

ABSTRACT

LYONS, FRANKIE WOODARD. Exploring Community College Faculty Job Satisfaction: Application of the Satisfaction-Performance Motivation Model. (Under the direction of Dr. Duane Akroyd).

Community colleges are becoming increasingly important organizations within the modern structure of higher education. Nearly half of all U.S. college students are enrolled in community colleges. Forces driving the expanding reliance upon community colleges to provide the postsecondary educational needs of U.S. citizens include: the current economic downturn, the rising costs of higher education, and changing expectations upon today's workforce requiring workers to possess skill sets beyond those gained with a high school diploma. Community colleges offer a more affordable option to meet the educational needs for a broad spectrum of students including traditional college students (18-24 years old), dual-enrolled high school students, and non-traditional students (age 25 and above) seeking a second career or updated skills.

Community college faculty are the employees primarily relied upon to facilitate student learning and program completion. There is growing concern that a shortage of community college faculty will emerge as numerous faculty retire amid increasing student enrollment. Community college administrators need strategies for retaining non-retiring faculty while recruiting for new faculty to replace retirees. One effective strategy will be to offer a work environment that cultivates positive work-related attitudes within faculty such as job satisfaction. This study was designed to examine the ability of selected human capital investments, intrinsic work rewards, extrinsic organizational rewards, and socio-demographics to predict the overall job satisfaction of full-time community college faculty.

The research used a cross-sectional predictive design utilizing secondary analysis of the 2004 National Study of Postsecondary Faculty (NSOPF:04) dataset.

Data analysis utilized Logistic Regression to determine a predictive model for overall job satisfaction. Results showed that faculty who were more satisfied with their salary, benefits and workload; were more satisfied with the teaching support they received from their institution; and who perceived that females and minorities were treated fairly by the organization were more likely to be overall satisfied with their work. Results also showed that minority faculty were less likely to be overall satisfied with their job, as were faculty who indicated that they would again choose a career in academe if given the choice.

Exploring Community College Faculty Job Satisfaction: Application of the
Satisfaction-Performance Motivation Model

by
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DEDICATION

In loving memory of my mother, Faye Rose Woodard, who taught by example as she modeled for my brothers and me her value for academic excellence, higher education, and life-long learning.

BIOGRAPHY

Frankie Woodard Lyons was born in Kinston, North Carolina where she lived until the age of 17. After graduating from North Lenoir High School, she entered the University of North Carolina at Chapel Hill. Frankie attended UNC-Chapel Hill from 1978 to 1982 where she obtained her Bachelor of Science Degree in Radiologic Science. She completed her Master of Science Degree in Healthcare Administration at the University of North Carolina at Charlotte in 2004. In 2006, Frankie was admitted to the Doctoral Program in the Department of Adult and Community College Education at North Carolina State University.

Frankie is certified by the American Society of Radiologic Technologists in the disciplines of Radiography and Mammography. She has worked as both a Radiographer and Mammographer in various states and in a variety of healthcare settings. In 1996, she first entered the formal educational instructional arena as an adjunct clinical and didactic instructor for the Associate in Applied Science Degree Program in Radiography at Rowan-Cabarrus Community College (RCCC) in Salisbury, NC. Over the next 15 years, Frankie served as a full-time Instructor, Clinical Coordinator and eventually Program Chair for the Radiography Program at RCCC. She currently is the Dean, School of Health, Wellness, and Public Safety at Davidson County Community College in Lexington, NC.

In 1978, Frankie was Salutatorian for her high school graduating class at North Lenoir High School. She was inducted into the Honorary Society Phi Kappa Phi at the University of North Carolina at Charlotte, and also at North Carolina State University. While at RCCC, Frankie received the 2011 Excellence in Teaching Award.

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CHAPTER 1: INTRODUCTION

Community College Faculty

Demand and Value

Community college faculty represent more than one-third of all faculty within postsecondary education institutions and educate nearly half of all first-time college students (Cohen & Brawer, 2008; Gahn & Twombly, 2001; Huber, 1998; Jaeger & Eagan, 2009). Community colleges represent the sole entry option into postsecondary education for many first-time college students (Bailey, Alfonso, Calcagno, Jenkins, Kienzl, & Leinbach, 2004; Boggs, 2004). The National Center for Education Statistics (NCES) projects that the number of high school graduates will reach 3.3 million by 2017 exceeding the standing record of 3 million set in 1979 (2008b). College enrollment increased 23 percent between 1992 and 2006 and is projected to increase an additional 16 percent to 20.6 million by 2017. Enrollment growth in the 25-and-over age group will surpass the under-25 group between 2005 and 2016 (NCES, 2008b). As open door institutions, community colleges will be expected to increase enrollment to help accommodate the projected growth in college attendance (Cohen & Brawer, 2008; Townsend & Twombly, 2007).

Further demands for community colleges emerge from their expanding roles within higher education. Such roles include the escalating transfer function, and the addition of the community college baccalaureate degree. In addition, more high school students are seeking early-college and dual-credit options (Cohen & Brawer, 2008; Twombly & Townsend, 2008). The persisting economic downturn creates additional demand. Displaced workers are turning to community colleges to retool, retrain, and to acquire new skill sets necessary for

competitiveness in emerging professions and a global job market. The Obama administration cites education as a long-term solution for economic recovery as previous administrations have done (Van Noy & Zeidenberg, 2009). However, the Obama administration is intensifying the focus upon community colleges in areas such as advanced manufacturing.

Community colleges are being urged to expand services to meet increasing need stemming from the 2008 economic downturn as well (Pope, 2012; Van Noy & Zeidenberg, 2009). Enrollment projections published prior to 2008 did not factor in the current economic crisis. Yet as the economic downturn deepens, community colleges face budget shortfalls that threaten to limit the most accessible option for many displaced workers as well as first-time students who are seeking a more affordable college choice (Murray & Cunningham, 2004; Van Noy & Zeidenberg, 2009). Increasing demand upon community colleges simultaneously creates increased demands for the services and duties of community college faculty.

Besides being responsive to community needs, community colleges are also valued for their diversity. More women and racially diverse faculty teach in community colleges than in universities and 4-year institutions (Finkelstein, Seal, & Schuster, 1998; Huber, 1998; Provasnik & Planty, 2008). Community college administrators have consciously focused upon assembling faculty bodies more similar to the student populations they serve (Evelyn, 2001). Community colleges and their faculty are valued because they serve such a large percentage of new and returning college students.

Yet despite their value and broad scope of influence, the numbers of community college faculty are dwindling. The primary factor that is decreasing the ranks of community

college faculty is retirement. Growth in numbers of students enrolling in the nation's community colleges creates increasing demand for those remaining faculty.

Shortage of Community College Faculty

The literature suggests that administrators within community college systems are currently facing an immense challenge as numerous highly-qualified, experienced faculty members simultaneously reach retirement age (Berry, Hammons, & Denny, 2001; Gahn & Twombly, 2001; Harris & Prentice, 2004). Unprecedented numbers of "graying" community college faculty are predicted to retire during the coming decade while too few qualified instructors are prepared to replace them (Harris & Prentice, 2004; Rifkin, 2000; Sprouse, Ebbers, & King, 2008). As early as 2001, researchers predicted a "worst-case scenario" (Berry, et al., 2001, p. 124) for community colleges created by swelling enrollments, high levels of faculty turnover, numerous retirements, and a shortage of qualified replacements (Murray & Cunningham, 2004).

Retirement vacancies will necessitate accelerated recruiting and hiring initiatives within community colleges (Corbin, 1998; Dee, 2004; Murray & Cunningham, 2004; Rosser & Townsend, 2006; Winter & Kjorlien, 2000). Projections made in the early 2000's for faculty retirement numbers ranged from 30 percent (Evelyn, 2001) to 44 percent (Gahn & Twombly, 2001). Re-staffing efforts are challenged by a limited pool of qualified applicants during a period of unprecedented nationwide demand (Cohen & Brawer, 2003; Dee, 2004; Murray & Cunningham, 2004; Winter, Petrosko, & Rodriguez, 2007).

Those early shortage forecasts may have missed the actual timing of the retirement bubble. The community college faculty shortage was originally predicted as an eminent event likely to occur during the early part of the 2000's (Berry, et al., 2001; Gahn & Twombly, 2001; Harris & Prentice, 2004). In 2007, Winter, et al., describe the recruitment of qualified community college faculty as an “emerging problem [that] results from massive retirements” (2007, p. 19). In the following year, Sprouse, et al. (2008), note that “a likely community college teacher shortage [is] on the horizon (p. 985). The most current information from the U.S. Department of Labor's (DOL) Occupational Outlook Handbook, 2010-11 Edition cites the “large numbers of postsecondary teachers who are likely to retire over the next decade” (2010, p.4). Additional DOL projections regarding postsecondary faculty include: a 15 percent growth in job openings between 2008 and 2018, growing demand upon community colleges as adults return to upgrade skill sets, and increasing college enrollment stemming from growth in the 18 to 24 year old population segment. The anticipated faculty retirement bubble apparently has been delayed, perhaps due to the economic downturn that has weakened retirement funds (Townsend & Twombly, 2007).

A shortage of community college faculty will impact the reactionary feature that characterizes community colleges (Berry, et al., 2001). Community colleges traditionally have been relied upon to rapidly respond during periods of high demand and economic downturn. The colleges' ability to respond to record demand is adversely impacted by the large numbers of simultaneous faculty retirements. The ripple effects of a faculty shortage will be far-reaching considering the broad mission and economic impacts of community

colleges with regard to national workforce development in a global economy (Van Noy & Zeidenberg, 2009). Thus, it is vital that community colleges retain non-retiring faculty as well as attract qualified replacements to fill the gaps. Retention of faculty will become a vital first step in addressing the faculty shortage.

Retention of Community College Faculty

Faculty turnover places burdens upon institutions in recruitment and selection processes, and in disruptions to student learning (Rosser & Townsend, 2006). High costs in terms of time and monetary resources for recruitment of new faculty, declines in institutional reputation, and detriment to student outcomes and well-being result from faculty turnover (Berry, et al., 2001; Berry & Morris, 2008; Jaeger & Eagan, 2009; Winter & Kjørlien, 2000; Zhou & Volkwein, 2003). Some turnover is inevitable due to illness or relocation; however, significant amounts of voluntary turnover could be avoided by ensuring faculty's expectations of rewards and the working environment are equitably met (Berry & Morris, 2008; Dee, 2004; Fried, Shirom, Gilboa, & Cooper, 2008; Harris & Prentice, 2004; Rosser & Townsend, 2006). Isaac & Boyer (2007) state that high levels of faculty job satisfaction result in less turnover and absenteeism, and in faculty who are more interactive with and helpful to students. Thus, job satisfaction becomes important for faculty retention.

Relocation options for non-retiring faculty will arise as colleges continue to expand programs while numerous retirements are occurring. Community college faculty will evaluate and weigh the options of remaining at one's current institution versus relocation. Non-retiring faculty may seek out employment in community colleges with favorable

reputations. To retain current faculty, community college administrators will seek guidance in creating an enticing work environment that demonstrates value for and commitment to faculty thereby fostering positive attitudes toward their work (Berry & Morris, 2008; Hardy & Laanan, 2006; Harris & Prentice, 2004; Murray & Cunningham, 2004; Rosser & Townsend, 2006). Satisfied faculty members are more likely to remain at their current institution rather than relocate (Murray & Cunningham, 2004; Rosser & Townsend, 2006; Zhou & Volkwein, 2003). Besides increasing retention, these strategies will also impact recruitment by attracting new faculty applicants.

The challenge for administrators is to find the workplace factors that have the greatest correspondence with faculty's perceptions of their job. An institution that demonstrates value for faculty will develop a positive reputation that will attract and retain new faculty applicants (Hardy & Laanan, 2006; Murray & Cunningham, 2004; Rosser & Townsend, 2006). As faculty retirements multiply, it is vital that community colleges retain non-retiring faculty and attract replacements to fill widening gaps in order to meet the community college's challenging mission. The themes that emerge to typify the problem for community colleges can be summed as follows: retirements, recruitment, retention, and enrollment.

Problem

The near-future demand for qualified community college faculty is projected to far exceed the available supply. This scenario will leave colleges competing for a scarce resource during a period of expanding need. Community college administrators wishing to

recruit new faculty and retain current faculty must offer a work situation that cultivates positive attitudes for faculty toward their jobs.

Strategies that administrators may have implemented in the past to positively impact job satisfaction for community college faculty need to be periodically re-evaluated for current applicability and updated as needed. Community college faculty have traditionally been identified as more satisfied than faculty in other types of higher educational institutions. Yet past research may not accurately reflect the work attitudes and behaviors of current community college faculty as some retirements are starting to reshape the group (Gahn & Twombly, 2001; Twombly & Townsend, 2008).

In the following section, the recent research pertaining to the job satisfaction of community college faculty will be briefly explored. An evaluation of the methodologies of previous studies will be offered. Additionally, a synopsis of how this study will differ from previous studies will be noted.

Hardy and Laanan (2006) explored the facets of job satisfaction for full-time faculty at public 2-year institutions during the fall of 1998 utilizing the NSOPF:99 database. They found that full-time community college faculty were least satisfied with increasing workloads. The researchers suggested that their study be repeated after retirements begin in order to update knowledge regarding faculty's intent to leave, perceptions of work, and attitudes toward work. Workers' values morph over time in response to aging, shifting family responsibilities, and fluctuating economic forces (Daly & Dee, 2006; Harris & Prentice, 2004; Jacobson, 2003). Generational differences likewise impact the values of workers

across all major professional fields and industries (Nelson, 2008; Smith, 2008). This research will provide an updated study using the more current NSOPF:04 database. Thus, it offers a valuable addition to and extension of the body of previous research pertaining to community college faculty. Utilization of the most recent data available will include any impacts resultant from full-time community college faculty's shifting values, attitudes, perceptions, and norms as described above (Hardy & Laanan, 2006).

Gahn and Twombly (2001) described the community college academic labor market. Townsend and Twombly (2007) presented a broadly descriptive narrative summarizing the duties of community college faculty. These studies are largely descriptive in nature, lacking any predictive ability regarding the perceptions and attitudes that community college faculty have regarding their work roles. This research does however offer a valuable profile of community college faculty and notes the challenges this faculty group face as they seek to increase professionalization in efforts to improve status, quality and perception of the profession (Townsend & Twombly, 2007).

Valadez and Anthony (2001) measured the job satisfaction and commitment of two-year part-time faculty using NSOPF: 93. The NSOPF:99 database was used to compare the frequency of use of technology for instructional delivery by full-time versus part-time community college faculty (Akroyd, Jaeger, Jackowski, & Jones, 2004; Jackowski & Akroyd, 2010). Umbach (2007) applied Social Exchange Theory to NSOPF: 04 to explore outcomes and effectiveness of contingent workers in community colleges (i.e., part-time faculty). Umbach and Wells (2009) used NSOPF: 04 to focus upon select institutional

variables and contingent (i.e., part-time) community college faculty, exploring specific elements of the job (workload, academic discipline) as they related to part-time faculty's job satisfaction levels. Generalizations from these various studies are limited because differences exist in the work attitudes of full-time versus part-time community college faculty.

Umbach and Wells (2009) found part-time community college faculty to be less satisfied, less committed, and less effective than full-time community college faculty. One primary reason for this difference is attributed to the large percentage (roughly half) of part-time faculty who indicate they prefer to be full-time but are unable to find full-time work. Notably, on community college campuses where large numbers of part-time faculty are utilized, there is an increased likelihood of all faculty, regardless of full or part-time status, stating that they would not again choose a career as faculty. Part-time community college faculty are also less satisfied with their salary and benefits, and less satisfied with their jobs overall (Umbach & Wells, 2009). My study will differ from this study by narrowing the focus to include only full-time community college faculty, a population differing in multiple perspectives from their part-time colleagues.

Winter and Kjorlien (2000) explored faculty recruitment for community college business departments and found that a focus upon intrinsic factors of job satisfaction (e.g., opportunities for career advancement, campus environment, and teaching) and job opportunities for one's spouse were most luring for potential applicants. Issac and Boyer (2007) explored the job satisfaction of minority faculty. Using NSOPF:99 they compare the job satisfaction of minority faculty in urban versus rural community colleges. Generalizations

from these studies are limited because the studies target specific segments of the community college faculty population (e.g., business faculty, minority faculty, faculty in urban community colleges, and faculty in rural locales).

In 2008, a research team used NSOPF: 04 to compare full-time and part-time community college faculty with 4-year faculty regarding factors that predict faculty "satisfaction with authority to make decisions about content and methods in instructional activities" (Kim, Twombly, & Wolf-Wendel, 2008, p. 164). Generalizations are limited to a specific facet of satisfaction: instructional autonomy.

Limits to generalizations plague the entire body of recent research focused upon community college faculty. Twombly and Townsend (2008) conducted an extensive literature review of studies pertaining to community college faculty published between January 1990 and September 2007. The authors characterize the majority of these as small-scale studies "conducted at the institutional or state level" (Twombly & Townsend, 2008, p. 11). Thus, the ability to generalize or transfer the knowledge to the larger population of community college faculty is severely restricted. Small-scale, institution or region-specific studies also fail to generate external interest or funding, further limiting resources to support broad-based research of community college faculty (Twombly & Townsend, 2008).

The literature presents a changing estimation regarding the adequacy of the amount of current research focusing upon community college faculty. The National Center for Postsecondary Improvement (1998) reported a deficiency in quantity that was echoed by others (Hardy & Laanan, 2006; Rosser & Townsend, 2006; Townsend & LaPaglia, 2000;

Twombly & Townsend, 2008). There appears to be some shifting as increasingly more studies have been published during the first decade of the 21st century. Yet, some still perceive the amount of recent research as inadequate given the volume of community college faculty and the growing numbers of students these faculty impact (Twombly & Townsend, 2008).

Twombly & Townsend (2008) note a significant disparity in research concentrating on community college faculty versus 4-year and university faculty. One theory they offer is that researchers are primarily employed in universities and 4-year institutions, and typically explore topics that are familiar; thus, community college faculty are excluded. Another of their theories suggests that community college faculty are typically not required to conduct research. Thus, university faculty perform most of the research including research pertaining to community college faculty. As a result, when community college faculty are included in research, they typically are compared unfavorably to 4-year and university faculty, appearing deficient in status, outcomes, and student achievement. Research addressing community college faculty is often published in community college journals, dissertations, or institutional reports, publications that target very limited audiences.

Since 2001, NSOPF datasets (:93, :99, :04) have been used in a number of published studies pertaining to community college faculty and the following specific themes: labor market characteristics (Gahn & Twombly, 2001), perceptions of race and gender (Perna, 2003), African American faculty job satisfaction (Flowers, 2005), intent to leave (Rosser & Townsend, 2006), changing work environment (Levin, Kater, & Wagoner, 2006), overall job

satisfaction of minority urban versus rural faculty (Issac & Boyer, 2007), satisfaction with autonomy (Kim, et al., 2008), faculty characteristics and perspectives (Hardy & Laanan, 2006), job satisfaction and commitment of part-time faculty (Valadez & Anthony, 2001), likelihood to utilize technology for instructional delivery (Akroyd, et al., 2004; Jackowski & Akroyd, 2010), job satisfaction and workplace perceptions of foreign-born faculty (Mamiseishvili, 2011), and job satisfaction of part-time faculty (Umbach, 2007; Umbach & Wells, 2009).

None of the studies above have specifically addressed overall job satisfaction of full-time community college faculty collectively. These studies have addressed the generalizability and transferability limitation by using NSOPF national databases; however, secondary data analysis limits the research questions that can be asked. Although these studies offer many valuable insights, none of the studies are specifically designed to develop a predictive model for the job satisfaction of full-time community college faculty. The study that is proposed here will address this identified gap in the literature. In the next section, the theoretical framework that lays the conceptual foundation for the research will be presented.

