

## ABSTRACT

MARKUS, LISA C. Job Satisfaction of Foreign-born Faculty in Community Colleges Using NSOPF 2004 Data. (Under the direction of Dr. James Bartlett, II.)

Academic leaders of community colleges need to better understand the factors that can lead to job satisfaction or dissatisfaction among foreign-born faculty members. The purpose of the study is to examine foreign-born faculty at community colleges in the United States in relation to intrinsic, extrinsic, demographic, and institutional typology factors affecting job satisfaction. The research methodology will include data from the NSOPF 2004, utilizing the framework of Hagedorn (2000). The sample will be drawn from foreign-born faculty employed at community colleges within the United States, and the results will be analyzed using multiple regression and descriptive statistics.

These results will provide chancellors, provosts, presidents, chief academic officers, department heads, deans, and faculty members with a reference source to use when making decisions about budgets, hiring, support staff, and ways to improve institutional climate. Therefore, the findings of this study will be significant because they will show which factors can predict job satisfaction for foreign-born faculty at community colleges.

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Job Satisfaction of Foreign-born Faculty in Community Colleges  
Using NSOPF 2004 Data

by  
Lisa C. Markus

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APPROVED BY:

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Pooneh Lari, Member

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Bradley Mehlenbacher, Member

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Matthew Militello, Member

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James Bartlett, II, Chair

## DEDICATION

This dissertation is dedicated to my family who supported and encouraged me to complete my doctorate. I would especially like to dedicate this dissertation to my mother, who instilled the value of an education in me at an early age and shaped me into the person I am today. She truly has helped make this dream a reality. I also dedicate this to my husband, who continues to support and motivate me to achieve all of my goals.

This is dedicated, as well, to the memory of my grandfather and grandmother, Abe and Rebecca, whose own sacrifices and dedication have demonstrated to me that with hard work anything can be accomplished.

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## CHAPTER ONE

### INTRODUCTION

#### Introduction

Community colleges in North Carolina and throughout the United States provide an assortment of services to local communities, services that include offering associates degrees in the arts and sciences as well as certificate programs, transfer programs, and continuing education. As Dougherty and Townsend (2006) stated, “The community college is not a static institution” (p. 8). In the 1960s, the mission of community colleges was to serve multiple needs, from vocational and technical education, to adult basic education, to continuing education in the arts and humanities. Today, however, community colleges have revised their mission statements to include not only the above needs but also the goal of “enabling a diverse population of students...by enhancing the education, cultural, and economic development of the service area” (Levin, 2002, p.5). Community college leaders are required to change with time (Grubb & Lazerson, 2005), and faculty members within the community college are often the first to incorporate the changes (Bruns & Bruns, 2007). As McBride, Munday, and Tunnell (1992) pointed out, “People of an organization are perhaps its most important resource. For a college this goes a step further, for the faculty *are* the college” (p. 158). Watba and Farmer (2006) conducted a study identifying issues confronting community college deans over a five-year period in four southeastern states: Florida, Maryland, North Carolina, and Virginia. The results of study suggest that college leaders should put stronger emphasis on recruiting and preparing new leaders to replace those who will retire in the 21st century.

There are 988 public two-year colleges that educate around 44% of the college students in the nation (American Association of Community Colleges [AACC], 2005). There are many reasons why more and more students have turned to community colleges for their postsecondary needs. In their book *The American Community College* (2008), Cohen and Brawer attributed the increase in the number of students attending community college “to several conditions in addition to general population expansion: older students’ participation; financial aid; part-time attendance; the reclassification of institutions; the redefinition of students and courses; and high attendance by women, low-ability, and minority students (p.44). Students also seek services from community colleges because of the rising tuition costs at nearby universities. For example, the average annual tuition and fees for public community colleges is \$2,402, compared to \$6,585 for public four-year colleges (AACC, 2005). Therefore, student enrollment trends among community colleges continue to rise, creating challenges for leaders who need to hire faculty while budgets continue to be cut each academic year.

Community colleges attract diverse students from an array of backgrounds (Phillippe & Patton, 2000). For example, minority students constitute 30% of community college enrollments nationally, with Latino students representing the fastest-growing racial/ethnic population. In some urban community colleges the number of minorities is higher, accounting for more than 50% of the student population (Phillippe & Patton, 2000, p.23). Almost 100,000 foreign-born students attend community colleges, accounting for about 39% of all international students in the nation (AACC, 2005).

Clearly, the importance of foreign-born faculty and staff to the upcoming viability of public two-year colleges is vital. Such importance of “global economic competition and political events are increasing the need for an international component in the education of all community college students” (Vaughan, 2000, p. 35). Yet the fact remains that the “majority of community colleges have not made a stated commitment to internationalization” (Siaya & Hayward, 2003, p. 31). Some community colleges attempt to internationalize through study abroad programs and international festivals; however, institutions have largely overlooked the possibilities inherent in recruiting and retaining foreign-born faculty (Wells, 2007). Compared to native-born faculty members, foreign-born faculty are likely to bring a range of diverse, international perspectives to the campuses where they work (Wells, 2007). Recruitment and retention of foreign-born faculty and staff will continue to be essential to the faculty profile of public two-year community colleges in higher education. For the purposes of this paper, foreign-born faculty refers to all faculty members other than American-born.

It is critical that the presidents, chief academic officers, and deans of these institutions understand the factors that can lead to job satisfaction or dissatisfaction among foreign-born faculty members. Research studies that identify the challenges faced by foreign-born faculty serving in community colleges are imperative because community colleges likely attract foreign-born faculty more often than other institutions (Manzo, 2000). Manzo’s (2000) study suggests that many scholars of color are attracted to community colleges due to the value placed on teaching and on maintaining more diverse faculty and student populations in terms of gender and ethnicity. For example, “in 1987, 9% of the full-time faculty in two-year public colleges were classified as Native Americans, Asians, African Americans, or Hispanics; a

proportion that rose to 15% during the 1990s, and nearly 20% by 2003 (Cohen & Brewer, 2007, p. 85). Even though community colleges are more successful at recruiting faculty of color, sustaining diversity continues to be a challenge. Recently, there has emerged more literature than before addressing issues affecting community colleges. Nevertheless, research on job satisfaction among community college faculty is limited. According to Corbin (2001), a review of the literature about various community college topics reveals more about students than faculty. For this reason, exploring factors surrounding foreign-born faculty members' job satisfaction and beliefs about their work life will expand our knowledge of faculty issues.

#### Statement of the Problem

Recent trends and developments in universities and community colleges throughout the United States have demonstrated a need to increase diversity among faculty in terms of gender, race, ethnicity, and national origin. Over the past decades, institutions of higher education have increased their dependence on foreign-born faculty members as one way to increase diversity (Marvasti, 2005). During the 2007–2008 academic year, fully 106,123 foreign-born scholars with non-immigrant visa status were teaching or conducting research on U.S. campuses, an increase of almost 8,000 new faculty members from the previous academic year (Open Doors, 2009).

Due to the lack of information pertaining strictly to community colleges, literature must be studied on higher education in general. For example, there was only one study within the literature review on the subject of community colleges and foreign-born faculty (Wells, 2007). From 1969 to 1998, colleges and universities increased their proportion of foreign-born faculty members in the U.S. from 28,200 in 1969 to 74,200 in 1998, compared to

106,123 in 2006 (Schuster & Finkelstein, 2006). Data from the National Study of Postsecondary Faculty (NSOPF) of 2004 indicated an increase. This trend in hiring foreign-born faculty members is likely to persist because it serves several goals held in common by current community college leaders: (a) to fill vacant positions, particularly in the areas of math, science, and technology; (b) to bring international expertise to the college; (c) to enhance scientific innovation; (d) to represent society's new ethnic distribution; (e) to prepare American students to compete in the global workforce; and (f) to raise student awareness of the international perspective (Aguirre, 2000; Altbach, 2005, 2006; De Wit, 2002; NAFSA, 2006; Stromquist, 2007). Higher education administrators must increase the level of job satisfaction among their faculty and staff in order to decrease turnover and increase morale (Isaac & Boyer, 2007). Also, a number of studies within business education (Al-Enezi, 2007; Attar & Sweiss, 2010; Decker et al., 2009) have indicated that many companies have examined the relationships among employee satisfaction, productivity, and financial performance. The literature states that satisfied employees are more productive, innovative, and loyal, and they also have lower absentee rates. Furthermore, increased job satisfaction leads to increases in employee morale (Graham, 1996).

### Statement of Purpose

The purpose of the study is to examine, at a national level, how both mediators (motivators/ hygies) and demographic factors affect levels of job satisfaction among foreign-born faculty at community colleges in the United States. More specifically, the researcher will measure job satisfaction by utilizing the data set acquired by the National Center for Educational Statistics (NCES) 2004 study of postsecondary faculty (National

Study of Postsecondary Faculty [NSOPF]). This study seeks to modify Linda Hagedorn's (2000) conceptual framework of college and university faculty job satisfaction to further investigate the population of foreign-born community college faculty. Hagedorn defines many of the factors included in Herzberg's (1966) two-factor theory, which is structured by the framework of intrinsic variables (motivators) likely to effect job satisfaction and the extrinsic variables (hygienes) likely to effect job dissatisfaction. She modified and broadened the two-factor theory to account for additional factors (such as demographics, environments, and life-changing events) by applying the 1993 National Survey of Postsecondary Faculty (NSOPF: 93) administered during the 1992-93 academic year (NCES, 1993).

Hagedorn (2000) created a conceptual model for the study of community college faculty job satisfaction, and her model is the basis for this study. Hagedorn's model utilized NSOPF: 93 data to adapt Herzberg's two-factor theory for the specific task of examining university faculty. The NSOPF data is an enormous data source used to examine postsecondary issues (Hahs-Vaughn, 2007). The model was verified to be significant. Hagedorn's conceptual framework was built upon "mediators" and "triggers," the NSOPF: 93 factors selected by Hagedorn to predict overall faculty job satisfaction. Mediator and trigger factors affect work life and are listed under descriptive variables further in this chapter.

Hagedorn's (2000) variation of Herzberg's two-factor theory was reputable in research and is compatible with studying faculty members (Hagedorn, 2000; August & Waltman, 2004; Grunwald & Peterson, 2003; Reybold, 2005; Corley & Sabharwal, 2007; Castillo & Cano, 2004). The main reason for this research is to add to the literature analyzing

the job satisfaction of foreign-born community college faculty members; Hagedorn's research offers as a practical framework to apply to a community college study.

In particular, the researcher drew upon the NSOPF: 04 data, which was utilized during the 2003-04 academic year, to modify Hagedorn's (2000) conceptual framework of faculty job satisfaction so that it can be applied to foreign-born faculty working at community colleges in the United States. Hagedorn's conceptual framework helps predict the relationships among motivators, hygienes, demographic variables, employment, and opinion variables related to faculty job satisfaction. Additionally, the researcher sought to describe the characteristics of faculty members' job satisfaction. The NSOPF data (2004-2005) was used to measure job satisfaction of foreign-born faculty members. Lastly, the researcher explored whether or not the selected variables of employment, sociodemographic, and opinion factors explain a significant proportion of the variance in job satisfaction found among foreign-born community college faculty members.

### Research Objectives

Research Objective 1: Describe the foreign-born faculty member at U.S. community colleges, as measured by employment, sociodemographic, and opinion characteristics using the NSOPF 2004.

#### Section A: Employment characteristics

- i. Transfer to a new institution (Q9): the length of time a faculty member has held current job
- ii. Academic rank (Q10): a faculty member's academic rank, title, or position at that institution

- iii. Time in academic rank (Q11): the length of time a faculty member has held current academic rank
- iv. Tenure status (Q12): a faculty member's tenure status (tenured, on tenure track but not tenured, not on tenure track although institution has a tenure system, no tenure system at this institution)
- v. Time in tenure (Q13): the length of time a faculty member has held current tenure
- vi. Academic discipline (Q16): a faculty member's principal field of teaching

#### Section B: Sociodemographic characteristics

- i. Age (Q72)
- ii. Gender (Q71)
- iii. Race/Ethnicity (Q73): a faculty member's race/ethnicity identified as Hispanic or Latino
- iv. Race (Q74): a faculty member's race identified as American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or other Pacific Islander, and White
- v. Marital Status (Q77): as of fall of 2003, faculty member's marital status as single and never married; married; living with partner or significant other; or separated, divorced, or widowed
- vi. Dependents (Q78): the number of dependent children supported by faculty member

- vii. Place of Birth (Q80): whether the faculty member's place of birth was in the U.S.
- viii. Citizenship (Q81): citizenship status of faculty member

### Section C: Opinions

- i. Opinion: Teaching is rewarded (Q82a): faculty members were asked on a Likert scale to give their opinions about "good teaching is rewarded"
- ii. Opinion: female faculty treated fairly (Q82c): faculty members were asked on a Likert scale to give their opinions about "female faculty members are treated fairly"
- iii. Opinion: racial faculty treated fairly (Q82d): faculty members were asked on a Likert scale to give their opinions about "faculty who are members of racial or ethnic minorities are treated fairly"

Descriptive statistics: Descriptive statistics will be used to summarize the employment, sociodemographic, and opinion variables of the participants.

Descriptive variables: Employment characteristics include transfer to a new institution, time in academic rank, tenure status, time in tenure position, and academic discipline (nominal data). Time reported for variables will be split; for example, the variable "transfer to a new institution" will be split into four years or less in one category and for 10 years or longer in another category. Sociodemographic characteristics are age, and dependents (interval data) and gender, race/ethnicity, marital status, place of birth, and

citizenship (nominal data). Opinion variables included will be “teaching is rewarded,” “female faculty treated fairly,” and “minority faculty treated fairly” (interval data).

Research Objective 2: Describe the foreign-born community college faculty members’ satisfaction by using motivators (increase satisfaction) and hygienes (decrease dissatisfaction), as measured through the NSOPF 2004.

Descriptive variables: Motivators and hygienes (interval data), including achievement (Q82a teaching rewarded); recognition (Q82d minorities treated fairly); work itself (Q62a satisfaction with workload); responsibility (Q61a satisfaction with authority to make decisions); advancement (Q10 rank and Q12 tenure status); and rewards (Q62b satisfaction with salary and Q62c satisfaction with benefits).

Research Objective 3: Determine if selected variables of the mediators and triggers explain a significant proportion of the variance in job satisfaction of foreign-born faculty members at U.S. community colleges. Specifically, this study seeks:

3a. to determine motivators and hygiene factors (achievement, recognition, work itself, responsibility, advancement, and reward) and sociodemographics (gender, ethnicity, place of birth, institutional type, income, and academic discipline) that explain a significant proportion of the variance in job satisfaction for foreign-born faculty members at U.S. community colleges

3b. to describe the trigger characteristics (measured in changes of life stage, rank/tenure, institutions, and perceived justice) that explain a significant proportion of the variance in job satisfaction for foreign-born faculty members at U.S. community colleges.

Dependent Variables: Job Satisfaction is examined as *the satisfaction* index (sum) of employment items (X01Q62).

Independent Variables: Mediators and triggers including age and dependents (interval data); gender, race/ethnicity, marital status, place of birth, income, and citizenship (nominal data); achievement, recognition, work itself, responsibility, advancement, and reward (interval data); and changes of life stage (interval data) (Q72, age), family-related or personal circumstances (Q77, martial status); rank/tenure (Q11, time in rank and Q13, time in tenure), institution (Q9, time in job), and perceived justice (Q82c, female treated fairly); (Q82b part-time faculty treated fairly); and (Q83 choosing an academic career again).

### Significance of the Study

The presence of foreign-born faculty members at community colleges is integral to the institutions' missions and values. It is vital for administration in community colleges to better understand the institutional impact of this growing trend in diversity among faculty members. Because the relationship between job satisfaction and performance is significant (Judge, Thoreson, Bono, & Patton, 2001), it is extremely important for management within community colleges to understand the wide range of elements that affect job satisfaction (Judge, Bono, Thoresen, & Patton, 2001; Brayfield & Crockett, 1955; Herzberg et al., 1957). Academic leaders can use such insights to make better decisions relating to foreign-born faculty.

Community colleges have made it more of a priority lately to broaden the demographic profile of their faculty populations to have that profile more closely match the diversity within their student populations (see Table 1.1), especially since foreign-born

faculty employment has increased along with the number of students enrolling in community colleges (Phillippe & Sullivan, 2005). The increased number of students creates the need for additional faculty members, and administrators who do the hiring consider the diversity needs of the college in addition to other needs.

Table 1.1

*Faculty and Student Demographic Profiles*

<b>NCES 2004</b>	<b>White</b>	<b>Non-White</b>	<b>Diff (w-nw)</b>
Student	59.9%	40.1%	19.8
Faculty	80.9%	19.1%	61.8

<b>NCES 1998</b>	<b>White</b>	<b>Non-White</b>	<b>Diff (w-nw)</b>
Student	69.5%	30.5%	39.0
Faculty	85.3%	14.7%	70.6

Identifying the factors that produce higher levels of job satisfaction among foreign-born faculty members at community colleges in the United States is vital to reducing turnover, absenteeism, and low job productivity. In addition, the end point of this research effort, although somewhat similar to other faculty job satisfaction studies (Anthony & Valadez, 2002; Conley et al., 2002; Hagedorn, 2000; Iacqua, & Schumacher, 2001; Rosser, 2004; Rosser, 2005; Toutkoushian & Bellas, 2003), is unique in that it seeks to identify the factors that relate to higher levels of job satisfaction and lower levels of dissatisfaction among foreign-born faculty members employed at community colleges. Most of the studies in the past have analyzed four-year institutions or higher education as a whole; thus, there is limited research pertaining to community colleges.

## Definitions of Terms

The definitions that follow are of terms that were used throughout the study and were major contributors to the framework of the study.

*Academic fields* were academic disciplines assigned according NSOPF 2004.

*Amount of total individual income* was estimated for the 2003 calendar year of gross compensation before taxes.

*Career stages* were 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 were the same as those used by Hagedorn (2000).

*Community colleges* were those public, controlled, associate's-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 report separately to IPEDS from their main institution.

*Degree of urbanization* was derived from IPEDS by NSOPF: 04 using the U.S. Census Bureau's initial locale codes comprising 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).

*Full-time equivalent (FTE) enrollment* was 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, 2007; Heuer et al., 2005).

*Full-time faculty* were those individuals who were classified as full-time faculty by their institutions and who taught at least one credit course during the fall 2003 term when the NSOPF: 04 survey was conducted.

*Faculty rank* was the status of faculty in tenure-eligible positions, as defined by the NSOPF: 04 survey.

*Institution* was defined by NCES studies as the traditional sector of postsecondary education with accreditation at the college level recognized by the United States Department of Education.

*Institutional size* employed 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:

1. *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.)
2. *Medium community colleges* reported Fall 2003 FTE enrollment in the range of 2,000 to 4,999. (This variable range was derived from NSOPF: 04 by aggregating the continuous variable of undergraduate enrollment in the ranges of 2,000-4,999.)
3. *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.)

*Job Satisfaction*, consistent with the previous literature, was "simply how people feel about their jobs and different aspects of their jobs. It is the extent to which people like, [satisfaction] or dislike [dissatisfaction] their jobs" (Spector, 1997, p.2).

*Overall job satisfaction* was a global perspective of a faculty member regarding his or her relative contentment with the satisfaction index (sum) of employment items (X01Q62).

*Place of birth*: a dichotomous variable defined as "yes" (born outside the United States) or "no" (born in the United States) as on the NSOPF: 04 survey.

*Race/ethnicity*: a dichotomous variable defined as majority (White, non-Hispanic, and Asian/Pacific Islander) and under-represented minority (Black, Hispanic, and American Indian/Alaskan Native) as defined by the NSOPF: 04 survey.

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

*Satisfaction with instruction index* comprised 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).

*Satisfaction with intrinsic and extrinsic job satisfaction factors* comprised the NSOPF: 04 opinion scores for "teaching is rewarded" (Q82A), "part-time faculty are 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).

*Sex*: a dichotomous variable defined as male or female as in the NSOPF: 04 survey.

