a random sample. In addition, it is assumed in multiple regressions that scores are normally distributed when in combination with the other scores, the outcome scores are at least at the interval level, the outcome scores’ means are linear, and there is low
multicollinearity, that is, the bivariate correlation between the predictor values is low (Field, 2005; Green & Salkind, 2005). As explained above, the sampling procedures and the large sample size presents a high likelihood that the sample scores are normally distributed and random, thus supporting the use of both the \( t \)-test and multiple regression. Also, this large sample size with a robust sampling protocol supports that the additional assumptions for multiple regression do hold. Multicollinearity was assessed in the DAS output by reviewing the variable inflation factors (VIF) generated in the multiple regression output. A value that is greater than 10 is the threshold for concern regarding multicollinearity (Field, 2005). These statistical methods were selected for this study because, in addition to answering the research questions, they will provide practitioners with information regarding the relationship between overall job satisfaction and the intrinsic and extrinsic, demographic, and institutional typological factors in the community college. The results will provide utility by informing community college administrators’ decisions regarding institutional policies and practices relative to full- and part-time faculty.
CHAPTER 4: RESULTS

Descriptive statistics, independent means $t$-tests, weighted least squares multiple regression, and bivariate correlations (correlations) were employed as methodologies to address the research questions identified for this study (Field, 2005 and Green & Salkind, 2005). The research questions were:

1. Is there a difference in overall job satisfaction between full- and part-time community college faculty?

2. Does job satisfaction of community college faculty relate to the intrinsic and extrinsic job satisfaction factors of teaching rewards; fair treatment of part-time, female, or racial/ethnic minority faculty; or satisfaction with the choice of a teaching career field, controlling for job status?

3. Does job satisfaction of community college faculty relate to the demographic factors of gender, race/ethnicity, career stage, union status, or teaching field, controlling for job status?

4. Does job satisfaction of community college faculty relate to institutional size or degree of urbanization, controlling for job status?

Research question one was explored using descriptive statistics and independent means $t$-tests. Research questions two through four were investigated employing descriptive statistics, weighted least squares multiple regression analysis, and correlation analysis.
Research Question One

Research Question One asked whether there is a difference between full- and part-time faculty job satisfaction at public community colleges. Null Hypothesis One, $H_1$ which was developed to test this first research question, is presented below.

$H_1$: There is no significant difference in overall job satisfaction between full- and part-time community college faculty.

Independent samples $t$-tests were conducted employing the continuous, derived NSOPF: 04 variables of satisfaction with the employment index and satisfaction with the instruction index as measures of overall job satisfaction. Additionally, independent samples $t$-tests were completed for each of the variables that were aggregated to generate the indices. The employment index aggregated the NSOPF: 04 satisfaction questions addressing workload, salary, benefits, and satisfaction with the job overall. Respondent scores were re-coded for the satisfaction question responses for each index. Categorical responses of 1 (very dissatisfied), 2, (somewhat dissatisfied), 3 (somewhat satisfied) and 4 (very satisfied) and a range of categorical scores from 1-4 were re-coded to 0 (very dissatisfied), 1 (somewhat dissatisfied), 2 (somewhat satisfied), and 3 (very satisfied) with a continuous range of 0-12. Part-time faculty were significantly less satisfied with the employment index, $t(1) = p < .001$, $M = 8.16$, $SE = 0.07$, than were full-time faculty, $M = 8.69$, $SE = 0.09$ (Table 7). Part-time faculty also were significantly less satisfied than full-time faculty with two of the four variables comprising the employment index, namely, benefits, $t(1) = p < .001$ and salary, $t(1) = p < .05$, however, part-time faculty were significantly more satisfied with their workload, $t(1) = p < .001$ than their full-time
counterparts (Table 7). Satisfaction levels of full- and part-time faculty were not significantly different for the variable of job satisfaction overall.

Table 7

*Estimates of Descriptive Statistics for Community College Faculty Satisfaction with the Employment Index Variables, by Job Status*

<table>
<thead>
<tr>
<th>Faculty satisfaction</th>
<th>FT faculty</th>
<th>PT faculty</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment index variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workload</td>
<td>76.9 1.05</td>
<td>88.4 1.05</td>
<td>7.70***</td>
</tr>
<tr>
<td>Salary</td>
<td>72.3 1.44</td>
<td>68.3 1.09</td>
<td>2.18*</td>
</tr>
<tr>
<td>Benefits</td>
<td>86.1 0.98</td>
<td>50.1 1.36</td>
<td>21.54***</td>
</tr>
<tr>
<td>Job satisfaction overall</td>
<td>92.8 0.62</td>
<td>92.5 0.66</td>
<td>0.34</td>
</tr>
</tbody>
</table>

*Note.* The source of data was NSOPF: 04. *p* < .05. ***p* < .001.

The instruction index aggregated the NSOPF: 04 questions of satisfaction with authority to make decisions about content and methods, support for technology-based instructional approaches, quality of equipment and facilities, and support for teaching improvement. Part-time faculty, $M = 9.45, SE = 0.06$ were significantly more satisfied, $t(1) = p < .001$, than full-time faculty, $M = 9.07, SE = 0.07$ (Table 8), relative to the instruction index. Part-time faculty were also significantly more satisfied with equipment and facilities, $t(1) = p < .001$; support for teaching improvement, $t(1) = p < .001$; and support for technology-based instructional approaches than were full-time faculty, $t(1) =$
There was no difference between full- and part-faculty with the authority to make course decisions (Table 8).

Research Question Two

Research Question Two concerned the relationship between overall job satisfaction of community college faculty and the intrinsic and extrinsic variables of faculty opinions with respect to: teaching is rewarded; that part-time, female, and minority faculty are treated fairly; and to the statement that, if given the opportunity, they would choose and academic career again.

Table 8

*Estimates of Descriptive Statistics for Community College Faculty Satisfaction with the Instruction Index Variables, by Job Status*

<table>
<thead>
<tr>
<th>Instruction index variables</th>
<th>FT faculty</th>
<th></th>
<th>PT faculty</th>
<th></th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authority for decisions</td>
<td>95.5%</td>
<td>0.55 SE</td>
<td>94.9%</td>
<td>0.53 SE</td>
<td>0.69</td>
</tr>
<tr>
<td>Technology support</td>
<td>86.4%</td>
<td>0.83 SE</td>
<td>89.4%</td>
<td>0.83 SE</td>
<td>2.59**</td>
</tr>
<tr>
<td>Equipment and facilities</td>
<td>77.0%</td>
<td>1.45 SE</td>
<td>83.9%</td>
<td>1.06 SE</td>
<td>3.87***</td>
</tr>
<tr>
<td>Teaching and improvement</td>
<td>71.2%</td>
<td>1.28 SE</td>
<td>78.5%</td>
<td>1.06 SE</td>
<td>4.41***</td>
</tr>
</tbody>
</table>

*Note.* The source of data was NSOPF: 04. **p < .01. ***p < .001.
The following null hypothesis and sub-hypotheses were developed to investigate research question two:

\[ H_2: \text{There is no significant relationship between overall job satisfaction and community college faculty opinions regarding intrinsic and extrinsic job factors, controlling for job status.} \]

\[ H_{2a}: \text{Full-time community college faculty job satisfaction and full-time faculty opinions regarding teaching is rewarding; that part-time, female, and racial minority faculty are treated fairly; and that if given the opportunity again, they would choose an academic career are not related.} \]

\[ H_{2b}: \text{Part-time community college faculty job satisfaction and part-time faculty opinions regarding teaching is rewarding; that part-time, female, and racial minority faculty are treated fairly; and that if given the opportunity again, they would choose an academic career are not related.} \]