Theoretical Framework

Understanding how to interpret employees' attitudes and how to motivate employees' behaviors has been a topic of interest for businessmen, and industrial and psychological researchers for more than 80 years (Hertel & Wittchen, 2009; Heslin, Carson, & VandeWalle, 2009; Klein, Austin & Cooper, 2008). In any work situation employees develop attitudes about their jobs. Employers strive to decipher what the attitudes mean, and how to

influence those attitudes and subsequent impacts upon worker behaviors (Borkowski, 2005). Employers are particularly interested in determining what causes employees to develop positive attitudes such as job satisfaction (Lawler, 1983). For this research, job satisfaction will be defined as "the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values [i.e., rewards]" (Locke, 1969, p. 316).

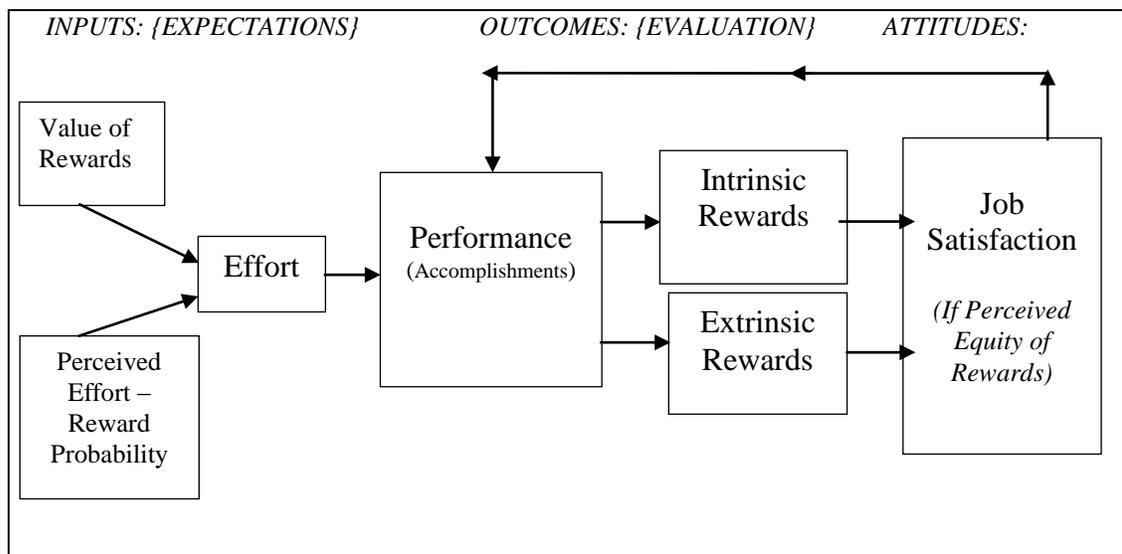


Figure 1.1. Conceptual Model. Porter-Lawler Satisfaction-Performance Motivation Model

Lyman Porter and Edward Lawler (1968) developed the Satisfaction-Performance Motivation Model (See Figure 1.1), also referred to as Performance-Satisfaction Theory, to describe the relationship between employee performance and job satisfaction. Performance-Satisfaction Theory is an extension of two earlier theories: J. Stacy Adams' Equity Theory (1963, 1965) and Victor H. Vroom's Expectancy Theory (1964).

Equity Theory addresses the perceived relative fairness of rewards resulting from a person's job performance and accomplishments. Equity Theory considers the employee's (Person's) inputs (e.g., experience, education, efforts, skills, abilities) and outcomes (e.g., salary, bonuses, promotions, recognition) relative to a comparison employee (Other) (Borkowski, 2005; Porter & Lawler, 1968).

Expectancy Theory, sometimes referred to as VIE Theory explains a person's motivation to perform using three factors: valence, instrumentality, and expectancy. Valence refers to the strength of desire or aversion for an outcome based upon the individual's value for the outcome. Instrumentality is the person's perception that performance (behavior and input) will lead to outcomes that are valued by the individual (rewards and outcomes). Expectancy is described as the person's perception that effort (i.e., action and input) will lead to performance and subsequent outcome (i.e., reward and outcome). Expectancy Theory explains the job satisfaction-performance relationship as follows:

Individuals are satisfied with their jobs to the extent to which their jobs provide them with what they desire, and they perform effectively in them to the extent that effective performance leads to the attainment of what they desire.

(Vroom, 1964, p. 264)

“Porter and Lawler disagree with Vroom's claim that satisfaction drives performance. They develop an alternative framework for exploring the relationship between employee performance and job satisfaction that incorporates Adams' Equity Theory” (Borkowski, 2005, p. 147). According to the Porter-Lawler Satisfaction-Performance Motivation Model,

satisfaction results when an employee performs to potential, then receives expected, valued rewards resulting directly from performance, given the rewards are perceived as equitable. Rewards may be intrinsic (generated within the individual) and/or extrinsic (generated by the organization) (Porter & Lawler, 1968). The employee's degree of satisfaction is proportional to the perceived amount and equitability of rewards (Borkowski, 2005).

Employers must assure that the highest performers receive the greatest rewards in order for the organization's highest performers to be its most satisfied employees. However, rewards must be: 1) valued, 2) perceived as directly resultant from one's effort, and 3) perceived as equitable in order for job satisfaction to result (Borkowski, 2005).

The Porter-Lawler Satisfaction-Performance Motivation Model suggests that an upward spiraling of productivity and job satisfaction can result from simply offering valued rewards equitably to all high-performing employees within the organization. The model is cyclic rather than linear as indicated by the arrow leading from Job Satisfaction back to Performance (See Figure 1.1). Rewarding employees' efforts/performances with valued and equitable rewards will inspire satisfied employees who respond with greater efforts/performances in pursuit of escalating levels of rewards. Likewise, employees' attitudes toward work will become increasingly more positive. Other workers within the organization who possess the same skills, abilities, and values will recognize the connection between performance and rewards. They will be motivated to increase efforts/performances to gain the valued rewards as well. The caveat here is that all employees within the

organization must recognize that the rewards resulted from the workers' efforts and performances (Borkowski, 2005).

For this research, the author developed a Measurement Model (See Figure 1.2) based upon selected concepts and theories presented in the Porter-Lawler Satisfaction-Performance Motivation Model. The specific portions of the Porter-Lawler Model that have been chosen for this study include the effects of intrinsic and extrinsic rewards upon job satisfaction. These portions of the Porter-Lawler Model have been expanded to include select principles of Human Capital Theory and effects of socio-demographic variables upon overall job satisfaction. In this Measurement Model, independent variables will be grouped into four areas: Human Capital Investments, Intrinsic Rewards, Extrinsic Rewards, and Socio-Demographics. These groups of independent variables will be explored for their relationships and predictive abilities with regards to the job satisfaction of full-time community college faculty.

In the following sections, the four groupings of independent variables (Human Capital Investments, Intrinsic Rewards, Extrinsic Rewards, and Socio-Demographics) will be discussed to briefly explore their relationships with the dependent variable, overall job satisfaction. Overall job satisfaction will also be quickly introduced in the context of community college faculty.

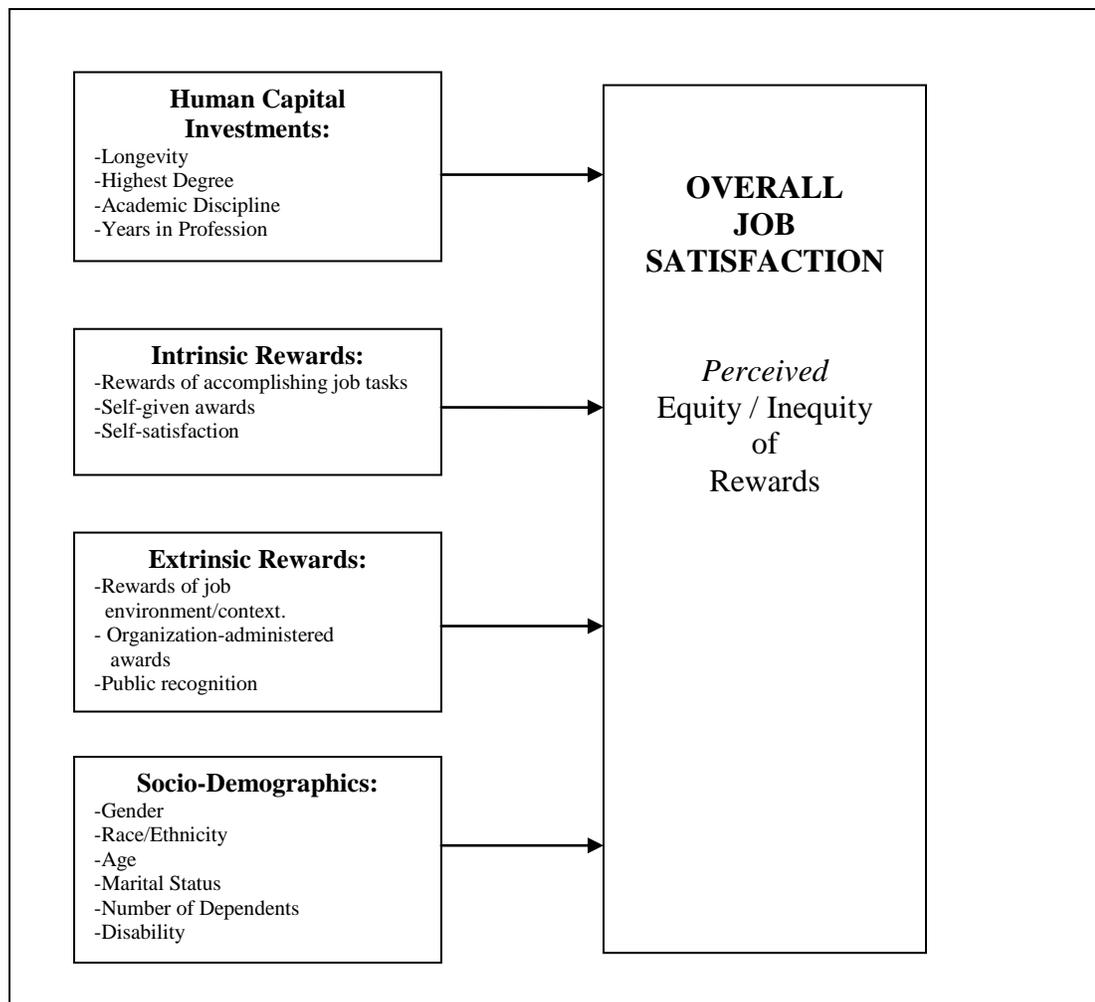


Figure 1.2. Measurement Model. Factors that Affect Job Satisfaction for Full-Time Community College Faculty. Model based upon Porter-Lawler's Satisfaction-Performance Motivation Model.

Human Capital

The first group of variables that will be explored is the human capital group (longevity, highest degree, academic discipline, and years in profession). Although numerous theories and definitions for human capital have been developed, specific ones have been

selected for this research study. Human capital may be defined as the “know how of the work force that increases the productivity of each worker” (Langelett, 2002, p. 1). Human capital may also be described as the capital invested in education, training, and healthcare of workers within an organization (Wang, Shieh, & Wang, 2008). “Human capital itself represents the total value of the human resources of an enterprise, and is composed of the staff and their ability to successfully complete their work” (Wang, et al., 2008, p. 1012). Literature shows that individuals make investments in and decisions regarding their human capital (e.g., education, training, experience, and academic vs. vocational discipline) because they expect future returns (i.e., rewards) to result from improved performance and additional work contributions (Langelett, 2002; Lubinski, Benbow, Webb, & Bleske-Rechek, 2006). Job satisfaction and subsequent performance is impacted according to the match/mismatch between human capital investments and expected rewards (Allen & Van der Velden, 2001; Langelett, 2002).

The application of human capital for this research is illustrated in the Measurement Model (Figure 1.2). The line from Human Capital Investments indicates the correspondence with job satisfaction in the perception of equitable rewards is present. Human capital investments may include: formal education, on-the-job training, informal education, life experiences, and learning by doing (Langelett, 2002). Employees who remain within a designated profession for lengthy periods, and/or remain employed at an institution long-term are making investments in their own human capital by gaining valuable experience and

improving their skills. Simultaneously, they are contributing to the overall success of the organization by helping to accomplish its work goals (Wang, et al., 2008).

Cohen and Outcalt (2001) found that full-time faculty and faculty pursuing a doctoral degree "demonstrated higher degrees of commitment to teaching, to their profession, and to their institution" (p. 3). Umbach (2007) found that faculty who feel valued, supported and rewarded will "exhibit greater commitment to an organization" (p. 93). Institutions that "invest resources to ensure that employees have the information, skills and competencies they need to work effectively" (Wan, 2007, p. 297) demonstrate enhanced employee satisfaction and improved performance measures. In addition, such organizations achieve goals, and "survive and thrive for years to come" (Wan, 2007, p. 297).

It follows that an employee who makes substantial human capital investments (e.g., longevity at an institution, longevity in a given profession, pursuit of an advanced degree) will expect to gain compensation, (i.e., greater amounts of valued outcomes) to reward those investments. According to Porter-Lawler Performance-Satisfaction Theory, if the rewards are perceived as equitably awarded, then job satisfaction will occur. As a result, the satisfied employees are motivated to come to work more regularly, demonstrate more commitment to the institution, perform at an even greater level, and are more likely to remain at the institution (Allen & Van der Velden, 2001; Berry & Morris, 2008; Langelett, 2002; Rosser & Townsend, 2006; Winter & Kjorlien, 2000).

Rewards

The next groups of rewards that will be explored for relationships to job satisfaction are intrinsic rewards (rewards of accomplishing job tasks, self-given awards, self-satisfaction) and extrinsic rewards (rewards of job environment/context, organization-administered awards, public recognition). Rationale will also be stated for the selection of specific reward variables.

In order for community college faculty to be satisfied, work rewards that are valued by faculty must be offered. Rewards may be categorized as either intrinsic or extrinsic. Intrinsic rewards are generated within the faculty member and are associated with doing tasks of the work itself (i.e., teaching, working with students). In contrast, extrinsic rewards are distributed by the institution and are associated with the work environment or context (Borkowski, 2005; Porter & Lawler, 1968; Smerek & Peterson, 2007).

To motivate job satisfaction, valued rewards must result directly from on-the-job efforts, and be equitably distributed to all skilled, deserving faculty. The Porter-Lawler Model may be utilized to determine which rewards are *valued* by community college faculty. Research results can help colleges to assemble highly-productive, committed faculty who exhibit positive attitudes toward work. Community college administrators can utilize the results to retain current highly-qualified, productive, and satisfied faculty thus enhancing the college's reputation as a desirable employer. Such a reputation will serve as a recruitment tool by attracting faculty applicants who are seeking new or more desirable employment opportunities (Berry & Morris, 2008; Rosser & Townsend, 2006).

Intrinsic and Extrinsic Rewards.

The specific grouping of reward variables (intrinsic and extrinsic) will be explained in Chapter 3. Variables were selected for this study because: 1) they have been empirically linked to community college faculty's perceptions of and attitudes toward work (Allen & Van der Velden, 2001; Berry & Morris, 2008; Langelett, 2002; Rosser & Townsend, 2006; Winter & Kjørlien, 2000); 2) they have been proven to impact community college faculty's work-related behaviors (e.g., performance, absenteeism, retention) (Allen & Van der Velden, 2001; Langelett, 2002; Rosser & Townsend, 2006); 3) they have value and significance for community college faculty members (Rosser & Townsend, 2006; Winter & Kjørlien, 2000); and, 4) they are included in the NSOPF:04 dataset.

The literature reveals a long pattern connecting job satisfaction and reward expectations (Hackman and Oldham, 1980; Mottaz, 1985; Wharton, Rotolo, & Bird, 2000). Herzberg (1966) first classified work rewards as either intrinsic or extrinsic. Numerous subsequent researchers have grouped job satisfaction and reward factors in similar fashion (Berry & Morris, 2008; Gruneberg, 1979; Hackman and Oldham, 1980; Mottaz, 1985; Rosser & Townsend, 2006; Winter & Kjørlien, 2000). Intrinsic rewards are rewards associated with the work itself, those reward factors associated with accomplishing the tasks of the job. Extrinsic rewards are those associated with the work environment or the context in which tasks are performed. Extrinsic rewards are described as clearly visible to all workers within the organization (Mottaz, 1985).

A note of interest: some variables (e.g., pay and benefits, and recognition) have been categorized as intrinsic by some researchers and extrinsic by others. Categorization of intrinsic or extrinsic depends upon the researcher's theoretical framework and the definitions used for variables in the study. For example, some researchers claim money (e.g. merit raise, performance bonus) is a motivator for worker satisfaction and behavior (intrinsic reward) while others claim money is simply associated with membership in the organization (extrinsic reward). Similarly, recognition has been dually categorized depending upon the researcher's lens. If recognition is described as a public reward visible to all employees it is considered extrinsic. In contrast, when recognition refers to the employee's sense of pride, accomplishment, and self-worth resulting from public praise, the reward is considered intrinsic (Grant, 2008; Klein, et al., 2008). This inconsistency in classification of rewards variables leads to some confusion when interpreting results of past research. For this research, pay and benefits will be categorized as an extrinsic reward. Recognition will not be included as a variable in this study because it is not included in the NSOPF:04 dataset that will be analyzed.

Rosser and Townsend (2006) utilized a conceptualization of community college faculty work rewards grouped as intrinsic and extrinsic. The researchers found that rewards coupled with institutional culture impact retention of existing community college faculty. Winter and Kjorlien (2000) found that a focus upon intrinsic rewards and job satisfaction will also boost recruitment of community college faculty.

Socio-Demographics

In this section, the rationale for the inclusion of socio-demographic variables (gender, race/ethnicity, age, marital status, number of dependent children, and disability) will be briefly explained. A more thorough discussion of each variable follows in Chapter 2.

The value that workers place upon rewards may vary considerably resulting in differences in job satisfaction levels among workers in all types of institutions. The individual variance in work values has prompted the inclusion of background factors and demographics (e.g., gender, age, education level, tenure, full-time or part-time status, marital status, urban-rural background, and race) in various studies of job satisfaction yielding mixed results (Dee, 2004; Isaac & Boyer, 2007; Lester, 2008; Mottaz, 1985; Pearson, 2008; Van der Linden, 2004). Findings indicate that socio-demographics (e.g. gender, race, age, marital status) also impact community college faculty's attitudes and values (Townsend & Twombly, 2007). Thus, the inclusion of demographic variables will add to the knowledge generated from this research study. In the next section, the dependent variable, overall job satisfaction is introduced and briefly discussed.

Overall Job Satisfaction

Locke (1969) defines 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). Berry and Morris (2008) separate job satisfaction into two categories: global (i.e., overall) job satisfaction, and faceted job satisfaction. They define global/overall job satisfaction as satisfaction with one's job in general. In contrast, the researchers define

faceted job satisfaction as a function of the various contributions from its array of multidimensional facets (Berry & Morris, 2008). This research study will be focusing upon the global/overall job satisfaction of full-time community college faculty.

In an attempt to limit some variability, this research will be limited to full-time faculty included in the National Survey of Postsecondary Faculty (NSOPF:04) database who are employed in public two-year institutions and whose primary responsibility is teaching for-credit courses. Community colleges' full-time faculty hold significant importance for their institutions because they represent a large financial investment, perform the majority of service/committee work, and are essential for the success of institutional outcomes (Sprouse, et al., 2008).