*Teaching field* was derived by applying the principal field of teaching and general area codes employed in the NSOPF: 04 faculty study into the two teaching field categories of (1) liberal arts leading to associate of arts or sciences degrees or (2) career programs leading to associate of applied business or science degrees.

*Tenure status*: a dichotomous variable identified as tenured or non-tenured/tenure track.

*Work*: any combination of teaching, research, and service that meets institution standards or tenure.

## Theoretical Framework for the Study

### Herzberg's Two-Factor Theory of Motivator–Hygiene

In the late 1950s, Frederick Herzberg and his colleagues developed an influential theory of job satisfaction based on the characteristics of motivators and hygienes (Herzberg et al., 1959). Even though studies of job satisfaction make use of many different theories and explanations, the literature frequently references the work of Frederick Herzberg (1966), the creator of the two-factor theory, also known as the Motivator-Hygiene Theory. Herzberg's two-factor theory maintains that certain factors can be characterized as either motivators or hygienes. The theory states that motivators can help increase satisfaction while other characteristics, labeled hygienes, decrease satisfaction or result in demotivation. Herzberg's research (1959) identified 14 first-level job factors relating to job satisfaction and dissatisfaction: achievement, recognition, the work itself, responsibility, possibility of

advancement, possibility of growth, salary status, the quality of interpersonal relations with superiors, the quality of interpersonal relations with peers, technical supervision, agreement with company policies and administration, pleasant working conditions, external factors from personal life, and job security. However, Herzberg ultimately found only five of these factors to be influential in affecting job satisfaction and dissatisfaction: achievement, recognition, the work itself, responsibility, advancement, and (to a lesser degree) salary.

Frederick Herzberg (1959) separated the motivational elements of work into two categories: those serving people's animal needs (hygiene factors) and those meeting exclusively human needs (motivation factors). Intrinsic factors (achievement, recognition, the work itself, responsibility, and advancement) are related to the execution of a job with the possibility of achieving professional growth. These indicate success in performance and thus are named “motivators” and identified as job “satisfiers.”

Extrinsic factors, which are associated with the conditions that surround the job, are named “hygiene” factors and are job “dissatisfiers.” Extrinsic factors include administration, fringe benefits, working hours, conditions, and salary. Furthermore, Herzberg determined that external environmental factors, such as company policy, administration styles, supervision, salary, working conditions, and interpersonal relations, were dissatisfiers; if these factors were present, individuals would be satisfied, but not motivated (Herzberg et al., 1959).

Herzberg believed that the causes of satisfaction and dissatisfaction were distinct; thus, the theory has been labeled the two-factor theory of job satisfaction. Recent and more exacting studies have verified much of Herzberg’s work (Diener, 1985; Gallagher & Einhorn,

1976; Gawel, 1997; Knight & Westbrook, 2004). Although Herzberg's theories were developed about forty years ago, his work continues to be recognized and his contribution praised (Wren & Greenwood, 1998). Herzberg's motivation-hygiene theory has dominated the study of job satisfaction and has formed the basis for the development of job satisfaction assessments.

### Conceptual Framework for the Study

The conceptual framework for this study entails independent and dependent variables related to three research objectives. The conceptual framework emerges from the overall framework of Herzberg et al. (1959) and Hagedorn (2000). The Hagedorn (2000) conceptual model of faculty satisfaction has been applied to college and university faculty and tested using a national database. In the conceptual framework of this study, faculty satisfaction refers to job satisfaction of foreign-born faculty members employed at community colleges within the United States. The conceptual framework developed in Figure 1.1 provides the basis for the method of this study and identifies how the independent variables (mediator and trigger variables) affect job satisfaction of foreign-born faculty members at community colleges in the United States.

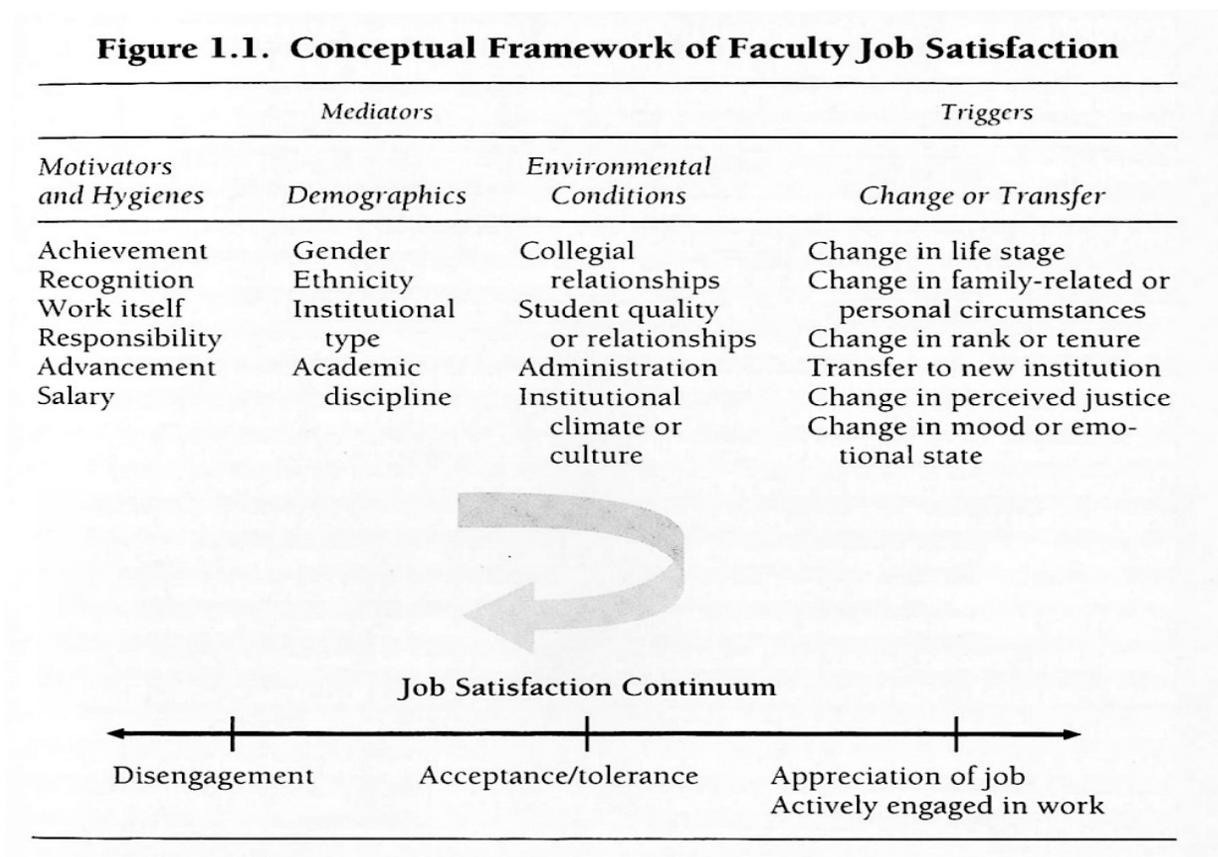


Figure 1.1

*Hagedorn Conceptual Framework of Faculty Job Satisfaction* (Hagedorn , 2000, p. 7).

The study modified Hagedorn’s conceptual framework for use with community college foreign-born faculty. Tables 1.1, 1.2, and 1.3 identify how the study built upon Hagedorn’s conceptual framework to examine job satisfaction. Due to the data source of questioning, the study was not able to measure the construct of environmental conditions or the “change in mood or emotional state.” However, the study did add a “place of birth” variable under demographics in order to narrow its focus to foreign-born faculty.

Table 1.2

*Motivator and Hygiene Variables for the Study*

<b>Hagedorn</b>	<b>NSOPF:04 Question Number</b>	<b>Present Study</b>
Achievement	82a	Teaching rewarded
Recognition	82d	Minorities treated fairly
Work itself	62a	Satisfaction with workload
Responsibility	61a	Satisfaction with authority to make decisions
Advancement	10 12	Rank Tenure Status
Salary	62b 62c	Satisfaction with salary Satisfaction with benefits

Table 1.3

*Sociodemographic Variables for the Study*

<b>Hagedorn</b>	<b>NSOPF:04 Question Number</b>	<b>Present Study</b>
Gender	71	Male/female
Ethnicity	73	African American or Hispanic White/Non-white
Institutional type	Sorted prior through IPEDS	Carnegie designation
<i>None</i>	Sorted prior through IPEDS	Degree of Urbanization
Academic discipline	16	Principal Field of Teaching field
<i>None</i>	66	Income
<i>None</i>	81	Place of birth (US or other)

Table 1.4

*Trigger Variables for the Study*

<b>Hagedorn</b>	<b>NSOPF:04 Question Number</b>	<b>Present Study</b>
Change in life stage	72	Age: split into two age groups
Change in family-related or personal circumstances	77	Sample split by marital status: single, married, separated/divorced
Change in rank	11	Time in rank: sample split between 5 years and 5+ years
Change in tenure	13	Time in tenure: sample split between <5 years and 5+ years
Transfer to new institution	9	Length of time for current job: sample split between 4 years or 10 years or longer
Change in perceived justice	82c	Perceptions of gender prejudice: low or high

## Limitations and Delimitations

## Limitations

The study was limited by the sample of community college foreign-born faculty. It was also limited by the self-reported perceptions and responses from the community college foreign-born faculty.

In addition, there have been approximately six years between the conduct of NSPOF: 04 during the fall of 2003 academic term and the summer of 2010, when the present research was completed. During these six years, variations may have occurred that were not exhibited in the study.

Another limitation to the study was that it was an ex-post-facto study that employed the existing NSOPF: 04 survey results obtained before the research objectives for the present study were developed. Accordingly, this analysis did not allow for the survey questions to be specifically crafted to the research objectives.

#### Delimitations

The study examined job satisfaction for foreign-born faculty at community colleges using NSOPF: 04 by drawing upon questions from the survey to operationalize the mediator and trigger factors related to job satisfaction. This restricted the study to a sample of faculty members who were employed during the 2004-2005 academic calendar year.

## CHAPTER TWO

### LITERATURE REVIEW

The review of literature for the study focused on job satisfaction of foreign-born faculty at community colleges. There are many studies that examine job satisfaction in education settings. This literature review covered foreign-born faculty in higher education in general, and not specific to community colleges, because of the lack of literature. To support this claim, Appendix E documents search terms related to job satisfaction articles from the past 10 years. The line of research focusing on foreign-born faculty was also limited; therefore, studies focusing on minorities and faculty members of color were used. The majority of studies in this area concluded that job satisfaction was a key element in faculty members' "intent to leave" and controls other factors such as performance and turnover.

#### Job Satisfaction

Job satisfaction is a significant topic that has been researched by many scholars in many fields, from education (Aguirre, 2000), to health (Al-Enezi, 2009), to business (Attar & Sweiss, 2010). The effects of job satisfaction on worker productivity in all types of organizations has been the topic of much research (Glisson & Durick, 1988). Literature pertaining to the subject originated in the late 1900s with Frederick Taylor, who pioneered work on the subject of scientific management by focusing on individuals and their tools while attempting later to examine how individuals are mostly motivated by economic needs (Taylor, 1947).

Frederick Taylor was one of the first theorists to help define organizational efficiency in terms of a scientific approach to the management of organizations, and he is known as the father of scientific management. Taylor (1947) created systems founded on scientific principles relating to standardization and efficiency: Standardized management methods and improved working conditions would yield the most efficient work.

Researchers soon observed, however, that too much standardization left employees feeling alienated from their jobs. Between 1924 and 1933, studies were conducted at the Western Electric Company's Hawthorne Plant in Chicago. These tests, called the Hawthorne Illumination Tests, divided employees into two groups, where one "test" group was subjected to calculated changes in lighting and another "control" group worked under constant lighting conditions throughout the experiment. The findings demonstrated that productivity increased even though the test group had their lighting decreased to near twilight. The control group's productivity had not changed (Cook, 1962; Roethlisberger & Dickson, 1939). In the early 1930s, additional experiments—called the "Hawthorne Effect" studies—were conducted and performed by Elton Mayo, Fritz Roethlisberger, and William Dickson. The Hawthorne Effect studies demonstrated that, when employees were given special attention, productivity was likely to change, regardless of whether working conditions had changed. This finding later drove studies on employees' feelings and attitudes about their work lives (Roethlisberger & Dickson, 1939).

Many theorists turned their focus on how employees' job satisfaction related to their feelings and attitudes about their working environment. These theories have helped clarify the ideas behind the concept of job satisfaction (Herzberg et al., 1959; Lawler & Porter,

1967; Lawler & Suttle, 1973; Vroom, 1964, Kalleberg, 1977). Still, the dominant theoretical framework used throughout the literature continued to be Herzberg's study on job attitudes and productivity (Herzberg et al., 1959). This study classified work attitudes into two categories: motivators and hygiene factors. Herzberg's two-factor theory categorized job factors into two groups: intrinsic and extrinsic. Intrinsic job factors included feelings of accomplishment, recognition, and autonomy. Extrinsic job factors, or motivators within the environment, included salary, job security, and physical working conditions; these were named hygiene factors. This theory suggests that job satisfaction and dissatisfaction are caused by two separate sets of independent characteristics. According to Herzberg et al. (1959), motivators can cause job satisfaction. Likewise, hygiene factors can create job dissatisfaction, but their absence does not induce satisfaction. Herzberg's work has been implemented by other scholars who have pointed out that job satisfaction is determined by the extent to which the job itself fulfills an individual's physical and psychological needs (Morse & Weiss, 1955; Oldham & Hackman, 1981; Porter & Lawler, 1965; Wolf, 1970).

### Defining Job Satisfaction

As early as 1969, Locke defined job satisfaction as the "pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values" (p. 316). According to Locke, feelings of satisfaction and dissatisfaction regarding one's job was "a function of the perceived relationship between what one wants from one's job and what one perceives it as offering or entailing" (p. 316). According to Spector (1997), job satisfaction is "simply how people feel about their jobs and different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike

(dissatisfaction) their jobs” (p.2). Common to many of these definitions is the notion that job satisfaction is an attitudinal variable that impacts an individual’s internal state of well-being at work. The feelings of satisfaction and dissatisfaction follow from whether an individual assesses the job and certain job-related practices with approval or disapproval (Locke, 1976).

### Faculty Job Satisfaction

Concerns about job satisfaction will increasingly occupy many higher-education policy makers and administrators, given the growing necessity for diverse faculty members within institutions. Although a vast amount of literature exists on the subject of job satisfaction, there is still a shortage of research pertaining to foreign-born academic faculty members who support and maintain diversity within community colleges. Today, more than ever, foreign-born faculty are a vital part of community colleges. This study explored several aspects of the job satisfaction of foreign-born faculty at community colleges in the United States.

### Job Satisfaction in the Community College

Many community colleges aim to create a diversified student body, and it makes sense that faculty and staff demographics mirror this mission. Since the beginning of the twentieth century, community colleges have been leaders when it comes to accepting diverse students. This is partly because of the colleges’ strong open-access acceptance policies. Community college mission statements continue to reflect the importance of accepting students from all socioeconomic classes and from a variety of cultural experiences (Community College Story, George B. Vaughan).

As of January 2009, there were more than 11 million students attending over 1,177 community colleges, both private and public, throughout the United States (AACC, 2009). Of that number, 988 public community colleges offered an array of opportunities for students to build upon their professional experiences through transferability of credit courses to four-year universities, vocational training, and professional development options. Community college mission statements often are based on the concepts of open access and equity for all. Community colleges work to create diverse student populations as well as diverse faculty and staff populations, in the hope of connecting everyone to more diverse populations of age, experience, and ethnicity. During the 1999-2000 academic year, the greatest proportional increase in degrees awarded went to Hispanics, with a 130% increase to 37,548. During the same academic period, degrees presented to Asian and Pacific Islanders increased 104% to 21,413, and those presented to African Americans grew 73% to 39,872.

Throughout the United States, institutions are diversifying their faculties ethnically and racially in reaction to both internal and external pressures for organizational change. Yet in the area of faculty and staff diversity, community colleges still come up short. Despite years of affirmative action policies, community colleges continue to underrepresent foreign-born faculty members (Trower & Chait, 2002). The problem is not one of will: Community colleges strive to reflect the demographics of their student bodies within their faculty populations. The problem, instead, involves job satisfaction. Past studies have shown that minority groups face a range of obstacles that impact their job satisfaction levels (Antonio, 2002; Flowers & Jones, 2003; Laden & Hagedorn, 2000; Niemann & Dovidio, 2005; Olsen et al., 1995; Peterson, Friedman, Ash, Franco, & Carr, 2004). As a group, foreign-born

faculty are likely to face similar challenges that minority groups face, because of their citizenship status, cultural differences, and the stereotypes they encounter.

### Theoretical Frameworks

Job satisfaction is a commonly studied variable within business and educational settings. It has been described, simply, as how people feel about their jobs and different aspects of their jobs (Cranny et al, 1992). It is the extent to which people like or dislike their jobs. Job satisfaction is generally assessed as an attitudinal variable (Spector, 1997, p. 2). Job satisfaction is a multifaceted blend of experiences with many contributing factors (Spector, 1997).

Two main categories of theories have emerged from job satisfaction research: “content” theories and “process” theories (Landy, 1978). Process theories of job satisfaction attempt to explain how satisfaction increases or decreases given specific types of variables such as experiences, needs, and values. Content theories, on the other hand, attempt to identify the specific needs or values most conducive to job satisfaction and to explain why those factors have the effects that they have (Maslow, 1943; Herzberg, 1966). Herzberg’s (1959) two-factor theory of motivator-hygiene and Maslow’s (1970) hierarchy of needs are the two content theories discussed in this literature review. These are content theories because they attempt to identify the needs and values that must be realized in order for an individual to feel satisfied at work.

In Maslow’s (1970) hierarchy of needs theory, human needs form a five-level hierarchy, from physiological needs to safety, belongingness, love, esteem, and finally self-actualization. Maslow proposes that individuals are motivated by these needs, beginning with

the lowest unfinished need in the hierarchy. If a need that has formerly been met becomes vulnerable, the individual proceeds to that level before endeavoring to achieve the final goal of self-actualization. As a result, the most fulfilling work life would be one that best matches the individual's current level within the hierarchy of need. Using Maslow's theory, some scholars have explored job satisfaction from the viewpoint of need achievement. However, this approach has become less accepted because it emphasizes fundamental needs rather than cognitive processes. Instead, the attitudinal point of view has gained focus in research on job satisfaction (Spector, 1997). Still, Maslow's hierarchy of needs theory is supported by Herzberg's two-factor theory of motivator-hygiene.

For the most part, past and current literature uses the theoretical framework underlying Herzberg's two-factor theory, which focuses on 14 different intrinsic and extrinsic factors affecting job satisfaction and motivation ( Hagedorn, 2000; Kalleberg, 1977; Olsen, 1993; Zhou & Volkwein, 2004). The following section will provide a detailed description of studies that have examined intrinsic and extrinsic factors influencing faculty members' job satisfaction. In addition, studies that explore these factors for foreign-born faculty will also be discussed.

### Herzberg's Two-Factor Theory

Herzberg's two-factor theory investigates the relationship between job satisfaction and job dissatisfaction and which factors affect each attitude. According to Herzberg et al. (1959), motivators cause positive job attitudes because they satisfy the worker's need for self-actualization (Maslow, 1954), which is the individual's ultimate goal. The existence of these factors has the potential to create high levels of job satisfaction, and yet the lack of

these factors does not necessarily mean that dissatisfaction will occur (Herzberg et al., 1959). Similarly, hygiene factors have the potential to cause dissatisfaction, but their absence does not produce a high level of satisfaction. Thus, job satisfaction and dissatisfaction act independently of one another. According to Herzberg (1968), the opposite of job satisfaction is not dissatisfaction; it is a relative lack of satisfaction. In the same way, the opposite of job dissatisfaction is not satisfaction, but rather the lack of dissatisfaction. For example, consider the hygiene factor of working conditions for faculty members at a community college. If the lack of office space in community colleges requires some faculty to double up on office space, faculty will be greatly dissatisfied. However, if the office space is adequate for the faculty as expected, the faculty will not be particularly satisfied by taking notice and being grateful (Gui et al., 2009).