Descriptive statistics, weighted least squares multiple regression, and analysis of correlations were conducted to explore the relationship between the predictor intrinsic and extrinsic factors and the outcome variables of employment and instruction job satisfaction indices, controlling for employment status. The estimates of means and standard errors for the employment index were: \( M = 8.7, SE = 0.09 \) for full-time faculty and \( M = 8.2, SE = 0.07 \) for part-time faculty. The estimates of means and standard errors for the instruction index were: \( M = 9.1, SE = 0.07 \) for full-time faculty and \( M = 9.5, SE = 0.06 \) for part-time faculty. Table 9 includes estimates of satisfaction response percentages and standard errors for the intrinsic and extrinsic variables, by job status.
Table 9

Estimates of Descriptive Statistics for Community College Faculty Satisfaction with Intrinsic and Extrinsic Variables, by Job Status

<table>
<thead>
<tr>
<th>Intrinsic and extrinsic variables</th>
<th>Faculty satisfaction</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FT faculty</td>
<td>PT faculty</td>
<td></td>
</tr>
<tr>
<td>Teaching is rewarded</td>
<td>75.8  1.08</td>
<td>82.3  1.02</td>
<td></td>
</tr>
<tr>
<td>PT faculty treated fairly</td>
<td>64.5  1.35</td>
<td>75.2  1.15</td>
<td></td>
</tr>
<tr>
<td>Females treated fairly</td>
<td>91.9  0.66</td>
<td>95.2  0.41</td>
<td></td>
</tr>
<tr>
<td>Minorities treated fairly</td>
<td>94.0  0.55</td>
<td>95.5  0.45</td>
<td></td>
</tr>
<tr>
<td>Career choice</td>
<td>92.2  0.68</td>
<td>90.2  0.81</td>
<td></td>
</tr>
</tbody>
</table>

Note. The source of data was NSOPF: 04.

Weighted least squares multiple regression analyses were conducted for the intrinsic and extrinsic variables of job satisfaction, by job status, for both outcome variables of employment index and instruction index. All values of β for both full- and part-time regression models for both outcome variables were negative (Tables 10 and 11), indicating that as the absolute value of the levels of disagreement opinions decrease (become less negative), the absolute value of the employment index is expected to increase (become more positive), thus, improving the employment index. The intrinsic and extrinsic factors for full- and part-time faculty were significant, with
Table 10

Summary of Weighted Least Squares Regression Analysis for the Intrinsic and Extrinsic Variables Predicting Satisfaction of Community College Faculty with the Employment Index, by Job Status

<table>
<thead>
<tr>
<th>Intrinsic and extrinsic Variables</th>
<th>Full-time faculty</th>
<th>Part-time faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>SE</td>
</tr>
<tr>
<td>Teaching rewarded</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vs. disagree</td>
<td>-0.29</td>
<td>0.03</td>
</tr>
<tr>
<td>PT treated fairly vs. disagree</td>
<td>-0.15</td>
<td>0.03</td>
</tr>
<tr>
<td>Females treat. fair vs. disagree</td>
<td>-0.82</td>
<td>0.03</td>
</tr>
<tr>
<td>Minority treat. fair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vs. disagree</td>
<td>-0.07</td>
<td>0.03</td>
</tr>
<tr>
<td>Not choose vs. choose</td>
<td>-0.14</td>
<td>0.02</td>
</tr>
</tbody>
</table>

*Note.* Data source was NSOPF:04. ** $p < .01$ and *** $p < .001$. Full-time faculty $R^2 = .22$ and Part-time faculty $R^2 = .33$

Part-time faculty (82.3%) indicating greater favorable levels of opinion that teaching is rewarded than full-time (75.8%) faculty. The prediction equations constructed from the regressions are presented in Appendix C.
Table 11

*Summary of Weighted Least Squares Regression Analysis for the Intrinsic and Extrinsic Variables Predicting Satisfaction of Community College Faculty with the Instruction Index, by Job Status*

<table>
<thead>
<tr>
<th>Intrinsic and extrinsic Variables</th>
<th>Full-time faculty</th>
<th>Part-time faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \beta )</td>
<td>( SE )</td>
</tr>
<tr>
<td>Teaching rewarded vs. disagree</td>
<td>-0.31</td>
<td>0.03</td>
</tr>
<tr>
<td>PT treated fairly vs. disagree</td>
<td>-0.20</td>
<td>0.03</td>
</tr>
<tr>
<td>Females treat. fair vs. disagree</td>
<td>-0.05</td>
<td>0.03</td>
</tr>
<tr>
<td>Minority treat. fair vs. disagree</td>
<td>-0.08</td>
<td>0.03</td>
</tr>
<tr>
<td>Not choose vs. choose</td>
<td>-0.08</td>
<td>0.02</td>
</tr>
</tbody>
</table>

*Note.* Data source was NSOPF:04. ** \( p < .01 \) and *** \( p < .001 \). Full-time faculty \( R^2 = .23 \) and Part-time faculty \( R^2 = .22 \)

Research Question Three

The third research question concerned the relationship of demographic job satisfaction factors of community college faculty and job satisfaction. The null hypotheses developed to answer research question three follow:
H3a: Full-time community college faculty job satisfaction and gender, race/ethnicity, career stage, union membership, and teaching field are not related.

H3b: Part-time community college faculty job satisfaction and gender, race/ethnicity, career stage, union membership, and teaching field are not related.

The demographic factors of gender, career stage, race, union membership, or teaching field and their influence the outcome variables of employment index and instruction index of job satisfaction for full- and part-time faculty were studied. Table 12 presents descriptive statistics including the estimates of response percentages and standard errors, by job status, of the demographic factors of job satisfaction data.

Correlations indicated that the relationships between the predictor demographic variables for all variables were minimal (Appendix B). The prediction equations constructed from the regressions are presented in Appendix C.

The regression analysis for the employment index yielded significant values of $\beta$ for union status, $t(1) = .3.55, p < .001$, for full-time faculty and for teaching field for both full-time $t(1) = .2.04, p < .05$, and for part-time $t(1) = .8.16, p < .001$ (Table 13) indicating a positive relationship between these predictors and the employment index.

The model for the instruction index also revealed three significant values of $\beta$.

There is a negative relationship between membership in the union for full-time faculty, $t(1) = -2.84, p < .01$, and part-time faculty, $t(1) = -2.43, p < .05$, and the instruction index; however, there is a positive relationship between part-time faculty $t(1) = 3.95, p < .001$ (Table 14).
### Table 12

*Estimates of Descriptive Statistics for Community College Faculty Satisfaction with Demographic Variables, by Job Status*

<table>
<thead>
<tr>
<th>Demographic variables</th>
<th>FT faculty</th>
<th>PT faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>SE</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>54.2</td>
<td>1.02</td>
</tr>
<tr>
<td>Female</td>
<td>47.6</td>
<td>1.02</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>81.6</td>
<td>0.74</td>
</tr>
<tr>
<td>Non-White</td>
<td>18.4</td>
<td>0.74</td>
</tr>
<tr>
<td><strong>Career stage</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early stage</td>
<td>7.0</td>
<td>12.4</td>
</tr>
<tr>
<td>Mid-stage</td>
<td>56.5</td>
<td>1.59</td>
</tr>
<tr>
<td>Late stage</td>
<td>36.5</td>
<td>1.77</td>
</tr>
<tr>
<td><strong>Union status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Member</td>
<td>58.3</td>
<td>2.57</td>
</tr>
<tr>
<td>Non-member</td>
<td>41.7</td>
<td>2.57</td>
</tr>
</tbody>
</table>
Table 12 (Continued)

Estimates of Descriptive Statistics for Community College Faculty Satisfaction with Demographic Variables, by Job Status

<table>
<thead>
<tr>
<th>Demographic variables</th>
<th>FT faculty</th>
<th></th>
<th>PT faculty</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>SE</td>
<td>%</td>
<td>SE</td>
</tr>
<tr>
<td>Career Field</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liberal arts</td>
<td>50.5</td>
<td>1.38</td>
<td>49.5</td>
<td>1.50</td>
</tr>
<tr>
<td>Career programs</td>
<td>51.8</td>
<td>1.38</td>
<td>48.2</td>
<td>1.50</td>
</tr>
</tbody>
</table>

Note. The source of data was NSOPF: 04.