Purpose

The purpose of this study is to examine variables that influence overall job satisfaction among full-time community college faculty including human capital investment variables, select intrinsic and extrinsic reward variables, and socio-demographic variables.

Research Question

The following research question will be implemented to accomplish the purpose:

1. What are the effects of Human Capital Investment Variables (longevity, highest degree, academic discipline, and years in profession), Intrinsic Reward Variables (rewards of accomplishing job tasks, self-given awards, and self-satisfaction), Extrinsic Reward Variables (rewards of job environment/context, organization-administered awards, and public recognition), and Socio-Demographic Variables (gender, race/ethnicity, age, marital status, number of dependent children, and disability) on full-time community college faculty's overall job satisfaction?

Significance of Study

A research study that focuses upon community college faculty's perceptions of and attitudes toward work is important for several reasons. Faculty within these educational institutions represent a major portion of postsecondary educators. "Forty-three percent of all full-and part-time faculty members work in community colleges" (Townsend & Twombly, 2007, p.1).

The impact of this faculty body is far reaching and highly influential in American society. Community college faculty "teach almost 40 percent of all undergraduates and, in particular, a high percentage of students of color" (Townsend & Twombly, 2007, p. 3). Many community college students matriculate to universities and 4-year colleges. High school students pursuing dual-credit or dual-enrollment tracks are also found on community college campuses (Townsend & Twombly, 2007). The impact of community college faculty

is predicted to expand during the coming decade due to population growth and economic conditions (Boggs, 2004). Current trends suggest that record numbers of high school students will be graduating during the 2010s, and half or more of these students will show up at the nation's community colleges. As the economic downturn continues, ever-mounting numbers of displaced workers (i.e., non-traditional students) are turning to community colleges to upgrade skills or retrain for the emerging global labor markets (Berry, et al., 2001; Van Noy & Zeidenberg, 2009).

This study will offer valuable information to community college administrators facing the challenges of retaining non-retiring faculty and recruiting new faculty to replace retirees. One method to attract qualified applicants is to gain the reputation as an institution where the faculty members experience high levels of job satisfaction. Additionally, current non-retiring faculty will more likely stay at an institution where job satisfaction is emphasized (Murray & Cunningham, 2004; Rosser & Townsend, 2006; Zhou & Volkwein, 2003).

Community college faculty play a key role in the accomplishment of institutional mission and goals. Research suggests that satisfied workers are more productive, healthier, and come to work more regularly (Isaac & Boyer, 2007; Rosser & Townsend, 2006). Students benefit and institutional outcomes are boosted as job satisfaction of faculty has been linked to improved student learning and achievement (Rosser & Townsend, 2006; Townsend & Twombly, 2007). Satisfied faculty demonstrate lower levels of turnover and absenteeism, and are more interactive with and helpful to students (Hutton & Jobe, 1985; Isaac & Boyer, 2007).

This study will address the lack of consensus in the body of current research regarding job satisfaction and community college faculty. Smerek & Peterson (2006) state that “there is little unity in understanding job satisfaction in a college or university context” (p. 230). Community college administrators need strategies for retention and recruitment initiatives. In a climate of fierce competition for qualified community college faculty, job satisfaction and faculty retention factors, in particular those factors proven to impact student learning outcomes (SLOs) will gain increased significance (Townsend & Twombly, 2007; Twombly & Townsend, 2008).

Budgetary implications will also emerge from retention and recruitment initiatives. “Given the resource constraints at every college and university, wisely using money to impact job satisfaction will aid in their overall functioning” (Smerek & Peterson, 2006, p. 247). Retention will decrease the funds necessary for recruitment and training of new faculty hires. Funding is a primary concern for community colleges where state officials control the expenditures of tax dollars. “44% of funding [for community colleges] comes from state subsidies” (Jenkins, 2008 Bridges to Opportunity Initiative). More states, the primary funding source for community colleges, are moving toward performance-based funding.

Community colleges face monumental challenges in meeting student performance goals due to open door admissions. Open admissions result in a high enrollment of developmental students, many of whom lack the basic skills necessary to achieve satisfactory levels of academic performance measures. The improved student learning outcomes associated with satisfied faculty can positively impact performance-based budgeting (Eagan,

2007; Levin, 2005; Townsend & Twombly, 2007; Twombly & Townsend, 2008; Voorhees, 2001).

Broadly applicable strategies for community colleges' human resource policies and procedures will emerge from this study. The study will test a predictive model of factors that impact overall job satisfaction of full-time community college faculty. A national data set (NSOPF: 04) will be employed for the testing of the model adding national implications for and generalizability of findings. Equipped with knowledge of the factors that most profoundly impact community college faculty's overall job satisfaction, community college administrators can examine and adjust current practices and policies in order to more effectively retain and recruit full-time faculty during a period of high student enrollment and numerous faculty retirements (Hardy & Laanan, 2006; Zhou & Volkwein, 2003).

Definition of Terms

Job satisfaction: "The pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values" (Locke, 1969, p. 316).

Global job satisfaction: Overall job satisfaction; satisfaction with one's job in general (Berry & Morris, 2008).

Faceted job satisfaction: Satisfaction as a function of the various contributions from its array of multidimensional facets (Berry & Morris, 2008).

Human capital: The know-how of the work force that increases the productivity of each worker (Langelett, 2002).

Human capital investments: education and training undertaken with the expectation future returns will yield in the workplace (Langelett, 2002).

Intrinsic rewards: Those rewards or motivators associated with accomplishing the specific tasks of the work itself (e.g., achievement, recognition, work itself, responsibility, autonomy, advancement and growth opportunities, professional development support, and clarity of mission) (Smerek & Peterson, 2007).

Extrinsic rewards: Those rewards or motivators associated with the work environment or context (e.g., company policy and administration, supervision, relationship with supervisor/peers/subordinates, work conditions, equipment and facilities, salary and benefits, presence of core values, personal life, recognition, status, and safety and security) (Smerek & Peterson, 2007).

Value: A principle, standard, or quality regarded as worthwhile or desirable; concept that underlies an individual's choice of goal or decision to accept a goal (Locke & Latham, 1990).

Performance: Actions of a worker in the workplace with regard to one's potential; resulting accomplishments of a worker's efforts on the job (Borkowski, 2005).

Equity: perceived relative fairness of rewards resulting from a person's job performance and accomplishments relative to a comparison other (Borkowski, 2005).

Summary and Overview

In this chapter, community colleges are established as increasingly important institutions within the arena of higher education. Full-time community college faculty are crucially important in carrying out the mission of their institutions. The literature suggests

that demand for community colleges will be increasing during a period of escalating retirements of community college faculty creating a potential shortage of faculty. The shortage will be compounded by an expected increase in student enrollment at community colleges. This study will explore methods to predict the job satisfaction of full-time community college faculty. The findings of this study will provide valuable strategies for community college administrators to implement in order to recruit and retain faculty for their institutions. This study is designed to address an identified gap in the current literature by developing and testing a predictive model for the job satisfaction of full-time community college faculty.

The following chapters will include complete details of the important research introduced in Chapter 1. In Chapter 2, a literature review will explore research pertaining to community college faculty and job satisfaction. In Chapter 3, the methodology of the research study will be presented including details of data collection and statistical analysis. In Chapter 4, the results of the statistical analysis will be thoroughly presented. In Chapter 5, the results will be summarized, conclusions will be drawn, and recommendations for policy, practice, and future research will be presented.

CHAPTER 2: LITERATURE REVIEW

This literature review will explore research pertaining to community college faculty and job satisfaction. The chapter is divided into three major sections: (1) Exploring Theories of Motivation and Attitudes Toward Work; (2) Research Pertaining to Factors that Affect Job Satisfaction for Postsecondary Faculty; and, (3) Community College Faculty and Job Satisfaction.

Exploring Theories of Motivation and Attitudes Toward Work

Industrial and organizational psychologists have long sought to unearth effective strategies for motivating workers and encouraging positive attitudes toward work. A variety of models and frameworks have been used to explain relationships between worker attitudes and worker behaviors. It has been well established that the motivation and attitudes of workers are key components directly impacting both organizational outcomes and worker well-being (Flores & Utley, 2000; Kacel, Miller, & Norris, 2005; Kinjerski & Skrypnek, 2008; Mottaz, 1985; Pearson, 2008; Shutan, 2004; Smith, 2008; Zurmehly, 2008).

Early Theories of Work Motivation

Early work motivation research efforts often referred to the works and theories of psychoanalysts and behaviorists Freud, Watson, and Skinner dating from the early to mid-1900s. Freud's work suggested that humans act in response to the unconscious instincts of sex and aggression [the id] while behaviorist theories proposed that the environment shapes human behaviors. Some later researchers believed that a central component was missing

from these early theories: human cognition and its impact upon motivation, attitudes and behaviors (Locke & Latham, 1990).

Cognitive Theories of Work Motivation

Subsequently, cognitive-based theories began to emerge (e.g., Maslow's hierarchy of needs, Vroom's expectancy theory, Deci & Ryan's intrinsic motivation, and Herzberg's two-factor theory) offering new explanations for motivation and work behaviors. The common thread for these emerging theories was recognition of the human capacity for reasoning. Cognitive abilities enable humans to self-regulate behaviors; imagine possible scenarios that differ from reality; make inferences, deductions, and draw conclusions; and, escape the limitations of present time and space through mental projections (Latham, Locke, & Fassina, 2002; Locke, 2007; Locke & Latham, 1990). One such cognitive theory of motivation is the Porter-Lawler Performance Satisfaction Theory (Porter & Lawler, 1968). The Porter-Lawler Theory will be explored in depth and will serve as the guiding framework for this research study.

Job Attitudes and Work Behaviors

Job satisfaction was a frequently researched topic throughout the thirties and forties. The Western Electric studies (Roethlisberger & Dickson, 1939) were often used to illustrate that workers' attitudes and perceptions in the work place influence work-related behaviors. The data from those early studies created the basis for the commonly accepted assumption at that time that increased job satisfaction leads to increased worker productivity. Researchers during this early timeframe repeatedly concluded that job morale "directly affects the quality

and quantity of an individual's output [and] reduces turnover--cuts down absenteeism and tardiness; lifts production" (Lawler & Porter, 1967, p. 20).

Although a relationship between job attitudes and worker behaviors was demonstrated to exist, past attempts to demonstrate that job satisfaction caused higher worker productivity regularly yielded unsubstantial results. Research did however establish that absenteeism and turnover, two factors that negatively impact organizational effectiveness are related to job satisfaction (Lawler, 1983).

Job Satisfaction and Performance.

The job satisfaction-performance relationship was weak, yet the correlation was persistently positive (Lawler & Porter, 1967). Lawler and Porter summarized that relationship as follows: "the evidence indicates that a low but consistent [positive] relationship exists between satisfaction and performance, but it is not at all clear *why* this relationship exists" (1967, p. 22). Porter and Lawler went on to devote decades of research addressing the *why* of the satisfaction-performance relationship (Borkowski, 2005; Lawler, 1983; Lawler & Porter, 1967; Porter & Lawler, 1968).

Porter-Lawler Performance-Satisfaction Theory.

In their Satisfaction-Performance Motivation Model, also referred to as Performance-Satisfaction Theory, Porter and Lawler (1968) describe the relationship between employee performance and job satisfaction. Performance-Satisfaction Theory is an extension of two earlier theories: J. Stacy Adams' Equity Theory (1963, 1965) and Victor H. Vroom's Expectancy Theory (1964). Lawler and Porter (1967) surmise that:

people are motivated to do things which they feel have a high probability of leading to rewards which they value. When a worker says he is satisfied with his job, he is in effect saying his needs are satisfied as a result of having his job. (p. 22)

One of the major tenets of Performance-Satisfaction Theory is that of valued rewards resulting from worker behaviors. A worker is motivated to come to work and to remain with an organization when one's important needs are satisfied by performing a given job. Thus, the relationship between worker attitudes and absenteeism and turnover is explained. Each worker places varying degrees of importance upon specific rewards based upon one's values. For example, one worker may value a promotion while another worker may not due to the additional responsibilities that will accompany it (Lawler, 1983).

Porter and Lawler (1967, 1968) noted that theoretical evidence did not support the regularly claimed causal relationship: high job satisfaction causes increased job performance. They used Vroom's (1964) findings to support an alternate relationship:

Job satisfaction is closely affected by the amount of rewards that people derive from their jobs and....level of performance is closely affected by the basis of attainment of rewards. Individuals are satisfied with their jobs to the extent to which their jobs provide them with what they desire, and they perform effectively in them to the extent that effective performance leads to the attainment of what they desire. (p. 246)

Vroom's (1964) theoretical perspective is closely related to path-goal relationships and is the basis for his suggestion that satisfaction results from goal attainment (Porter & Lawler, 1968). In Performance-Satisfaction Theory, the assumption is that goal attainment is synonymous with the achievement of valued rewards.

Equity Theory (Adams, 1963, 1965) further explains how the employee's perceptions of job rewards impact job attitudes and behaviors. If the employee *perceives* there to be inequity in the distribution of rewards in a given workplace, tension builds in the employee. The employee then acts to reduce the tension by resolving the inequity. Several inequity-resolving methods are available for the employee to choose from: 1) alter inputs by reducing productivity; 2) alter outcomes by seeking a raise or promotion; 3) cognitively distort inputs or outputs of Person (self) by thinking how much harder one works in comparison to Other; 4) leave the field by transferring or resigning; 5) distort inputs or outputs of comparative Other by describing Other's job as undesirable; or, 6) changing comparison Other by finding someone more like one's self (Person) (Adams, 1965; Borkowski, 2005).

The Porter-Lawler Model (Figure 1.1, p. 13) offers a theoretical framework for exploring one specific job attitude (i.e., job satisfaction) and one specific work behavior (i.e., performance). Two important assumptions of the Porter-Lawler Model are: 1) rewards not tied to performance (e.g., raises based upon seniority) will not demonstrate a correlation between job satisfaction and performance; and, 2) "performance leads to satisfaction rather than satisfaction to improved performance" (Borkowski, 2005, p. 148).

Two feedback relationships are at work within the Porter-Lawler Model. In the first instance, equitably-rewarded effort is more likely to cause the employee to feel that still further increased effort will result in even more rewards. Secondly, Porter and Lawler (1968) hypothesized that "higher-order needs--such as esteem, autonomy, and self-actualization needs--become more attractive the more a person is rewarded and feels satisfied with a given level of rewards" (p. 40). In both instances, highly satisfied employees will subsequently demonstrate greater effort toward higher performance as a result of the feedback loop's impact. Thus, it follows that an organization's most productive employees will receive greater rewards, will be more satisfied, and will demonstrate less absenteeism and turnover. Employers desire such a relationship to function within organizations given that productive, satisfied employees positively impact bottom line measures of organizational productivity and effectiveness. In the business world effectiveness is measured by shareholder profit. However, in the educational arena effectiveness is often measured by student learning outcomes, program completion, graduation, and/or transfer to another institution.

In summary, the researchers theorized that rewards cause satisfaction, and certain performances produce rewards. Thus, performance and satisfaction can be linked "through the action of a third variable--rewards" (Lawler & Porter, 1967, p. 23). The researchers further posit that according to their theoretical model, performance *causes* satisfaction when 1) *valued* rewards result from performance; and, 2) the rewards are *perceived* as equitable. The challenge for employers who wish to retain the organization's most productive workers is to determine which rewards are most valued by productive employees, and then assure

equitable distribution of those rewards according to level of job performance. In the following section, research pertaining to factors that affect job satisfaction of workers will be explored.

Rewards: Extrinsic and Intrinsic Motivation

One broad pattern that emerges from the research pertaining to job satisfaction is the concept of reward factors with regard to worker expectations. In order for satisfaction to occur, rewards must match expectations (Hackman and Oldham, 1980; Kanfer, 2008; Mottaz, 1985; Wharton, Rotolo, & Bird, 2000). Herzberg (1966), an early researcher who explored worker motivation and its effect upon job satisfaction, first classified work rewards as either extrinsic or intrinsic. Grant (2008) defines extrinsic motivation as "the desire to expend effort to obtain outcomes external to the work itself, such as rewards or recognition" (p. 49). In contrast, "intrinsic motivation refers to the desire to expend effort based on interest in and enjoyment of the work itself" (Grant, 2008, p. 49). Numerous other researchers have subsequently grouped reward factors in similar fashion (Berry & Morris, 2008; Gruneberg, 1979; Hackman and Oldham, 1980; Mottaz, 1985; Rosser & Townsend, 2006; Winter & Kjørlien, 2000).

Kanfer (2008) simplified the grouping of rewards further by categorizing them as either "monetary or nonmonetary (e.g., praise, recognition)" (p. 115).

Extrinsic Rewards

Extrinsic rewards are those rewards associated with the work environment or the context in which work-related tasks are performed. Katz and Van Maanen (1977) developed

a classification methodology that divides extrinsic rewards into two dimensions: organizational rewards and social rewards. Organizational rewards encompass tangibles that the institution offers to promote task accomplishment, and to motivate and encourage workers to perform at a highly productive level. Extrinsic organizational rewards are organizationally controlled and are described as being clearly visible to all workers within the organization. Extrinsic organizational rewards include: “pay, promotions, fringe benefits, and security” (Mottaz, 1985, p. 366). Extrinsic social rewards relate to interactions that occur with others within the job context, specifically the quality of those interactions. Social reward factors include interactions with colleagues and supervisors that may be described as “friendly, helpful, and supportive” (Mottaz, 1985, p. 366).

Slocum (1970) notes that extrinsic rewards (pay and benefits) are much weaker motivators for performance because they are associated with organizational membership rather than individual effort. Conversely, intrinsic rewards (feelings of accomplishment) are tied to an individual's performance in a specific job.

Intrinsic Rewards

Intrinsic rewards are the rewards associated with the work itself, those reward factors associated with accomplishing the tasks of the job (Mottaz, 1985). Intrinsic rewards "are given to the individual by himself for good performance" (Lawler & Porter, 1967, p. 24). Mottaz (1985) identifies the following variables as intrinsic: “interesting and challenging work, self-direction and responsibility, variety, creativity, opportunities to use one’s skills and abilities, and sufficient feedback regarding the effectiveness of one’s efforts” (p. 366). A

worker's feeling of self-satisfaction following the accomplishment of a worthwhile task is also an intrinsic reward (Lawler & Porter, 1967).

Rewards and Job Satisfaction

Both extrinsic and intrinsic rewards have been found to predict job satisfaction. The value that workers place upon rewards of either type may vary considerably resulting in differences in job satisfaction levels among the various workers within institutions. Klein, et al. (2008) states that:

An individual's values determine which types of actions and events are desirable and undesirable by providing criteria that are used in evaluating and defining actions and events. As such, attractiveness of attaining a goal is judged in part by one's values. (p. 115)

Individual variance in work values has prompted the inclusion of background factors and demographics (e.g., gender, age, education level, tenure, full-time or part-time status, marital status, urban-rural background, and race) in some studies of job satisfaction yielding mixed results (Dee, 2004; Isaac & Boyer, 2007; Lester, 2008; Mottaz, 1985; Pearson, 2008; van der Linden, 2004).

Kacel, Miller, and Norris (2005) found that nurse practitioners "were most satisfied with intrinsic factors and least satisfied with extrinsic factors of their jobs" (p. 27). The intrinsic factors used in their research include: sense of accomplishment, challenge in work, level of autonomy, patient mix, and ability to deliver quality care. The extrinsic factors were: compensation time for professional committee service, reward distribution, research

involvement, compensation for service beyond regular duties, and monetary bonuses beyond regular salary (Kacel, et al., 2005).