#### Motivators and Hygiene

Motivators and hygiene factors are derived from Herzberg's two-factor theory for job satisfaction, which was developed in the late 1950s. The theory initially recognized 14 job-related factors related to demonstrating satisfaction and dissatisfaction with work (Herzberg et al., 1957; Herzberg et al., 1959). In the end, the study found that only five to six factors significantly impacted job satisfaction: achievements, recognition, work itself, advancement, responsibility, and (to some extent) salary. This study expanded on these five factors, also known as intrinsic and extrinsic factors, and further applied them to the study of foreign-born faculty members. Intrinsic and extrinsic factors have significant effects on overall job satisfaction (Gruenberg, 1980).

## Achievement

Herzberg described the first factor, achievement, as the opposite of failure and the absence of achievement (1959, p. 45). Researchers can identify job achievement through factors such as the successful completion of a task, finding solutions to problems, showing work evidence, and seeing the results of one's work (Herzberg, 1959). Herzberg identified achievement in 41% of the workers who were observed as having high levels of job satisfaction. However, the relationship between scholarly achievement and job satisfaction has not been clearly defined in academe. For instance, it is hard to show if one predicts the other (Lin, Pearce, & Lang, 2009).

Some studies have measured job achievement in academe in terms of the number of peer-reviewed journal articles published, book publications, and presentations (August & Waltman, 2004; Hagedorn, 2000; Herzberg et al., 1959; Lahey & Vihtelic, 2000). The August and Waltman study measured achievement by examining professional productivity (publications and presentations) for female faculty (2004). The findings indicated that the number of publications and presentations did not have a significant impact on job satisfaction. However, Lahey and Vihtelic (2000) looked even more closely at the productivity of publications, and they even examined such factors as publication within top tiers. Their study examined male and female finance faculty and demonstrated a negative relationship between job satisfaction and the variable of having published in top-tier journals. Yet, a closer look at this relationship indicated that, for the group of female faculty members, top-tier publications had a significant positive impact on job satisfaction.

Just as gender differences can influence job satisfaction levels, ethnicity can create differences as well. Even though foreign-born faculty demonstrate high levels of scholarly productivity compared to their native U.S.-born peers, their average compensation and levels of job satisfaction are lower (Corley & Sabharwal, 2007; Lee, 2002).

### Recognition

According to Herzberg, et al. (1959), recognition at work is an intrinsic factor that positively impacts job satisfaction. The source of the recognition can be almost anyone from the supervisor to the general public, and the act can involve any type of notice: Praise and blame can both be categorized as recognition. Types of recognition seen within academe include tenure, salary, and support for research, teaching, and service (August & Waltman, 2004; Hagedorn, 1996, 2000; Olsen, 1993; Rosser, 2004, 2005). Olsen, Maple, and Stage (1995) found that, among women and minority faculty members, perceived recognition and institutional support positively impacted overall job satisfaction.

### Work Itself

An additional factor shaping faculty job satisfaction is the work itself, which includes the time spent on research, teaching, and service projects (Hagedorn, 2000; Olsen, Maple, & Stage, 1995; Smart, 1990). Oshagbemi's (1997) study discussed how faculty members' teaching and research activities account for and explain about 50% of their job satisfaction. Even more interestingly, the study also found that faculty members' jobs explain over 30% of their job dissatisfaction (Oshagbemi, 1997). Service projects, teaching, and research are the main components of faculty jobs, even though the amount of time spent on research is

viewed institutionally as being more valuable than teaching or service within a faculty member's job life (Bok, 1986).

Research has shown that low-ranking faculty and minority faculty spend more time on service projects and teaching than on research. Some studies have suggested that this difference has increased the overall dissatisfaction of foreign-born faculty (Turner & Myers, 1999). A study conducted by Olsen and colleagues (1995) identified that overall job satisfaction with teaching negatively affected the amount of support and recognition faculty members received from their academic departments. Faculty members who were more satisfied with their research were more likely to receive tenure during their career.

It is difficult to generalize about faculty job satisfaction given only the factors of time spent teaching, researching, and completing service projects, since multiple and varying influences such as type of institution, gender, age, minority or ethnicity, academic rank, country of origin, and citizenship status also impact satisfaction. For example, minorities, in particular, have shown significant differences in the amount of time spent on service projects compared to their white male counterparts (Antonio, Astin, & Cress, 2000).

The time spent on research can have wide-ranging effects on levels of job satisfaction. Olsen et al. (1995) found that greater time spent on research improved job satisfaction. Jacobs and Winslow (2004) reported that faculty members' dissatisfaction with their jobs was the same whether they spent high or low amounts of time on research. Hill conducted research with both two-year college data (1983) and four-year college data (1986). In his findings, job satisfaction at four-year colleges resulted from the intrinsic factors of the work itself. However, his findings concerning community colleges showed that high amounts

of time spent on academic activities such as teaching, advising, and committee work had a negative effect on job satisfaction.

#### Advancement

Herzberg defines the advancement factor as an actual change in the status or position of a faculty member. The category of advancement within academia comprises a promotion of rank or the accomplishment of tenure (Hagedorn, 2000). It is important to note that if an individual transferred from one part of the institution to another without any change in rank, but is given increased opportunities for responsibility, the change is considered to be an increase in responsibility, which is another category, not advancement. Faculty members perceive the obtainment of tenure as a reward, and they consider it to be a critical measure of their achievement in academia. Rank and tenure are determined to be powerful, explanatory variables in measuring faculty job satisfaction (Tack & Patitu, 1992).

Past research has demonstrated that faculty members who are of color, female, and foreign-born have struggled and labored to move forward within the ranks of academia (Antonio, Astin, & Cress, 2000; Corley & Sabharwal, 2007; Hagedorn, 1996; Laden & Hagedorn, 2000; Perna, 2001; Tack & Patitu, 1992; Bellas & Toutkoushian, 1999; Toutkoushian, 1999; Turner & Myers, 2000).

Some studies have shown that faculty members of color are more involved in teaching and service activities than research, resulting in lower productivity (fewer publications) and fewer opportunities to obtain tenure (Konrad & Pfeffer, 1991; Toutkoushian, 1999). In one examination of racial/ethnic group differences, Toutkoushian (1999) found that, among full-time faculty at four-year institutions, African Americans were

less likely than Whites and Hispanics to hold the rank of full professor, and that African Americans and Hispanics were less likely than Whites to hold tenured positions. These findings surfaced after controlling for experience, career publications, Carnegie class, and academic field. Perna's (2001) study also agreed with these findings and suggested that the lower representation of minorities among tenured faculty was related to differences in human capital, structural characteristics, and research productivity.

#### Responsibility and Authority

As noted above, a faculty member who transfers from one part of an institution to another without any change in rank but with increased opportunities for responsibility has achieved an increase in responsibility, not an advancement. This category can also include a loss of job satisfaction resulting from a lack or diminution of responsibility. Deci (1999) and his colleagues found that the "most important issue, within the supervisory context, is the extent to which faculty members felt in control, in other words, the extent to which people within the context felt pressured to think, feel, or behave in particular way [by] for example, the chair of the department" (p. 629).

Self-managed teams take on most of the responsibility and authority traditionally entrusted to first-line supervisors. Self-defining teams represent an intense form of empowerment because the teams determine their own missions, control their own internal processes, and bargain relationships with other parts of the organizations and outside resources (Yukl, 2002).

## Salary

According to Herzberg (1966), this category includes all sequences of events in which compensation plays a role (p. 46). Herzberg gives examples involving wage or salary increases or unfulfilled expectations of salary increases. Salary has also been used as a gauge to measure position and fairness as factors affecting job satisfaction (Bender & Heywood, 2006; Hagedorn, 1996, 2000). Yet a study by Bender and Heywood (2006) found this to be less important for female faculty members than for male faculty members.

Studies have shown salary to be a cause of both job satisfaction and job dissatisfaction among faculty (Morse & Weiss, 1955; Moses, 1986; Winkler, 1982). On the other hand, Hagedorn (2000) discovered that job satisfaction levels of employees were significantly affected by the factor of compensation. Salary was one of the most significant factors in Hagedorn's study of faculty job satisfaction. How salary affects the attitudes of foreign-born immigrants is currently being investigated by several scholars (Corley & Sabharwal, 2007; Monks, 2007). A recent study by Corley and Sabharwal (2007) found that foreign-born faculty employed in universities made lower salaries overall compared to U.S.-born faculty members. Foreign-born faculty earned over \$1,000 per year less than native-born faculty. This study did not measure the direct impact of salary on job satisfaction, but it did find that foreign-born faculty members were unlikely to communicate overall job satisfaction, especially as it related to compensation and benefits. Monks and Robinson (2000) utilized data from the 1993 National Study of Postsecondary Faculty (NSOPF) to demonstrate the gap in compensation among foreign-born faculty after controlling for other

factors. This research demonstrated that foreign-born faculty members are encountering a salary gap that can not be explained by any other social or institutional factors.

### Individual Characteristics

Demographics crucially shape a person's life and experiences. A number of demographic variables influence faculty members' overall job satisfaction. Studies suggest a link between overall job satisfaction and demographic factors such as gender and academic discipline. Gender has been heavily researched, and it is the most researched variable in the studies of faculty satisfaction; however, no common conclusion on the relationship between gender and job satisfaction has been made (August & Waltman, 2004; Bilimoria et al, 2006; Callister, 2006; Hagedorn, 2000; Hult, Callister, & Sullivan, 2005; Okpara, Squillace, & Erundu, 2005; Olsen, Maple, & Stage, 1995; Oshagbemi, 1997; Ropers-Huilman, 2000; Sax, Hagedorn, Arredondo, & Dicrisi, 2002; Settles, Cortina, Malley, & Stewart, 2006; Tack & Patitu, 1992).

The majority of these studies have found that female faculty are less satisfied than their male counterparts (Bilimoria et al., 2006; Callister, 2006; Settles et al, 2006; Tack & Patitu, 1992). In addition, significant distinctions have been found between male and female faculty members in areas of job satisfaction such as promotion, compensation, and security. The literature states that family issues play a larger part for females, since females are still chiefly depended on for raising children within the home (Bullers, 1999; Hagedorn & Sax, 2004). Another demographic factor that has impacted faculty job satisfaction is ethnicity (Antonio, 2002; Flowers & Jones, 2003; Laden & Hagedorn, 2000; Niemann & Dovidio,

2005; Olsen et al., 1995; Peterson, Friedman, Ash, Franco, & Carr, 2004; Tack & Patitu, 1992).

There has been limited literature written on how academic discipline affects faculty job satisfaction. For instance, Olsen and his colleagues found differences among minorities and female faculty members relating to the time spent involved with research and teaching, but academic discipline was not found to have significant impact on job satisfaction (Olsen et. al, 1995).

Yet differences among academic disciplines can indirectly affect job satisfaction. Some studies that investigated the relationship between academic disciplines and faculty turnover revealed that faculty of different disciplines are motivated by diverse factors (Xu, 2008). Xu (2008) found that faculty in “pure” sciences such as agriculture, animal and plant science, medicine, and public health are more likely to be influenced by salary, opportunities for advancement, job autonomy, and external funding. Faculty belonging to the “applied” sciences such as psychology, anthropology, political science, and sociology are more likely to be impacted by the factors of job security and advancement opportunities. Because most foreign-born faculty are employed in applied programs such as engineering and computer sciences, the findings from the above studies are vital to understanding job satisfaction of foreign-born faculty (Corley & Sabharwal, 2007; Varma et.al., 2006).

#### Institutional Typological Factors

In the 1970s, the Carnegie Commission on Higher Education created a classification for colleges and universities associated with earlier literature (The Carnegie Foundation for the Advancement of Teaching [CFAT], 2007). Even though the classification has changed

over time, the basic classification of two-year colleges had remained the same (Hardy & Katsinas, 2007). However, in 2005, modifications to the classification system were announced (CFAT, 2007). The Carnegie Foundation for the Advancement of Teaching (2007) revealed an expanded classification system that would reclassify two-year institutions based on institutional control, degree of urbanization, and size. The statistics to validate this classification system are accessible from the Integrated Postsecondary Education Data System (IPEDS), NCES, and the U. S. Census Bureau (Hardy & Katsinas, 2007).

#### Summary

Herzberg's job satisfaction theoretical model was used to define extrinsic and intrinsic factors. Also, examples were given of prior literature that used the same factors. As a final point, the Herzberg job satisfaction model was applied to additional job satisfaction situations within prior literature to demonstrate relationships to the situations of foreign-born faculty. This chapter notes that the subject of job satisfaction related to foreign-born faculty has not been extensively studied. With the current trend of foreign-born faculty obtaining more positions each year within institutions of higher education, the need for adequate and effective research is becoming even more imperative for scholars and education leaders alike. Higher education administrators at community colleges throughout the United States continue to look to research to answer questions about how best to satisfy their foreign-born faculty members.

## CHAPTER III

### METHODOLOGY

The purpose of the chapter is to present the research design and methods used for the study. The chapter begins with a discussion of the explanatory, non-experimental, quantitative survey research design and the three guiding research objectives used in the study. Next, the chapter includes a presentation of the variables used in the study and the organization of the variables for each of the research objectives. The chapter continues with a discussion of the population and sample of community college foreign-born faculty selected. Other sections of the chapter include instrumentation, data collection, participant response rates, data analysis procedures, and preliminary data analysis. The preliminary data analysis section covers assumptions, handling of non-response bias, and exploratory factor analysis. Reliability of the instruments used in the study are reported using Cronbach's alpha. The chapter concludes with an overall summary of the research design and methodology.

#### Introduction

This chapter provides an overview of the design and methodologies that were applied in this research study to determine the relationships among sociodemographic and employment factors related to job satisfaction of foreign-born faculty members at community colleges. The study utilized data from the National Study of Postsecondary Faculty (NSOPF: 2004), which was collected by the National Center for Education Statistics (NCES) and helped address the research objectives. NSOPF: 04 provided a valid source of research related to postsecondary faculty in the United States. This nationally representative data

about foreign-born faculty and instructional staff was stratified from institutions across all Carnegie classifications (U.S. Department of Education, National Center for Education Statistics, 2004) and applied as the data source.

The National Center for Education Statistics (NCES) conducted the fourth National Study of Postsecondary Faculty (NSOPF) in 2004. The NSOPF had been carried out previously in 1988, 1993, and 1999. These surveys collected and composed data regarding faculty at postsecondary institutions throughout the United States and are cited often in the existing research. NSOPF data have been utilized to inform policy and practice by researchers, policymakers, administrators, and practitioners.

### Research Design

The research design was created to better understand the factors that were examined and the procedures that were used (Sproull, 1995). The study was created to explore and measure the level of job satisfaction among foreign-born community college faculty through a quantitative, non-experimental, explanatory research design.

The researcher chose to follow a quantitative design given an interest in measuring data from a higher number of participants than could be summarized through a qualitative research design. Furthermore, the research objectives being measured were best suited for a quantitative design. The advantages of nonexperimental designs are that they can be carried out in natural settings and do not require experimentation. The disadvantages are that results lead to conclusions only about associations and do not shed light on cause and effect (Sproull, 2002). The study reports descriptive and correlational findings.

Descriptive data are utilized for summarizing large amounts of data and identifying

major characteristics of the population (O'Rourke, Hatcher, & Stepanski, 2005). Correlational data help clarify connections and relationships but not causation (O'Rourke, Hatcher, & Stepanski, 2005). The researcher chose to follow a quantitative design given an interest in measuring data from a higher number of participants than could be summarized through a qualitative research design. Furthermore, the research objectives being measured were best suited for a quantitative design. The advantages of nonexperimental designs are that they can be carried out in natural settings and do not require experimentation. The disadvantages are that results lead to conclusions only about associations and do not shed light on cause and effect (Sproull, 2002). The study reports descriptive and correlational findings. Descriptive data are utilized for summarizing large amounts of data and identifying major characteristics of the population (O'Rourke, Hatcher, & Stepanski, 2005). Correlational data help clarify connections and relationships but not causation (O'Rourke, Hatcher, & Stepanski, 2005).

### Research Objectives

The study utilized a quantitative research survey design to examine job satisfaction as perceived by community college foreign-born faculty. The following research objectives helped guide the study:

*Research Objective 1* – Describe the foreign-born faculty member at U.S. community colleges, as measured by sociodemographic and employment characteristics, by using the NSOPF 2004.

*Research Objective 2* – Describe the foreign-born community college members' job satisfaction by using motivators (increase satisfaction) and hygienes (decrease dissatisfaction), as measured through the NSOPF 2004.

*Research Objective 3* – Determine whether selected demographic variables explain a significant proportion of the variance in job satisfaction of foreign-born faculty members at U.S. community colleges.

- Describe the demographic characteristics (gender, ethnicity, and academic discipline) that explain a significant proportion of the variance in job satisfaction for foreign-born faculty members at U.S. community colleges.
- Describe the trigger characteristics, measured in changes of life stage and job, that explain a significant proportion of the variance in job satisfaction for foreign-born faculty members at U.S. community colleges.

#### *Conceptual Framework*

The conceptual framework provides an explanation of the variables and their proposed relationships to one another. The study sought to add to the research regarding job satisfaction and foreign-born community college faculty in the United States.

Sociodemographic characteristics have been shown to influence job satisfaction. The conceptual framework acknowledges this finding so as to further explore how sociodemographic characteristics influence the job satisfaction specifically of foreign-born faculty. The study in addition evaluated the impact of work-related variables as predictors of

job satisfaction among foreign-born faculty. Each variable is more fully described below in terms of how it relates and contributes to this study.

#### Variables Used in the Study

The research variables for the study were classified as dependent or independent for each of the three research objectives. The conceptual framework for the study illustrated in Chapter One provided a visual display of the variables used in the study. The first research objective sought to describe the job satisfaction of foreign-born faculty at community colleges in the United States. Table 3.1 provides a list of the subscales used to describe the sociodemographic characteristics addressed in the first research objective.

Table 3.1

#### *Variables Used to Describe Sociodemographic Characteristics*

Variables
Sociodemographic Characteristics
Age
Gender
Race/Ethnicity
Education level
Marital status
Number of dependent children
Citizenship

The first research objective was a descriptive question used to examine sociodemographic information that included age, gender, race/ethnicity, education level, marital status, the number of dependent children, and citizenship. Frequencies, means, percentages, and standard deviations were computed for the data analysis.

The second research objective was a descriptive question used to describe levels of job satisfaction as perceived by the foreign-born community college faculty in the United States using motivators that increase satisfaction (achievements, recognition, work itself, responsibility, and advancement) as well as hygienes that decrease dissatisfaction (such as rewards). Frequencies, means, percentages, and standard deviations were computed for the data analysis. Table 3.2 provides a list of the dependent variables for the second research objective.

Table 3.2

*Variables Used to Describe Participants' Perceptions of their Job Satisfaction*

Variables
Motivators and Hygiene
Achievement
Recognition
Work itself
Responsibility
Advancement
Reward

The third research objective sought to examine whether personal and professional characteristics could explain a significant amount of variance in levels of job satisfaction. Table 3.3 provides a list of the dependent and independent variables used for the third research question.

Table 3.3

*Variables Used to Determine if Sociodemographic and Employment Variables Explain Job Satisfaction*

Variables
Independent Variables
Sociodemographics
Gender
Ethnicity
Institutional type
Income
Academic discipline
Motivators and Hygiene
Achievement
Recognition
Work itself
Responsibility
Advancement
Reward
Triggers (changes of)
Changes in Life stage
Changes in Rank/tenure
Changes in Institutions
Changes in Perceived justice
Dependent Variable
Job Satisfaction index (sum) of employment items

The independent variables were sociodemographic characteristics that included gender, ethnicity, institutional type, income, and academic discipline. Also, independent variables included motivators and hygiene factors of achievement, recognition, work itself, responsibility, advancement, and reward. In addition, the trigger characteristics were changes of life stage, rank/tenure, institutions, and perceived justice. The dependent variable for this question included the sum of employment items measuring job satisfaction.