Research Question Four

Research question four investigated if there is a relationship between institutional typology and the job satisfaction, controlling for job status. The following null hypotheses were developed to answer research question four:

H₄: There is no significant relationship between overall job satisfaction and community college institutional typology factors, controlling for job status.

H₄ₐ: Full-time community college faculty job satisfaction and institutional size and degree of urbanization are not related.
Table 13

Summary of Weighted Least Squares Regression Analysis for the Demographic Variables Predicting Satisfaction of Community College Faculty with the Employment Index, by Job Status

<table>
<thead>
<tr>
<th>Demographic variables</th>
<th>Full-time faculty</th>
<th></th>
<th></th>
<th></th>
<th>Part-time faculty</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \beta )</td>
<td>( SE )</td>
<td>( t )</td>
<td>( \beta )</td>
<td>( SE )</td>
<td>( t )</td>
<td>( \beta )</td>
<td>( SE )</td>
</tr>
<tr>
<td>Female vs. male</td>
<td>0.01</td>
<td>0.02</td>
<td>0.48</td>
<td>-0.04</td>
<td>0.03</td>
<td>-1.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-white vs. White</td>
<td>-0.02</td>
<td>0.02</td>
<td>-0.99</td>
<td>-0.00</td>
<td>0.02</td>
<td>-0.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early vs. mid-career</td>
<td>-0.01</td>
<td>0.03</td>
<td>0.43</td>
<td>-0.02</td>
<td>0.03</td>
<td>-1.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Late vs. mid-career</td>
<td>0.05</td>
<td>0.03</td>
<td>1.92</td>
<td>0.03</td>
<td>0.02</td>
<td>1.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Union yes vs. no</td>
<td>-0.09</td>
<td>0.03</td>
<td>3.55***</td>
<td>-0.03</td>
<td>0.03</td>
<td>-0.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career vs. liberal arts</td>
<td>0.06</td>
<td>0.02</td>
<td>2.04**</td>
<td>0.19</td>
<td>0.02</td>
<td>8.16***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Data source was NSOPF:04. ** \( p < .01 \) and *** \( p < .001 \). Full-time faculty \( R^2 = .01 \) and Part-time faculty \( R^2 = .04 \).

H₄b: Part-time community college faculty job satisfaction and institutional size and degree of urbanization are not related.

The relationship between typological dimensions of community college institutional diversity and job satisfaction were the focus of research question four. The factors of institutional size and setting were examined relative to their influence the outcome variables of the employment index and the instruction index of job satisfaction.
Table 14

*Summary of Weighted Least Squares Regression Analysis for the Demographic Variables Predicting Satisfaction of Community College Faculty with the Instruction Index, by Job Status*

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Full-time faculty</th>
<th></th>
<th></th>
<th>Part-time faculty</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>SE</td>
<td>t</td>
<td>β</td>
<td>SE</td>
<td>t</td>
</tr>
<tr>
<td>Female vs. male</td>
<td>-0.01</td>
<td>0.02</td>
<td>-0.51</td>
<td>-0.02</td>
<td>0.02</td>
<td>-0.64</td>
</tr>
<tr>
<td>Non-white vs. White</td>
<td>-0.03</td>
<td>0.02</td>
<td>-1.24</td>
<td>0.00</td>
<td>0.02</td>
<td>-0.10</td>
</tr>
<tr>
<td>Early vs. mid-career</td>
<td>0.01</td>
<td>0.02</td>
<td>0.60</td>
<td>0.00</td>
<td>0.03</td>
<td>-0.14</td>
</tr>
<tr>
<td>Late vs. mid-career</td>
<td>0.02</td>
<td>0.02</td>
<td>0.68</td>
<td>0.06</td>
<td>0.03</td>
<td>1.97*</td>
</tr>
<tr>
<td>Union yes vs. no</td>
<td>-0.08</td>
<td>0.03</td>
<td>-2.84*</td>
<td>-0.08</td>
<td>0.03</td>
<td>-2.43*</td>
</tr>
<tr>
<td>Career vs. liberal arts</td>
<td>0.04</td>
<td>0.02</td>
<td>1.74</td>
<td>0.10</td>
<td>0.03</td>
<td>3.95***</td>
</tr>
</tbody>
</table>

*Note. Data source was NSOPF:04. *p < .05, **p < .01 and ***p < .001. Full-time faculty R² = .01 and Part-time faculty R² = .01 for full- and part-time faculty. Table 15 contains the descriptive statistics including the estimates of means and standard errors of the typological factors influencing community college faculty job satisfaction.*

Analysis of the correlations among outcome and predictor variables demonstrated minimal relationship between the variables (Appendix C). Weighted least squares multiple regression yielded four significant values of β. Mid-size colleges were
Table 15

Estimates of Descriptive Statistics for Community College Faculty Satisfaction with Typology Variables, by Job Status

<table>
<thead>
<tr>
<th>Typology variables</th>
<th>Faculty satisfaction</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FT faculty</td>
<td>PT faculty</td>
<td></td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>SE</td>
<td>%</td>
</tr>
<tr>
<td>Institutional size</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>14.9</td>
<td>2.63</td>
<td>15.8</td>
</tr>
<tr>
<td>Mid-size</td>
<td>33.0</td>
<td>2.95</td>
<td>29.6</td>
</tr>
<tr>
<td>Large</td>
<td>52.1</td>
<td>3.14</td>
<td>54.6</td>
</tr>
<tr>
<td>Degree of urbanization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>20.1</td>
<td>2.94</td>
<td>18.3</td>
</tr>
<tr>
<td>Suburban</td>
<td>27.0</td>
<td>3.27</td>
<td>27.9</td>
</tr>
<tr>
<td>Urban</td>
<td>52.9</td>
<td>3.34</td>
<td>53.8</td>
</tr>
</tbody>
</table>

*Note.* Data source was NSOPF:04.

significantly less satisfied than large size colleges, $t(1) = -1.97, p < .05,$ and rural colleges were significantly more satisfied than urban colleges, $t(1) = 1.97, p < .05,$ with the employment index (Table 16). Rural community college full-time, $t(1) = 2.32, p < .05,$ and part-time, $t(1) = 1.97, p < .05,$ were also more satisfied with the instruction index
Table 16

*Summary of Weighted Least Squares Regression Analysis for the Typology Variables Predicting Satisfaction of Community College Faculty with the Employment Index, by Job Status*

<table>
<thead>
<tr>
<th>Typology variables</th>
<th>Full-time faculty</th>
<th>Part-time faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>$SE$</td>
</tr>
<tr>
<td>Small size vs. large size</td>
<td>-0.06</td>
<td>0.04</td>
</tr>
<tr>
<td>Mid-size vs. large size</td>
<td>-0.07</td>
<td>0.03</td>
</tr>
<tr>
<td>Rural vs. urban</td>
<td>0.00</td>
<td>0.04</td>
</tr>
<tr>
<td>Suburban vs. urban</td>
<td>0.06</td>
<td>0.03</td>
</tr>
</tbody>
</table>

*Note.* Data source was NSOPF: 04. *$p < .05$* Full-time faculty $R^2 = .01$ and Part-time faculty $R^2 = .01$

(Table 17). Prediction equations constructed from the regression analyses, are presented in Appendix C.