Downey (2008) explored the job satisfaction of community college administrators. He found that intrinsic satisfaction factors ($R^2 = .475$) explained more of the variance in job satisfaction than extrinsic factors ($R^2 = .212$). Downey (2008) included interpersonal factors and positive emotions ($R^2 = .349$) as well in his research.

Flores and Utley (2000) worked with managers in technical industrial organizations over a 12 year timeframe. They compared the various practices used for inspiring worker productivity. The researchers concluded that the companies who "used positive intrinsic incentives like recognition and responsibility were better able to implement quality systems and gain productivity improvements" (Flores & Utley, 2000, p. 15).

Smith (2009) found that engaged workers are more productive workers. He reports that disengaged workers cost the United States \$350 billion each year. Smith (2009) used the 2008 definition for engaged workers from the Institute for Corporate Productivity: "those who are mentally and emotionally invested in their work and in contributing to an employer's success" (p. 14). Although great benefit packages including family leave and generous wages were appreciated by employees, according to surveys the support for and investment in professional development (an intrinsic reward) mattered most in engaging employees (Smith, 2009). In the next section, research pertaining to factors that affect job satisfaction for postsecondary faculty will be explored.

Postsecondary Faculty

Factors that Affect Job Satisfaction

Job satisfaction may be defined most simplistically as an affective attitude toward one's job. Attitudes evolve from both an emotional and a cognitive seat, and directly impact behavior (Fisher, 2000). Organizational management recognizes the value in discovering and implementing effective methods for creating positive worker attitudes due to their impacts upon worker behavior and worker productivity. Essentially, satisfied workers put forth greater effort to accomplish tasks, come to work more regularly, exhibit stronger commitment toward the organization, intend to remain with the organization, and are healthier both physically and mentally. These effects are desirable due to their positive impacts upon organizational productivity and measures of outcome achievement and success (Flores & Utley, 2000; Kacel, et al., 2005; Kinjerski & Skrypnek, 2008; Mottaz, 1985; Pearson, 2008; Shutan, 2004; Smith, 2008; Zurmehly, 2008).

Measures of Performance

In the postsecondary educational arena, one of the primary products or measures of effectiveness is student learning outcomes. Faculty are the frontline employees charged with directly interfacing with students to facilitate student learning (Barr & Tagg, 1995; McPhail, Heacock, & Linck, 2001). The literature discloses a direct link between postsecondary faculty job satisfaction and student achievement (Hutton & Jobe, 1985; Jaeger & Eagan, 2009; Zhou & Volkwein, 2003).

Satisfied faculty who work in higher education come to work more regularly, are more likely to remain with their institution, and are more inclined to interact with and help their students (Issac & Boyer, 2007). Thus, faculty's positive perception of the work environment is paramount for the achievement of successful learning outcome measures in postsecondary educational institutions.

The challenge for administrators within institutions of higher education is to determine how to most effectively encourage faculty to develop and maintain positive attitudes (e.g., job satisfaction, organizational commitment, intent to stay) toward their jobs. The Porter-Lawler Performance-Satisfaction Theory suggests that rewarding productive faculty with valued and equitably distributed rewards will encourage positive job attitudes, specifically job satisfaction.

Values and Rewards

Values tend to evolve from one's membership within a group or family. Values are characterized as evolving from a shared experience or shared culture where societal norms dictate perceptions and reactions to events. Although postsecondary faculty may be thought of as a group characterized by possessing specific values, the individual faculty members are also members of families, cultures, races, genders, ethnicities and other such groups. Those various group memberships worked to shape the central, innate values of the individuals prior to their joining the faculty group (Values, n.d.). As a result, demographics are important when researching reward structures for postsecondary faculty.

As previously established, rewards for job performance are both intrinsic and extrinsic. An individual's personal values influence the degree of importance placed upon rewards. Job attitudes (e.g., job satisfaction) are impacted by the expected rewards, the match of rewards with one's values, and the equitable distribution of rewards across the institution as a result of performance (Borkowski, 2005; Johnson & Johnson, 2000; Porter & Lawler, 1968). These relationships hold in the postsecondary educational arena as well.

Expectancy Theory predicts that workers whose expectations and values are met will experience job satisfaction and will more likely remain with an institution thus indicating a high level of organizational commitment. The critical piece for employers is the ability to accurately identify key variables that will predict high levels of overall job satisfaction. These variables relate to work conditions and environmental features through the filter of worker expectations and values.

Finally, the rewards must be equitably distributed. The literature reveals that sometimes institutions offer favorable and preferential treatments designed to entice celebrated talent to come on board. However, their peers already employed at the institution react negatively to the perceived unfairness. The researchers caution that balance must be exercised with reward distribution in order to maintain a stable population of current talent while attracting new (Chuanzhong, 2005).

Valued Rewards for Faculty.

Knowledge of the rewards that are valued by postsecondary faculty is important for productivity and institutional effectiveness purposes. Zhou and Volkwein (2003) focused

upon job satisfaction and turnover among tenured versus nontenured faculty. Their research is important because it identifies specific variables and rewards that greatly impact faculty intent to leave. The researchers suggest that "seniority, satisfaction with job security, and satisfaction with compensation greatly reduce voluntary turnover" (Zhou & Volkwein, 2003, p. 19). The literature shows that these factors varied highly among tenured and nontenured faculty.

The researchers found that intrinsic rewards had greater impact upon intent-to-stay, while extrinsic rewards exerted greater force upon voluntary turnover. Intent-to-leave (or stay) is an attitude that precedes the action of volunteer turnover (or retention) (Zhou & Volkwein, 2003). The intrinsic rewards include: teaching and research productivity, committee service, and satisfaction with job autonomy. The extrinsic rewards include: pay and benefits, promotion in rank, research resources and support, labs and facilities, equipment, libraries, supervision of graduate students, research collaboration, and grant support services. This body of research is important because it used a national database (NSOPF:99) which allows for findings to apply more broadly to all postsecondary faculty (Zhou & Volkwein, 2003).

Another group of researchers found that tenure, and extrinsic vs. intrinsic rewards impacted the motivation of faculty to conduct research. The researchers found that: "(a) untenured faculty members are motivated by extrinsic rewards; (b) tenured faculty members are motivated by intrinsic rewards; [and] (c) research productivity is positively correlated with tenure status" (Chen, Gupta, & Hoshower, 2006, p. 179). The extrinsic reward factors

included in this study are: income increase, tenure, and promotion. The intrinsic factors included: individual personal satisfaction from solving research puzzles, contributing to the discipline, and achieving peer recognition (Chen, et al., 2006).

A nursing educator explored the special challenges associated with nursing faculty who must balance educational advancement and clinical demands of patient care. This educator highlights the intrinsic rewards of teaching including: "watching students develop a love for knowledge and the desire to enhance their practice with evidence. That, and the 'a-ha' experience--in the classroom and in online discussions when students finally understand and are excited by newly acquired skills and insights" (Plowfield, 2005, p. 207). This intrinsic spark that appears in students when learning occurs is a natural motivator for faculty across disciplines (Brecke, 2007).

Faculty in higher education are primarily motivated by intrinsic rewards unless extrinsic rewards are perceived as unfair or inadequate. Cook, Ley, Crawford and Warner (2009) explored the reward systems related to motivating university faculty to teach electronic and distance education (DE) courses. These researchers found that the increasing demands in recent years (since 2003) associated with DE instruction have shifted the rewards focus of faculty who participate in DE. The authors attribute the shift to the faculty's extrinsic motivation for having "their physiological needs [met] through incentives, such as salary increases, course releases and technology support" (Cook, et al., 2009, p. 150).

The literature reveals that stipends, course releases, technology training, administrative support and recognition were all powerful incentives that attract faculty to DE

assignments. In contrast, increased time commitments for DE classes, lack of tenure considerations, lack of course releases, and lack of training and technology support proved to deter faculty from agreeing to DE assignments (Cook, et al., 2009).

Rosser (2005) investigated the changes that occur over time in faculty satisfaction with work-life. She utilized two NSOPF databases (93 and 99) to gauge faculty's changing perceptions in three dimensions of work-life and four dimensions of satisfaction. The researcher identified the need for continual monitoring of work-life and satisfaction for postsecondary faculty as external constituencies place increasing demands upon accountability and outcomes for public institutions.

Job Attitudes and Behaviors

It is important to explore faculty's job attitudes such as job satisfaction because attitudes are the precursors of actions such as turnover. In the following sections, the relationships between job attitudes and behaviors will be explored.

Faculty Turnover.

Daly and Dee (2006) explored the reasons for faculty turnover in urban public universities. Their findings suggest that work conditions and environmental variables may be divided into: structural expectations (e.g., collegial communication, equitable rewards, work autonomy, job security, and a role in decision making) and environmental factors (e.g., labor market dynamics and family responsibilities). The authors explain that when a faculty member's structural expectations are not met, he/she may experience a "psychological disposition toward...leaving the institution" (Daly & Dee, 2006, p. 779). However, if no

alternative jobs are available, or if family relocation is not possible, then leaving the job may not be an option. In such an instance, the faculty member will not be committed to the organization and productivity (e.g., student learning outcomes) will suffer.

Organizational Commitment of Faculty

Organizational commitment may be defined as "an individual's identification with and involvement in a particular organization" (Mowday, Porter, & Steers, 1982, p. 27). Mowday et al. (1982) disclosed that organizational commitment contains both psychological (i.e., attitude) and behavioral elements, and is characterized by the following three factors: 1) acceptance of the organization's goals and values; 2) a willingness to diligently strive for the organization's purposes; and, 3) a desire to remain a member of the organization. Fjortoft (1993) suggests that for faculty, organizational commitment translates into a sense of belonging within a particular institution. Organizational commitment is important for community colleges due to its predictive ability regarding employee intent to leave or stay with an institution. Daley & Dee (2006) define intent to leave as the "degree of likelihood that an employee will terminate his or her membership in a work organization" (p. 778). The researchers offer the opposing concept of intent to stay which they define as "the extent to which an employee plans to continue membership with his or her employer" (Daly & Dee, 2006, p. 778).

The literature suggests that both job satisfaction and commitment are important elements for impacting retention and productivity of faculty (Daly & Dee, 2006; Fjortoft, 1993). Findings indicate that job satisfaction precedes organizational commitment.

Continuing, organizational commitment influences intent to leave or intent to stay. If a faculty member experiences decreased job satisfaction and decreased organizational commitment, then his/her performance will be detrimentally impacted, and turnover will more likely occur if alternative employment is available. In an effort to retain faculty, community college administrators will benefit from methods to enhance job satisfaction (Murray & Cunningham, 2004; Rosser & Townsend , 2006).

Effects of Demographics

It is important to explore the relationship that faculty's demographics, background and work experiences may have with personal values and job attitudes such as job satisfaction. In the following sections, the research pertinent to postsecondary faculty and the following groups of variables will be explored: demographics, work environment or context, and faculty status.

Gender and Race

Lester (2008) focused upon gender socialization among community college faculty. The researcher found that organizational culture socialization explains how individual faculty members "come to understand gender within the context of the college" (Lester, 2008, p. 288). The researcher explains how social interactions between male and female colleagues influenced perceptions of appropriate behaviors and roles for each gender. Incidences of workplace bullying and tokenism were experienced by female instructors in male-dominated vocational programs such as welding. These interactions were perceived by the females as efforts by the males to construct gender role expectations.

Another group of researchers found higher job satisfaction levels among university employees working in more homogenous departments with regards to race and gender than in departments that had a more heterogeneous mix of employees. The researchers frame work as a social structure where workers bring pre-formed values, traits and expectations. The results indicate that work satisfaction can be explained via a social-relational view where workers who share common values and expectations (i.e., more things in common) tend to be more satisfied in their jobs (Wharton, et al., 2000).

In her work focusing upon females in academe, Hagedorn (1996) identified several key factors to explain job satisfaction among female postsecondary faculty. Those factors include: perceptions of fairness of salary, tenure and rank, job-related stress, perceived support and interactions with superiors or facilitators, good working relationships and shared values with colleagues, satisfaction with students, satisfaction with the institution in regards to person-environment fit, and job involvement (i.e., work participation) (Hagedorn, 1996).

Hagedorn and Laden (2002) compared the satisfaction of female faculty at 2-year institutions to that of women in 4-institutions. The findings show that community colleges are more gender friendly than universities; however, the welcoming climate is applicable primarily to White females. The researchers describe how lone female faculty members of color lack emotional support and often feel isolated and lonely, obstacles not faced by their White counterparts (Hagedorn, 2007; Hagedorn & Laden, 2002).

Age

Smith's (2008) study found age and generational differences to have a profound impact upon job satisfaction. The research initiative from the University of Southern California's Marshall School of Business reported on the low job satisfaction prevalent among Gen Y workers. "Across all major fields and industries, job satisfaction levels for new Gen Y professionals are plummeting" (Smith, 2008, p.18). These workers, age 25 and under, have fewer than 40 percent reporting satisfaction in their current job. The report highlighted the importance of generational communication in efforts to increase satisfaction, engagement, and productivity of the Gen Y workers (Smith, 2008).

According to Bailey (2008), younger American workers place a higher importance upon work/life balance than older workers. "Younger workers are more inclined to change jobs for better work schedules or more money, exhibiting less commitment to specific organization than previous generations" (Bailey, 2008, p. 787). The researcher notes that other influencing forces include more single parent and dual-career families. Thus, in addition to decreased commitment to work, the younger-aged work group also juggles increased responsibilities and demands upon available time (Bailey, 2008).

Effects of Work Environment Variables

Geographic Location

Geographic locations of institutions have demonstrated an impact on the satisfaction of faculty (Issac and Boyer, 2007; Murray and Cunningham, 2004). Some factors that emerge as important include: Preparation of the student body, workload, wages and benefits,

teaching resources, service expectations beyond the classroom, and cultural offerings of the community.

Urban versus Rural: Faculty Expectations.

Issac and Boyer (2007) explored the perceptions of minority faculty at urban versus rural community college locations. Their research revealed that rural faculty are more satisfied with workload, but less satisfied with salary and benefits, and instructional duties.

Another body of research looked at urban versus rural public university faculty, and intent to stay. The researchers found these faculty were somewhat ambivalent to location. The literature did however reveal strategies for improving job satisfaction and organizational commitment of faculty, thereby enhancing retention. The factors of importance include: autonomy, supportive communication networks, equity in rewards distribution, and mutually negotiated work expectations (Daly & Dee, 2006).

Murray and Cunningham (2004) found that for community college faculty, urban vs. rural location does matter. The researchers conducted a qualitative case study to measure the job satisfaction of new faculty at rural community colleges. Using Met Expectations Theory as a guide, the researchers developed questions and interviewed 45 faculty members at seven rural community colleges in four western states in an attempt to determine the factors that attract faculty to rural community colleges. They suggest that the predicted shortage of community college faculty bodes particularly grim for rural community colleges. "Rural community colleges cannot offer potential faculty the financial, cultural, and social

advantages that more urban institutions can" (Murray & Cunningham, 2004, p. 20). Thus, rural community colleges will have a distinct disadvantage in recruitment of new faculty.

Based on findings, Murray and Cunningham (2004) posit that the key factor for attracting and retaining faculty to rural community colleges is to hire faculty with realistic expectations. Potential faculty: 1) should be comfortable living in small communities; 2) should understand and embrace the community college open-door mission where students of diverse ability and readiness levels will enroll; and, 3) should expect a heavy workload. Proper hiring initiatives and new-hire orientation programs are key factors in satisfying and retaining rural community college faculty (Murray & Cunningham, 2004).

Workload

Daly and Dee (2006) disclosed several factors that contribute to urban university faculty turnover by primarily increasing workplace stress resulting in lowered levels of job satisfaction. The primary responsible factors include: "heavy teaching loads, community-based research, and professional service responsibilities" (Daly & Dee, 2006, p. 777). The researchers suggest that those faculty inclined to leave the institution expressed that the job presented an "overwhelming set of role expectations" (Daly & Dee, 2006, p.777) contributing to high stress and burnout. Community college faculty are not immune from the negative effects of excessive workload burdens.

Distance education is one instructional method that increasingly impacts community college faculty workload across all disciplines (Akroyd, et al., 2004). One of the major points of resistance for faculty with regards to distance education is the increased workload and

time commitment associated with instructional delivery and preparation. Community college faculty are not likely to see the workload demands associated with technology and online instruction to decrease. Data from the National Center for Education Statistics (2008a) states that 97% of public 2-year institutions offered college-level distance education (i.e., online, hybrid) courses compared to 88% of public 4-year institutions. By 2025, up to forty-five million students are projected to learn via online educational offerings (Akroyd, et al., 2004). Online instruction enables community colleges to increase class size, enrollment, and student access without building new classroom spaces.

Shared Governance

Faculty who are given a voice in decision-making, policy-making and conflict resolution exhibit more satisfaction than those who receive dictated policy having little or no voice. Some examples of how faculty gain input capabilities include faculty senates also referred to as academic senates, (Pope & Miller, 2005) and faculty unions (Hernandez, 2000). The key benefit is that faculty and administrators work together in a collaborative manner affording faculty the opportunity to contribute to the decision-making process (Hernandez, 2000). The literature reveals that faculty unions do not impact job satisfaction in any area except satisfaction with pay and benefits. Generally, non-union faculty members are more satisfied with governance, institutional support, office facilities, and workload (Townsend and Twombly, 2007).

Effects of Faculty Status

Full-Time versus Part-Time

The literature is divided regarding the satisfaction of part-time faculty. Faculty who are part-time by choice tend to be more satisfied than part-time faculty who wish to be full-time (Umbach, 2009; Valadez & Anthony, 2001). Job satisfaction is important due to the increasing numbers of part-time faculty employed within postsecondary education. The number of part-time faculty within higher education was 46% in 2003 (Umbach, 2007). Within community colleges, the number of part-timers was even higher: 58% in 2000 (Valadez & Anthony, 2001) and 66% in 2005 (Jaeger & Eagan, 2009). As institutions of higher education function increasingly in the business model, more concern is placed upon organizational outcomes such as degree completion (Jaeger & Eagan, 2009). Thus, the relationships among part-time faculty and organizational effectiveness, organizational commitment, and student learning outcomes merit greater attention.

The literature shows that increasing numbers of part-time faculty within an institution of higher education results in decreased satisfaction of all faculty (Umbach, 2009; Valadez & Anthony, 2001). Part-time faculty demonstrate lower levels of commitment to the organization, and experience more uncertainty about continued employment (Umbach, 2009). The literature shows that long-term employees working in environments with high percentages of contingent workers are insecure about their own employment status (Umbach, 2006). Part-time faculty who teach in the humanities and social sciences are less satisfied than part-time faculty in vocational or technical disciplines (Jaeger & Eagan, 2009). Full-

time faculty who typically assume primary responsibility for service and committee work in their institutions, by default experience increasing workload as the percentages and numbers of part-time faculty increase.

Tenure versus Non-Tenure

Wharton, et al. (2000) found that departments with higher percentages of tenured faculty demonstrated higher levels of job satisfaction than departments with fewer tenured faculty. Interestingly, the researchers found that individual tenure status did not significantly impact job satisfaction. The results supported the researchers' social-relational model for work environment where a more homogenous work group experience more satisfaction, more commitment to their work, and lower rates of turnover. Additionally, previous research suggests that the duties of tenured faculty are more satisfying due to more job complexity and autonomy, more security, less danger, and higher levels of rewards (Wharton, et al., 2000).

Tenured faculty experience less job insecurity and are thus more satisfied than non-tenured faculty. The literature shows that "job insecurity relates to mental distress and job-induced tension" (De Cuyper & De Witte, 2007, p. 69), factors that have negative impacts on job satisfaction.