## Population

The population for this study was foreign-born faculty at community colleges in the United States. This included faculty and instructional staff from two-year institutions defined by Carnegie classifications (U.S. Department of Education, National Center for Education Statistics, 2004). The researcher selected faculty members who met the following criteria: (1) confirmed study eligibility as working at a community college, (2) were employed full- or part-time at an institution, and (3) answered “no” to question 80 and thus not were born in the United States. Of surveyed participants, 805 were foreign-born professors serving in community colleges where student populations are the most diverse among institutions of higher education.

## Sample

The data represents a national sample of all full-time and part-time faculty and instructional staff at public and private two-year and four-year institutions in the United States (National Center for Education Statistics, 2006). NSOPF: 04 consisted of a sample of 35,630 faculty and instructional staff across 1,080 institutions. The data was collected using a web-based questionnaire that was either self-administered or conducted by telephone with a trained interviewer (NCES, 2006). Completed surveys were obtained from about 26,110 faculty members and instructional staff, for a weighted response rate of 76%.

The NSOPF (2004) included two components: a faculty survey and an institutional survey. Data from the faculty survey offered information about faculty backgrounds, teaching assignments, research activities, salaries and benefits, and attitudes toward selected aspects of faculty work. Data from the institutional survey provided information about the

characteristics of the institutions where respondents work, including faculty composition (the percentage of faculty members who are part-time), student composition (the percentage of students who are minorities), faculty-to-student ratios, and institutional policies.

#### Institution Sample

The institution file contained questionnaire data from 920 institutions. NCES selected 1,080 institutions of which 1,070 were eligible to participate in NSOPF: 04. Of eligible institutions, 91% provided a faculty list and 86% completed the institution questionnaire. The primary interest of this study was to examine faculty at community colleges. Of the 920 institutions in the sample, 232 community colleges participated.

#### Faculty Sample

The faculty data file contained questionnaire data from 26,110 respondents. The faculty sample was a subset of lists provided by participating institutions. Of the 34,330 eligible sample members, 26,110 completed the survey for a response rate of 76% (U.S. Department of Education, 2006). Stratified systematic sampling was used to select faculty within each faculty stratum defined by race/ethnicity, gender, and employment status (U.S. Department of Education, 2006). Of the 26,110 faculty respondents, 805 were employed at community colleges.

## Instrumentation

The instrument for NSOPF: 04 was adapted from the 1999 (NSOPF: 99) survey (U.S. Department of Education, National Center for Education Statistics, 1999) in a number of ways, including shortening the instrument and employing a web-based instrument with telephonic interviews to follow-up with non-respondents. It was also updated with a focus on developing trends while maintaining comparability with previous NSOPF studies (Heuer et al., 2005). The NSOPF: 04 sampling protocols included weighting of under-represented 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., 2005).

## Reliability and Validity

Reliability and validity are vital in survey-based research. Reliability refers to the standard that the instrument will “provide consistent scores upon repeated administration by alternate forms” and over time (O’Rourke, Hatcher, & Stepanski, 2005, p. 158). One of the common classes of reliability estimates that was used in the study was internal consistency reliability, which assesses the consistency of results across items within a survey. Nunnally (1970) indicates that .70 is an acceptable estimate of internal consistency. All of the pre-existing scales in the study met or exceeded Nunnally’s recommendation. As a part of pre-data analysis, the pre-existing scales were assessed via principal component factor analysis and also by calculation of Cronbach’s alpha following data collection. After these procedures

were conducted, the researcher made a final decision regarding which scales to retain for analysis.

#### NSOPF Data Collection

The NCES coordinators at each chosen institution were used to facilitate the Institutional Review Board's (IRB) procedures and to complete institutional questionnaires. They also offered electronic lists of all faculty and instructional staff who qualified for the study. Sample participants were officially asked to complete the survey. The NSOPF: 04 data collection procedure did not provide optional paper-and-pencil surveys. Both questionnaires were web-based and self-administered. In addition, Computer Assisted Telephone Interviews (CATI) were employed to follow up non-response data of the faculty instrument.

Various efforts were made to collect institutional and individual faculty data, including the use of a web-based, self-administered questionnaire and telephone interviews. Both institutions and faculty members were provided incentives to participate. Monetary reimbursement was offered to institutions that indicated difficulty in complying, and early completers of the faculty survey and selected sample members were offered an unknown incentive to participate.

#### Institutional Data Collection

Institutional data were collected during the period of 29 September 2003 to 22 October 2004. Each institution was asked to appoint an institution coordinator (IC) to provide a list of faculty members including name, various individual demographics (e.g., sex, academic discipline, and race/ethnicity), and contact information. The IC was also asked to

complete institution data via a web-based survey. Trained telephone interviewers contacted institutions to complete missing questionnaires. Of participating institutions, 81% completed the institution questionnaire using the web, while the remaining 19% completed it with the assistance of an interviewer. The average time to complete the survey was 35 minutes (NCES, 2006).

#### Faculty Data Collection

Faculty data was collected in the 9-month period from 15 January to 6 October 2004. Individual faculty members were instructed to complete a web-based survey or to call a toll-free telephone number. After four weeks, trained telephone interviewers began to call non-responders. Of participating faculty members, 76% completed the faculty questionnaire using the web, while the remaining 24% completed it with the assistance of an interviewer. Nearly 60% of faculty completed the survey during the early phase and did not require follow-up. The average time to complete the survey was 30 minutes (NCES, 2006).

#### Data Collection

Data were collected via an online instrument. The principal investigator applied for and received project approval from the North Carolina State Institutional Review Board on 15 September 2010. A copy of the approval is provided in Appendix B. NCES grants access to approved researchers for the purpose of contributing to literature related to the field. In this study we used the 2004 NSOPF restricted datasets under the direction of the chair for this dissertation. Dr. James Bartlett has access to the restricted NSOPF: 2004 data set from the

U.S. Department of Education through North Carolina State University. Participant privacy and confidentiality were of concern with regard to accessing this data source.

#### Data Analysis Procedures

The data analysis procedures used in the study included (1) descriptive statistics that produced frequency and cross tabulation data describing the population, (2) exploratory factor analysis, a data reduction technique designed to reduce the 25 job satisfaction variables into reliable constructs, and (3) stepwise regression designed to assess the relationship between the dependent variable and independent variables included in the data analysis. The researcher analyzed the data using descriptive and inferential Statistical Package for Social Sciences (SPSS) procedures.

#### *Descriptive statistics*

The SPSS 18.0 for Windows software was used to execute the statistical analysis for the study. SPSS is a comprehensive system for analyzing data that provides information on descriptive statistics and statistical analysis. In an attempt to address the three research objectives, the researcher used descriptive statistics to examine the following factors for foreign-born faculty employed at U. S. community colleges: a) sociodemographic factors (nominal data): gender, race/ethnicity, marital status, citizenship, education level; b) sociodemographic factors (interval data): age, number of dependents; c) employment (interval data): years in current job, time in academic rank, time in tenure position; d) satisfaction variables (nominal data): satisfaction with authority for decisions, job overall, technology support, benefits, workload, equipment and facilities, teaching and improvement, salary; e) employment (nominal data): employment status, academic rank, tenure status,

academic discipline, principal activity; f) overall job satisfaction: sum of employment items; g) opinion variables (interval data): female faculty treated fairly, minority faculty treated fairly, teaching is rewarded.

### *Exploratory factor analysis*

To examine the levels of job satisfaction of foreign-born community college faculty, 25 items were selected from the NSOPF: 04 survey. These items address various aspects of job satisfaction. An exploratory factor analysis was performed, and the results arranged the independent variables into three constructs: (1) Opinions Regarding Fairness, (2) Satisfaction with Governance and Work Environment, and (3) Satisfaction with Rewards and Future Outlook. The remaining job satisfaction item—index (sum) of employment items— was a stand-alone variable representing an overall measure of satisfaction and was the dependent variable used in the data analysis for this study.

According to Hair and his colleagues (2006), principal component analysis can be used if the scores on numerous variables from a group of subjects are available to develop a small set of components that empirically summarize the correlations among the variables. A principal component factor analysis was performed to determine if the 25 variables related to job satisfaction could be grouped reliably into constructs. To examine the factor loadings, the following criteria were used:  $\pm .3$  to  $\pm .4$  are minimally acceptable, while loadings greater than  $.5$  are typically considered practically significant and loadings over  $.7$  show a well defined structure (Hair et al., 2006).

Exploratory factor analysis was conducted with the SPSS 18 software program using the extraction method of principal component analysis, and the OBLIMIN rotation was

selected because of the related nature of the constructs (Hair et al., 2006). Internal consistency is the extent to which “the individual items that constitute a test correlate with one another or with the test total” (O’Rourke, Hatcher, & Stepanski, 2005, p.158). Reliability estimates range from 0-1, and there must be at least two questions to perform a reliability measure. The internal reliability estimates offered information concerning item redundancy and low internal consistency, both of which have the likelihood to be controlled by changes of the final variables to be included in each factor scale. Frequencies and percentages as well as cross tabulations were utilized to provide a descriptive profile of foreign-born faculty members’ sociodemographic and work related variables, as well as their levels of job satisfaction.

An exploratory factor analysis was conducted, and the results were grouped into the independent variables of three constructs. A three-factor model was examined first for conceptual and empirical sense. The factor loadings for “Opinions Regarding Fairness” ranged between .856 and .571, the factor loadings for “Satisfaction with Governance and Work Environment” ranged from .906 to .756, and the factor loadings for “Satisfaction with Rewards and Future Outlook” ranged from .684 to .463. All of these loadings were above .30 as suggested by Osborne et al. (2008). These factors gave empirical support to the theoretical base for the instrument. The remaining job satisfaction item, overall job satisfaction, was calculated as the satisfaction index (sum) of employment items (X01Q62) index as derived in NSOPF: 04. In addition to examining the data to ensure that assumptions were met, the researcher conducted a factor analysis to examine the construct validity.

### *Cronbach's alpha*

For the study, factors were labeled, and Cronbach's alpha was conducted. Cronbach's alpha score should exceed .70. Additionally, Cronbach's alpha was reported for all summated scales. All summated scales were calculated and recoded for any reversed scored items. Cronbach's alpha uses internal consistency to estimate reliability. According to Hair et al. (2006), the generally agreed upon lower limit for Cronbach's alpha is .70 (p. 137). The estimates for the opinion and satisfaction scales ranged from .717 (satisfaction with governance and work environment) to .779 (satisfaction with rewards and future outlook). All of the opinion and satisfaction scales demonstrated that the levels are above the minimum .70 for reliability. Cronbach's alpha was reported for all summated scales, and all summated scales were calculated and recoded for any reversed scored items. According to Hair et al. (2006), Cronbach's Alpha score should exceed .70. Factor scores were computed for each summated scale.

### *Stepwise multiple regression analysis*

In an effort to address research objective 3, regression analysis was conducted to assess the predictive capabilities of sociodemographic and work-related characteristics of job satisfaction. According to Hair et al. (2006), multiple regression analyses allow the researcher to evaluate the relationship between one dependent variable and several independent variables. The aim of this type of analysis is prediction and assessment of the relationship between the dependent and independent variables.

The multiple regression analysis of this study was conducted using the stepwise method, with probability set at .05 level. The dependent variable is the community college

members' job satisfaction, and 25 sociodemographic and work-related variables were selected as independent variables.

The statistical tests of stepwise multiple regression analysis were used to explore the extent to which the independent variables of sociodemographic and work-related characteristics predict the levels of job satisfaction. Stepwise multiple regression was used to address research objective 3 to determine if selected variables of the mediators and triggers in job satisfaction explain a significant proportion of the variance in job satisfaction of foreign-born faculty members at U.S. community colleges. A linear regression analysis was conducted to assess the predictive capabilities of mediators and triggers on overall job satisfaction. According to Hair et al. (2006), multiple regression enables the researcher to assess the relationship between one dependent variable and two or more independent variables. The intent of this type of analysis is prediction and assessment of the relationship between the dependent and independent variables.

Predictor (independent) variables were entered into the stepwise regression equation. The independent variables comprised the motivators and hygiene variables of achievement, recognition, work itself, responsibility, advancement, and salary. The demographic variables comprised gender, ethnicity, citizenship, income, institutional type, and academic discipline. The last five variables related to triggers included changes in life stage, family circumstances, rank or tenure, institution, degree of urbanization, and perceived justice. The motivators and hygiene variables were aligned using the constructs described originally by Herzberg et al (1959) as motivator factors and hygiene factors. Additional variables were

aligned using the constructs described in Hagedorn's conceptual framework of faculty job satisfaction (2000). The significance level established for this regression was  $p < .05$ .

### Data Analysis

The researcher initially reexamined the data by reading the methodology report to ensure that assumptions were met for multi-variate data analysis. Any missing data was addressed using methods such as cold-deck and hot-deck imputations (NSOPF: 04, p. 27).

Non-response bias followed the steps listed below, as summarized in the NSOPF: 04

Appendix B of Technical Notes and Methodology:

1. Estimated the non-response bias and tested (adjusting for multiple comparisons) to determine if the bias is significant at the .05 level
2. Computed adjustment factors using a subset of variables designed to significantly reduce or eliminate non-response
3. Estimated any remaining bias for the variables after the weights were computed, and performed statistical tests to determine the significance of any remaining non-response bias
4. Weighted adjustments to reduce, and/or nearly eliminate, bias (p. 32)

### Summary of Data Analysis Procedures

An exploratory factor analysis (EFA) was performed to determine which 25 variables were related to job satisfaction and tests for internal consistency, or Cronbach's alpha grouped reliably into three constructs. Following Hair et al. (2006), principal component analysis was used "to condense the information contained in a number of original variables

into a smaller set of factors with a minimal loss of information” (p.17). Exploratory factor analysis was conducted with the SPSS 18 software program using the extraction method of principal component analysis. Internal consistency is the extent to which the “individual items that constitute a test correlate with one another or with the test total” (O’Rourke, Hatcher, & Stepanski, 2005, p.158). Reliability estimates range from 0-1, and there must be at least two questions to perform a reliability measure. The internal reliability estimates provided information regarding item redundancy and low internal consistency, both of which have the potential to be managed by modification of the final items to be included in each factor scale. Frequencies and percentages as well as cross tabulations were utilized to provide a descriptive profile of foreign-born faculty’s demographics and work environment, as well as their job satisfaction. Stepwise multiple regression analysis was then used to explore the extent to which the independent variables of sociodemographic and work-related characteristics predict the levels of job satisfaction.

Table 3.4

*Summary of Data Analysis Procedures*

<b>Research Objectives</b>	<b>Statistical Analysis</b>
1	Descriptive (Means, SD, Frequencies, Percents)
2	Descriptive (Means, SD, Frequencies, Percents)
3	Stepwise Multiple Regression

*Research Objective One: Describe the foreign-born faculty member at U.S. community colleges, as measured by sociodemographic and employment characteristics by using the NSOPF 2004.*

Sociodemographic and employment characteristics were reported with descriptive and frequency analyses. Sociodemographic characteristics reported frequencies and percentages to account for respondents' gender, race/ethnicity, marital status, dependents, country of birth, and citizenship. Employment characteristics reported frequencies and percentages to account for respondents' academic rank, tenure status, and academic discipline. Also, means and standard deviations were used to report the average scores for *current job, time in academic rank, and time in tenure status.*

*Research Objective Two: Describe the foreign-born community college members' job satisfaction by using motivators (increase satisfaction) and hygienes (decrease dissatisfaction), as measured through the NSOPF 2004.*

Means and standard deviations were used to report motivator and hygiene variables. Additional descriptive statistics were conducted to summarize the job satisfaction variables. Job satisfaction variable original values were assigned as follows: (4) very dissatisfied; (3) somewhat dissatisfied; (2) somewhat satisfied; and (1) very satisfied. The following opinion item values were originally assigned to the responses: (4) strongly disagree; (3) somewhat disagree; (2) somewhat agree; and (1) strongly agree. Values were combined from the job satisfaction items by summing: (4) very dissatisfied and (3) dissatisfied were recorded as

“dissatisfied” participants, while items (2) satisfied and (1) very satisfied were recoded as “satisfied” participants. This helped to demonstrate clearer overall levels of job satisfaction.

*Research Objective Three: Determine if selected variables of demographics explain a significant proportion of the variance in job satisfaction of foreign-born faculty members at U.S. community colleges.*

A step-wise multiple regression was used to explain job satisfaction. The step-wise regression was set to use .05 as the probability. Sociodemographic variables and work-related characteristics served as the independent variables, while job satisfaction served as the dependent variable. The third research objective was analyzed by use of multiple regression. Multiple regression is widely used in social sciences because of the involvedness of dependent variables in social phenomena. For example, job satisfaction cannot be entirely explained by one predictor variable; as a result, it becomes imperative to have a method that permits the measurement of the predictive ability of various variables. Certain essential assumptions justify using multiple regression. One fundamental assumption for the use of multiple regression is that both the independent variables and the dependent variable be evaluated at the interval or ratio level of measurement. This was the case with this research design, which made use of this process appropriate.

Multiple regression is well-suited for examiners analyzing the relationship between naturally occurring independent and dependent variables. It is useful for determining whether a set of variables is helpful for predicting a dependent variable. It can determine whether or not the relationship between the independent variable and dependent variable is “statistically significant, how much variance in the dependent variable is accounted for by the predictors,

and which are relatively important predictors of the dependent variable” (O’Rourke, Hatcher, & Stepanski, 2005, p. 372). However, it does not present cause and effect relationships between the independent and dependent variables. The most important assumptions for the use of multiple regression involve “independent observations, measurement error, or specification errors” (Pedhazur, 1982), as cited in O’Rourke, Hatcher, and Stepanski (2005, p. 427). The individual dependent variable that consisted of the summed satisfaction with employment index variable comprises satisfaction scores for workload (Q62A), salary (Q62B), benefits (Q62C), and job overall (Q62D). Analysis was conducted by entering all independent variables at the same time into the model and then running stepwise regression.

#### Summary of Research Design and Methodology

The research design and methodology were selected to quantify the perceptions of foreign-born U.S. community college faculty regarding their sociodemographic and work-related characteristics. In order to address these perceptions of job satisfaction, the following steps were followed in completing the study:

1. A North Carolina State University IRB application was completed and submitted to the IRB committee, and IRB approval was given to complete the study.
2. The population for the study was drawn to include all foreign-born community college members from the United States.
3. Data were analyzed using SPSS 18.0, with appropriate statistical analyses for each of the research objectives.

Table 3.1 summarizes the statistical procedures that were used to analyze the data.

Descriptive statistics were used to summarize the sociodemographic and employment

variables of the participants. Means and standard deviations were used to report the interval data, and frequencies and percents were used to describe nominal data. Stepwise multiple regression was used to learn more about the relationship between the dependent and independent variables.

This chapter has provided a description of the methodology that was followed to implement, analyze, and report findings for the study. The processes for organizing data were explained, and the statistical tests utilized for analyses were discussed. The study utilized factor constructs from past literature. The study design reflected the trends of past findings. The findings are reported in Chapter Four.

## CHAPTER FOUR

### RESULTS

This chapter provides a complete overview of the results for this study. The chapter is organized into three sections. The first section answers research objectives one and two. Research objective one reports the sociodemographic and employment characteristics that describe foreign-born community college members within the United States. Research objective two reports motivators (increase satisfaction) and hygienes (decrease dissatisfaction) variables indicated from the theoretical and conceptual frameworks in measuring job satisfaction.

The second section reports include a principal component analysis designed to determine how variables load and cluster. The final section reports the results of the stepwise regression analysis designed to explain which variables indicated a significant proportion of the variance in job satisfaction for foreign-born community college members within the United States.

The chapter presents findings from the following research objectives:

*Research Objective 1* – Describe the foreign-born faculty member at U.S. community colleges, as measured by sociodemographic and employment characteristics by using the NSOPF 2004.

*Research Objective 2* – Describe the foreign-born community college faculty members' job satisfaction by using motivators (increase satisfaction) and hygienes (decrease dissatisfaction), as measured through the NSOPF 2004.

*Research Objective 3* – Determine if selected variables of demographics explain a significant proportion of the variance in job satisfaction of foreign-born faculty members at U.S. community colleges.

- Describe the demographic characteristics (gender, ethnicity, and academic discipline) that explain a significant proportion of the variance in job satisfaction for foreign-born faculty members at U.S. community colleges.
- Describe the trigger characteristics, measured in changes of life stage and job that explain a significant proportion of the variance in job satisfaction for foreign-born faculty members at U.S. community colleges.