These research results provide insight into the job satisfaction perceptions of full- and part-time public community college faculty job satisfaction. It clearly demonstrates that there are significant gaps in the overall satisfaction of faculty, which is related to full- or part-time job status. Lower level satisfaction levels exist for part-time faculty terms of salary, and benefits; whereas, satisfaction with workload, support for technology, equipment and facilities, and support for teaching improvement were lower
Table 17

Summary of Weighted Least Squares Regression Analysis for the Typology Variables Predicting Satisfaction of Community College Faculty with the Instruction Index, by Job Status

<table>
<thead>
<tr>
<th>Typology variables</th>
<th>Full-time faculty</th>
<th>Part-time faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>SE</td>
</tr>
<tr>
<td>Small size vs. large size</td>
<td>-0.04</td>
<td>0.41</td>
</tr>
<tr>
<td>Mid-size vs. large size</td>
<td>-0.03</td>
<td>0.03</td>
</tr>
<tr>
<td>Rural vs. urban</td>
<td>0.08</td>
<td>0.03</td>
</tr>
<tr>
<td>Suburban vs. urban</td>
<td>0.06</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Note. Data source was NSOPF: 04. * p < .05 Full-time faculty R^2 = .01 and Part-time faculty R^2 = .01

for full-time faculty than for part-time faculty. Interestingly, significant differences between satisfaction levels between the liberal arts and career teaching fields exist as well. These and other differences along with implications for practice and recommendations for future research are presented in the final chapter, Chapter 5.
CHAPTER 5: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary of This Research

The purpose of this study was to gain insight into community college faculty job satisfaction of full-time and part-time faculty in relation to the intrinsic and extrinsic, demographic, and institutional typology factors affecting job satisfaction. Intrinsic and extrinsic job satisfaction factors were initially identified by Herzberg et al. (1959) and later adapted and expanded by Hagedorn (2002) for the study of job satisfaction of 4-year higher education faculty. Herzberg et al. employed a qualitative methodology to study the job satisfaction of engineers and accountants in a manufacturing setting; whereas, Hagedorn used NSOPF: 93 as the principal data source for her adaptation of Herzberg’s dual-factor theory of job satisfaction to 4-year higher education faculty. The current investigation employed the NSOPF: 04 study as the data source to adapt and expand Hagedorn’s study by operationalizing several of the intrinsic and extrinsic factors identified by her in that study. Since several of the factors of faculty job satisfaction initially identified by Hagedorn (NSOPF: 93) were aggregated into more overarching and continuous measures of job satisfaction for NSOPF: 04, namely, the employment index and the instruction index, several adaptations to her model were necessary. Additionally, other modifications were required to adapt Hagedorn’s model to the community college setting.

Hagedorn (2002) derived a continuous measure of overall job satisfaction for the outcome variable in her model, but did not specify either the methodology or the variables employed in its derivation. In NSOPF: 04, there are two aggregated and
continuous variables that address overall job satisfaction in the context of this research.

The employment index is comprised of four of the NSOPF: 04 satisfaction questions including questions regarding satisfaction with workload, salary, and benefits; representing extrinsic factors; while the fourth variable of overall job satisfaction is more holistic. The instruction index is comprised of the NSOPF: 04 satisfaction questions including: authority for academic decisions, support for employment of technology in the classroom, equipment and facilities, and support for teaching improvement and represent intrinsic variables. These two indices are, in effect, holistic measures of faculty job satisfaction that together are consistent with the theoretical framework for this study. As such, these two aggregated and continuous variables were operationalized as the outcome measures of job satisfaction for this study. Several other NSOPF: 04 variables were operationalized as measures of the three categories of community college job satisfaction factors including: intrinsic and extrinsic factors, demographic factors, and institutional typology factors.

The intrinsic and extrinsic factors included many of those of the earlier studies; whereas, the demographic factors were expanded to include two new categories: union status (membership) and teaching field (liberal arts or career programs). These two expansions are critical components of the community college setting and, as such, represent new model dimensions. A third factor that was identified for this study was based on the 2005 Carnegie Classifications of 2-year colleges. The size and degrees of urbanization are elements that describe the nature of the college as well as the setting of the college, both of which may influence faculty job satisfaction.
The target population for this work was public community college full- and part-time faculty that taught at least one course during the fall 2003 academic term. The data source was NSOPF: 04, which is a publicly available, Internet accessible, standardized national study of 1,597 full-time and 3067 part-time faculty.

Descriptive statistics, independent means $t$-tests, weighted least squares multiple regressions, and analysis of correlations were conducted to explore the relationship between the predictor factors of job satisfaction and the outcome employment and instruction job satisfaction indices, controlling for the employment status of full-time, part-time, and all faculty. All analyses were conducted employing the Data Analysis System’s “create tables” and “estimate covariance analysis” data tools (NSOPF: 04) available on the National Center for Education website.

Findings and Conclusions

Research Question One

Research Question One asked if there is a difference between full- and part-time faculty job satisfaction. Comparisons of the response means for the employment index and instruction index variables for both full- and part-time faculty satisfaction were conducted using the independent samples $t$-test. The $t$-test analysis of the employment index revealed that part-time faculty ($M = 8.16$) are less satisfied, $t(1) = 4.65, p < .001$, than full-time faculty ($M = 8.69$) with the employment index. In terms of the variables comprising the employment index, a smaller proportion of part-time faculty (68.3%) are satisfied than full-time faculty (72%) with salary, $t(1) = 2.18, p < .05$, and benefits (part-time = 50% and full-time = 86%), $t(1) = 21.45, p < .001$; however, a greater proportion of
part-time faculty (88%) were more satisfied than their full-time counterparts (80%) with workload $t(1) = 7.70$, $p < .001$. There was no difference between full-and part-time faculty job with the individual predictor of satisfaction overall. These findings demonstrate that there is a statistically significant difference between full- and part-time faculty job satisfaction, thus, $H_1$ was rejected.

Approximately one-third of part-time faculty responded that they were very or somewhat dissatisfied with salaries; whereas, nearly one-fourth of full-time faculty were very or somewhat dissatisfied, indicating that the issues of part-time faculty salaries do contribute to lowering the employment index score. The gap between full- and part-time faculty is even wider for the satisfaction variable of benefits. Eighty-six percent of full-time faculty expressed satisfaction with benefits, while only 50% of part-time faculty were satisfied with benefits. These findings are consistent with the literature in that compensation is typically lower for part-time faculty than for full-time faculty (Branochowsik, 1996; Gappa & Leslie, 1993; and Rouche et al., 1995) and lend support Herzberg’s dual-factor theory (1959) which maintains that extrinsic factors of a job lead to job dissatisfaction.

Approaches to lessoning the gap in satisfaction with benefits between full-and part-time faculty is multi-faceted and is undoubtedly related to the unique and varying needs of part-time faculty. For example, a part-time faculty member who has adequate benefits through full-time employment elsewhere, from an employed spouse with family benefit coverage, or through a retirement plan will undoubtedly hold different opinions about the satisfaction with benefits than those faculty members, without adequate benefits
such as, a recent college graduate or otherwise unemployed faculty member whose sole source of income is from part-time teaching.

For institutions sincerely interested in improving benefits for part-time faculty, care must be exercised to ensure relative equity between faculty with different needs. One approach with potential merit in this regard is a menu approach to benefits whereby a faculty member could choose benefits from a set of options that might include such things as: a proportion of medical benefits, tuition waiver for faculty member or dependents, access to retirement plans etc. In any case, the need for research into potential models for the provision of part-time faculty benefits is of great importance. Obviously, a single approach to improving satisfaction with benefits cannot meet the needs of all part-time faculty.

Full-time faculty satisfaction (80%) with workload is significantly lower than that of part-time faculty (88%). This finding illustrates one of the possible effects of institutional decisions to either increase the number of part-time faculty to accommodate increases in enrollment growth or to replace retiring full-time faculty with part-time faculty. This shift in staffing proportions from full- to part-time faculty expands advising and other non-classroom full-time faculty duties influenced by the number of enrolled students. In addition, increasing requirements for accountability to meet regional and programmatic accreditation standards as well as increased requirements from state boards levy even heavier burdens on full-time faculty. Although workload was not included in Hagedorn’s (2000) it was selected as a variable to adapt her model to the community college setting. Clearly, workload is an important element of full-time faculty job
satisfaction in the current financial climate of community colleges and in all likelihood will drive increased interest in the unionization of community college full-time faculty.

The instruction index t-test revealed that on average, instruction index for part-time was higher ($M = 9.45$) than for full-time faculty ($M = 9.07$). Part-time faculty are also more satisfied with the variables comprising the instruction index including the support for technology (89% vs. 86%), equipment and facilities (84% vs. 77%), and the support for teaching improvement (79% vs. 71%) than are full-time faculty.