Terminal Degree Level and Expectations

Gahn and Twombly (2001) highlighted concerns similar to those of Murray and Cunningham (2004) regarding proper matching of expectations and orientations for faculty new hires. The researchers debate the prudence of the practice of some graduate school

faculty urging PhD students /graduates to seek faculty jobs in community colleges. Due to the overpopulation of PhD's relative to faculty openings in research universities, some graduates are steered by their faculty advisors toward appointments at community colleges. However, unrealistic expectations of the doctoral-trained new faculty result in a mismatch of job duties and expectations and ultimately end in job dissatisfaction followed by turnover (Gahn & Twombly, 2001; Murray & Cunningham, 2004).

In order to attempt to narrow the focus somewhat, the following sections will explore research that addresses the variables that have been selected for this research study. It is not yet clear exactly which reward variables will emerge in the exploratory factor analysis, the initial step in the data analysis. Thus, the sections exploring intrinsic and extrinsic reward variables remain a bit broad.

Job Satisfaction Factors Important for this Research Study

Due to its complexity and multidimensionality, the direct measurement of job satisfaction can be a daunting task. The determination of impacting factors and conditions can be equally challenging as well. Researchers often will select factors that evolve from the selected theoretical framework for the study at hand (Creswell, 2003; Hair, Black, Babin, Anderson, & Tatham, 2006; Mottaz, 1985). The reward factors important for this research will be grouped as Human Capital Investment Factors, Intrinsic Reward Factors, and Extrinsic Reward Factors.

Human Capital Investment Factors

Human capital may be defined as the “know how of the work force that increases the productivity of each worker” (Langelett, 2002, p. 1). Theoretically, investments made into human capital such as education and training will yield future returns from the initial investment (Langelett, 2002; Lubinski, Benbow, Webb, & Bleske-Rechek, 2006). Human capital investments may include: formal education, on-the-job training, informal education, life experiences, and learning by doing (Langelett, 2002). An individual makes a personal investment in human capital with the expectation that future income and opportunities will reflect a positive return on investment (i.e., reward). Job satisfaction will be impacted according to the match or mismatch between one's human capital investments (i.e., one's level of education and skills) with expected rewards (i.e., rank, duties and wages) (Allen & Van der Velden, 2001; Langelett, 2002).

Length of Employment and Longevity.

From a human capital perspective, length of employment refers to two different yet related concepts: length of employment in the field, and length of employment at the current organization, or simply longevity. In both instances, an increased length of employment indicates that the employee possesses greater levels of skill and expertise, and has consciously chosen to remain with the organization and/or area of work. An employee who has remained immersed within a discipline over time has gained experiential (i.e., ad hoc) knowledge, and has had greater chances to participate in relevant professional development opportunities. As a result, the employee possesses higher human capital value. Additionally,

a long term employee is often more productive, more efficient, and has developed more commitment to the organization.

In their study focusing upon professional identity and the community college professoriate, Cohen and Outcalt (2001) found that full-time faculty and faculty pursuing a doctoral degree "demonstrated higher degrees of commitment to teaching, to their profession, and to their institution" (p. 3). Umbach (2007) also found that faculty who feel valued, supported and rewarded will "exhibit greater commitment to an organization (p. 93). He applied social exchange theory to explain the differences in commitment of full-time versus part-time faculty. According to social exchange theory, individuals seek out relationships that will offer resources of value. In exchange, the individual will "reciprocate by providing resources and support" (Umbach, 2007, p. 93) such as increased performance, positive work-related behaviors, and higher levels of organizational commitment.

Highest Educational Degree.

The conscious decision one makes to pursue a higher degree is recognized as an investment in human capital. Such an investment is made with the expectation that it will "yield a future stream of returns or dividends to the initial investment" (Langlett, 2002). Although an individual's human capital may increase via a variety of means (e.g., on-the-job training, informal education, life experiences, and learning by doing), formal education requires a personal commitment of time, intellectual ability and monetary costs. Each individual weighs the expected costs and benefits to guide the personal decision of how much to invest in one's own human capital (Langlett, 2002; Van der Linden, 2004). However, the

worker must possess requisite knowledge, skills and abilities in order to be successful in higher degree attainment. Additionally, one's environment must be supportive of the endeavor (Locke, 2007; Locke & Latham, 1990; 2002).

Faculty who are pursuing a doctoral degree have been demonstrated to be more committed to academe, to their institution or college, and to their students and teaching (Cohen & Outcalt, 2001; Van der Linden, 2004). These faculty are recognized as being more productive individuals who bring various talents to the organization. As a result, these faculty expect organizations to reward them for their investments (Langlett, 2002). Benefits to the organization stemming from faculty members' earning higher degrees include greater student learning outcomes, and prestige for the institution as a more highly educated faculty body is amassed (Gahn & Twombly, 2001).

Van der Linden (2004) found that community college faculty who choose to pursue a higher degree (most often a doctorate) while employed are often signaling to administration the desire to rise to a more senior-level position. The researcher suggests that "an advanced degree may actually be a prerequisite or screening type of variable for top administrative positions (Van der Linden, 2004, p. 4).

Literature shows that the terminal degree for community college faculty has traditionally been considered the master's level (Cohen & Outcalt, 2001; Flannigan, Jones, & Moore, 2004; Gahn & Twombly, 2001; Hardy & Laanan, 2006; Townsend & Twombly, 2007). Yet there is some evidence that the community college faculty labor market may be shifting. Gahn and Twombly (2001) found that some community colleges are hiring more

Ph.D.'s in an effort to transform the college's image to one of higher prestige. As mentioned previously in the introduction, some graduate schools are encouraging new doctoral graduates to seek faculty positions in community colleges due to a tight job market in 4-year colleges and universities. Community college administrators may recognize the glut of Ph.D.-trained faculty as one potential solution for the community college faculty shortage. The potential downside for community colleges who hire Ph.D.-trained faculty is the mismatch in values and goals. Community colleges are open-door institutions where teaching is the primary mission. There is concern that doctorate-trained faculty who may favor research over teaching will threaten the current community college mission (Gahn & Twombly, 2001).

Intrinsic Rewards

Intrinsic rewards are those rewards or motivators associated with accomplishing the specific tasks of the work itself (e.g., achievement, recognition, work itself, responsibility, autonomy, advancement and growth opportunities, professional development support, and clarity of mission) (Smerek & Peterson, 2007). The intrinsic rewards that are important for this research include: autonomy, work itself, recognition, and institutional support for professional development. Each of these will be addressed in the following sections.

Autonomy.

Recent literature is rich with discussion of autonomy and its relative importance to job attitudes and behaviors (Antony & Valadez, 2002; Boezeman & Ellemers, 2009; De Cuyper & De Witte, 2006; Kater & Levin, 2005; Kim, Twombly, & Wolf-Wendel, 2008;

Kinjerski & Skrypnek, 2008; Levin, 2006; Zurmehly, 2008). "The need for autonomy refers to the need of having choice and self-control in one's own actions" (Boezeman & Ellemers, 2009, p. 898). Deci and Ryan's self-determination theory explains the professional's need for autonomy. Professionals generally exhibit a strong need for independence and participation in decision-making. Thus, high levels of work autonomy are highly valued and contribute positively to job attitudes and behaviors (Boezeman & Ellemers, 2009; Kim, 2002; Kinjerski & Skrypnek, 2008; Zurmehly, 2008). "The higher need for autonomy is met through increased control of the work situation, having influence in the organization, participating in decisions, and having authority to use institutional resources" (Wallin, 2003, p. 321).

De Cuyper and De Witte (2006) note that autonomy is generally not an expectation of contingent or temporary workers as these workers "may not expect or may not feel entitled to high levels of autonomy" (p. 445). Thus, part-time or adjunct faculty may not demonstrate the same negative effects upon job attitudes and behaviors resulting from low autonomy that full-time faculty exhibit. For job satisfaction to result from autonomy, it is important that autonomy is experienced while performing the job activities or actual duties of the job (Boezeman & Ellemers, 2009). Frustration and dissatisfaction result from the perception of little control over one's work situation (Zurmehly, 2008). Levin (2006) discusses how the shifting focus in higher education which he labels *new managerialism* will likely erode faculty autonomy due to its "emphasis upon productivity and efficiency" (p. 67).

Some research indicates that levels of autonomy differ among faculty in 2-year institutions versus those in 4-year universities (Antony & Valadez, 2002; Levin, 2006). Kim,

et al., (2008) noted that although 4-year faculty generally have more job autonomy, "community college faculty members actually have more autonomy in some aspects of their work, such as external employment and intellectual property, than faculty members at 4-year colleges and universities" (p. 160).

Work Itself.

Recognizing one's work as meaningful and experiencing satisfaction from carrying out the tasks of one's job leads to increased intent to stay within the profession (Kinjerski & Skrypnik, 2008). Professionals in various professions indicate that they most value "a good feeling about the work performed, the perception that quality is important and a sense of professionalism in the workplace" (Watson, 2008, p. 114). 'Work itself' has been defined as the intrinsic properties and features of a job such as "variety, interest, challenge, status, autonomy, [and] flow" (Johnson & Johnson, 2000).

Faculty within institutions of higher education have traditionally been recognized as having value for teaching and for promoting the learning of adult students (Levin, 2006). An English professor described the feeling of empowerment he derived from seeing students' ability to learn awakened. A college administrator notes how 2-year college faculty are more rewarded from the work itself as they are afforded more opportunities to interact with students in the classroom and to support student learning (Jacobson, 2003). Although most educators state they are drawn to higher education by their value for teaching, faculty working at a research university who were interviewed admitted that "research outranked teaching in the university's faculty reward system, and that externally funded research and

publication in appropriate outlets were essential not only for promotion and tenure but also for maintaining esteem in the eyes of one's peers" (Serow, 2000, p. 453).

Community colleges are recognized as centers for teaching and learning (Anderson, Murray, & Olivarez, 2002). Community college faculty are not under the same pressures to conduct research. Thus, community college faculty often indicate they experience high levels of satisfaction and intrinsic rewards from being able to do the thing most loved...teach (Jacobson, 2003; Townsend & Twombly, 2007).

Recognition.

In their research focused on perceived over-qualification and negative affectivity, Johnson and Johnson (2000) found that "jobs with opportunities for achievement, recognition, responsibility, advancement and growth in competence are those that enhance motivation and job satisfaction" (p. 167). The literature shows that in general, intrinsic properties of work (e.g. recognition, responsibility and advancement) have a greater positive effect on satisfaction with work than extrinsic features (e.g., working conditions, policies and procedures) (Johnson & Johnson, 2000). Recognition for accomplishing work-related tasks is valued for its positive feedback to employees.

Although recognition itself may be considered an extrinsic reward (i.e., a public reward that is visible to all employees), the employee's feeling of worthwhile accomplishment that results from recognition and praise is an intrinsic reward (i.e., the employee gives the reward to him/herself). Thus, some literature classifies praise and

recognition for work performance and achievements as an extrinsic reward while other research places it with intrinsic rewards (Grant, 2008; Klein, et al., 2008; Slocum, 1970).

Support for Professional Development.

Faculty represent one of the greatest financial commodities within higher education. Institutions invest significant amounts of time and money in recruiting, training and retaining qualified faculty. The quality of faculty is important because of the impacts upon measures of institutional effectiveness as well (Sprouse, et al., 2008). Layzell, Lovell, & Gill (1994) suggest that faculty should be viewed as a long-term institutional and state assets that must be "developed, maintained, and effectively utilized" (p.1). Layzell, et al. (1994) frame their explanation for faculty being categorized as both institutional and state assets by suggesting that classroom faculty are fulfilling the institutional mission and goals, thereby extending the state's mission and goals by meeting the needs of its stakeholders (i.e., taxpayers). Continuing, the asset (i.e., faculty) must be continually maintained and renewed to assure that depreciation is prevented (Layzell, et al, 1994).

Wallin (2003) discusses the value of professional development for both individual faculty and students. Improved quality in teaching results in improved learning for students. Faculty are intrinsically motivated to participate in professional development activities. Given the increasing use of technology in higher education for innovative instructional delivery (Akroyd, et al., 2004), it is understandable that faculty list technology as their most critical area of need for professional development (Mars & Ginter, 2007; Wallin, 2003).

Faculty require on-going professional development to remain competent, effective, and current in their field of expertise. Sprouse, et al., (2008) found that the four influencers for quality faculty development include: "culture of learning, leadership, ownership of goals, and structure and sustainability" (p. 996). Townsend and Twombly (2007) add two more important components: rewards linked to the professional development, and "a belief on the part of instructors that administrators support and value good teaching" (p. 43). Faculty are more likely to remain at an institution that addresses the professional development needs of its faculty by investing time and resources for quality professional development programs (Sprouse, et al., 2008).

Townsend and Twombly (2007) acknowledge John Murray as an authority on faculty in 2-year public institutions and professional development. In Grant & Keim (2002), Murray offers a list of professional development activities as compiled by community college faculty which he has subsequently ranked by frequency including:

financial support for conference attendance (93%), bringing outside professionals to campus (88%), waiver of tuition at the home institution for full-time faculty (81%), released time for projects related to teaching (65%), mini-grants to improve teaching (55%), [and]sabbatical leave for full-time faculty (44%) (p. 795).

Extrinsic Rewards

Extrinsic rewards are those rewards or motivators associated with the work environment or context (e.g., company policy and administration, supervision, relationship

with supervisor/peers/subordinates, work conditions, equipment and facilities, salary and benefits, presence of core values, personal life, recognition, status, and safety and security) (Smerek & Peterson, 2007). The extrinsic variables that are important for this research include: workload, support for technology, equipment and facilities, and salary and benefits (i.e., income). Each of these will be addressed in the following sections.

Workload: Hours, Duties, & Number Classes Taught.

Balance between work and life pressures has become an increasing area of concern in the American workforce. Employers value efficiency and effectiveness, and place greater emphasis on getting things done quickly (Shutan, 2006). As a result, a growing number of Americans expressing feelings of being overworked and overwhelmed. There is increasing concern for the impact that life-work imbalance will have upon the health and life-satisfaction of today's workers.

Higher education is not exempt from the growing expectations of institutional performance and accountability. Institutional effectiveness efforts are now campus-wide activities that place increasing pressures upon both faculty and staff. Institutions expect faculty and staff to utilize data to make decisions regarding program and learning outcomes and planning (Skolits & Graybeal, 2007). However, faculty and staff cited "two frequently encountered barriers: the lack of time and the lack of resources" (Skolits & Graybeal, 2007, p. 318). These researchers suggested that more institutional support in data collection would address the major barrier, that of lack of time.

Most faculty agree that their primary motivation for teaching is personal satisfaction (Woolliscroft, Harrison, & Anderson, 2002). However, increasing workload and added responsibilities act to erode that satisfaction level for some faculty. Although the teaching workload and numbers of students may be fairly constant for some faculty, external factors that require the devotion of increasing hours in addition to the teaching load factors negatively impact workload satisfaction.

Pearson (2008) reported that role overload and feelings of being overwhelmed contributed to multiple types of strain in academic faculty. Persistent strain results in dissatisfaction, which ultimately affects the employee's sense of well-being and psychological health.

Bailey (2008) describes an integrated approach for employers to recognize the multiple roles and responsibilities of the modern worker. The workplace today is complicated by more dual-career families, more single-parent families juggling dual-employers, longer work days, and heavier workloads. An interdependent approach is necessary for the recognition that employees have equally important work and personal lives. Such a holistic approach to work/life relieves the worker from the struggle of finding balance in two separate yet vital parts of life.

Technology Support.

The most current data available from the National Center for Education Statistics (2008a) states that 97% of public 2-year institutions offered college-level distance education courses compared to 88% of public 4-year institutions. Distance education methods noted

were video, audio, and computer technologies including online and blended/hybrid online (NCES, 2008a). Technology allows community colleges to further extend more learning opportunities to students, thereby fulfilling its mission of accessible education (Jackowski & Akroyd, 2010). Akroyd, Jaeger, Jackowski, & Jones, (2004) reported projections indicating that by 2025, up to forty-five million students would learn via online educational offerings. These findings suggest that community college instructors are very likely be required to utilize technology of some sort during instructional deliveries.

One of the major points of resistance for faculty is the increased time-demands associated with distance education delivery and preparation (Akroyd, et al., 2004). Computer-based instructional applications found in community colleges include: computer-based classrooms and labs, computer simulations, presentation handouts, e-mail, commercial courseware, internet resources, course management tools, and web pages for class materials. Faculty are often challenged in trying to recreate the traditional classroom environment in a non-traditional delivery method (Cohen & Brawer, 2003, 2008). Also, increased reliance upon technology for instruction causes increased risk for technological malfunctions and disruptions at critical times. Without adequate Instructional Technology (IT) support, faculty become frustrated and students experience disruptions in learning.

Part-time faculty are even more negatively impacted by the inadequacy of IT support because they are less familiar with the college's support services in general (Akroyd, et al., 2004). Increasing numbers of part-time faculty are teaching at community colleges due to the current trend of replacing retired full-time faculty with additional part-timers. This practice is

a concern for quality of instruction as many part-time faculty lack office space, internet access and are poorly integrated into the instructional infrastructure of the institution (Akroyd, et al., 2004).

Working conditions that challenge the ability to perform one's duties contribute to work-stress and dissatisfaction. Additionally, practices that serve to increase one's workload can increase strain and overload. These stresses and strains serve to negatively impact job attitudes and behaviors such as job satisfaction and work productivity (Vischer, 2007; Woolliscroft, et al., 2002).

Equipment and Facilities.

There is a growing body of research focused on the effects of the workplace environment and physical features relative to the worker's performance and satisfaction on the job. These features of the job have been termed work context characteristics in some literature (Humphrey, Nahrgang, & Morgeson, 2007). Increasingly, institutions are making improvements in workspace conditions (e.g., improved indoor air quality, ergonomic furniture and lighting) with the expectation that productivity will increase. Workspace stress is the term given to the health-related effects of the physical environment of the workplace (Vischer, 2007).

Stressors can affect both the physical and mental performance ability of workers. Coping is the mechanism that workers use in response to workplace stressors. Stress at work results from "a mismatch or misfit between the demands of the situation and the resources of the individual" (Vischer, 2007, p. 177). When a work environment is a poor fit for a worker

(i.e., misfit) the worker experiences inappropriate or excessive demands by the work environment. In an uncomfortable environment, worker energy that could be used for other creative purposes is required to cope with workspace stress (Vischer, 2007). When workers experience physical discomfort when performing the job, attitudes such as job satisfaction suffer. When a job becomes uncomfortable and dissatisfying, workers avoid coming to work and begin to look for a better job (i.e., absenteeism and turnover) (Humphrey, et al., 2007).

Ergonomics addresses situations of misfit by viewing workplace tools as human body extensions. The workspace areas commonly focused on with regards to ergonomics include: "lighting and daylighting, noise and noise control, and office furniture and spatial layouts in offices" (Vischer, 2007, p. 178). Other factors that affect worker comfort include colours and decorations, signage, artwork, and design details. Workspace quality that supports worker comfort by supplying an optimal work environment positively impacts worker productivity.

Income: Salary & Benefits.

The literature reveals that managers use money and benefit packages to attract, retain, and motivate employees in an effort to achieve organizational goals (Luna-Arocas & Tang, 2004; Winter, Petrosko, & Rodriguez, 2007). "Pay-for-performance strategies [are] essentially [methods for] rewarding good work with increased pay and benefits" (Rasch, 2004, p. 407). However, each individual worker may react to money differently according to one's personal values. In many cultures, the love of money is seen as "the root of all evil" and is highly associated with "greed" (Luna-Arocas & Tang, 2004, p. 332).