#### Data Collection

The NCES coordinators at the chosen institution were used to facilitate the Institutional Review Board's (IRB) procedures and to complete institutional questionnaires. They also offered electronic lists of all faculty and instructional staff who qualified for the study. Sample participants were officially asked to complete the survey. The NSOPF:04 data collection procedure did not provide optional paper-and-pencil surveys. Both questionnaires were web-based and self-administered. In addition, Computer Assisted Telephone Interviews (CATI) were employed to follow up non-response data of the faculty instrument.

Various efforts were made to collect institutional and individual faculty data, including a web-based, self-administered questionnaire and telephone interviews. Both institutions and faculty members were provided incentives to participate. Monetary reimbursement was offered to institutions that indicated difficulty in complying. Early

completers of the faculty survey and selected sample members were offered an unknown incentive to participate.

#### Institutional Data Collection

Institutional data were collected during the period of 29 September 2003 to 22 October 2004. Each institution was asked to appoint an institution coordinator (IC) to provide a list of faculty members including name, various individual demographics (sex, academic discipline, and race/ethnicity), and contact information. The IC was also asked to complete institution data via a web-based survey. Trained telephone interviewers contacted institutions to complete missing questionnaires. Of participating institutions, 81% completed the institution questionnaire using the web, while the remaining 19% completed it with the assistance of an interviewer. The average time to complete the survey was 35 minutes (NCES, 2006).

#### Faculty Data Collection

Faculty data was collected in the 9-month period from 15 January to 6 October 2004. Individual faculty members were instructed to complete a web-based survey or to call a toll-free telephone number. After four weeks, trained telephone interviewers began to call non-responders. Of participating faculty, 76% completed the faculty questionnaire using the web, while the remaining 24% completed it with the assistance of an interviewer. Nearly 60% of faculty completed the survey during the early phase and did not require follow-up. The average time to complete the survey was 30 minutes (NCES, 2006).

### Sociodemographic Characteristics of Foreign-Born Community College Faculty Members

In an effort to answer the first research objective, descriptive and frequency analyses were conducted to gain a better understanding of the sociodemographic, employment, and opinion characteristics pertaining to the 805 foreign-born community college members who completed the NSOPF 2003 survey.

Participants were asked to provide sociodemographic information about their age, gender, race/ethnicity, education level, marital status, number of dependent children, and citizen status. A detailed description of the sociodemographic information provided by the participants is presented in Table 4.1. The mean age of those participants who responded to the survey question regarding age ( $n = 805$ ) was 48 years old ( $SD = 10.94$ ). As for gender, the majority of the foreign-born community college members in the study were male: 54% ( $n = 435$ ). Of the 805 foreign-born community college members responding to the question regarding race background, 52.9% ( $n = 426$ ) were White/Not Hispanic. Asians were the second largest racial group of 28.9% ( $n = 233$ ); Blacks or African Americans followed at 19% ( $n = 153$ ); American Indians or Alaska Natives at 1.2% ( $n = 10$ ); and Native Hawaiians or other Pacific Islanders at 1.1% ( $n = 9$ ). In regards to ethnicity, the largest group of participants, 71.7% ( $n = 577$ ), were identified as not being of Latino or Hispanic ethnicity, leaving 28.3% ( $n = 228$ ) identified as Latino or Hispanic.

Of respondents with advanced degrees, the largest group had Master's degrees (55.9%,  $n = 450$ ), while 26% indicated having a terminal degree as their highest earned degree ( $n = 210$ ). Those with Bachelor's degrees comprised 12.7% ( $n = 102$ ); those with Associate's degrees comprised 3.1% ( $n = 25$ ); and 7% ( $n = 6$ ) had a Certificate.

Of the 805 participants responding to the question regarding marital status, 73.4% (n=591) reported being married; 2.9% (n=23) reported living with partner or significant other; 8.7% (n =70) reported being single and never married; and the remaining participants (15%, n = 121) reported being separated, divorced or widowed.

Among the 805 foreign-born community college members responding to the question regarding the number of dependent children they support, 40.5% (n =326 ) indicated that they had no children, while more than 59.5% (n=479) indicated having one child or more to support. Of the 805 participants responding to the question regarding citizenship, 77.3% (n =622) reported being a United States citizen, leaving 22.7% (n=183) as non-citizens.

Table 4.1

*Frequencies and Percentages: Sociodemographic Variables*

Variable	Respondents	
	n	%
<b>Gender</b>		
Male	435	54
Female	370	46
<b>Race/Ethnicity- Hispanic/Latino</b>		
No	577	71.7
Yes	228	28.3
<b>Race</b>		
White	426	52.9
Black or African American	153	19
Asian	233	28.9
Native Hawaiian or other Pacific Islander	9	1.1
American Indian/Alaska Native	10	1.2
<b>Marital Status</b>		
Single	70	8.7
Married	591	73.4
Living with partner or significant other	23	2.9
Separated, Divorced, or Widowed	121	15.0
<b>Dependents</b>		
None	326	40.5
1 or More	479	59.5
<b>Citizenship Status</b>		
No	183	22.7
Yes	622	77.3
<b>Education Level</b>		
Not applicable (Do not hold a degree)	12	1.5
Terminal Degree	210	26.7
Master's Degree	450	55.9
Bachelor's Degree	102	12.7
Associate's Degree	25	3.1
Certificate or Diploma	6	.1

N=805

## Employment Characteristics

This section presents data concerning foreign-born community college members' years in current job; time in academic rank; time in tenure; academic rank; tenure status; employment status; type of academic rank; principal activity; and academic discipline affiliation. A detailed description of the employment information provided by the participants is presented in Tables 4.2 and 4.3. The majority of foreign-born community college members (57.1%, n=460) were employed part-time during the 2003-2004 academic year, and 42.9% (n=345) were identified as full-time employees.

To gain a better understanding of the assignments of foreign-born community college members, respondents were asked to identify their principal activity at their institutions during the 2003-04 academic year. Of the 805 participants surveyed, almost 90% (n=718) identified teaching as their principal activity at work. A detailed description of their principal activity at work is presented in Table 4.3. Further principal activities revealed from the data were research (.2%, n=2); administration (4.3%, n=35); and other activity (6.2%, n=50).

To gain a better understanding of the assignments of foreign-born community college members, respondents were asked to identify their primary field or discipline of teaching at their respective institutions during the 2003-04 academic year. A detailed description of their academic disciplines is presented in Table 4.3.

Overall, around half (52.5%, n=481) of all community college members have at least seven years of job experience in academe. As to their rank and tenure status, findings indicate that foreign-born community college faculty members are holding appointments in lower ranks or are not in ranked positions at all. A higher proportion of foreign-born

community college faculty members (43.5%, n=350) indicated the rank of instructor; 24.3% (n=196) were ranked as “other title” within their institution; 25.8% (n=208) were full, associate, or assistant professors; and 2.1% (n=17) were listed as lecturers, leaving only 4.2% (n=34) answering the question about academic rank as not applicable for their situation. The average foreign-born community college faculty member has held his or her current rank for eight years. Nearly 65.6% (n=528) of all foreign-born community college faculty members were untenured or not on the tenure track. The proportion of foreign-born members who are either tenured or on the tenure track is 34.4% (n=277). The average foreign-born community college member has held his or her current tenure status for at least 11 years.

Table 4.2

*Minimum, Maximum, Mean, and Standard Deviation of Respondents' Years in Current Job, Time in Academic Rank, and Time in Tenure Status*

	Respondents			
	MIN	MAX	M	SD
Years in Current Job	1964	2003	1996	7.520
Time in Academic Rank	1973	2003	1995	6.860
Time in Tenure	1968	2003	1992	8.937

N=805

Table 4.3  
*Frequencies and Percentages of Respondents' Academic Rank, Tenure Status, and Academic Discipline of Current of Foreign-born Faculty at Community Colleges*

Variable	Respondents	
	n	%
Employment Status		
Full-time	345	42.9
Part-time	460	57.1
Academic Rank		
Not applicable	34	4.2
Professor	208	25.8
Instructor	350	43.5
Lecturer	17	2.1
Other	196	24.3
Tenure Status		
Tenure or on tenure track	277	34.4
Not on tenure track or no tenure system	528	65.6
Academic Discipline		
No teaching or research field	2	.2
Business, law and communication	53	6.6
Health sciences	46	5.7
Humanities	177	22.0
Natural sciences and engineering	287	35.7
Social sciences and education	138	17.1
Occupational specific programs	42	5.2
All other programs	60	7.5
Principal Activity		
Teaching	718	89.2
Research	2	.2
Administration	35	4.3
Other activity	50	6.2

N=805

## Job Satisfaction

The focus of the study was to expand on previous research related to job satisfaction by describing more accurately the job satisfaction of foreign-born community college faculty members in the United States. In an effort to answer the second research objective, the NSOPF 2004 in Section E of the Faculty Survey was devoted to exploring job satisfaction more thoroughly by having participants rate eight job satisfaction items. The NSOPF 2004 in Section H of the Faculty Survey was devoted to exploring participants' opinions (agreement or disagreement) regarding four questions and an additional question about choosing an academic career again. These two survey section response sets led to an answer for research objective two, and the results of *respondents'* variables are presented in Tables 4.6 and 4.7. This section presents findings for full-time foreign-born public community college faculty members with regards to their opinions and job satisfaction. Using past literature, in particular that which provided the theoretical and conceptual framework for this study, the researcher chose five variables. The data analysis section were reported and limited to include only full-time foreign-born public community college members' job satisfaction, since part-time and full-time members have extremely different views of job satisfaction (Lee & Johnson, 1991) and reward systems (DeSantis & Durst, 1996). However, tables were represented below and categorized by full or part time employment status for comparability.

Table 4.4

*Minimum, Maximum, Mean and Standard Deviation of Full-time Respondents Motivators and Hygienes*

Variables	Full-time Respondents				
	MIN	MAX	M	SD	N
Satisfaction Variables					
Sat. w/ auth. for decisions <sup>a</sup>	1	4	1.35	.602	341
Sat. w/ job overall <sup>a</sup>	1	4	1.57	.688	345
Sat. w/ technology support <sup>a</sup>	1	4	1.65	.779	341
Sat. w/ benefits <sup>a</sup>	1	4	1.80	.742	345
Sat. w/ workload <sup>a</sup>	1	4	1.85	.878	345
Sat. w/ equipment and facilities <sup>a</sup>	1	4	1.91	.844	341
Sat. w/ teaching and improvement <sup>a</sup>	1	4	1.97	.915	341
Sat. w/ salary <sup>a</sup>	1	4	2.20	.908	345
Opinion Variables					
Female treated fairly <sup>b</sup>	1	4	1.51	.647	345
Minority treated fairly <sup>b</sup>	1	4	1.67	.859	345
Teaching is rewarded <sup>b</sup>	1	4	1.90	.875	345
Choosing academic career again <sup>c</sup>	0	1	.94	.228	345

Note.

<sup>a</sup> 4-point scale: 1=Very satisfied, 2= Somewhat satisfied, 3=Somewhat dissatisfied, 4=Very dissatisfied

<sup>b</sup> 4-point scale: 1=Strongly agree, 2=Somewhat agree, 3=Somewhat disagree, 4=Strongly disagree

<sup>c</sup> 2-point scale: 0=no, 1=yes

Table 4.5

*Minimum, Maximum, Mean and Standard Deviation of Part-time Respondents Motivators and Hygienes*

Variables	Part-time Respondents				
	MIN	MAX	M	SD	N
Satisfaction Variables					
Sat. w/ auth. for decisions <sup>a</sup>	1	4	1.44	.661	453
Sat. w/ technology support <sup>a</sup>	1	4	1.69	.802	453
Sat. w/ job overall <sup>a</sup>	1	4	1.73	.755	460
Sat. w/ workload <sup>a</sup>	1	4	1.81	.910	460
Sat. w/ equipment and facilities <sup>a</sup>	1	4	1.81	.864	453
Sat. w/ teaching and improvement <sup>a</sup>	1	4	2.01	.916	453
Sat. w/ salary <sup>a</sup>	1	4	2.31	.987	460
Sat. w/ benefits <sup>a</sup>	1	4	2.72	1.079	460
Opinion Variables					
Choosing academic career again <sup>c</sup>	0	1	.89	.309	460
Female treated fairly <sup>b</sup>	1	4	1.55	.682	460
Minority treated fairly <sup>b</sup>	1	4	1.66	.768	460
Teaching is rewarded <sup>b</sup>	1	4	1.94	.926	460

Note.

<sup>a</sup> 4-point scale: 1=Very satisfied, 2= Somewhat satisfied, 3=Somewhat dissatisfied, 4=Very dissatisfied

<sup>b</sup> 4-point scale: 1=Strongly agree, 2=Somewhat agree, 3=Somewhat disagree, 4=Strongly disagree

<sup>c</sup> 2-point scale: 0=no, 1=yes

Job satisfaction item values were assigned to the responses as follows: (4) very dissatisfied, (3) somewhat dissatisfied, (2) somewhat satisfied, and (1) very satisfied. The opinion item values were assigned to the responses as follows: (4) strongly disagree, (3) somewhat disagree, (2) somewhat agree, and (1) strongly agree. Values were combined from the job satisfaction items by summing (4) very dissatisfied and (3) dissatisfied assigned as one category of “dissatisfied” participants, while items (2) satisfied and (1) very satisfied

were recoded as “satisfied” participants. Results were demonstrated in Table 4.7 showing a clearer overall picture of areas in which participants were the most satisfied.

Full-time foreign-born public community college faculty members were most satisfied with their authority to make decisions (95.6%, n=326) and were more likely to be satisfied with their job overall (92.8%, n=320), with technology support (88.2%, n=301), and with benefits (85.8%, n=296). Full-time foreign-born public community college faculty members were less satisfied with their workload (80.6%, n=278), equipment and facilities (80.3%, n=274), teaching and improvements (75.1%, n=256) and salary (67%, n=231). In general, full-time foreign-born community college members collectively expressed high to moderate levels of job satisfaction.

Table 4.6

*Estimates of Descriptive Statistics for Job Satisfaction Variables Pertaining to Full-Time Foreign-born Community College Faculty Members*

Job Satisfaction of Full-time Foreign-born Community College Members		
	% "satisfied"	n
Authority for decision	95.6	326
Job satisfaction overall	92.8	320
Technology support	88.2	301
Benefits	85.8	296
Workload	80.6	278
Equipment	80.3	274
Teaching and improvement	75.1	256
Salary	67.0	231

Note. Scaled responses used a 4-point scale, from 1=Very satisfied to 4=Very dissatisfied, while "% satisfied" above was calculated by adding the percentage of participants answering 1 or 2.

Table 4.7

*Estimates of Descriptive Statistics for Job Satisfaction Variables Pertaining to Part-time Foreign-born Community College Faculty Members*

Job Satisfaction of Full-time Foreign-born Community College Members		
	% "satisfied"	n
Authority for decision	94.5	453
Job satisfaction overall	87.0	460
Technology support	86.5	453
Equipment	81.5	453
Workload	80.7	460
Teaching and improvement	74.2	453
Salary	63.0	460
Benefits	46.3	460

Note. Scaled responses used a 4-point scale, from 1=Very satisfied to 4=Very dissatisfied, while "% satisfied" above was calculated by adding the percentage of participants answering 1 or 2.

#### Factor Analysis of Job Satisfaction Variables

Prior to conducting analyses pertinent to research objective three in this study, the researcher completed a series of factor analysis procedures for the selected instrument subscales. Factor analysis was performed in order to identify the factors that explain the variation among measures. In addition, factor analysis defined the dimensions underlying the existing measurement instrument. Factor analysis was primarily performed in order to group items that have the same underlying meaning and to reduce a large number of items to a smaller set of variables that could be used in the study. The principal component analysis was conducted using Oblimin with Kaiser rotation. Factor analysis was conducted to determine the structures of eight job satisfaction and five faculty opinion variables. The results of factor

analyses were summarized in the following section, and loading for each component was presented in Table 4. Factor analysis using the principal component analysis method indicated a three-component solution for these sets of items.

Component one, *Opinions Regarding Fairness*, consisted of four out of the five faculty opinion variables: racial minorities treated fairly, female faculty treated fairly, part-time treated fairly, and teaching is rewarded. The second component, *Satisfaction with Governance and Work Environment*, included Satisfaction with the following: authority to make decisions, technology-based activities, equipment/facilities, and institutional support for teaching improvement. The third component, *Satisfaction with Rewards and Future Outlook*, included the following: work load, salary, benefits, and the job overall, as well as the opinion variable regarding choosing an academic career again. All of the variables had positive loadings with the exception of the variables representing satisfaction with salary (-.624), benefits (-.684), workload (-.571), and job overall (-.463).

Table 4.8

*Factor Loadings for Principal Component Analysis*

Factor/Item	Loading
<i>Component 1: Opinions Regarding Fairness</i>	
Opinion: racial minorities treated fairly	.856
Opinion: female faculty treated fairly	.787
Opinion: part-time treated fairly	.655
Opinion: teaching is rewarded	.571
<i>Component 2: Satisfaction with Governance and Work Environment</i>	
Satisfaction with Technology Based Activities	.906
Satisfaction with Equipment / Facilities	.870
Satisfaction with Authority to make Decision	.802
Satisfaction with Institutional Support for Teaching Improvement	.756
<i>Component 3: Satisfaction with Rewards and Future Outlook</i>	
Satisfaction with Benefits	-.684
Satisfaction with Salary	-.624
Satisfaction with Workload	-.571
Satisfaction with Job Overall	-.463

#### Reliability Analysis

The Cronbach's Alpha internal consistency reliability coefficients were computed for each subscale utilized in the study. The reliability coefficients reported were based upon aggregated items resulting from the factor analysis. In addition, each of the items contained in the factors were closely clustered together: that is, they were moderately to highly correlated with each other and with their respective components. Component one (the fairness subscale) of variables included community college member responses for five opinion questions regarding whether or not teaching is rewarding, part-time faculty are treated fairly, female faculty are treated fairly, and racial minorities are treated fairly, as well

as whether the survey participant would choose an academic career again. Principal component analysis was conducted utilizing an Oblimin with Kaiser Rotation, and this resulted in one subscale.

The Cronbach's Alpha reliability coefficient shown in Table 4.9 for the subscale on "Opinions Regarding Fairness" was .650. According to Hair et. al. (2006), Cronbach's Alpha score should exceed .70. Looking more deeply, findings listed as the item-total statistics showed the Cronbach's alpha. If the survey question "choosing an academic career again" were deleted, this would raise the alpha from .650 to .719. Therefore, the findings were produced yet again. This time, deleting the variable "choosing an academic career again" demonstrated a Cronbach's alpha of .719, an adequate outcome (Hair et al., 2006).

Reliability analysis was also conducted to generate the reliability coefficient of component two (Satisfaction with Governance and Work Environment). The Cronbach's Alpha reliability coefficient for this component was .717. Finally, the reliability analysis was conducted to create the reliability coefficient of component three; this allowed the construction of the summated subscale called Satisfaction with Rewards and Future Outlook by adding four survey items. The Cronbach's Alpha reliability coefficient for this component was .779. Component one had a moderate internal consistency and reliability, while components two and three had high internal consistency and reliability, as shown in table 4.9.

Table 4.9

*Reliability, Cronbach's Alpha, of Variables for Opinion and Satisfaction Scales*

Component	Items	$\alpha$
1	Opinions Regarding Fairness	.719
2	Satisfaction with Governance and Work Environment	.717
3	Satisfaction with Rewards and Future Outlook	.779

Note. According to Hair et al. (2006), a reliability coefficient of .70 is considered acceptable.

## Exploring Demographic Variables and Trigger Characteristics

The following section presented the findings and analysis of the data for the third research objective. The third research objective sought to determine whether demographic characteristics and trigger variables explained a significant amount of variance in job satisfaction for foreign-born faculty working at U.S. community colleges.