Although statistically significant, the difference in full- and part-time faculty satisfaction with technology support is small and hence, in a practical perspective, may not be of great consequence. It is likely that economic pressures play a significant role in the area of full-time faculty satisfaction with equipment and facilities. If institutions have not developed an equipment acquisition or replacement plan nor integrated such a plan into their budgeting process to gain or sustain currency with technological advances, the relevance of even new laboratories and equipment can be ephemeral--lasting only a few years before becoming outdated.

Two factors may affect the comparatively greater degree of satisfaction with support for teaching improvement by part-time faculty. First, investments in opportunities for the professional development of full-time faculty, particularly for attendance at professional conferences, have long been an expectation of both full-time faculty as well as colleges. In the current budget environment, professional development funds are typically targeted for early budget cuts, and are extremely difficult to re-establish in subsequent budgeting cycles. Second, there is typically an institutional focus on the
teaching improvement of part-time faculty that is often offered in multiple formats to accommodate the various preferences of part-time faculty. Professional development activities are typically conducted locally, captured via digital means for convenient access, or provided by distance learning venues. Support for conference or workshop attendance by part-time faculty is usually not provided nor has it been a historic expectation of part-time faculty. It is likely that the overall degree of such concerns regarding support for teaching improvement is far less that of their full-time counterparts.

Research Question Two

Research Question Two focused on the relationship between the intrinsic and extrinsic variables of job satisfaction and the employment and instruction indices for both full- and part-time faculty. Descriptive statistics, weighted least squares multiple regression analysis, and analyses of correlations were used to investigate this question.

The analysis of correlations between the outcome employment index and the job satisfaction factors suggests that improving the percentage of full-time faculty, $r(1) = -.38$, and part-time faculty, $r(1) = -.42$, that agree teaching is rewarded and increasing the percentage of full-time faculty, $r(1) = -.27$ and part-time faculty $r(1) = -.51$. that agree that part-time faculty are treated fairly, should result in, improvement in the employment index,

Values of $\beta$ generated by the weighted least squares multiple regressions for both outcome variables were all significant; therefore, null hypotheses $H_{2a}$, $H_{2b}$ and $H_2$ were rejected. The full-time faculty regression model accounted for 22% and the part-time faculty model accounted for 33% of the variation in the outcome employment index.
Values of $\beta$ for both full- and part-time faculty were all negative and significant for all intrinsic and extrinsic variables; indicating that as faculty opinions become increasingly negative, the employment index will correspondingly increase. In other words, improvement in full-time faculty opinions regarding satisfaction with the intrinsic or extrinsic factors of job satisfaction will improve the employment index score. Values of $\beta$ were also negative for part-time faculty and were significant except the opinion that females are treated fairly (Table 10). Thus, improvements in part-time faculty opinions that teaching is rewarded, part-time faculty and minorities are treated fairly, and, an increase in the percentage of faculty with the perspective that they would choose an academic career again, significantly influence the employment index of job satisfaction.

**Research Question Three**

Weighted least squares multiple regressions were conducted to test the relationships between the two outcome variables and the predictor demographic variables for full- and part-time faculty. None of these regression models produced coefficients of determination which were significant. The regression analysis for the employment index yielded significant values of $\beta$ for union status, $t(1) = .3.55, p < .001$, for full-time faculty and for teaching field for both full-time $t(1) = .2.04, p < .05$, and for part-time $t(1) = .8.16, p < .001$, faculty, hence, null hypotheses $H_{3a}, H_{3b}$ and $H_{3}$ must be rejected.

These positive relationships between these predictors and the employment index indicate that the membership in a union does contribute to enhancing job satisfaction for full-time faculty over non-membership. This finding is consistent with previous literature. In addition, teaching in a career program enhances satisfaction with the employment
index for both full- and part-time faculty. This finding may be explained by the relatively higher salaries often demanded by faculty with expertise in career areas as well as the market for employment in these fields. A relevant example of the impact of market forces is currently being felt across the spectrum of health sciences disciplines. The expanding demand for health professionals due to the aging population is in competition with health sciences programs that are under pressure to supply ever-increasing numbers of graduates.

The model for the instruction index also revealed three significant values of $\beta$.

There is a negative relationship between membership in the union for full-time faculty, $t(1) = -2.84, p < .01$, and for part-time faculty, $t(1) = -2.43, p < .05$, and the instruction index; however, there is a significant positive relationship between liberal arts faculty $t(1) = 3.95, p < .001$, and the instruction index for part-time faculty (Tables 14 & 15).

These results indicate that the relationship between faculty union membership and satisfaction with the instruction index were significant -- as union membership decreases, the value of the instruction index increases. This relationship suggests that institutional policies and practices that lead to the decreased interest in union membership will also lead to an increase in faculty satisfaction with the instruction index.

**Research Question Four**

The relationship between institution typological dimensions of community college diversity and job satisfaction were the focus of Research Question Four. The factors of institutional size and setting were examined relative to their influence on the outcome variables of the employment index and the instruction index of job satisfaction for full-
and part-time faculty. None of values of $\beta$ (Table 17 & 18) for comparisons between the institutional typology predictors and the employment or instruction index were significant. It must be concluded to reject null hypotheses $H_{4a}$, $H_{4b}$ and $H_4$

**Implications for Practice**

A thorough analysis of the findings presented in the previous section of this chapter reveals several implications for community college practice. The employment index represents several of the extrinsic variables of job satisfaction and, as such, is an important general indicator of the degree of job satisfaction of full- and part-time, community college faculty. The analysis of the degree of satisfaction with individual variables comprising the index provides a more refined view of the congruence between full- and part-time faculty job satisfaction perspectives. The finding that approximately one-fourth of full-time faculty and one-third of part-time faculty are dissatisfied with salary suggests that institutions should address the issue of salaries in some manner. One approach would be to conduct an externally benchmarked evaluation of faculty salaries with institutions of comparable funding sources, size, typology, governance, and control. The results of such an evaluation could then be interpreted and considered in the institutional budgeting process.

The second implication for practice is inferred from the finding that 50% of part-time faculty are dissatisfied with benefits while only 14% of full-time faculty are dissatisfied. The magnitude of this differential between full- and part-time faculty dissatisfaction with benefits is by far the greatest of all variables studied. Satisfaction with benefits may also prove to have the most far-reaching impact on instructional
staffing because 67% of community college faculty are part-time. The failure of academic leaders to act in some fashion to address this satisfaction differential will portend increasing staffing and financial challenges, particularly if the recent movement toward the unionization of part-time faculty gains traction (Duplantis, Chandler, & Geske, 1995; Morgan & Kearney, 1977). This is especially relevant in the current economic environment of static state and local support to higher education (Digest of Education Statistics, 2008), the erosion of buying power due to inflation (U.S. Department of Labor, Bureau of Labor Statistics, 2009), and a deepening world economic recession. Given the well-known countercyclical nature of increased community college enrollments during periods of economic downturns, the outlook for attracting additional numbers of qualified part-time faculty to serve these additional students will become a significant challenge to academic administrators. This situation will be exacerbated in urban and suburban areas where the competitive edge for attracting part-time faculty will undoubtedly be expressed in terms of relative salaries and benefits.

This disparity between full- and part-time faculty perceptions in terms of salary and benefits suggests three possible underlying issues that should be investigated in future research. First, part-time faculty that teach in career programs are often employed full-time elsewhere and enjoy competitive salaries and benefits through employment in career fields outside of the college. Many of these faculty may be teaching for reasons other than salary and benefits; however more research needs to be undertaken to determine if this perception is, indeed, accurate. Second, part-time faculty compensation and benefits are typically not proportional to full-time faculty compensation and benefits for similar
instructional work. The issue of salary is obviously important for many part-time faculty who are retired, are seeking supplemental income, or are meeting subsistence needs by teaching part-time. The accessibility to benefits, particularly health care benefits, is even more important. Further research should be conducted to enhance the understanding of the dimensions of these issues in community colleges and to provide a basis for approaches to address them. As the dependence on part-time faculty continues and, in all likelihood expands, the imperative to address the issue of disparity in salary and benefits will become increasingly paramount.