The most important factor related to wages and benefits is the employee's satisfaction with its perceived equity (Glover, Simpson, & Waller, 2009; Luna-Arocas & Tang, 2004; Nelson, 2008; Rasch, 2004; Temnitskii, 2007). Wage dissatisfaction can result in negative consequences such as: "low commitment, counterproductive behaviors, theft, and unethical behavior" (Luna-Arocas & Tang, 2004, p. 329). Among engineers, women complained that their salary was lower for equal work and skills (Nelson, 2008). Another research study demonstrated that wage gaps may be expected among newly-trained, younger employees who recognize that on-the-job experience will serve to narrow the gap (Levy-Garboua & Montmarquette, 2004). Glover, et al. (2009) found that for colleges in Texas, inadequate salary was a strong de-motivator that acted to inhibit a college's ability to attract and retain qualified faculty and staff. Winter, et al. (2007) cautions community college administrators to be cognizant of the role wages and benefit packages play in attracting qualified instructors during the predicted period of intense competition for replacement faculty that the retiring baby-boomer bubble will generate.

Job Dissatisfaction and Creativity

There is an alternative view of job dissatisfaction as a positive phenomenon when it leads to employee creativity that ultimately benefits the organization. In such instances, dissatisfied employees may try to determine methods to improve the current conditions of their work situation. Examples of valuable contributions include: "new products, services, manufacturing methods, and administrative processes" (Zhou & George, 2001, p. 682). In order for dissatisfaction to become an impetus for creativity and change, the supervisor must

view dissatisfaction as an opportunity rather than a problem. In such an instance, the organization and the individual employee benefit from the promotion of meaningful change (Zhou & George, 2001).

Community College Faculty

In this third and final major section, research that addresses the job satisfaction of community college faculty will be explored. Variables and conditions that are important for predicting community college faculty and job attitudes and behaviors will be reviewed.

Overall Job Satisfaction

The variables that persistently predict overall job satisfaction for community college faculty are related to the highly responsive nature of community colleges (Townsend & Twombly, 2007). Responsiveness becomes most evident when changes in economic conditions occur. During times of economic downturn, community colleges are expected to act as front-line responders by immediately reacting to local work environment demands to retrain and retool workers with high-demand skill sets. Often, enrollment demands increase without timely and parallel funding increases to monetarily support the growth. Concurrent cuts in state budgets for community colleges further exacerbate the underfunded condition of community colleges. George Boggs (2004), president and chief executive officer of the American Association of Community Colleges during 2004, notes that in spite of declining state budgets and revenue for the colleges, community colleges are expected to accomplish more with less (Townsend & Twombly, 2007).

Historic View

Hill (1986) found that some facets of job satisfaction are empirically linked to organizational commitment and the propensity to leave the job among community college faculty in New York. Those job satisfaction variables include: work, supervision, co-workers, pay, and promotion. The measures of organizational commitment used in his study were taken from Porter's 1974 Organizational Commitment Questionnaire and include: "belief in and acceptance of the organization's goals and values, willingness to exert considerable effort on behalf of the organization, and the desire to maintain organizational membership" (Hill, 1986, p.4). Findings of the study showed that the single strongest predictive variable of job satisfaction indicating variance in organizational commitment was the work itself which accounted for 38 percent of the variance in community college faculty's organizational commitment. The three variables that combined for the greatest impact upon job commitment and propensity to leave/stay included: the job itself, the social context or co-workers, and worker opportunity for promotion.

Hill (1986) concluded that community college administrators should seek methods to enhance the intrinsic rewards that community college faculty derive from their work to increase commitment and positively influence intent to stay. Suggested methods include: facilitating faculty's perception that their work is useful, challenging and respected; offering faculty opportunities for promotion; and instigating training sessions designed to help faculty view their co-workers in more positive ways such as "stimulating, ambitious, and pleasant individuals" (Hill, 1986, p. 8).

Milosheff (1990) identified ten variables that she claims best predict job satisfaction among community college faculty: educational degree attainment, perceived influence on campus, time spent on school activities relative to students and teaching, perception of student quality, student interactions outside of class, adverse finances of the institution, perception of institutional quality, perception of department and department colleagues, and, type of department affiliation. The definition of faculty job satisfaction used for her study is "a faculty member's approval with career choice, prospects for advancement, intention to remain in the profession, feelings of immobility, satisfaction with the institution as the appropriate place for him/herself, and perception of the job as a source of personal strain" (Milosheff, 1990, p. 20).

Milosheff (1990) also identified faculty's perception of student quality as the most influential factor on community college faculty's job satisfaction. Perception of student quality is defined as "the faculty members' perception of student appreciation, students' future prospects, students' interest in learning, amount of attention students demand, student preparedness, and institutional spending on remediation" (Milosheff, 1990, p. 19). A negative relationship was identified between job satisfaction and two of the variables: time spent on in-school activities and adverse financial condition (i.e., institutional financial difficulties, loss of tenured faculty jobs and faculty salary). Thus, increases in these two variables were associated with lower levels of job satisfaction. It should be noted, however, that the ten combined variables accounted for only 29 percent of the variance in job satisfaction. Thus, 71 percent of the variance was not addressed by this model (Milosheff, 1990).

Chapter Summary

There are empirically demonstrated links among community college faculty's levels of productivity and work attitudes (i.e., job satisfaction, organizational commitment). The ribbon of connection lies with faculty job satisfaction. Given the current climate of pending faculty shortages and record demands on the community college system, it will be a valuable contribution to the body of literature to accurately identify variables that most accurately predict overall job satisfaction. Identifying specific methods that community college administrators may use to enhance faculty satisfaction will also reduce faculty absenteeism and turnover, increase faculty productivity, increase organizational commitment of faculty, enhance the college's reputation to attract new faculty applicants, and most importantly, positively impact student learning.

The literature reveals many common variables pertinent to community college faculty job satisfaction, productivity, and organizational commitment. The variables that impact community college faculty productivity include: workload, creativity, status, incentives, and job stress/burnout (Daly & Dee, 2006; Goodwin & Young, 1978; Isaac & Boyer, 2007; Murray & Cunningham, 2004; Palmer, 1998; Ratcliff, 1984; Townsend & Twombly, 2007). The variables that indirectly impact organizational commitment via a direct impact upon job satisfaction include: work, supervision, co-workers, pay, promotion, and inclusion in decision making (Fjortoft, 1993; Hill, 1986). Daly and Dee (2006) add environmental factors of job market and family responsibilities. Bowling (2007) found that increased job satisfaction had a positive impact upon citizenship behaviors within the organization.

When hiring community college faculty, administrators should screen for employees that closely fit with the organization's mission, vision, values and goals. Those goals should be clearly defined, and the worker should be offered honest feedback relating to success of goal attainment (Chernovitskaya, 2009; Hackman & Oldham, 1980; Isaac & Boyer, 2007; Mottaz, 1985; Murray & Cunningham, 2004; Townsend & Twombly, 2007). Both intrinsic rewards (e.g., interesting and challenging work, self-direction and responsibility, variety, creativity, opportunities to use one's skills and abilities, recognition, and sufficient feedback regarding the effectiveness of one's efforts) and extrinsic rewards (e.g., friendly, helpful and supportive colleagues and supervisors; pay; promotions; fringe benefits; work environment; and, security) must be addressed with regard to community college job satisfaction (Taris & Schreurs, 2009; Townsend & Twombly, 2007).

Past research portrays a vast assortment of variables that may be used to predict the overall job satisfaction of full-time community college faculty. However, it is not practical to include all variables that have been discussed in this section. The selection of predictor variables included for this research study was driven by: 1) the theoretical model selected as a framework; and, 2) the variables that have been included in the NSOPF:04 database.

In closing, it is important to place the research study proposed here within the landscape of previous research. Hardy and Laanan (2006) concluded their article detailing a study that focused on the characteristics and perspectives of faculty at public 2-year institutions with the following sentence:

Thus, one of the most valuable research projects that could flow from the current study, in the authors' opinion, would be the development of a predictive model of job satisfaction and the importance of the various factors assessed by the NSOPF in contributing to overall faculty satisfaction. (p. 810)

The research project proposed here accomplishes exactly what Hardy and Laanan (2006) suggested was vitally needed. Thus, this body of research will offer a valuable contribution by filling an identified gap in the literature regarding community college faculty and job satisfaction. In Chapter 3, the methodology of the research study will be presented including details of data collection and statistical analysis.

CHAPTER 3: METHODOLOGY

Research Design

Using Johnson's (2001) typology, the design to be implemented for this research is a non-experimental, quantitative, cross-sectional predictive design utilizing secondary analysis of the 2004 National Study of Postsecondary Faculty (NSOPF:04) dataset. The research study is designed to accomplish the following objective:

To explore the ability of select human capital investment variables, intrinsic reward variables, extrinsic reward variables, and socio-demographic variables to predict overall job satisfaction levels for full-time community college faculty.

The dependent variable is *overall job satisfaction*. Overall job satisfaction, also referred to as global job satisfaction is a measure of satisfaction with one's job in general as compared to faceted job satisfaction which is satisfaction defined as a function of the various contributions from its array of multidimensional facets (Berry & Morris, 2008). The independent variables will be grouped into four areas: Human Capital Investments, Intrinsic Rewards, Extrinsic Rewards, and Socio-Demographics. The Human Capital Investment variables include: length of employment at current institution, highest degree earned, academic discipline, and total years in profession. Intrinsic Reward variables and Extrinsic Reward variables are "yet to be determined" by an exploratory factor analysis, the initial step in the data analysis. The Socio-Demographic variables include: gender, race and ethnicity, age, marital status, number of dependent children, and disability status.

Population and Sample

The dataset to be used for this research study is the 2004 National Study of Postsecondary Faculty (NSOPF:04), a nationally representative survey sponsored by the U.S. Department of Education's National Center for Education Statistics (NCES). The 2004 survey is the fourth in a series with previous data analyzed in 1988, 1993, and 1999 (NSOPF:88, NSOPF:93, and NSOPF:99). NSOPF:04 was designed to collect data detailing socioeconomic and demographic characteristics, work duties, and career pathways of faculty and instructional staff working in public and private not-for-profit 2- and 4-year institutions in the United States.

NCES implemented a two-stage sampling process to collect NSOPF: 04 data. The first stage involved sampling eligible institutions to collect lists of eligible faculty followed by a second stage sampling of faculty.

Stage One Sampling

The sampling frame for institution selection was based upon the Winter 2001-02 Integrated Postsecondary Education Data System Data Collection (Winter:02 IPEDS) file. For stratification purposes, the institutions were categorized as public or private not-for-profit; and, by level of degree offered based upon the 2000 Carnegie classification system resulting in 10 primary institutional strata. The institutional frame consisted of 3,380 eligible postsecondary institutions with 1,080 being sampled and 980 submitting lists of eligible faculty (NCES, 2006).

Stage Two Sampling

The sampling frame for faculty included all faculty and instructional staff employed in the eligible institutions. All faculty were included whether or not they had instructional responsibilities, and all staff with instructional duties were included whether or not they were classified as faculty. The faculty and instructional staff comprising the faculty frame included an approximate estimation of 1.1 million individuals. Of those, 35,630 faculty and instructional staff in the 50 states and the District of Columbia were selected for NSOPF:04 sampling.

For verification purposes prior to sampling, faculty counts provided by institutions were checked against the Integrated Postsecondary Education Data System (IPEDS) and counts on the institution questionnaires. Any discrepancies were cleared with the institution prior to faculty survey administration. Faculty cells were indexed by institutional and faculty strata. Faculty sampling was made by using an equal probability stratified systematic sampling to select from within the cells. Expected sample sizes for each institution were calculated prior to sampling.

To assure that faculty were selected within the strata as defined by race/ethnicity, gender, and employment status, sampling was closely monitored throughout the months of selection. Faculty sampling rates were increased as necessary to assure that at least 10 faculty were selected from each institution, and to assure that at least one faculty member was selected in each stratum at each institution if possible. The faculty sampling was reviewed to eliminate any faculty that may have been sampled more than once (NCES, 2006).

Data Collection

Faculty data were collected via a mixed-mode approach (web survey or telephone interview). Initial contact with sample faculty was made by a letter that included instructions for completing the web-based self-survey and the computer-assisted telephone interview (CATI). Early response incentives were offered to encourage timely participation. Four weeks later, non-responders were contacted by interviewers attempting to conduct a telephone interview. Selected refusals and non-responders also were offered incentives. The 9 month data collection period extended from January 15 through October 6, 2004 (NCES, 2006).

Faculty Website.

A website was designed for faculty and instructional staff selected to complete the NSOPF:04 survey. The website offered a link to the survey as well as information about the process and instructions for completing the survey. Access to the secure website was ID and password protected. There was also a help-desk established with 24 hour access and a toll-free contact number (NCES, 2006).

Faculty Response.

The original responding group included 35,630 faculty and instructional staff. Of these, 26,110 completed the survey yielding an overall 76 percent unweighted and weighted response rate. Those that completed the internet survey totaled 19,780 (76 percent) with the remaining 6,330 (24 percent) completing a CATI telephone interview. Adjustment factors for nonresponses were calculated using GEM methods to account for complex sample designs.

The nonresponse adjustment cells were constructed to reduce or eliminate nonresponse bias (NCES, 2006).

Sample for this Research

Because this research will utilize analysis of previously collected data (i.e., secondary data analysis), it is necessary to define how the sample for this research study was determined. The NSOPF:04 survey collected data from 980 responding institutions and 26,110 responding faculty and instructional staff within those institutions. For this research, the sample was reduced to include only full-time community college faculty employed at public 2-year institutions whose principle activity was teaching for-credit courses during fall semester of 2003. Application of these criteria yielded a sample of 2308 faculty (N = 2308) for this study.

Instrumentation

A Technical Review Panel (TRP) was assembled to develop the questionnaires for NSOPF:04. Duties of the TRP included the implementation of appropriate statistical tools, models and analyses to assure reliability and validity of the survey instruments (NCES, 2006). The survey instrument included 83 numbered questions; however, some questions were multi-response. Not all questions were relevant to each faculty respondent as some questions targeted part-time faculty only and/or faculty employed at 4-year/research institutions only.

The purpose of the faculty survey was to collect information regarding discipline, academic and professional background, workload and responsibilities, scholarly activities,

job satisfaction, retirement plans, income and other compensation, select socio-demographics (gender, race/ethnicity, date-of-birth, marital status, number of dependent children, and citizenship), and opinions regarding one's institutional working environment (NCES, 2006).

The measurement model guiding this proposed research is included below:

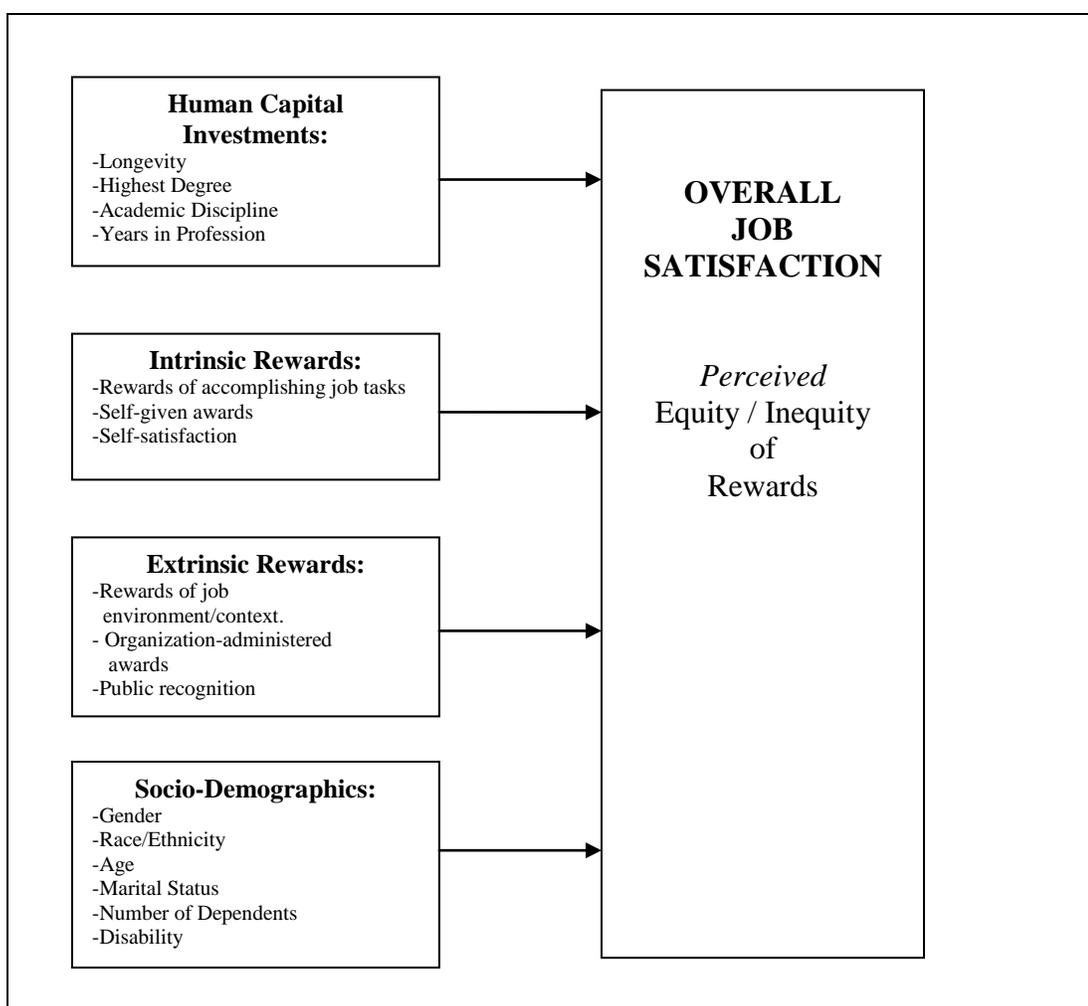


Figure 1.2. Measurement Model. Factors that Affect Job Satisfaction for Full-Time

Community College Faculty. Model based upon Porter-Lawler's Satisfaction-Performance Motivation Model.

Variables Used in This Study

Dependent Variable.

The dependent variable selected for this study is overall job satisfaction. In order to obtain information for this variable from the NSOPF:04 data set, the following survey question (Q62d) that was issued to all faculty and instructional staff will be used:

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

This variable was measured on an interval scale with responses ranging from 1 (very satisfied) to 4 (very dissatisfied). For this study, satisfaction responses will be recoded as a dichotomous variable where 1 (very satisfied) and 2 (somewhat satisfied) = 1 (Satisfied); and, 3 (somewhat dissatisfied) and 4 (very dissatisfied) = 0 (Not Satisfied).

Independent Variables.

Specific questions have been selected from the NSOPF:04 survey to gather responses related to human capital investments, work rewards, and socio-demographics. Previous research has been used to guide the selection of appropriate survey questions for this study. The respondents' replies to these select questions will be used to approximate the quantification of independent variables. Table 3.1 is a summary listing of all survey questions used for this research.

Intrinsic and Extrinsic Rewards.

Reward variables will be categorized as intrinsic and extrinsic rewards. The questions listed in Table 3.1 that are grouped as Intrinsic Rewards and Extrinsic Rewards will be factor analyzed to provide evidence of construct validity and reliability. At this point, the researcher does not know how many intrinsic and extrinsic reward questions will emerge from the initial EFA. These questions were selected because their content has been shown by previous research to be important for job satisfaction. Previous research has demonstrated that many other work rewards can be predictors of overall job satisfaction for workers (Berry & Morris, 2008; Grant, 2008; Hardy & Laanan, 2006; Issac & Boyer, 2007; Kim, et al., 2008; Murray & Cunningham, 2004; Rosser Townsend, 2006; Twombly & Townsend, 2008; Umbach & Wells, 2009; Valadez & Anthony, 2001; Winter & Kjollien, 2000). However, only those variables that are included in the NSOPF:04 database are available for this research.