The first part of the third research objective sought to describe demographic characteristics such as gender, ethnicity, and academic discipline that explained a significant proportion of the variance in job satisfaction. The second part sought to describe the trigger characteristics, measured in changes of life stage and job circumstances, that explained a significant proportion of the variance in job satisfaction. Overall, the third research objective attempted to determine what personal and professional characteristics predicted job satisfaction among foreign-born community college faculty members within the United States.

A stepwise regression analysis was used to address research objective three to determine whether selected variables of the mediators and triggers explained a significant proportion of the variance in job satisfaction for foreign-born faculty members at U.S. community colleges. A regression analysis was conducted to assess the predictive capabilities of mediators and triggers on overall job satisfaction. This type of analysis allows the researcher to evaluate how well the characteristics and factors measured predictive job satisfaction. Findings for the third research objective were determined by following the steps outlined by Hair and his colleagues (2006) on conducting a regression analysis. The predictors were the eight characteristics, and the criterion variable was the “Satisfaction, index” which included the sum of employment items.

According to Hair et al., (2006) multiple regression enables the researcher to assess the relationship between one dependent variable and two or more independent variables. The intent of this type of analysis was prediction and assessment of the relationship between the dependent and independent variables.

### Regression Analysis

The results of the regression analysis as presented in table 4.9 were used to examine the amount of variance that demographic (work-related and personal) and typological characteristics explained in job satisfaction. This section presents findings from a stepwise regression analysis that predicts the job satisfaction of community college members. Using multiple regression allows for the identification of certain variables of particular importance for a particular group, such as (here) full-time foreign born community college members. This multiple regression analysis was conducted using the stepwise method, with probability

set at .05 level. The dependent variable is community college members' job satisfaction, and 25 sociodemographic and work-related variables were selected as independent variables.

These 25 independent variables are listed in Appendix B.

Table 4.10

*Stepwise Multiple Regression Analysis to Explore if Foreign-born Community College Faculty Typological Characteristics and Demographics (work-related and opinions) Explain a Significant Amount of Variance in Perceived Job Satisfaction*

(N=345)

Source of Variation	SS	df	MS	F	p	
Regression	991.899	8	123.9	35.255	.000*	
Residual	1167.591	332	7			
Total	2159.490	340	3.517			
	Overall $R^2$	$R^2$ Change	B	Beta	t	p
Constant (2.424)	45.9%		2.424		2.584	.010
Satisfaction, (sum) of instruction		32.4%	.510	.472	10.188	.000
Opinion: female faculty treated fairly		3.9%	-.735	-.189	-4.198	.000
Amount of total individual income		2.3%	.024	.179	4.216	.000
Gender (male)		2.7%	.834	.163	3.822	.000
Career stage- early		1.4%	.840	.103	2.494	.013
Degree of urbanization - rural		1.2%	-.913	-.116	-2.807	.005
Opinion: teaching is rewarded		1.2%	-.355	-.123	-2.642	.009
Opinion: choose career again		.5%	.888	.081	1.980	.049
Excluded Variables						
Race, white					-.729	.466
Career stage – mid					-.990	.323
Career stage – late					.990	.323
Academic discipline – sciences					-.664	.507
Education – terminal degree					-.286	.775
Education – master's degree					.387	.699
Education – less than master's degree					.042	.967
Degree of urbanization – suburban					-.210	.834
Degree of urbanization - urban					.374	.708
Community college size – small					.147	.883
Community college size – medium					-1.954	.052

Table 4.10 Continued

Community college size – large					1.822	.069
Time in current job –5 yrs or less					.171	.864
Time in current job – 6 -10 yrs					1.006	.315
Time in current job – > than 10 yrs					-1.160	.247
Opinion: part-time faculty treated fairly					-1.261	.208
Opinion: racial minorities treated fairly					-.337	.736

Note. \*p<.05

The order in which the variables were entered into the model is presented in Table 4.9. In this case, eight variables were added and none were removed. The model summary indicated how much variance was accounted for by using the model to predict job satisfaction. The first entry accounted for 32% of the variance (adjusted  $R^2 = .324$ ) using the variable called “satisfaction, index (sum) of instruction items.”

The final entry included satisfaction, index (sum) of instruction time, as well as additional variables (opinion about female faculty treated fairly, amount of total individual income, gender, career stage, degree of urbanization, opinion about teaching is rewarded, opinion about choosing an academic career again). Among the 25 independent variables, the following eight variables entered into the equation as significant: 1) satisfaction, index (sum) of instruction time, 2) opinion, female faculty treated fairly, 3) amount of total individual income, 4) gender, 5) career stage, 6) degree of urbanization, 7) opinion, teaching is rewarded, 8) opinion, choosing an academic career again. This means that the above eight variables were important in determining the extent to which full-time foreign-born community college faculty members were satisfied with their jobs.

The first variable—satisfaction, index (sum) of instruction time—entered with a significant high Beta coefficient of .472. The next seven variables entered with moderately high coefficients. These seven variables were 1) opinion, female faculty treated fairly, 2) amount of total individual income, 3) gender, 4) career stage, 5) degree of urbanization; 6) opinion, teaching is rewarded, and 7) opinion, choosing an academic career again. Therefore, results from this multiple regression analysis showed that eight of the 25 independent variables were significant in predicting full-time foreign-born community college members' job satisfaction. This regression yielded a moderate result,  $F = 35.255$ ,  $\text{sig. } F < .001$ . The  $R^2$  is .459 and the adjusted R Square of .446 indicated that, together, the 8 independent variables accounted for nearly 46% of the variance in full-time foreign-born community college members' job satisfaction.

The eight variables with the highest standardized Beta coefficient were 1) satisfaction, index (sum) of instruction time (Beta = .472,  $\text{sig. } p = .000$ ); 2) opinion, female faculty treated fairly (Beta = -.189,  $\text{sig. } p = .000$ ); 3) amount of total individual income (Beta = .179,  $\text{sig. } p = .000$ ); 4) gender (Beta = .163,  $\text{sig. } p = .000$ ); 5) career stage (Beta = .103,  $\text{sig. } p = .013$ ); 6) degree of urbanization (Beta = -.116,  $\text{sig. } p = .005$ ); 7) opinion, teaching is rewarded (Beta = -.123,  $\text{sig. } p = .009$ ); 8) opinion, choosing an academic career again (Beta = .081,  $\text{sig. } p = .049$ ). The positive Beta coefficient of these variables indicated that the more satisfied faculty members were with these variables, the more likely they were to be satisfied with their job.

Therefore, results from this multiple regression analysis showed that eight of the 25 independent variables were significant in predicting full-time foreign-born community

college faculty members' job satisfaction. This regression yielded a moderate result,  $F = 35.255$ ,  $\text{sign. } F < .001$ . The  $R$  of .459 and  $R$  Square of .446 indicated that, together, the eight independent variables accounted for nearly 46% of the variance in full-time foreign-born community college members' job satisfaction. Using the stepwise method, a significant model emerged of an adjusted  $R^2$  of .446;  $F_{8,332} = 35.255$ ,  $p < .000$  indicating significant variables were show below.

Table 4.11

*Summary of Regression Analysis for Variables Predicting Overall Job Satisfaction*

( $N = 345$ )

Predictor Variable	Beta	p
Satisfaction, index (sum) of instruction time	.472	.000
Opinion: female faculty treated fairly	-.189	.000
Amount of total individual income	.179	.000
Gender	.163	.000
Early career stage	.103	.000
Rural	-.116	.000
Opinion: teaching is rewarded	-.123	.000
Opinion: choosing an academic career again.	.081	.049

Those variables that were not significant included race, white; career stages of mid and late; academic discipline – sciences, education levels, and degree of urbanization including suburban and urban areas; community college size; time in current job; opinion: part-time faculty treated fairly and racial minorities treated fairly. Each of the independent variables of this regression deemed significant were listed in Table 4.10 with standardized Beta coefficients and significant p values. In addition, each of the independent variables of

this regression deemed insignificant were listed in Table 4.11 with standardized Beta coefficients and p values. These variables were not significant predictors in this model.

Table 4.12

*Summary of Regression Analysis for Variables not Significant in Predicting Overall Job Satisfaction*

(N = 345)

Predictor variable	Beta	p
1. Race, white	-.030	.466
2. Career stage – mid	-.045	.323
3. Career stage – late	.042	.323
4. Academic discipline – sciences	-.028	.507
5. Education level – terminal degree	-.012	.775
6. Education level – master’s degree	.016	.699
7. Education level – less than master’s degree	.002	.967
8. Degree of urbanization – suburban	-.009	.834
9. Degree of urbanization - urban	.017	.708
10. Community college size – small	.006	.883
11. Community college size – medium	-.080	.052
12. Community college size – large	.079	.069
13. Time in current job –5 yrs or less	.007	.864
14. Time in current job – 6 -10 yrs	.041	.315
15. Time in current job – more than 10 yrs	-.052	.247
16. Opinion: part-time faculty treated fairly	-.060	.208
17. Opinion: racial minorities treated fairly	-.017	.736

### Summary

This chapter has presented a series of descriptive and frequency analyses to answer research objectives one and two. Research objective three was answered by conducting a factor analysis, Cronbach’s alpha, and stepwise regression analysis based on the NSOPF: 04 database. Foreign-born community college faculty members have been described regarding their sociodemographic characteristics, education, work activities, and perceptions of various

aspects of their jobs. Analysis of this section found that the majority of foreign-born community college faculty members were satisfied with their job. Results from the stepwise multiple regression analysis further suggested that community college faculty members' job satisfaction can be attributed to a combination of variables deemed significant by the study.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The major purpose of the study was to examine, at a national level, foreign-born faculty members at community colleges in the United States in relation to mediators of motivators and hygienes as well as demographic factors affecting job satisfaction. More specifically, the researcher measured job satisfaction by utilizing data acquired by the National Center for Educational Statistics (NCES) 2004 data set of the National Study of Postsecondary Faculty Studies (NSOPF), which provided the most recent national data on community college and university faculty members.

The chapter presents an overall summary of the study including a review of the findings; conclusions; recommendations for practice and policy; suggestions for future research; and limitations of the study. The study had three main objectives. The first research objective sought to describe, using the NSOPF 2004, the foreign-born faculty members of U.S. community colleges, as measured by sociodemographic, employment, and opinions on fairness characteristics. The second objective was to describe the foreign-born community college faculty members' satisfaction using motivators (increase satisfaction) and hygienes (decrease dissatisfaction), as measured through the NSOPF 2004. The third objective of the study was to determine whether selected variables of demographics explained a significant proportion of the variance in job satisfaction of foreign-born faculty members at U.S. community colleges.

## Chapter One

Chapter One provided comprehensive information obtained from existing research on the background, problem, purpose, and significance of the study. Job satisfaction is a vital mission for leaders in all higher education institutions, as well as in business. Parts of the NSOPF 2004 were used to measure job satisfaction of foreign-born community college faculty members in the United States. Participants answered 13 questions related to job satisfaction. These questions helped the researcher gain further insight into the current demographics (personal and work-related) and perceptions of foreign-born participants' job satisfaction. Using a quantitative survey research design, the study was guided by three research objectives. The first two objectives sought to describe factors related to job satisfaction perceptions of the participants. The third objective chose to explore whether variables and demographics explained overall job satisfaction in the workplace.

The theoretical framework for the study was based on Herzberg's (1966) two-factor theory, which is structured by intrinsic variables (motivators) likely to affect job satisfaction and the extrinsic variables (hygienes) likely to affect job dissatisfaction. This study modified Hagedorn's (2000) conceptual framework for college and university faculty job satisfaction to further investigate the population of foreign-born community college faculty members. Hagedorn's model has been the foundation for most job satisfaction research pertaining to higher education. Hagedorn (2000) created the model most conducive for the study of community college faculty and staff's job satisfaction; therefore, her model is the basis for this study. Hagedorn's model utilized NSOPF: 93 data as well as adapted Herzberg's two-factor theory to tackle the university faculty. Hagedorn's (2000) variation of Herzberg's two-

factor theory is reputable for research and is compatible with faculty member subjects (Hagedorn, 2000; August & Waltman, 2004; Grunwald & Peterson, 2003; Reybold, 2005; Corley & Sabharwal, 2007; Castillo & Cano, 2004). The conceptual framework and key definitions of terms were also provided in Chapter One. Significance of the study in terms of mission and values, institutional impact, job performance, and overall significance were provided as well. Finally, delimitations of the study were presented.

## Chapter Two

Chapter Two covered the existing relevant literature on the topic of job satisfaction. Existing job satisfaction literature was organized into the following categories: definition of job satisfaction, faculty job satisfaction, community college setting, theoretical perspectives on job satisfaction, motivators and hygiene variables, and demographics often measured in research pertaining to job satisfaction. A final summary of the literature followed the review.

## Chapter Three

Chapter Three provided a detailed description of the research methodology selected for the study. Principal component analysis was conducted for several items on the NSOPF 2004 survey pertaining to demographic (work-related and personal) and typological characteristics explained in past research on job satisfaction. Reliability coefficients, using Cronbach's alpha, were conducted to determine internal consistency and were computed for each of the three subscales utilized in the study. The reliability coefficients reported were based upon aggregated items resulting from factor analysis. Lastly, findings were presented from a stepwise regression analysis that predicts the job satisfaction of community college

faculty members. Using multiple regression allowed for the identification of certain variables that were of particular importance to a particular group of members, such as (here) full-time foreign-born community college faculty members.

#### Chapter Four

Chapter Four presented the findings of analyzed data. The three research objectives that guided the study were addressed. Descriptive statistics using means, standard deviations, frequencies and percents were provided for the respondents' overall job satisfaction, demographic (work-related and personal) characteristics, and typological characteristics. Correlations were conducted and presented. Prediction of job satisfaction variables were explored through stepwise regression analysis, to investigate whether demographic (work-related and personal) and typological characteristics explain a significant amount of variance in job satisfaction.

#### Chapter Five

The fifth and final chapter contains the summary, conclusions, recommendations, and limitations extracted from the study. Summaries of findings were given for the three research objectives. Conclusions were presented for each research objective, and the findings and existing research will be discussed. Recommendations for practitioners, administrators, and higher education researchers will be provided. Lastly, limitations of the study will be presented.

## Discussion of Findings and Conclusions

The intention of the study was to explore job satisfaction of foreign-born community college faculty members in the United States. The study was guided by three research objectives. The first research objective described the foreign-born faculty member at U.S. community colleges, as measured by sociodemographic, employment, and opinion characteristics. The second research objective sought to describe the foreign-born community college faculty members' job satisfaction using motivators (increase satisfaction) and hygienes (decrease dissatisfaction). The third research objective of the study was to determine whether selected variables of demographic (work-related and personal) and typological characteristics explain a significant proportion of the variance in job satisfaction of foreign-born faculty members at U.S. community colleges.

### Research Objective One

Both personal and work-related sociodemographic factors for the survey participants were stated. Personal factors included age, gender, race/ethnicity, education level, marital status, dependent children, and citizenship. Work-related factors included years in current job, time in academic rank, time in tenure, academic rank, tenure status, employment status, type of academic rank, principal activity, and academic discipline affiliation.

#### Personal

Gender, race/ethnicity, marital status, dependents, citizenship, education level, academic rank, tenure status, employment status, type of academic rank, principal activity, and academic discipline affiliation were reported with frequencies and percents, while age,

years in current job, time in academic rank, and time in tenure were reported with means and standard deviations.

Of the total participants, a little over half were male, white, supporting more than one child, and holding a master's degree. Over three quarters of participants were married and citizens of the United States.

#### Work-related

Over half of the participants were employed part-time at the community college and were not on the tenure track or not at an institution with a tenure system. Type of academic rank varied among respondents. The largest group that responded held the rank of instructor. The average age of the respondents was 48 years old. The range of ages was from 24 to 85. The respondents' work experience in their current positions ranged from 1 to 39 years with the average being 7 years. The respondents' time within their current rank ranged from 1 to 30 years with the average being 8 years. The respondents' time within their tenure status ranged from 1 to 35 years with the average being 11 years.

For the majority of respondents, the principal work activity is teaching. Participants' academic disciplines varied from humanities to engineering, although the majority of respondents were members of the "non-science group," which included disciplines such as education, literature, foreign language, and linguistics.

Research objective one conducted analyses on the characteristics related to the participants' sociodemographic, employment, and opinions factors relevant to job satisfaction. Personal data showed that the average foreign-born faculty member working in a community college within the United States was male, a US citizen, 48 years old, married,

white, supporting one or more children, and holding a master's degree. Employment characteristics indicated that the average participant was employed part-time, with an instructor rank maintained for eight years, and that their principal activity was teaching for at least seven years in a "non-science" discipline at their current job in academe. These participants were not tenured or not on the tenure track and had held this status for at least 11 years.

These findings presented a slightly different portrait of foreign-born faculty members than that portrayed in mainstream descriptions (Ng, Lee, & Pak, 2007). Demographic characteristics researched by the study revealed that the majority of community college faculty members were citizens of the United States. Employment characteristics researched by the study revealed that the majority of community college members were working part-time as well as teaching in "non-science" fields. This modifies the existing literature on foreign-born faculty, which has been restricted to the engineering and sciences fields (Johnson & Regents, 1998; Corley & Sabharawl, 2007).

Much of the existing literature examined the perceptions of full-time community college faculty members. One common trend seen in both four-year and two-year institutions has been an increase in the number part-time faculty members. Colleges and universities in general are relying more and more heavily on part-time faculty, and more than any other institutions of higher education, community colleges have been influenced by this trend (Valadez & Anthony, 2001). This study showed that half of the sample worked part-time, which aligns with Conley and Leslie's (2002) article documenting that the majority of instructional faculty and staff in community colleges were employed on a part-time basis.

### Conclusions: Research Objective One

The study brought attention to the need for researchers to add focus on part-time faculty as well as on faculty working in “non-science” fields such as education, literature, foreign languages, and linguistics when investigating foreign-born community college faculty members.

### Research Objective Two

Research objective two conducted analyses to describe the foreign-born community college faculty members’ perceptions and satisfaction related to their job. The eight variables were reported by participants in order of job satisfaction levels. Participants were very satisfied in regards to authority for decisions, job satisfaction overall, and technology support. Next, participants were somewhat satisfied with their benefits, workload, and equipment. Respondents were somewhat dissatisfied in regards to teaching and improvement, and they were very dissatisfied with their salaries. Isaac and Boyer looked at minority community college faculty and found similar results, with their participants being most satisfied with their authority to make decisions (2007). The study demonstrated that foreign-born community college faculty members feel dissatisfied about their salary and benefits. The discussion topics of salary and benefits have been a source of conflict even among university faculty. Wilson (2004) described how faculty salaries increased only by 2.1%, during the academic year of 2003–2004. According to Wilson, this was the smallest increase in nearly 30 years (2004). Higher education institutions, including community colleges, will have to continue to address faculty concerns about salary.

### Conclusions: Research Objective Two

Foreign-born community college faculty members were most satisfied with their authority to make decisions but were most dissatisfied with issues pertaining to salary. The data in this study indicated, overall, that community college faculty members were quite pleased with the level of job autonomy that they have but were much less satisfied with their salaries.

### Research Objective Three

Research objective three explored whether selected demographic variables (work-related and personal) explained a significant proportion of the variance in job satisfaction for foreign-born members at U.S. public community colleges. A stepwise regression analysis with all variables was conducted, and eight characteristics entered a significant model, explaining almost half of the variance in job satisfaction.

### Conclusions: Research Objective Three

The following factors relating to the job satisfaction of foreign-born community college faculty members were significant: satisfaction, index (sum) of instruction time; opinion: female faculty treated fairly; amount of total individual income; gender; career stage (early); degree of urbanization (rural); opinion: teaching is rewarded; and opinion: choosing an academic career again. These variables explained a moderate amount of variance in job satisfaction. The data analyzed in the study indicate that the most significant factors relating to the participants' job satisfaction were instructional duties and opinions about whether female faculty members were treated fairly. These two variables explained the most variance in job satisfaction.

The current study found that a relationship exists between the instruction index and perceived job satisfaction levels. The questions that made up the instruction index measured the participants' satisfaction with their authority to make decisions; technology-based instruction; equipment/facilities; and institutional support for teaching improvement. These factors pertained to aspects of work relationships, physical environment, and professional development.