Full-time faculty satisfaction (77%) with workload is significantly less than that of part-time faculty (88%). This finding is interesting given the parity of full-and part-time faculty satisfaction levels with the job overall. It is plausible that, to a great extent, the differences in non-classroom job duties between full-and part-time faculty contribute to the observed differences in workload satisfaction. Institutional decisions to increase the number of part-time faculty in response to sustained increases in enrollment, as well as budget-driven decisions to replace vacated full-time faculty positions with part-time faculty, increase the enrollment-driven, non-classroom duties of full-time faculty. In addition, more rigorous accountability requirements necessary to meet regional and programmatic accreditation standards, and state accountability requirements are expanding for these same faculty. More research should be focused on the impacts of shifting faculty staffing patterns on full-time faculty workloads.

The third implication for practice is an extension of the workload dissatisfaction finding and focuses on developing cost effective methods of managing full-time faculty
workloads in this era of increasing enrollment without concomitant increases in full-time staffing. One cost effective method of addressing full-time faculty workload would be to shift some of the full-time faculty non-classroom duties to interested and experienced part-time faculty currently employed by the institution. Compensation for such expanded duties could be in the form of salary, access to benefits, retirement programs, or tuition waivers for dependents, or some other compensatory arrangement in a benefit menu approach. This approach would produce secondary marginal benefits as an increase in full-time faculty satisfaction with workload, an increase in part-time faculty satisfaction with salary, benefits or other compensatory arrangements of value, while closing the gap in satisfaction with the employment index between full- and part-time faculty.

The finding that part-time faculty are more satisfied with the instruction index than are full-time faculty reflects the relative satisfaction of part-time faculty with the variables comprising the instruction index including support for technology (89% vs. 86%), equipment and facilities, (84% vs. 77%) and the support for teaching improvement, (79% vs. 71%). It is likely that economic pressures play a significant role in the areas of full-time faculty satisfaction with support for technology and equipment and facilities leading to the third recommendation for practice. If institutions have not developed an equipment acquisition or replacement plan and integrated such a plan to into their budgeting priorities, the relevancy of these instructional tools will be ephemeral with new advances rapidly contributing to their obsolescence particularly in the sciences, technology, engineering, mathematics and health sciences disciplines.
Analysis of the relationship between the intrinsic and extrinsic factors of job satisfaction and the employment and instruction indices produced the findings that improvement in the rewarding of teaching and in the treatment of part-time faculty are areas that would yield improvement in faculty job satisfaction and are the fourth and fifth recommendations for practice. Both of these areas are reflections of institutional climate dimensions and as such do not necessarily depend on financial resources. It is recommended that institutions develop mechanisms to evaluate the perspectives of full and part-time faculty in this regard and take steps to address any areas identified as such.

Recommendations for Future Research

*Satisfaction Model*

The theoretical framework used for this study was an adaptation and expansion of Hagedorn’s (2000) study of faculty job satisfaction. She adapted studies of previous researchers (based on business and industry settings), principally Herzberg’s dual-factor theory of job satisfaction (Herzberg, Mausner, and Snyderman, 1959), and extended those models to form a comprehensive model for the study of postsecondary faculty. Her data source was NSOPF: 93. The conceptual framework chosen for the present study was founded in Hagedorn’s work and adapted and expanded to the delimited population of public community college faculty by employing NSOPF: and the 2005 Carnegie Classifications (2007).

The findings of this study, as well as the limited studies reported to date, provide solid implications for the benefit of continued research regarding the satisfaction issues of public community college faculty. This particular area of research is highlighted by the
article by Judge, et al. (2001) in which the literature related to job satisfaction and performance was reviewed. These authors concluded that there is a medium-sized relationship between job satisfaction and performance.

It is recommended that future researchers re-conceptualize the job satisfaction factors identified by Herzberg (1959) and Hagedorn (2000) for community college faculty and expand them to include the additional elements of union membership and institutional typology. Both of these factors are especially relevant to public community colleges. The criteria for the classification of associates degree granting colleges published by the Carnegie Foundation for the Advancement of Teaching (2007) should consider additional typological factors that would more precisely categorize the institutional dimensions of associates degree granting colleges in terms of the economic profile elements of the local service area such as type of business and industry base, and the presence or absence of locally-generated revenues such as property or income taxes,

Specific Recommendations

There are a number of recommendations for future research that emerged from this research. First, it is recommended that researchers investigate the issues of part-time faculty salary, benefits, and approaches to improve these job satisfaction factors. It is of particular importance given the inconsistency of, on one hand, continuing long-term reliance on part-time faculty and on the other, intuitive practices that ignore the value of part-time faculty service. Part-time faculty salary and benefits in relationship of their importance to the community college institutional core mission of teaching and learning should be a focus for future research. In addition, failure to address these issues holds
significant implications for community colleges, namely the prospect of part-time faculty unionization. Ruiz, (2007) provides a summary of the impact of the state-wide part-time faculty bargaining unit on the conditions of part-time faculty compensation and salary in the State of Washington.

Second, this study did not examine, in detail, the relationship of faculty satisfaction and the nature of program disciplines, i.e. transfer-oriented programs in liberal arts or career programs in applied business, applied sciences or one-year credit certificates in career program disciplines such as licensed practical nursing or medical assisting. Research examining relationships between job satisfaction, full-time faculty, part-time faculty, university transfer program, and career program faculty would provide deeper insight into faculty job satisfaction by program typology.

A third dimension of job satisfaction that surfaced in this work was the nature of employment outside of part-time faculty employment. Faculty that are securing a livelihood by teaching part-time at a number of institutions are likely to hold a different view of job satisfaction than those faculty who have their financial needs met through other full-time employment, retirement, or spouses employment. The study of the relationship between the nature of employment outside of part-time teaching with faculty job satisfaction is the third recommendation for future research.

The effects on full-time faculty non-classroom workload due to increases in enrollment and institutional decisions to absorb additional workload created by such enrollment increases on full-time faculty satisfaction with workload is the another recommendation for future research. This finding is a subtle, yet, important aspect of full-
time faculty job satisfaction and should be further investigated in the context of the ever-increasing use of part-time faculty. In addition to changes in full-time faculty workload, approaches to the integration of part-time faculty in non-classroom faculty responsibilities such as advising, committee work, and institutional accountability efforts is the fourth recommendation for future research.

The theoretical framework used for this study was an adaptation and expansion of Hagedorn’s (2000) study of faculty job satisfaction. She adapted studies of previous researchers (based on business and industry settings), principally Herzberg’s dual-factor theory of job satisfaction (Herzberg, Mausner, and Snyderman, 1959), and extended those models to form a comprehensive model for the study of postsecondary faculty. Her data source was NSOPF: 93. The conceptual framework chosen for the present study was founded in Hagedorn’s study and adapted and expanded to the delimited population of public community college faculty employing NSOPF: and the 2005 Carnegie Classifications (2007).

The findings of this research, and the limited studies reported to date, provide solid implications for the benefit of continued research regarding the satisfaction issues of public community college faculty. This particularly area of research is highlighted by the article by Judge, et al. (2001) in which the published literature related to job satisfaction and performance was reviewed and resulting in their conclusion that there is a relationship between job satisfaction and performance.