The satisfaction with rewards measures will be used as proxy measures for intrinsic and extrinsic rewards. In some questions, the responder is asked to estimate income from one's current institution (Q66a-b), to calculate hours/percent time spent on work-related duties (Q31a-d, Q32a), or to list number of classes/sections taught (Q35a). In other questions the responder rates his/her opinions regarding the rewarding of good teaching, and the fair treatment of part-time faculty, female faculty, and racial minorities (Q82a-d) on a Likert-type scale ranging from 1 (strongly agree) to 4 (strongly disagree). The final question of the survey asks the responder to state whether an academic career would be chosen again if given the option (Q83; 0=No, 1=Yes). These opinion-type questions will be included in the intrinsic

and extrinsic rewards section as well. Table 3.1 is a summary listing of all questions/variables and measures that will be used for this research.

Table 3.1

Summary of Variables and Measures

Variable Description	Questions # and Original Response Code	Coding for Analysis
Dependent Variable	Q62d	0 = Not Satisfied
Satisfaction with job overall ^b (Overall Job Satisfaction)	“Satisfaction with your job at this institution overall.” Single item. 4-point Likert-type measure. 1=very satisfied, 4=very dissatisfied.	(3,4) 1 = Satisfied (1,2)
Human Capital Investments: Independent Variables		
Length of Employment (Longevity) Year began current job ^b	Q 9 In what year did you start working at the job you held during the 2003 Fall Term at your institution? Response = year listed. Calculation: 2003 minus year listed = value #	Value #
Highest Degree Highest degree earned ^b	Q17a1 Single Item. An ordinal scale (0 to 7). 8 categories: 0=NA; 1=doctoral; 2=1st professional; 3=MFA, MSW; 4=other master's; 5= bachelor's; 6=associate's; 7= undergrad certificate or diploma.	0 = No Degree, Associate's, undergrad certificate, diploma, or Bachelor's. 1 = Master's, MFA, MSW, Doctoral, or 1 st professional
Academic Discipline Principle field of teaching, general code ^b	Q16CD2 “Principle field of teaching – general code 2 dummy variables indicating the primary teaching field of study as general or occupational education	1 = General Education 0 = Occupational Education
Years Teaching First postsecondary job, year began ^b	Q 23 For those who worked at another institution, what year did you begin 1 st postsecondary faculty or instructional staff job? Response = year listed. Calculation: 2003 minus year listed = value #	Value #

Table 3.1 Continued

Intrinsic Rewards: Independent Variables		
Satisfaction with authority to make decisions ^b (Autonomy) ^a	Q61a, “Satisfaction with authority to make decisions about content and methods in instructional activities.” Single item. 4-point Likert-type measure. 1=very satisfied, 4=very dissatisfied.	0 = Not Satisfied (3,4) 1 = Satisfied (1,2)
Percent time spent on instruction, undergraduate ^b (Work Itself)	Q 32a, Percentage of time spent on instructional activities with undergraduates including teaching, class prep, advising, and supervising students. Single item. Percentage between 0% to 100%	Percentage: 0 - 100
Opinion that good teaching is recognized and rewarded. (Recognition) ^a	Q 82a, Agreement with statement that "Good teaching is rewarded". Single item. 4-point Likert-type measure. 1=strongly agree, 4=strongly disagree.	0 = Disagree (3,4) 1 = Agree (1,2)
Opinion that part-time faculty are treated fairly. (Fairness: Part-Time) ^a	Q 82b, Agreement with statement that "Part-time faculty are treated fairly ". Single item. 4-point Likert-type measure. 1=strongly agree, 4=strongly disagree.	0 = Disagree (3,4) 1 = Agree (1,2)
Opinion that female faculty are treated fairly. (Fairness: Females) ^a	Q 82c, Agreement with statement that "Female faculty are treated fairly ". Single item. 4-point Likert-type measure. 1=strongly agree, 4=strongly disagree.	0 = Disagree (3,4) 1 = Agree (1,2)
Opinion that racial minorities are treated fairly. (Fairness: Minorities) ^a	Q 82d, Agreement with statement that "Racial minorities are treated fairly ". Single item. 4-point Likert-type measure. 1=strongly agree, 4=strongly disagree.	0 = Disagree (3,4) 1 = Agree (1,2)
Choose academic career again. (Career Choice)	Q83 “Finally, if you had it to do over again, would you still choose an academic career?”	0 = Disagree (3,4) 1 = Agree (1,2)
Satisfaction with institutional support for teaching improvement ^b (Support for Professional Development) ^a	Q 61d, “Satisfaction with institutional support for teaching improvement (grants, release time, professional development funds).”	0 = Disagree (3,4) 1 = Agree (1,2)

Table 3.1 Continued

Satisfaction with support for technology- based activities ^b (Technology Support) ^a	Q61b, “Satisfaction with institutional support for implementing technology-based instructional activities.” Single item. 4-point Likert-type measure. 1=very satisfied, 4=very dissatisfied.	0 = Disagree (3,4) 1 = Agree (1,2)
Satisfaction with equipment /facilities ^b (Equipment/Facilities) ^a	Q61c, “Satisfaction with quality of equipment and facilities available for classroom instruction.” Single item. 4-point Likert-type measure. 1=very satisfied, 4=very dissatisfied.	0 = Not Satisfied (3,4) 1 = Satisfied (1,2)

Extrinsic Rewards: **Independent Variables**

Hours per week on duties ^b (Work Hours/Duties)	Q31a+Q31b+Q31c+Q31d Hours per week on each work activity: 31a. paid tasks at institution (teaching, clinical service, class prep, research, administration); 31b. unpaid tasks at institution (club assist., recruiting, attending institutional events); 31c. paid tasks outside institution (consulting, outside jobs, teaching at other institutions); 31d. unpaid tasks outside institution (unpaid professional service activities related to work). Composite score. a+b+c+d = value #.	Value #
Number of classes taught ^b (Number Classes)	Q35a Number of classes/sections taught for credit. 0 = No classes to 20 = 20 or more classes.	Value between 0 and 20.
Satisfaction with workload ^b (Workload) ^a	Q62a “Satisfaction with your workload.” Single item. 4-point Likert-type measure. 1=very satisfied, 4=very dissatisfied.	0 = Not Satisfied (3,4) 1 = Satisfied (1,2)
Satisfaction with salary ^b (Salary) ^a	Q62b, “Satisfaction with your salary.” Single item. 4-point Likert-type measure. 1=very satisfied, 4=very dissatisfied.	0 = Not Satisfied (3,4) 1 = Satisfied (1,2)
Satisfaction with benefits ^b (Benefits) ^a	Q62c. “Satisfaction with the benefits available to you.” Single item. 4-point Likert-type measure. 1=very satisfied, 4=very dissatisfied.	0 = Not Satisfied (3,4) 1 = Satisfied (1,2)
Amount of individual income from current institution. (Income) ^c	Q66a+Q66b. What is your amount of income from <i>all sources</i> (estimate gross income before taxes): 66a. basic salary from institution; 66b. other income from institution (summer, overload, administration, research, coaching sports); Composite score. a + b = value #.	Value #

Table 3.1 Continued

Socio-Demographics: Independent Variables		
Gender ^b	Q71 “Are you...” 1 = Male; 2 = Female	0 = Female 1 = Male
Race/Ethnicity:	Q 73 “Are you Hispanic or Latino?” Q74a-e “Are you...” a. American India/Alaska Native b. Asian c. Black/African American d. Hawaiian/Pacific Islander e. White 2 Variable item. 0 = No; 1 = Yes (Value X03Q74F)	0 = Majority : White non- Hispanic. 1 = Minority : American Indian/Alaska Native, Asian /Pacific Islander Black/African American non- Hispanic, Hispanic White or Hispanic Black.
Age, year of birth ^b	Q72 “In what year were you born?” Response = year listed. Calculation: 2003 minus year listed = value #	Value #
Marital Status, Fall 2003 ^b	Q77 “On Nov. 1, 2003 were you...” 1= Single and never married 2= Married 3= Living with partner or significant other 4= Separated, divorced, or widowed	0 = Not Single (married; living with partner/ significant other). 1 = Single (never married; separated, divorced, or widowed).
Number of Dependent Children ^b	Q79 “How many dependent children do you support?” (Dependent = 24 yr old or younger) 0 = None to 10 = 10 or more	Value between 0 and 10.
Disability, any ^b	Q 75 “Do you have a long-lasting condition that substantially limits one or more of your major life activities?” 0 = No; 1 = Yes	0 = No disability 1 = Disability

Note: Logistic regression in SAS will be modeled on 1=Satisfied.

***Independent Variables:** Questions to be factor analyzed for determining intrinsic and extrinsic reward variables.

^bNSOPF:04 variable descriptions.

^cIncome only includes income from current institution.

Data Analysis

Exploratory Factor Analysis

The first statistical analysis used for this study will be an exploratory factor analysis (EFA) of 11 intrinsic and extrinsic rewards questions, the satisfaction and opinion NSOPF:04 survey questions that were previously discussed (See Table 3.1). EFA is a statistical method utilized to reduce a larger set of observed variables into a smaller set of latent (i.e., unobserved) factors. The purpose of the factor analysis is to extract the underlying factors that will subsequently be used as independent reward variables and to provide information on validity and reliability (Thompson, 2004). The maximum likelihood method will be used for initial factor extraction. Eigenvalues will be requested and a scree test will be performed to determine which factors are meaningful and thus should be retained. The proportion of variance and cumulative proportion of variance will also be used to aid in the decision of appropriate number of factors to retain. The minimum proportion of variance will be set at 10%. Promax oblique rotation of the extracted factors will follow to reveal the factor correlation pattern. Hatcher (1994) recommends the promax oblique rotated factor pattern matrix as the primary basis for interpretation because the loadings represent the unique variance contributed by each factor retained. The rotated factor pattern has simple structure if the variables load on one factor, have high factor loadings on some variables, and very low (near-zero) loadings on the remaining variables (Allison, 1999; Hatcher, 1994).

When interpreting the rotated factor pattern, .40 will be the cut-off for factor loading. Questions (items) that produce a factor loading of .40 or greater on one factor and less than

.40 on all other factor(s) will be considered to load on that factor. Each extracted factor will account for maximum variance not accounted for by previously extracted factors (Hatcher, 1994). Cronbach's coefficient alpha (α) will be calculated to assess the reliability of the retained factors. Reliability coefficient measures equal to or greater than 0.70 are considered adequate for social science research studies (Hatcher, 2004). Thus, the minimum Cronbach's alpha measure will be set at 0.70 for this study. Following the EFA, the measurement model will be revised to include the extracted factors.

Descriptive Statistics

Descriptive statistics of all data selected for analysis will also be conducted using the SAS frequency procedure. Socio-demographic variables and professional characteristics are included in the analysis because they have been identified in previous research as co-variants. Although personal and professional characteristics may prove to be significant for this study, the primary purpose for their inclusion is to control for their influence upon the dependent variable. This research study is a non-experimental (correlational) design implemented to measure associations between variables only, and does not attempt to determine cause and effect (Hair, et al., 2006).

The research question is the following:

1. What are the effects of Human Capital Investment Variables (longevity, highest degree, academic discipline, and years in profession), Intrinsic Reward Variables (rewards of accomplishing job tasks, self-given awards, and self-satisfaction), Extrinsic Reward Variables (rewards of job environment/context, organization-administered awards, and public recognition), and Socio-Demographic Variables (gender, race/ethnicity, age, marital status, number of dependent children, and disability) on full-time community college faculty's overall job satisfaction?

Logistic Regression

Binary logit analysis (i.e., logistic regression) will be used to examine the predictive value of select independent variables on the dependent variable (overall job satisfaction). The SAS survey logistic procedure will be used to analyze overall job satisfaction (0= Not Satisfied, 1=Satisfied). It is appropriate to use logistic regression when the dependent variable is binary or dichotomous. Logistic regression may also be used to analyze multiple continuous or categorical predictor variables (LaValley, 2008). Logistic regression will identify: 1) whether the model is significant (i.e., does it produce an effect on the dependent variable); 2) which independent variable(s) contribute to the effect; and, 3) the magnitude and direction of impact of each (Allison, 1999).

The logit model, also known as the logistic regression model overcomes problems of linear regression attributed to probabilities being bounded by 0 and 1. The logit model

removes the upper bound by transforming the probability to an odds ratio (Allison, 1999; Cantor, 2002).

$$\text{logit}(p_i) = \ln \left(\frac{p_i}{1 - p_i} \right) = \beta_0 + \beta_1 x_{1,i} + \dots + \beta_k x_{k,i}.$$

In the formula given, p_i is the likelihood that job satisfaction will result while $1 - p_i$ is the likelihood that job satisfaction will not result. Thus, the fraction $(p_i / 1 - p_i)$ is the odds ratio. β_0 , the intercept term, is the odds ratio (i.e., likelihood) that job satisfaction will result when all predictor values equal 0.

The surveylogistic procedure statement in SAS will be used for the logistic regression analysis. To account for the complex sample design, a stratum statement, a class/cluster statement, and a weight statement will be used. The Event= '1' option will also be used in the PROC SURVEYLOGISTIC statement to tell SAS to estimate the model on 1 (Satisfied) rather than the default 0 (Not Satisfied).

Diagnostics of the Logit Model.

Diagnostic statistics will be calculated to test the models' goodness-of-fit. To test for level of significance of the independent variables added to the regression model, the Likelihood Ratio (LR) Chi-Square test will be used. Significance levels will be set at 0.05 or less (Allison, 1999; Dufty, 2007; Hatcher, Kryter, Prus, & Fitzgerald, 1992). Allison (1999) prefers the Likelihood Ratio test that calculates the Wald statistic. He prefers the Wald Statistic over the Hosmer-Lemeshow (HL) statistic because the HL statistic is weak, failing to reject the null hypothesis in up to 75% of cases even when it is known to be incorrect (Allison, 1999). Model fit statistics (AIC, SC) will also be examined.

To determine the amount of error reduced by using the full model versus the intercept only model (*i. e.*, β_0), R^2 will be calculated. According to Allison (1999), low values for R^2 are the norm when utilizing logistic regression. The C-statistic will also be evaluated to determine the discriminatory power of the model.

Multicollinearity must be assessed in a model such as this one with multiple predictor variables. It is often difficult to estimate the distinct effect of each independent variable when some variables are highly correlated with one another. Tolerance will be computed to yield collinearity diagnostics. As Allison (1999) suggests, variables with tolerance levels below .40 will be examined for removal from the model with consideration given to the uniqueness index of each problem variable.

In the dataset for this study, the dependent variable is measured on a Likert-type scale from 1 (very satisfied) to 4 (very dissatisfied). Overall Job Satisfaction will be recoded as a binary variable where Satisfied = 1 and Not Satisfied = 0 (*i. e.*, satisfaction is either present or not present; 1,0). Recoding of the variable will be necessary in order for the data to be analyzed using logistic regression. Factor analysis will determine the independent intrinsic and extrinsic reward variables. Select human capital investment variables will also be used. Socio-demographic variables will be included as co-variants to control for their effect.

Limitations

The use of secondary data analysis limits the researcher to questions that were asked in the original questionnaire. Thus, the researcher is limited in the data that is available for analysis. A second limitation is potential self-report bias in the data set, as the survey is a

web-based self-administered questionnaire. Other potential limitations relate to the NSOPF:04 dataset. There is a potential threat to internal validity as the data collection was a multi-mode method (web-based initial and CATI follow-up). Another potential threat to internal validity is the impacts of a time lapse as data was collected over a 10-month period. Responder bias may have occurred as a result of the time lapse. One other limitation is the nonrandom selection of participants in the study. Strata cluster sampling was used to select the faculty sample.

Delimitations

Several delimitations have been implemented to narrow the scope and focus of the research study. This study is limited to full-time faculty who primarily teach for-credit courses in public 2-year institutions within the United States and the District of Columbia. The research will not address faculty who teach at other types of institutions including private 2-year and 4-year institutions. Additionally, the independent variables of rank, scholarly activity, tenure, and union membership will not be used as these variables are generally not applicable to community college faculty.

Summary

This chapter portrayed an overview of the quantitative methods that will be applied to examine the overall job satisfaction of full-time community college faculty. The nationally representative NSOPF:04 dataset will be statistically analyzed to answer the research question. A thorough description of the methods used by researchers in gathering the dataset was presented. Details of how the variables will be operationalized for this study were also

rendered. A systematic depiction of the proposed statistical analysis was laid out in a step-by-step approach. In Chapter 4, the results of this statistical analysis will be presented.

CHAPTER 4: RESULTS

Introduction

In this chapter, the results of the data analysis that was described in the previous chapter will be systematically presented and explained. The research study is designed to answer the following research question:

1. What are the effects of Human Capital Investment Variables (longevity, highest degree, academic discipline, and years in profession), Intrinsic Reward Variables (rewards of accomplishing job tasks, self-given awards, and self-satisfaction), Extrinsic Reward Variables (rewards of job environment/context, organization-administered awards, and public recognition), and Socio-Demographic Variables (gender, race/ethnicity, age, marital status, number of dependent children, and disability) on full-time community college faculty's overall job satisfaction?

This chapter includes three primary sections. In the first section, the results of the exploratory factor analysis of the 11 faceted satisfaction and opinion variables are explained. A demographic and professional profile of the survey participants included in this research study is presented in section two. Section three addresses the research question stated above and presents a model for predicting the overall job satisfaction of full-time community college faculty.

Factor Analysis

The first statistical analysis conducted for this study was an exploratory factor analysis (EFA) of the satisfaction variables and opinion variables relevant to community

college faculty. The extracted factors will subsequently be used as independent rewards variables (Thompson, 2004).

The initial extraction of factors was performed using the maximum likelihood method (SAS option *method=ml*). The maximum likelihood method is sometimes preferred over the more popular principle factor method because “it provides a significance test for solving the “number of factors” problem, and it is also believed to provide better parameter estimates” (Hatcher, 1994, p. 77). The extracted factors at this point represent the maximum amount of variance not accounted for by other extracted factors and are orthogonal (i.e., uncorrelated with one another). In the next step, prior communality estimates are presented using SAS *priors=smc*. The *smc* option in SAS sets the prior communality estimates proportional to the squared multiple correlations.

To determine the number of meaningful factors n that should be retained, SAS option *nfact=n* was utilized to request the eigenvalues, and the proportion of variance accounted for by each factor was explored. Hatcher (1994) suggests that the Kaiser criterion (i.e., eigenvalue-one criterion) be the first option exercised in making this decision. In keeping with the Kaiser criterion, factors demonstrating eigenvalues greater than 1.00 are initially retained. For this study, *nfact = 3* was used.

Another option used in determining the number of factors n to keep was the scree test. The scree test is performed by plotting the eigenvalues associated with each factor and looking for large breaks between values until the plotted points eventually flatten out. The factors that are plotted prior to the breaks are assumed to be meaningful factors that should

be retained and rotated (Hatcher, 1994). The scree test for this study is presented in *Figure 4.1*. Three plotted factors appear to be relatively separate from the flattened portion of the graph supporting the decision that 3 factors should be retained.