The finding that foreign-born faculty were more significantly influenced by the instruction index reveals the importance of the variables that composed the instruction index: support for technology, equipment, and facilities; and support for teaching improvement. It is possible that monetary demands have had a major impact on institutions' ability to provide support for technology, equipment, and facilities and thus on foreign-born faculty's job satisfaction in these areas. Community college budgets need permanent allocations for upgrading and maintaining technology, equipment, and facilities, and they need to prioritize opportunities for teaching improvement (such as mentoring and professional development) that significantly affect faculty members' job satisfaction.

The second predictor variable was community college faculty's perceptions of whether female faculty are treated fairly. The predictor variable represents opinion values related to this factor for foreign-born community college faculty members. The foreign-born faculty perceived that females were not treated fairly. This variable was significantly related to job satisfaction and demonstrated a negative relationship. As opinions become increasingly negative, the employment index, measuring job satisfaction, will correspondingly increase. Improvements in how full-time foreign-born community college

members perceive the treatment of female faculty at their institutions relate significantly and positively to job satisfaction levels.

Generally, monetary rewards and the number of female faculty members strongly affect perceptions of whether female faculty are fairly treated (Robst et al, 2003). Therefore, administrators who want to improve perceptions in that regard should employ and advance women in equal proportion to their male counterparts; administrators should also lessen the salary gaps between men and women who have the same qualifications and responsibilities.

Previous studies have found connections between perceptions of fairness and job satisfaction (Moorman, 1991; Folger & Konovsky, 1989). The results from this study agreed with the belief that a faculty member's perception of whether or not certain actions in the college were fair and were carried out fairly may significantly affect the faculty member's level of job satisfaction. Job satisfaction has been described by some as "an evaluation of equitableness of treatment or conditions" (Smith, Kendall, & Hulin, 1969, p. 166). Organ (1990) argued that the cognitive component of job satisfaction is derived from comparisons with colleagues, and therefore employees' perceptions of fairness in part come from comparisons made with others. Particularly, Organ declared that "one is satisfied to the extent that outcomes or conditions approximate some conception of 'what they might have been'—which in turn may be defined by social comparison processes, prior experience, or implicit promise" (1990, p. 56).

The third predictor variable pertained to the amount of total individual income and revealed that income is positively related to job satisfaction. As the total individual incomes of community college faculty members increases, their perceived job satisfaction levels also

increase. This has been shown by substantial research on the positive effects that income has on employees' job satisfaction (Bender & Heywood, 2006; Kalleberg, 1977; Ward & Sloane, 2000; Watson & Meiksins, 1991).

Further research on the relation between income and job satisfaction has revealed that women receive less job satisfaction from additional earnings than do men (Bender et al., 2005; Donohue & Heywood, 2004). One reason the literature gives to support this argument is that women are more likely to exchange an increase in salary for other job characteristics, such as having a flexible schedule that allows for caregiving activities (Bender et al., 2005) or having reduced hours (Donohue & Heywood, 2004). However, generalizations pertaining to all women are difficult to make, since flexibility might translate into different priorities, such as balancing work and family or changing marital status and dependents.

The fourth predictor variable is gender. This study found that men perceived higher levels of job satisfaction. Much of the research has backed up this finding and has found that male faculty members have higher levels of overall job satisfaction than female faculty members (Bilimoria et al., 2006; Callister, 2006; Hult et al., 2005; Olsen et al., 1995; Settles et al., 2006; Tack & Patitu, 1992). These studies have revealed that the higher levels of job satisfaction related to satisfaction with benefits and salaries (Sabharwal & Corley, 2009). This finding is not unexpected, since male faculty have frequently experienced more rewards and higher job status in community colleges than have their female counterparts (Fraser & Hodge, 2000).

The study's fifth predictor variable indicated that early-career community college faculty members perceived an increase in job satisfaction levels. This could be described as

the “honeymoon” period of any career and is supported by earlier literature that demonstrates a U-shaped relationship between age and job satisfaction (Herzberg et al., 1957). It is important to note, however, that other, more current research shows the opposite finding. Current literature on early-career faculty reports that many early-career faculty members express low levels of satisfaction; they perceive the early-career stage as the most difficult and stressful stage, as it combines the pressures and challenges of being new with a heavy workload and high expectations and demands for success (Baldwin & Blackburn, 1981). Significantly, this study disagrees with that finding and agrees instead with the earlier research, in that it shows an increase in faculty members’ job satisfaction during their early career stage. The findings from this study were consistent with the theories related to career development by researchers such as Herzberg, et al (1957) and Sullivan (1999). These theorists reported that during the early career stage, workers begin to establish themselves in a profession. The priority during this phase of career development is the need to feel the relevance of the work life. During this critical time, however, the employee can become dissatisfied and is more likely to leave the job if not satisfied.

The sixth predictor variable was the degree of urbanization: that is, whether the institution was part of an urban, suburban, or rural area. This study found that foreign-born faculty members at rural community colleges perceived lower levels of job satisfaction. The reason could be that they feel more isolated from other groups and from people like themselves. Unlike faculty members at rural community colleges, those at urban ones have been known to offset areas of dissatisfaction by making use of the greater number of activities and opportunities available outside of their immediate work environment (Hardy &

Katsinas, 2007). Another reason why faculty members in rural settings may perceive lower levels of job satisfaction is that their communities frequently have higher poverty levels and illiteracy rates than urban ones (Holub, 1996). Also, faculty in rural settings often come across more stressful situations that appear overwhelming (Valadez & Killacky, 1995). Nevertheless, the “rural community college will be an indispensable part of the community’s overall efforts to build a better future for all of its citizens” (Garza & Eller, 1998, p. 31). Rural community colleges continue to perform significant educational, cultural, and social functions within their communities. They also have a unique problem with retaining faculty, who, as shown, report lower levels of job satisfaction (Valadez & Killacky, 1995).

The seventh and eight predictor variables indicated that a community college faculty member’s level of job satisfaction increases when the member perceives that teaching is rewarded and that he or she would choose this career again. In the case of foreign-born community college faculty members, the predictor variable for opinion values relating to “teaching is rewarded” were negative and significant, indicating that as participants’ opinions become increasingly negative, the employment index, measured job satisfaction, correspondingly increases. Improvement in full-time foreign-born community college members’ opinions about whether teaching is rewarded at their institution will significantly influence employees’ job satisfaction.

The responsibility for motivating faculty members and influencing their behavior so that they will be more effective and productive is the function of administrators (Oosthuizen, 2001), although the level of a faculty member’s commitment to an institution depends largely on the rewards and recognition received (Andrew & Kent, 2007). The motivation and

productivity levels of faculty can be improved through valuable rewards (such as recognition) that which in the end produce higher and more effective job performance (Deepröse, 1994).

When faculty members experience success in occupations that are mentally challenging and allow them to apply their skills and abilities, they experience increased levels of job satisfaction (Bull, 2005). One study affirmed a statistically significant relationship between reward and recognition as well as between job motivation and job satisfaction levels. The study demonstrated that changing rewards and recognition alters job motivation and satisfaction levels (Ali & Ahmed, 2009). As more focus is placed upon programs dealing with rewards and recognition within institutions, faculty morale should improve; with improved communication between administration and faculty about recognition and rewards, faculty should perceive a connection between job performance and motivation, and this perception in turn will affect job satisfaction (Flynn, 1998).

The last variable concerned whether the faculty member would choose the same career again, and this variable determined positive. A higher likelihood of choosing this career again correlated with a higher job satisfaction level. Several recent studies found similar results (Dolliver, 2004; Andrew, Faubion, & Palmer, 2002).

### General Recommendations for Policy

#### Recommendation One

This study found that community college faculty members at rural institutions need additional support to ease stress at their workplace. Foreign-born faculty members need support to ease emotional stress related to being a minority—and at times, the sole minority—

faculty member within the institution. *Networking reduces these feelings of isolation (Salem & Focete, 2004).*

Foreign-born community college faculty members need to have organized networks to assist them, especially in rural settings. Administrators can fulfill this recommendation by referring the foreign-born community college faculty members' needs to specific programs or networks that are tailored to known significant factors affecting the job satisfaction of foreign-born faculty members. Such a program or network would be designed to help with such topics as teaching and grading standards, as well as the cultural expectations and norms of faculty and students. This study, along with other research, suggests that steps should be taken to increase institutional awareness of foreign-born faculty members and to incorporate them into the institution (Tierney & Rhoads, 1994). For instance, faculty and staff may encounter grading standards or communication styles that differ from those in their native country. It is imperative that institutions openly *communicate to foreign-born faculty members the expectations and standards relevant to the new context*. A great deal of research proposes that a new faculty member's continued success in academia depends on whether expectations are met; if not, turnover occurs (Murray & Cunningham, 2004). If administrators and colleagues do not take responsibility for communicating appropriate expectations, then the burden gets placed on the students, who often help *foreign-born members adapt to the US community college culture*.

Socialization is one way to process the norms, customs, and ideologies of a community. Multiple studies have examined how socialization relates to job satisfaction among faculty (Antonio et al, 2000). Literature examining socialization within institutions

have agreed that there is a need for more communication focusing on how new faculty members can adjust successfully to their new work environments (Cawyer & Friedrich, 1998; Tierney & Rhoads, 1994). For example, Bullis and Bach (1989) discovered that certain circumstances (such as taking part in social events with other new faculty) served as critical moments for socialization. Cawyer and Friedrich (1998) revealed that new faculty members desired open communication with administrators and colleagues in order to lessen the feelings of isolation that accompany being new. Community college faculty members must participate in social and professional networks that will help align them with their new institution and take part in it more effectively. In addition, networks increase socialization and result in an increased reported sense of community, all of which impact job satisfaction.

#### Recommendation Two

This study revealed that foreign-born community college faculty members felt that good teaching was not rewarded. Effective communication with a mentor may help participants learn how good teaching gets rewarded at their community college. Mentoring is especially vital for helping foreign-born faculty adapt to local academic culture. Moss et al. (1999, p. 414) note that mentoring is particularly important for “women, people of color, and others who are less favorably positioned within the academy.” This would include foreign-born faculty members as one group that would benefit from mentoring services.

A mentor would help faculty learn how to maneuver within the system and how to communicate more effectively with department heads and administrators. Mentoring is a task that department chairs should perform and make accessible to all foreign-born faculty members. How effectively a chairperson supports, connects, and helps socialize foreign-born

faculty members can increase or decrease levels of job satisfaction (August & Waltman, 2004). Findings also indicate that another important aspect of mentoring is accessibility. Therefore, it is necessary that administrators assign mentors to new faculty rather than merely encouraging casual mentoring (Cawyer et al., 2002). In conclusion, facilitating networking and mentoring services for foreign-born community college members are necessary activities involving department chairs as well as other members of the college community.

#### Recommendations for Future Research

This study adapted the theoretical framework of the dual-factor theory of job satisfaction by Herzberg and colleagues (Herzberg, Mausner, & Snyderman, 1959) as well as expanded upon Hagedorn's (2000) study of faculty job satisfaction modified from the four-year university to the community college. Hagedorn's study also used the data source of NSOPF: 93, whereas this study used NSOPF 2004. The conceptual framework selected for this study derived from Hagedorn's theory and was tailored to include the population of foreign-born public community college faculty members by employing NSOPF: 2004. The results from this study provide research implications regarding the levels and sources of job satisfaction among foreign-born community college faculty members.

#### Recommendation One

Job satisfaction variables identified by Herzberg (1959) and Hagedorn (2000) for faculty members need to be expanded to contain factors related to income and institutional typology. These factors are significant when discussing foreign-born community college faculty members. Future researchers that wish to recreate a similar study are recommended to

disregard changes involving rank or tenure when looking at community college faculty.

These are almost irrelevant to faculty serving in community colleges.

The conceptual framework used for this study was built examining university faculty. This study looked at community college faculty therefore the variable of employment status was added to the conceptual framework, since there are many more part-time faculty members in community colleges than there are in four-year universities. In addition, the classification of community colleges can be honed further to distinguish two-year, private, and public institutions. Including these factors would make it easier to compare like community colleges with regard to the economic and academic needs of the institutions.

#### Recommendation Two

A job satisfaction instrument needs to be created that measures an individual's job satisfaction level using the framework developed by Hagedorn (2000). This instrument would assess and measure each factor that is regarded significant by the framework. In addition, there would be procedures to expand upon the study's theoretical foundation in order to include certain constructs suggested by research but not included in Hagedorn's job satisfaction model—factors, for instance, such as work and family balance.

#### Recommendation Three

Due to the limited amount of existing literature on the topic of foreign-born community college faculty members, qualitative methods need to be developed for obtaining data that can not be obtained through quantitative methods. This allows for the researcher to use different techniques and lenses that may not be usable in a quantitative study. For example, by using questionnaires paired with interviews, qualitative research can assess

similarities and differences in the norms, attitudes, and practices of foreign-born community college faculty members across institutions having varying degrees of urbanization. Lastly, qualitative research can assess the cultural norms of community colleges that include diversity goals within their mission statements, and it can compare those norms to colleges without such statements.

Given that this study researched job satisfaction among foreign-born faculty members at urban, suburban, and rural community colleges, future research could investigate rural faculty members more directly by comparing rural college communities with similar enrollment sizes. Supplementary literature validates precisely why foreign-born faculty members are less satisfied working in rural areas. This research can then be used to improve job satisfaction among foreign-born community college faculty members. Additional research must assess the impact that mentors and networks have on job satisfaction for foreign-born community college faculty members. This type of literature could lead to a mentoring program in which early-career foreign-born community college faculty members are matched with senior foreign-born faculty who can help them adjust to their new environment and succeed.

#### Recommendation Four

An investigation to compare the perspectives of job satisfaction between members from different countries of origin is needed in future research to gain a basic understanding of experiences that may differ from the European faculty member to an Asian faculty member. As stated in the limitations, it would have been more suitable to use country of origin to examine the job satisfaction of foreign-born faculty in this study. Though, due to a

data limitation (NSOPF does not include the detail information within the variable about country of origin), the researcher had to use the born in the United States variable instead.

### Limitations

There are several limitations that should be addressed when considering the summary, conclusions, and recommendations of the study. The first limitation was that the regression analysis was limited to data involving full-time foreign-born community college faculty members. This data was deemed the best representation of the community college culture. However, part-time community college faculty members continue to increase as a group and thus could alter the data if included. In addition to examining only full-time faculty members, the data source of NSOPF: 04 did not allow for information pertaining to the country of origin to be examined for participants; the researcher had to use the born in the United States variable instead.

The second limitation was that the data-gathering procedure entailed using a survey instrument. As with any survey instrument, the willingness, interest, and ability of participants to answer to all questions and reply accurately could not be controlled by the investigator. Also, the survey instrument was not developed solely to assess job satisfaction of community college faculty members. The survey was originally intended to evaluate a variety of characteristics relating to the workplace experiences and perceptions of community college and university faculty members.

The third limitation was that the survey was limited to foreign-born community college faculty members who self-reported on the NSOPF: 2004 instrument.

## Conclusion

In conclusion, job satisfaction needs to be evaluated by faculty and staff. Assessing job satisfaction can create an environment that promotes a passion for serving students. It can send a message to the employees that administrators care about their needs at the same time that it provides administrators with important information about those employees who have a direct relationship with students on a daily basis. As a result, a more effective learning environment for students and for all members working throughout the community college may be established.

Certainly, the focus on how job satisfaction relates to job performance goes back as far as the literature on the Hawthorne studies (Roethlisberger & Dickerson, 1939), and the subject continues to be researched to this day. In much of the literature, job satisfaction is the deciding factor that influences various aspects of work life behavior such as job performance, turnover, and absenteeism (Decker et al., 2009; Thatcher et al., 2002; Parsons & Broadridge, 2006). Although there has been quantitative research on this subject (Laffaldano & Muchinsky, 1985; Petty, McGee, & Cavender, 1984) and qualitative research as well (Brayfield & Crockett, 1955; Herzberg, Mausner, Peterson, & Capwell, 1957; Locke, 1970; Schwab & Cummings, 1970), additional studies and further analysis are needed. In particular, an updated discussion needs to be initiated on the increasingly diverse workforce—including workers who are foreign-born—within community colleges throughout the United States.

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APPENDIX

Appendix A: Budget

Paper	\$ 50
Printer Ink	\$100
Gasoline	\$300
Kinko's Spiral Binding	\$100
SPSS Student Editions	\$100
<b>Total</b>	<b>\$650.00</b>

Appendix B: IRB Approval

Office of Research  
and Graduate Studies

**NC STATE UNIVERSITY**

Sponsored Programs and Regulatory  
Compliance

Campus Box 7514  
2701 Sullivan Drive  
Raleigh, NC 27695-7514

919.515.2444  
919.515.7721 (fax)

From: Debra Paxton, IRB Administrator  
North Carolina State University  
Institutional Review Board

Date: September 15, 2010

**Project Title: Job Satisfaction of International Faculty in Community Colleges Using NSOPF 2004 Data**

**IRB#: 1631**

Dear Ms. Markus:

The research proposal named above has received administrative review and has been approved as exempt from the policy as outlined in the Code of Federal Regulations (Exemption: 46.101. b.4). Provided that the only participation of the subjects is as described in the proposal narrative, this project is exempt from further review.

NOTE:

1. This committee complies with requirements found in Title 45 part 46 of The Code of Federal Regulations. For NCSU projects, the Assurance Number is: FWA00003429.
2. Any changes to the research must be submitted and approved by the IRB prior to implementation.
3. If any unanticipated problems occur, they must be reported to the IRB office within 5 business days.

Please provide your faculty advisor with a copy of this letter.  
Thank you.

Sincerely,

Debra Paxton  
NCSU IRB

### Appendix C: Independent Variables

1. Opinion: teaching is rewarded
2. Race, white
3. Satisfaction, index (sum) of instruction time,
4. Time in current job – 6 -10 yrs
5. Time in current job – more than 10 yrs
6. Time in current job –5 yrs or less
7. Academic discipline – sciences
8. Amount of total individual income,
9. Career stage – early
10. Career stage – late
11. Career stage – mid
12. Community college size – large
13. Community college size – medium
14. Community college size – small
15. Degree of urbanization - urban
16. Degree of urbanization – suburban
17. Degree of urbanization- rural
18. Education – less than master’s degree
19. Education – master’s degree
20. Education – terminal degree
21. Gender
22. Opinion: choose academic career again
23. Opinion: female faculty treated fairly
24. Opinion: part-time faculty treated fairly
25. Opinion: racial minorities treated fairly

## Appendix D

### **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.*

### **NSOPF:04 Faculty Instrument Facsimile 2**

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### **NSOPF:04 Faculty Instrument Facsimile 3**

#### **► 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:** Faculty with instructional duties, Fall 2003

**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 4

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

- 1 = Agree: NOT faculty and DID NOT have any instructional duties
- 2 = Disagree: Had faculty status and/or had instructional duties

**Form: Q4 Label:** Principal activity

**Form Administered To:** All faculty and instructional staff

**StemWording:** Was your **principal activity** at [FILL INSTNAME] during the 2003 Fall Term. . . (If you had equal responsibilities, please select one.)