It is recommended that future researchers re-conceptualize the job satisfaction factors identified by Herzberg (1959) and Hagedorn (2000) for community college
faculty and expand them to include the additional elements of union membership and institutional typology. Both of these factors are especially relevant to public community colleges. The criteria for the classification of associates degree granting colleges published by the Carnegie Foundation for the Advancement of Teaching (2007) should consider additional typological factors that would more precisely categorize the institutional dimensions of associates degree granting colleges in terms of the economic profile elements of their designated service area such as type of business and industry base, and the presence or absence of locally-generated revenues such as property or income taxes.
REFERENCES


http://www.nchems.org/pubs/detail.php?id=68


http://www.carnegiefoundation.org/classifications/index.asp?key=799


http://www.bls.gov/oco/cg/cgs035.htm#outlook


APPENDIX A

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:
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
NSOPF:04 Faculty Instrument Facsimile
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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
NSOPF:04 Faculty Instrument Facsimile
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  
NSOPF:04 Faculty Instrument Facsimile  
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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]?
APPENDIX A (Continued)

(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

Stem Wording:
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.)

NSOPF:04 Faculty Instrument Facsimile

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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

Stem Wording:
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
  02 = Architecture and related services
  03 = Area/ethnic/cultural/gender studies
  04 = Arts--visual and performing
  05 = Biological and biomedical sciences
  06 = Business/management/marketing/ related
  07 = Communication/journalism/comm. Tech
  17 = Library science
  18 = Mathematics and statistics
  19 = Mechanical/repair technologies/techs
  20 = Multi/interdisciplinary studies
  21 = Parks/recreation/leisure/fitness studies
  22 = Precision production
  23 = Personal and culinary services
<table>
<thead>
<tr>
<th>Code</th>
<th>Field of Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>08</td>
<td>Computer/info sciences/support tech</td>
</tr>
<tr>
<td>09</td>
<td>Construction trades</td>
</tr>
<tr>
<td>10</td>
<td>Education</td>
</tr>
<tr>
<td>11</td>
<td>Engineering technologies/technicians</td>
</tr>
<tr>
<td>12</td>
<td>English language and literature/letters</td>
</tr>
<tr>
<td>13</td>
<td>Family/consumer sciences, human sciences</td>
</tr>
<tr>
<td>14</td>
<td>Foreign languages/literature/linguistics</td>
</tr>
<tr>
<td>15</td>
<td>Health professions/clinical sciences</td>
</tr>
<tr>
<td>16</td>
<td>Legal professions and studies</td>
</tr>
<tr>
<td>24</td>
<td>Philosophy, religion &amp; theology</td>
</tr>
<tr>
<td>25</td>
<td>Physical sciences</td>
</tr>
<tr>
<td>26</td>
<td>Psychology</td>
</tr>
<tr>
<td>27</td>
<td>Public administration/social services</td>
</tr>
<tr>
<td>28</td>
<td>Science technologies/technicians</td>
</tr>
<tr>
<td>29</td>
<td>Security &amp; protective services</td>
</tr>
<tr>
<td>30</td>
<td>Social sciences (except psych) and history</td>
</tr>
<tr>
<td>31</td>
<td>Transportation &amp; materials moving</td>
</tr>
<tr>
<td>32</td>
<td>Other</td>
</tr>
</tbody>
</table>

**NSOPF:04 Faculty Instrument Facsimile**

* Specific Discipline:

- 0101 = Agriculture and related sciences
- 0102 = Natural resources and conservation
- 0201 = Architecture and related services
- 0301 = Area/ethnic/cultural/gender studies
- 0401 = Art history, criticism & conservation
- 0402 = Design & applied arts
- 0403 = Drama/theatre arts and stagecraft
- 0404 = Fine and studio art
- 0405 = Music, general
- 0406 = Music history, literature, and theory
- 0407 = Visual and performing arts, other
- 0408 = Commercial and advertising art
- 0409 = Dance
- 0410 = Film/video and photographic arts
- 0501 = Biochem/biophysics/molecular biology
- 0502 = Botany/plant biology
- 0503 = Genetics
- 0504 = Microbiological sciences & immunology
- 0505 = Physiology, pathology & related sciences
- 0601 = Accounting and related services
- 0602 = Business admin/management/operations
- 0603 = Business operations support/assistance
- 0604 = Finance/financial management services
- 0605 = Human resources management and svcs
- 0606 = Marketing
- 0607 = Business/mgt/marketing/related, other
- 0608 = Management information systems/services
- 0701 = Communication/journalism/related pgms
- 0702 = Communication technologies/technicians
- 0801 = Computer/info tech administration/mgmt
- 0802 = Computer programming
- 0803 = Computer science
- 0804 = Computer software and media applications
- 0805 = Computer systems analysis
- 0806 = Computer systems networking/telecomm

- 0506 = Zoology/animal biology
- 0507 = Biological & biomedical sciences, other
- 0601 = Accounting and related services
- 0602 = Business admin/management/operations
- 0603 = Business operations support/assistance
- 0604 = Finance/financial management services
- 0605 = Human resources management and svcs
- 0606 = Marketing
- 0607 = Business/mgt/marketing/related, other
- 0608 = Management information systems/services
- 0701 = Communication/journalism/related pgms
- 0702 = Communication technologies/technicians
- 0801 = Computer/info tech administration/mgmt
- 0802 = Computer programming
- 0803 = Computer science
- 0804 = Computer software and media applications
- 0805 = Computer systems analysis
- 0806 = Computer systems networking/telecomm
- 0506 = Zoology/animal biology
- 0507 = Biological & biomedical sciences, other
- 0601 = Accounting and related services
- 0602 = Business admin/management/operations
- 0603 = Business operations support/assistance
- 0604 = Finance/financial management services
- 0605 = Human resources management and svcs
- 0606 = Marketing
- 0607 = Business/mgt/marketing/related, other
- 0608 = Management information systems/services
- 0701 = Communication/journalism/related pgms
- 0702 = Communication technologies/technicians
- 0801 = Computer/info tech administration/mgmt
- 0802 = Computer programming
- 0803 = Computer science
- 0804 = Computer software and media applications
- 0805 = Computer systems analysis
- 0806 = Computer systems networking/telecomm

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Appendix A (Continued)

0807 = Data entry/microcomputer applications
0808 = Data processing
0809 = Information science/studies
0810 = Computer/info sci/support svcs, other
0901 = Construction trades
1001 = Curriculum and instruction
1002 = Educational administration/supervision
1003 = Educational/instructional media design
1004 = Special education and teaching
1005 = Student counseling/personnel services
1006 = Education, other
1007 = Early childhood education and teaching
1008 = Elementary education and teaching
1009 = Secondary education and teaching
1010 = Adult and continuing education/teaching
1011 = Teacher ed: specific levels, other
1012 = Teacher ed: specific subject areas
1013 = Bilingual & multicultural education
1014 = Ed assessment
1015 = Higher education
1101 = Biomedical/medical engineering
NSOPF:04 Faculty Instrument Facsimile

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(Specific discipline continued)

2702 = Social work
2703 = Public administration & social svcs other
2801 = Science technologies/technicians
2901 = Corrections
2902 = Criminal justice
2903 = Fire protection
2904 = Police science
2905 = Security and protective services, other
3001 = Anthropology (except psychology)
3002 = Archeology
3003 = Criminology
3004 = Demography & population studies
3005 = Economics
3006 = Geography & cartography
3007 = History
3008 = International relations & affairs
3009 = Political science and government
3010 = Sociology
3011 = Urban studies/affairs
3012 = Social sciences, other
3101 = Transportation & materials moving
3201 = Other

Section B: Academic/Professional Background

Form: Q17a1 Label: Highest degree
Form Administered To:
All faculty and instructional staff

Stem Wording:
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:
NSOPF:04 Faculty Instrument Facsimile
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
APPENDIX A (Continued)

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

SkinWording:
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:)
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[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

SkinWording:
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
APPENDIX A (Continued)

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 2   6 = 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)
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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
APPENDIX A (Continued)

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
NSOPF:04 Faculty Instrument Facsimile
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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 
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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 
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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.