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

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

**Form Administered To:** All faculty and instructional staff

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

- 1 = Full time
- 2 = Part time

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

**Form Administered To:** Part-time faculty and instructional staff

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

- 0 = No
- 1 = Yes

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

**Form Administered To:** Part-time faculty and instructional staff

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

- 0 = No
- 1 = Yes

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

**Form Administered To:** All faculty and instructional staff

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

\* Year:

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

**Form Administered To:** All faculty and instructional staff

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

0 = Not applicable (No formal ranks are designated at this institution)

1 = Professor

2 = Associate professor

3 = Assistant professor

4 = Instructor

5 = Lecturer

6 = Other title (e.g., Administrative, Adjunct, Emeritus, other)

#### **NSOPF:04 Faculty Instrument Facsimile 6**

**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 7**

**Stem Wording:** 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

**Stem Wording:** What is your principal field or discipline of teaching at [FILL INSTNAME]?

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

\* Name of principal field/discipline of teaching:

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

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

**Form Administered To:** Faculty and instructional staff who provided a verbatim field of teaching

**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 8**

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

#### **NSOPF:04 Faculty Instrument Facsimile 9**

\* Specific Discipline:

0101 = Agriculture and related sciences 1102 = Chemical engineering  
 0102 = Natural resources and conservation 1103 = Civil engineering  
 0201 = Architecture and related services 1104 = Computer engineering  
 0301 = Area/ethnic/cultural/gender studies 1105 = Electrical/electronics/comms engineering  
 0401 = Art history, criticism & conservation 1106 = Engineering technologies/technicians  
 0402 = Design & applied arts 1107 = Environmental/environmental health eng  
 0403 = Drama/theatre arts and stagecraft 1108 = Mechanical engineering  
 0404 = Fine and studio art 1109 = Engineering, other  
 0405 = Music, general 1201 = English language and literature/letters  
 0406 = Music history, literature, and theory 1301 = Family/consumer sciences, human sciences  
 0407 = Visual and performing arts, other 1401 = Foreign languages/literature/linguistics  
 0408 = Commercial and advertising art 1501 = Alternative/complementary medicine/sys  
 0409 = Dance 1502 = Chiropractic  
 0410 = Film/video and photographic arts 1503 = Clinical/medical lab science/allied

0501 = Biochem/biophysics/molecular biology 1504 = Dental support services/allied  
 0502 = Botany/plant biology 1505 = Dentistry  
 0503 = Genetics 1506 = Health & medical administrative services  
 0504 = Microbiological sciences & immunology 1507 = Allied health and medical assisting  
 services  
 0505 = Physiology, pathology & related sciences 1508 = Allied health diagnostic,  
 intervention,  
 treatment professions  
 0506 = Zoology/animal biology 1509 = Medicine, including psychiatry  
 0507 = Biological & biomedical sciences, other 1510 = Mental/social health services and  
 allied  
 0601 = Accounting and related services 1511 = Nursing  
 0602 = Business admin/management/operations 1512 = Optometry  
 0603 = Business operations support/assistance 1513 = Osteopathic medicine/osteopathy  
 0604 = Finance/financial management services 1514 = Pharmacy/pharmaceutical  
 sciences/admin  
 0605 = Human resources management and svcs 1515 = Podiatric medicine/podiatry  
 0606 = Marketing 1516 = Public health  
 0607 = Business/mgt/marketing/related, other 1517 = Rehabilitation & therapeutic  
 professions  
 0608 = Management information systems/services 1518 = Veterinary medicine  
 0701 = Communication/journalism/related pgms 1519 = Health /related clinical services,  
 other  
 0702 = Communication technologies/technicians  
 and support services 1601 = Law  
 0801 = Computer/info tech administration/mgmt 1602 = Legal support services  
 0802 = Computer programming 1603 = Legal professions and studies, other  
 0803 = Computer science 1701 = Library science  
 0804 = Computer software and media applications 1801 = Mathematics  
 0805 = Computer systems analysis 1802 = Statistics  
 0806 = Computer systems networking/telecomm 1901 = Mechanical/repair  
 technologies/techs  
 0807 = Data entry/microcomputer applications 2001 = Multi/interdisciplinary studies  
 0808 = Data processing 2101 = Parks, recreation and leisure studies  
 0809 = Information science/studies 2102 = Health and physical education/fitness  
 0810 = Computer/info sci/support svcs, other 2201 = Precision production  
 0901 = Construction trades 2301 = Culinary arts and related services  
 1001 = Curriculum and instruction 2302 = Personal and culinary services  
 1002 = Educational administration/supervision 2401 = Philosophy  
 1003 = Educational/instructional media design 2402 = Religion/religious studies  
 1004 = Special education and teaching 2403 = Theology and religious vocations  
 1005 = Student counseling/personnel services 2501 = Astronomy & astrophysics  
 1006 = Education, other 2502 = Atmospheric sciences and meteorology  
 1007 = Early childhood education and teaching 2503 = Chemistry

1008 = Elementary education and teaching 2504 = Geological & earth sciences/geosciences  
 1009 = Secondary education and teaching 2505 = Physics  
 1010 = Adult and continuing education/teaching 2506 = Physical sciences, other  
 1011 = Teacher ed: specific levels, other 2601 = Behavioral psychology  
 1012 = Teacher ed: specific subject areas 2601 = Behavioral psychology  
 1013 = Bilingual & multicultural education 2602 = Clinical psychology  
 1014 = Ed assessment 2603 = Education/school psychology  
 1015 = Higher education 2604 = Psychology, other  
 1101 = Biomedical/medical engineering 2701 = Public administration

### NSOPF:04 Faculty Instrument Facsimile 10

(Specific discipline continued)

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

### ► SECTION B: Academic/Professional Background

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

**Form Administered To:** All faculty and instructional staff

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

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

0 = Not applicable (Do not hold a degree)

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

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

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

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

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

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

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

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

**Form Administered To:** Faculty and instructional staff whose highest degree is a first-professional degree

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

0 = No

1 = Yes

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

**Form Administered To:** Faculty and instructional staff who hold a degree

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

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

\* Year received:

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

**Form Administered To:** Faculty and instructional staff who hold a degree

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

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

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

**Form Administered To:** Faculty and instructional staff who provided a verbatim highest degree field

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

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

**Form:** Q17a3CD

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

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

**Form Administered To:** Faculty and instructional staff who provided a verbatim highest degree field, but whose results were not autocoded

**StemWording:** Please help us categorize "[FILL Q17a3VS]" using the drop-down list boxes below. [IF Q16CD ≥ 0] (Select one from the list of disciplines you've already told us about:)

**NSOPF:04 Faculty Instrument Facsimile 12**

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

\* General Area:

\* Specific Discipline:

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

**Form:** Q17a4

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

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

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

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

**Form Administered To:** Faculty and instructional staff who hold a degree

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

1. Please select the state in which the school was located. If the school was located in another country, select "foreign country."
2. Enter the name of the city in which the institution was located. You can also use the "Browse" link to identify the city.
3. Select the "Continue" button to list the schools located in that state and city.
4. Select the desired school.

### **NSOPF:04 Faculty Instrument Facsimile 13**

**Problems?** Try searching for the school by state without listing a city. If you still can't find the 142 school, select the "Unable To Find School in List" button at the bottom of the search results.)

\* State/Foreign:

1 = Alabama 21 = Maryland 41 = South Carolina

2 = Alaska 22 = Massachusetts 42 = South Dakota

3 = Arizona 23 = Michigan 43 = Tennessee

4 = Arkansas 24 = Minnesota 44 = Texas

5 = California 25 = Mississippi 45 = Utah

6 = Colorado 26 = Missouri 46 = Vermont

7 = Connecticut 27 = Montana 47 = Virginia

8 = Delaware 28 = Nebraska 48 = Washington

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

10 = Florida 30 = New Hampshire 50 = Wisconsin

11 = Georgia 31 = New Jersey 51 = Wyoming

12 = Hawaii 32 = New Mexico 52 = Puerto Rico

13 = Idaho 33 = New York 54 = American Samoa

14 = Illinois 34 = North Carolina 55 = Guam

15 = Indiana 35 = North Dakota 56 = Federated States of Micronesia  
 16 = Iowa 36 = Ohio 57 = Marshall Islands  
 17 = Kansas 37 = Oklahoma 58 = Northern Mariana Islands  
 18 = Kentucky 38 = Oregon 59 = Palau  
 19 = Louisiana 39 = Pennsylvania 60 = U.S. Virgin Islands  
 20 = Maine 40 = Rhode Island 63 = Foreign Country

\* City:

\* School Name:

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

**Form Administered To:** Faculty and instructional staff who reported their highest degree as master's level or above

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

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

\* Year received:

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

#### **NSOPF:04 Faculty Instrument Facsimile 14**

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

**Form Administered To:** All faculty and instructional staff

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

0 = 0

1 = 1

2 = 2

3 = 3

4 = 4

5 = 5 or more

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

**Form Administered To:** Faculty and instructional staff with other employment (excluding consulting)

**StemWording:** [IF Q18>1] Were you employed full time at any of these other jobs during the 2003 Fall Term? [ELSE] Were you employed full time at this other job during the 2003 Fall Term? [ENDIF]

0 = No

1 = Yes

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

**Form Administered To:** Faculty and instructional staff with other employment (excluding consulting)

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

0 = 0

1 = 1

2 = 2

3 = 3

4 = 4

5 = 5 or more

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

### NSOPF:04 Faculty Instrument Facsimile 15

**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

### NSOPF:04 Faculty Instrument Facsimile 16

**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

#### **NSOPF:04 Faculty Instrument Facsimile 17**

**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

### **NSOPF:04 Faculty Instrument Facsimile 18**

**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

**Stem Wording:** [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.

### **NSOPF:04 Faculty Instrument Facsimile 19**

**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

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

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

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

(Guidance on Counting Classes: Count multiple sections of the same course separately. For example, Sociology 101 taught to two different groups of students would count as two classes. Count lab or discussion sections as part of the same class unless they have separate credits assigned to them. For example, a biology class with lectures, labs, and discussion sections each week counts as one class.)

0 = No classes

1 = 1 class

19 = 19 classes

20 = 20 or more classes

**Form:** Q35b

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

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

**Form Administered To:** Faculty and instructional staff who taught at least one class

**Stem Wording:** 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.

#### **NSOPF:04 Faculty Instrument Facsimile 20**

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

**Stem Wording:** [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  
**Name:** Q37bi (i = 1 to 5) **Label:** Number of credit hours, i-th class  
**Name:** Q37ci (i = 1 to 5) **Label:** Number of hours taught per week, i-th class  
**Name:** Q37di (i = 1 to 5) **Label:** Number of students, i-th class  
**Name:** Q37ei (i = 1 to 5) **Label:** Primary level of students, i-th class  
**Name:** Q37fi (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

**Stem Wording:** [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.

#### **NSOPF:04 Faculty Instrument Facsimile 21**

[IF Q35A1 >1 AND Q35A1 ≤ 5] You reported earlier that you taught [FILL Q35A1] classes for credit during the 2003 Fall Term at [FILL INSTNAME]. Please answer the following questions for each of these classes, we will call A to [FILL B (IF Q35A1=2) OR C (IF Q35A1=3) OR D (IF Q35A1=4) OR E (IF Q35A1=5)]. [IF Q35A1=1] For the credit class that you reported teaching at [FILL INSTNAME] during the 2003 Fall Term, please answer the following questions. [ENDIF]

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

0 0 weeks

1 1 week

..

..

..

24 24 weeks

25 25 weeks

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

\* c. How many hours did **you** teach the class per week? (Do not include preparation time.)

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

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

1 = Undergraduate

2 = Graduate

3 = First professional

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

0 = No

1 = Yes

#### **NSOPF:04 Faculty Instrument Facsimile 22**

**Form:** Q38

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

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

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

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

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

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

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

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

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

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

**Form Administered To:** Faculty and instructional staff who taught an undergraduate credit class

**StemWording:** [IF Q37EI=1 FOR EXACTLY ONE OF THE Q37Ei, WHERE i=1 TO 5 OR (IF Q32A>0 AND Q32B=0 OR BLANK AND Q35A1=1)] For the **undergraduate** class you taught for credit during the 2003 Fall Term at [FILL INSTNAME], did you use any of the following? [ELSE] For the **undergraduate** classes you taught for credit during the 2003 Fall Term at [FILL INSTNAME], did you use any of the following? [ENDIF] Did you use. . .

- \* a. Multiple-choice midterm or final exam?
- \* b. Essay midterm or final exam?
- \* c. Short-answer midterm or final exam?
- \* d. Term/research papers and writing assignments?
- \* e. Multiple drafts of written work?
- \* f. Oral presentations by students?
- \* g. Group and team projects producing a joint product?
- \* h. Student evaluations of each other's work?
- \* i. Laboratory, shop, or studio assignments?

### NSOPF:04 Faculty Instrument Facsimile 23

\* 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

150

3 = Not used

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

**Form Administered To:** Faculty and instructional staff who had instructional duties

**StemWording:** During the 2003 Fall Term at [FILL INSTNAME], did **you** have one or more web sites for any of your teaching, advising, or other instructional duties? (Web sites used for instructional duties might include the syllabus, readings, assignments, and practice

exams for classes; might enable communication with students via listservs or online forums; and might provide real-time computer-based instruction.)

0 = No

1 = Yes

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

**Form Administered To:** Faculty and instructional staff who had instructional duties

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

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

**Form Administered To:** All faculty and instructional staff

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

0 = No

1 = Yes

#### **NSOPF:04 Faculty Instrument Facsimile 24**

**Form:** Q47

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

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

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

**Form Administered To:** Faculty and instructional staff who provided individual instruction to students

**StemWording:** [IF Q32A>0 AND Q32B=0 OR BLANK] How many undergraduate students received individual instruction for credit from you during the 2003 Fall Term? [ELSE] Of the students who received individual instruction for credit from you during the 2003 Fall Term, how many were . . . [ENDIF] (If none, enter "0.")

\* Undergraduate students

\* Graduate students

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

**Form:** Q47b

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

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

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

**Form Administered To:** Faculty and instructional staff who provided individual instruction to undergraduate, graduate, or first-professional students

**StemWording:** Of the students who received individual instruction for credit from you during the 2003 Fall Term, what was the **total number of hours** you spent each week with your. . . (If less than one hour, enter "1.")

- \* Undergraduate students
- \* Graduate students
- \* First-professional students

## NSOPF:04 Faculty Instrument Facsimile 25

**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?

#### **NSOPF:04 Faculty Instrument Facsimile 26**

- \* Published reviews of books, articles, or creative works; or chapters in edited volumes?
- \* Textbooks, other books; monographs; research or technical reports disseminated internally or to clients?
- \* Presentations at conferences, workshops, etc.?
- \* Exhibitions or performances in the fine or applied arts?
- \* Patents and computer software products? (For publications, include only works that have been accepted for publication. Count multiple publications/presentations of the same work only once. Include electronic publications that are not published elsewhere in the appropriate categories.)

**Form:** Q52b

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

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

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

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

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

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

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

**Form Administered To:** Faculty and instructional staff who have presented or published during their career

**Stem wording:** 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?

#### **NSOPF:04 Faculty Instrument Facsimile 27**

**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:

#### **NSOPF:04 Faculty Instrument Facsimile 28**

**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.

### **NSOPF:04 Faculty Instrument Facsimile 29**

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

**Form Administered To:** Faculty and instructional staff engaged in scholarly activity

**Stem Wording:** 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

**Stem Wording:** 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)

**Stem Wording:** [IF Q1=1 OR Q46=1 OR Q48>0 OR Q35A1>0 OR Q35A2>0] With regard to your job at [FILL INSTNAME] during the 2003 **Fall Term**, would you say you were very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied with. . .

### **NSOPF:04 Faculty Instrument Facsimile 30**

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

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

**Form:** Q65

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

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

**Form Administered To:** All faculty and instructional staff

**StemWording:** \* Have you retired from another position?

0 = No

1 = Yes

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

Years of age/Don't know

### ► SECTION F: Compensation

**Form:** Q66

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

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

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

### NSOPF:04 Faculty Instrument Facsimile 31

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

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

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

**Form Administered To:** All faculty and instructional staff

**StemWording:** We are almost finished. The next questions will be about your compensation and about your background. Your responses to these items—as with all items on this instrument—are voluntary and strictly confidential. They will be used only in statistical summaries. **For the 2003 calendar year**, please estimate your gross compensation before taxes. Do not include non-monetary compensation. (Enter dollar amount. If not sure, give your best estimates. If not applicable, enter "0.")

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

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

b. How much compensation did you receive from other income from this institution not

included in basic salary (e.g., for summer session, overload courses, administration, research, coaching sports, etc.)?

**Next, your compensation from other sources**

- c. How much were you paid for employment at another postsecondary institution?
- d. How much were you paid for outside consulting or freelance work?
- e. How much were you compensated for any other employment besides consulting and another postsecondary institution (e.g., speaking fees and honoraria, self-owned business, legal/medical/psychological services, professional performances/exhibitions)?
- f. How much income did you receive from any other source (e.g., investment income, royalties/commissions, pensions, real estate, loans, alimony, or child support)?

**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

**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

### NSOPF:04 Faculty Instrument Facsimile 33

**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  $Q66B \geq 1$  and  $Q66B \leq 8$ ] You told us before that **your** income from all sources for the 2003 Calendar year was [FILL Q66B]. What was your total **household income** before taxes for that same year? [ELSE] For the 2003 calendar year, what was your total household income before taxes? [ENDIF] (By household income, we mean the total income received by all persons, including yourself, residing in the house during the 2003 calendar year, but excluding minors and full-time students. Please include income from employment and from other sources including your spouse or partner, self-employment, interest earnings, alimony or child support, insurance benefits, and pension payments.)

\* Enter amount:

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

**Form Administered To:** Faculty and instructional staff who did not provide their household income

**StemWording:** The following ranges may make it easier for you to report your total household income. Was your income between. . . (Your responses to these items are strictly confidential. They will be used only in statistical summaries.)

-1 = Don't know

1 = \$1–24,999

2 = \$25,000–49,999

3 = \$50,000–74,999

4 = \$75,000–99,999

5 = \$100,000–149,999

### NSOPF:04 Faculty Instrument Facsimile 34

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

**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**

**Form Administered To:** All faculty and instructional staff

**StemWording:** How many dependent children do you support? (A dependent child is a person 24 years old or younger for whom you provide at least half of his/her financial support.)

\* Number of dependent children:

0 = None

1 = 1

2 = 2

9 = 9

10 = 10 or more dependents

**Form:** Q80

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

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

**Form Administered To:** All faculty and instructional staff

**StemWording:** Were you born in the United States?

0 = No

1 = Yes

Are you a United States citizen?

0 = No

1 = Yes

#### **► SECTION H: Opinions**

**Form:** Q82

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

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

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

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

**Form Administered To:** All faculty and instructional staff

### **NSOPF:04 Faculty Instrument Facsimile 37**

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

\* a. Good teaching is rewarded

\* b. Part-time faculty are treated fairly

\* c. Female faculty members are treated fairly

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

1 = Strongly Agree

2 = Somewhat Agree

3 = Somewhat Disagree

4 = Strongly Disagree

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

**Form Administered To:** All faculty and instructional staff

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

0 = No

1 = Yes

Appendix E: Review of Literature from the Past 10 Years

Reference	Job Satisfaction	Higher Ed	Community College	Business	Foreign Born	Minorities	Gender	Abroad
Aguirre, 2000	X	X			X	X		
Al-Enezi, 2009	X	X						X
Ali & Ahmed, 2009	X	X			X	X		
Altbach, 2006		X						
Antonio, 2002		X				X		
Attar & Sweiss, 2010	X			X				X
August & Waltman, 2004	X	X					X	
Bender & Heywood, 2006	X						X	
Bilimoria et. al, 2006	X	X					X	
Callister, 2006	X	X					X	
Corley & Sabharwal, 2007		X			X			
Decker et al., 2009	X			X				
Dougherty & Townsend, 2006			X					
Flowers & Jones, 2003		X				X		
Gui et al., 2009	X	X						
Hagedorn, 2000	X							
Hagedorn & Sax, 2004	X	X					X	
Hardy & Katsinas, 2007	X		X					
Isaac & Boyer, 2007	X		X				X	
Jacobs & Winslow, 2004	X	X					X	
Johnson & Regents, 2003		X			X			
Judge, Bono, & Locke, 2001	X							
Lahey & Vihtelic, 2000	X	X						
Laden, & Hagedorn, 2000	X	X				X		
Lee, 2002		X			X			
Lin et al., 2009	X	X			X			
Manzo, 2000			X				X	
Marvasti, 2005.	X	X			X			
Monks & Robinson, 2000		X				X	X	
Niemann & Dovidio, 2005	X					X		
Parson & Broadridge, 2006	X			X				X

Perna, 2003		X				X	X	
Peterson, et al, 2004		X				X		
Robst et al., 2003		X				X		
Rosser, 2004	X	X						
Rosser, 2005	X	X						
Sabharwal & Corley, 2009	X	X					X	
Settles et al., 2006	X	X					X	
Valdez & Antony, 2001	X		X					
Ward & Sloane, 2000	X	X			X			
Wells, 2007			X		X			
Xu, 2008		X						