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**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
APPENDIX A (Continued)

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.
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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
.9 = 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: Q37ai (i = 1 to 5) Label: Number of weeks taught, i-th credit class
APPENDIX A (Continued)

Name: Q37b (i = 1 to 5) Label: Number of credit hours, i-th class
Name: Q37c (i = 1 to 5) Label: Number of hours taught per week, i-th class
Name: Q37d (i = 1 to 5) Label: Number of students, i-th class
Name: Q37e (i = 1 to 5) Label: Primary level of students, i-th class
Name: Q37f (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.
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[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
APPENDIX A (Continued)

* f. Did you have a teaching or lab assistant, reader, or grader assigned to this class?
  0 = No
  1 = Yes

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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

Stem Wording:
[IF Q37E1=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?

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* 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
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  

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]
APPENDIX A (Continued)

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

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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 juried media or in-house newsletters?

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* 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
APPENDIX A (Continued)

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? 

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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:

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**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.
APPENDIX A (Continued)

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...
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
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.")
APPENDIX A (Continued)

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)?

NSOPF:04 Faculty Instrument Facsimile
32
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
APPENDIX A (Continued)

**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
APPENDIX A (Continued)

**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
APPENDIX A (Continued)

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
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
NSOPF:04 Faculty Instrument Facsimile
36
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.)
APPENDIX A (Continued)

* 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

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:
NSOPF:04 Faculty Instrument Facsimile
37
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
Finally, if you had it to do over again, would you still choose an academic career?

0 = No
1 = Yes
### APPENDIX B

Bivariate Correlations

Table B1

*Estimates of Bivariate Correlations Between the Intrinsic and Extrinsic Variables of Job Satisfaction for Full-time Community College Faculty and the Employment Index*

<table>
<thead>
<tr>
<th>Variables</th>
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<td>5. Minorities treated fairly</td>
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*Note. Data source was National Center for Education Statistics, NSOPF: 04.*
### Table B2

*Estimates of Bivariate Correlations Between the Intrinsic and Extrinsic Variables of Job Satisfaction for Part-time Community College Faculty and the Employment Index*

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*Note.* Data source was National Center for Education Statistics, NSOPF: 04.


APPENDIX B (Continued)

Table B3

Estimates of Bivariate Correlations Between the Intrinsic and Extrinsic Variables of Job Satisfaction for Full-time Community College Faculty and the Instruction Index

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Note. Data source was National Center for Education Statistics, NSOPF: 04
Table B4

*Estimates of Bivariate Correlations Between the Intrinsic and Extrinsic Variables of Job Satisfaction for Part-time Community College Faculty and the Instruction Index*

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*Note.* Data source was National Center for Education Statistics, NSOPF: 04
APPENDIX B (Continued)

Table B5

*Estimates of Bivariate Correlations Between the Demographic Variables of Job Satisfaction for Full-time Community College Faculty and the Employment Index*

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*Note.* Data source was National Center for Education Statistics, NSOPF: 04
Table B6

*Estimates of Bivariate Correlations Between the Demographic Variables of Job Satisfaction for Part-time Community College Faculty and the Employment Index*

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*Note.* Data source was National Center for Education Statistics, NSOPF: 04
Table B7

*Estimates of Bivariate Correlations Between the Demographic Variables of Job Satisfaction for Full-time Community College Faculty and the Instruction Index*

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*Note.* Data source was National Center for Education Statistics, NSOPF: 04
Table B8

Estimates of Bivariate Correlations Between the Demographic Variables of Job Satisfaction for Part-time Community College Faculty and the Instruction Index

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*Note.* Data source was National Center for Education Statistics, NSOPF: 04
Table B9

Estimates of Bivariate Correlations Between the Institutional Typology Variables of Job Satisfaction for Full-time Community College Faculty and the Employment Index

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</tr>
<tr>
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<td>-.22</td>
<td>.07</td>
<td>-.30</td>
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*Note.* Data source was National Center for Education Statistics, NSOPF: 04
APPENDIX B (Continued)

Table B10

_Estimates of Bivariate Correlations Between the Institutional Typology Variables of Job Satisfaction for Part-time Community College Faculty and the Employment Index_

<table>
<thead>
<tr>
<th>Variables</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<td>1.00</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>Suburban</td>
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</table>

*Note.* Data source was National Center for Education Statistics, NSOPF: 04
Table B11

*Estimates of Bivariate Correlations Between the Institutional Typology Variables of Job Satisfaction for Full-time Community College Faculty and the Instruction Index*

<table>
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</thead>
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<td>-.29</td>
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<td>4. Rural</td>
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<tr>
<td>5. Suburban</td>
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<td>1.00</td>
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</tbody>
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*Note.* Data source was National Center for Education Statistics, NSOPF: 04
Table B12

Estimates of Bivariate Correlations Between the Institutional Typology Variables of Job Satisfaction for Part-time Community College Faculty and the Instruction Index

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</thead>
<tbody>
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<td>Employment index</td>
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<td>1.00</td>
</tr>
</tbody>
</table>

*Note.* Data source was National Center for Education Statistics, NSOPF: 04
APPENDIX C

Predictive Regression Equations

General Regression Equation:

\[ \hat{Y} = B_1X_1 + B_2X_2 \ldots B_nX_n + B_0 \]

Regression equations for Intrinsic and Extrinsic Factors:

Satisfaction with the employment index

- Full-time faculty = (-0.29 T – 0.15 P – 0.82 F – 0.07 M – 0.14 C) + 9.55
- Part-time faculty = (-0.22 T – 0.39 P – 0.03 F – 0.05 M – 0.10 C) + 9.14
- All faculty = (-0.25 T – 0.28 P – 0.05 F – 0.06 M – 0.12 C) + 9.28

Satisfaction with the Instruction index

- Full-time faculty = (-0.31 T – 0.20 P – 0.05 F – 0.08 M – 0.08 C) + 9.94
- Part-time faculty = (-0.22 T – 0.27 P – 0.07 F – 0.04 M – 0.06 C) + 10.11
- All faculty = (-0.26 T – 0.24 P – 0.07 F – 0.06 M – 0.07 C) + 10.06

Where:

- T = Teaching is rewarded
- P = Part-time faculty are treated fairly
- F = Female faculty are treated fairly
- M = Minority faculty are treated fairly
- C = Would choose and academic career again
Regression equations for Demographic Factors

Satisfaction with the employment index

Full-time faculty = (0.01 G - 0.02 R+ 0.01 E + 0.05 L - 0.09 U) + 8.30
Part-time faculty = (-0.04 G + 0.00 R – 0.03 E + 0.03 L - 0.03 U) + 8.26
All faculty = (-.02 G – 0.01 R – 0.02 E + 0.03 L+ 0.05 U) + 8.26

Satisfaction with the Instruction index

Full-time faculty = (-0.01 G – 0.03 R + 0.02 E + 0.02 L - 0.08 U + 0.04 TF) + 9.29
Part-time faculty = (-0.02 G + 0.00 R +0.00 E + 0.04 L- 0.08 U + 0.10 TF) + 9.52
All faculty = (-0.02 G – 0.01 R + 0.01 E + 0.03 L- 0.10 U + 0.08 TF) + 9.47

Where:

G = Gender
R = Race/ethnicity
E = Early career stage
L = Late career stage
U = Union status
TF = Teaching Field
APPENDIX C (Continued)

Regression equations for Typological Factors

Satisfaction with the employment index

Full-time faculty = (-0.06 Sm – 0.07 M + 0.00 Ru + 0.06 Sub) + 8.74
Part-time faculty = (0.00 Sm + 0.01 M + 0.07 Ru + 0.01 Sub) + 8.02
All faculty = (-0.13 Sm -0.9 M + 0.32 Ru + 0.15 Sub) + 8.27

Satisfaction with the Instruction index

Full-time faculty = (-0.04 Sm – 0.03 M + 0.08 Ru + 0.06 Sub) + 8.99
Part-time faculty = (0.00 Sm + 0.01 M + 0.07 Ru + 0.01 Sub) + 8.02
All faculty = (-0.02 Sm – 0.02 M + 0.05 Ru + 0.03 Sub) + 8.27

Where:

Sm = Small size
M = Med-size
Ru = Rural
Sub = Suburban