The proportion of variance and cumulative proportion of variance were other methods used to aid in deciding the appropriate number of factors to be retained. The minimum proportion of variance for this study was set at 10%. Ideally, cumulative variance for the retained factors will approach 100%. There were 3 factors with a proportion of variance greater than 10% (69%, 18%, and 13%). The cumulative variance for these 3 factors was nearly 100%.

A promax rotation was used to assist with interpreting this EFA. Hatcher (1994) recommends the promax oblique rotated factor pattern matrix as the primary basis for interpretation because the loadings represent the unique variance contributed by each factor retained. The rotated factor pattern has simple structure if the variables load on one factor, have high factor loadings on some variables, and very low (near-zero) loadings on the remaining variables.

In summary, the criterion applied to interpret the final solution of the EFA for this study included the following: the Kaiser criterion held as each factor displayed eigenvalues greater than 1.00, each factor accounted for at least 10% of the variance in the data set, each variable produced a factor loading greater than or equal to the minimum of .40, and each variable loaded on only one factor.

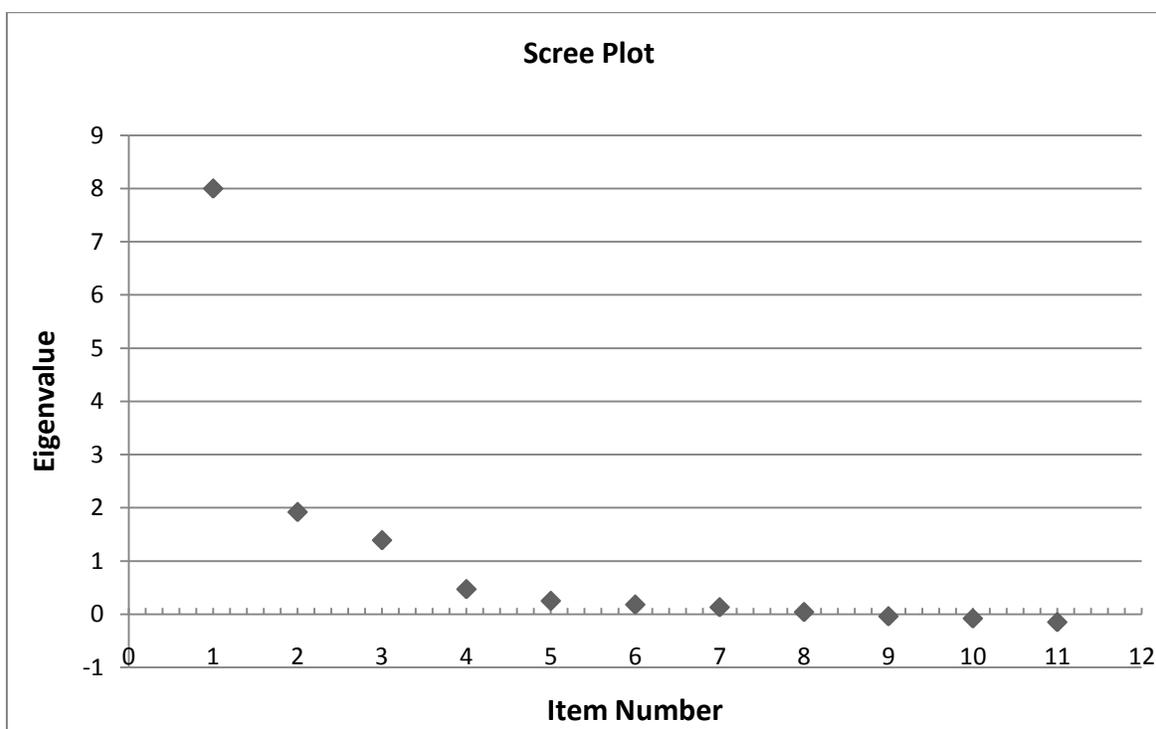


Figure 4.1. Scree plot of Eigenvalues. Produced by Exploratory Factor Analysis with nfact=3 for Reward and Opinion Variables.

Factor Analysis of Intrinsic and Extrinsic Rewards Variables

Responses to seven satisfaction questions and four opinion questions (eleven total items) were reduced into a smaller set of latent constructs (i.e., factors) by performing an exploratory factor analysis using squared multiple correlations as prior communality estimates. The factors were initially extracted using the maximum likelihood method. Following extraction, the factors were rotated using a promax rotation.

For interpretation of the rotated factor pattern, items were determined to load for a factor if the factor loading was .40 or greater for that factor and less than .40 on all other factors. Using these criteria, three factors loaded for the first factor labeled Institutional

Support for Teaching Excellence. Two items loaded for the second factor labeled Fair Treatment of Vulnerable Populations. Three items loaded for the third factor labeled Contracted Compensation. The three retained factors demonstrate simple structure, display more than 10% of the variance each (69%, 18%, and 13%) totaling nearly 100% variance when combined. The following three items failed to load on any factors: Q61A-Satisfaction with authority to make decisions; Q82A- Opinion that teaching excellence is rewarded; and, Q82B-Opinion that part-time faculty are treated fairly. A summary of the questionnaire items and corresponding factor loadings are presented in Table 4.1.

Construct Reliability

Cronbach's coefficient alpha (α) was calculated to assess the reliability of the underlying constructs for the retained factors. Reliability coefficient measures equal to or greater than 0.70 are considered adequate for social science research studies (Hatcher, 2004). In this study, reliability estimates were 0.75, 0.77, and 0.70 for the three extracted factors respectively (see Table 4.1): Institutional Support for Teaching Excellence, Fair Treatment of Vulnerable Populations, and Contracted Compensation.

Table 4.1

Survey Items, Corresponding Factor Loadings and Final Communalities Estimates (h^2)

Code	Survey Item	Factor			h^2
		1 ($\alpha=0.75$) Support For Teaching	2 ($\alpha=0.77$) Fair Treatment	3 ($\alpha=0.70$) Contracted Compensation	
Q61A	Satisfaction with authority to make decisions	.31	.13	.12	0.22
Q61B	Satisfaction with technology-based activities	.81	-.02	-.06	0.59
Q61C	Satisfaction with equipment and facilities	.70	-.05	-.03	0.43
Q61D	Satisfaction with institutional support for teaching improvement	.61	.04	.12	0.50
Q82A	Opinion: teaching excellence is rewarded	.34	.19	.21	0.37
Q82B	Opinion: part-time faculty are treated fairly	.30	.29	.03	0.28
Q82C	Opinion: female faculty are treated fairly	.01	.82	.01	0.67
Q82D	Opinion: racial minorities are treated fairly	-.01	.77	-.02	0.58
Q62B	Satisfaction with salary	-.05	-.02	.83	0.63
Q62C	Satisfaction with benefits	.03	-.03	.67	0.45
Q62A	Satisfaction with workload	.26	.06	.40	0.38

Note. The proportion of variance explained by each factor, ignoring other factors is: 69% (Factor 1), 18% (Factor 2), and 13% (Factor 3). N = 2308.

Revised Measurement Model

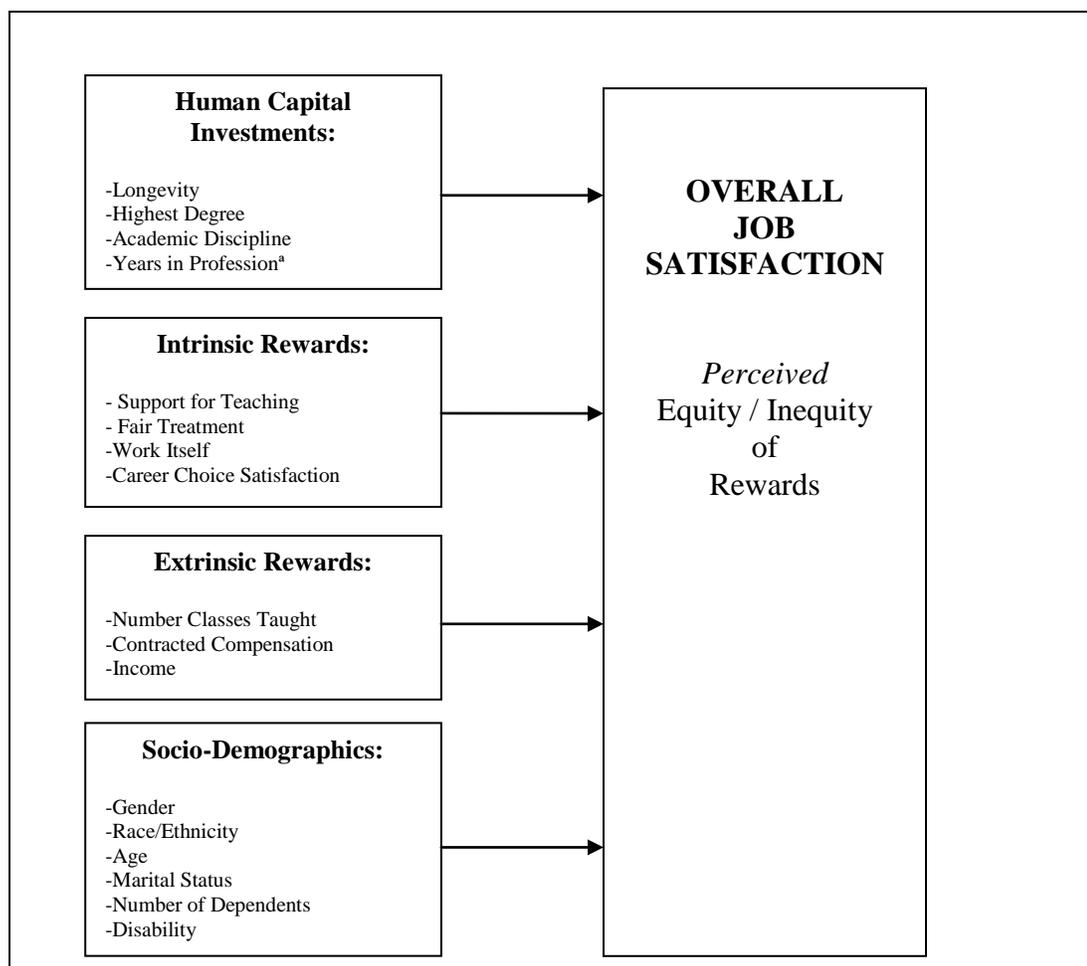


Figure 4.2. Measurement Model Revised after EFA. Factors/Variables that Affect Job Satisfaction for Full-Time Community College Faculty.

Note: Model based upon Porter-Lawler's Satisfaction-Performance Motivation Model.

*Years in Profession variable removed from logistic model to correct for multicollinearity following the initial tolerance test.

After reviewing the results of the Exploratory Factor Analysis, the measurement model was revised to reflect the extracted factors (Figure 4.2). Additionally, Table 4.2

summarizes the factors, variables, and measures including the SAS names and descriptions that have been revised and recoded or dummy-coded following the EFA for the pending Logistic Regression analysis.

Table 4.2

Summary of Factors, Variables and Measures after EFA

Variable Description	Question # and Original Response Code	Coding for Analysis
Dependent Variable Satisfaction with job overall (Overall Job Satisfaction) JOBSAT ^a	Q62d “Satisfaction with your job at this institution overall.” Single item. 4-point Likert-type measure. 1=very satisfied, 4=very dissatisfied. Recoded: 1=very dissatisfied, 4=very satisfied.	1 = Satisfied (3,4) ^b 0 = Not Satisfied (1,2)
Human Capital Investments: Independent Variables		
Length of Employment (Longevity) LONGEV ^a	Q 9 In what year did you start working at the job you held during the 2003 Fall Term at your institution? Response = year listed. Calculation: 2003 minus year listed = value #	Value #
Highest Degree Earned HIGHDEG ^a	Q17a1 Single Item. An ordinal scale (0 to 7). 8 categories: 0=NA; 1=doctoral; 2=1st professional; 3=MFA, MSW; 4=other master's; 5= bachelor's; 6=associate's; 7= undergrad certificate or diploma.	0 = No Degree, Associate's, undergrad certificate, diploma, or Bachelor's. 1 = Master's, MFA, MSW, Doctoral, 1 st Professional
Academic Discipline DISCIPLIN ^a	Q16CD2 “Principle field of teaching – general code 2 dummy variables indicating the primary teaching field of study as general or occupational education.	1 = General Education 0 = Occupational Education

Table 4.2 Continued

Years Teaching YRSTEACH ^a	Q 23 For those who worked at another institution, what year did you begin 1 st postsecondary faculty or instructional staff job? Response = year listed. Calculation: 2003 minus year listed = value #	Value #
Intrinsic Work Rewards: Independent Variables & Factors (Factor Loading)		
Institutional Support for Teaching Excellence TEACHSUP ^a <i>Alpha = .75</i>	Q61b, Q61c, & Q61d, a 3-item scale measuring faculty's satisfaction with institutional support for teaching excellence. Variables Recoded: 1=very dissatisfied, 4=very satisfied. 3-item scale; scores range from 3 – 12.	Satisfaction with technology based activities. (.81) Satisfaction with equipment & facilities. (.70) Satisfaction with institutional support for teaching improvement. (.61)
Fair Treatment of Vulnerable Populations FAIRTRMT ^a <i>Alpha = .77</i>	Q82c & Q82d, a 2-item scale measuring faculty's opinions regarding the fair treatment of protected populations in the institution's workforce. Variables Recoded: 1=strongly disagree, 4=strongly agree. 2-item scale; scores range from 2 – 8.	Opinion: female faculty treated fairly. (.82) Opinion: racial minorities treated fairly. (.77)
Percent time spent on actual instruction, undergraduate TEACHWRK ^a	Q 32a, Percentage of time spent on instructional activities with undergraduates including teaching, class prep, advising, and supervising students. Single item. Percentage between 0% to 100%	Percentage: 0% - 100%
Choose academic career again RECHOOSE ^a	Q83 "Finally, if you had it to do over again, would you still choose an academic career?"	1 = Yes 0 = No

Table 4.2 Continued

Extrinsic Organizational Rewards: Independent Variables & Factors		
Number classes taught NUMCLASS ^a	Q35a1 Number of classes taught, credit. 0 – 20.	Value #
Contracted Compensation COMPENS ^a <i>Alpha = .70</i>	Q62b, Q62c, & Q62a, a 3-item scale measuring faculty's satisfaction with contracted salary, benefits and workload. Variables Recoded: 1=very dissatisfied, 4=very satisfied. 3-item scale; scores range from 3 – 12.	Satisfaction with salary (.83) Satisfaction with benefits (.67) Satisfaction with workload (.40)
Total Individual Income from current institution INCOME ^a	Q66a+Q66b. What is your amount of income from institution? (estimate gross income before taxes): 66a. basic salary from institution; 66b. other income from institution (summer, overload, administration, research, coaching sports); Composite score. a + b = value #	Value #
Socio-Demographics: Independent Variables		
Gender GENDER ^a	Q71 "Are you..." 1 = Male; 2 = Female	1 = Male 0 = Female
Race/Ethnicity: ETHNIC ^a	Q 73 "Are you Hispanic or Latino?" Q74a-e "Are you..." a. American India/Alaska Native b. Asian c. Black/African American d. Hawaiian/Pacific Islander e. White (Value X03Q74F) 2 Variable item. 0 = No; 1 = Yes	1 = Minority : America Indian / Alaska Native, Asian/ Pacific Islander, Black/ African American non-Hispanic, Hispanic White or Hispanic Black. 0 = Majority : White non-Hispanic
Age, year of birth AGE ^a	Q72 "In what year were you born?" Response = year listed. Calculation: 2003 minus year listed = value #	Value #

Table 4.2 Continued

Marital Status, Fall 2003 MARITAL ^a	Q77 “On Nov.1, 2003 were you...” 1= Single and never married 2= Married 3= Living with partner or significant other 4= Separated, divorced, or widowed	1 = Single (never married; separated, divorced, or widowed). 0 = Not Single (married; living with partner or significant other).
Number of Dependent Children DEPENDS ^a	Q79 “How many dependent children do you support?” (Dependent = 24 yo or younger) 0 = None to 10 = 10	Value between 0 and 10. 1 = Disability 0 = No disability
Disability, if any DISABLE ^a	Q 75 “Do you have a long-lasting condition that substantially limits one or more of your major life activities?” 0 = No; 1 = Yes	

Note. Table was constructed after Exploratory Factor Analysis (EFA)

^a NSOPF:04 Recoded Variable Label

^b SAS Logistic Regression was modeled on 1=Satisfied

Socio-Demographics and Professional Characteristics

Table 4.3

Age: Community College Faculty

Age	Frequency	Cumulative	Percentage	Cumulative
Range		Frequency		Percentage
<30	39	39	1.69	1.69
30-44	647	686	28.03	29.72
45-54	802	1488	34.75	64.47
55-59	467	1955	20.23	84.71
60-64	247	2202	10.70	95.41
≥65	106	2308	4.59	100.00

Note. More than 70% are ≥ 45 years of age. N = 2308.

Table 4.4

Demographics

Category	Frequency	Cumulative Frequency	Percentage	Cumulative Percentage
Female	996	996	43.15	43.15
Male	1312	2308	56.85	100.00
Majority ^a	1624	1624	70.36	70.36
Minority	684	2308	29.64	100.00
Single ^b	549	549	23.79	23.79
Not Single	1759	2308	76.21	100.00
Disabled	102	102	4.42	4.42
Not Disabled	2206	2308	95.58	100.00
0 Dependents	1157	1157	50.13	50.13
1 Dependent	432	1589	18.72	68.85
2 Dependents	483	2072	20.93	89.77
3 Dependents	163	2235	7.06	96.84
4-10 Dependents	73	2308	3.16	100.00

^aMajority is defined as White non-Hispanic. Minority includes American Indian/ Alaska Native, Asian/ Pacific Islander, Black/African American non-Hispanic, Hispanic White, and Hispanic Black.

^bSingle includes never married, separated, divorced, or widowed. Not Single includes married, or living with partner / significant other.

A descriptive analysis of the survey participants is included to aid in establishing context for respondents. Socio-Demographic data included: gender, age, race/ethnicity, disability, marital status, and number of dependent children. Using SAS version 9.2, the frequency procedure and means procedure were performed for analysis. Tables 4.3 and 4.4 summarize the socio-demographic characteristics of the sample.

For this research study which focused upon community college faculty, survey participants were included if they self-identified as full time faculty employed in public 2 year institutions (i.e., community colleges), whose principle activity was instruction. Of the 2308 community college faculty, the majority (56.85%, $n = 1312$) were male. Table 4.3 summarizes the ages of the participants. Interestingly, less than 20 % of the participants (19.97%, $n = 461$) were under the age of 40. This statistic is in agreement with previous research noting the collective advancing age of the nation's community college faculty (Gahn & Twombly, 2001; Twombly & Townsend, 2008). Table 4.4 summarizes the demographic information (other than age) for the participants in this study.

Professional Characteristics of Participants

The faculty participants were fairly evenly divided by academic discipline with slightly more faculty (53.9%, $n = 1238$) categorized as General Education versus Occupational Education (46.1%, $n = 1059$). Note: There were 11 of the 2308 respondents with no response for Academic Discipline; thus, they were not included in the logistic regression analysis for this study. Tables 4.5 – 4.8 summarize the professional characteristics of participants.

Table 4.5

Professional Characteristics: Means

Variable	<i>n</i>	Minimum	Maximum	<i>M</i>	<i>SD</i>
Longevity ^a	2308	0	47	11.16	9.70
Years Teaching ^b	2308	0	48	15.17	10.58
Number Classes	2308	0	20	4.65	2.50
Income ^c	2308	68.00	142,000.00	56,780.61	18,327.64

^aLongevity is defined as years teaching at current institution.

^bYears Teaching is defined as number of years teaching overall at all institutions.

^cIncome includes amount of individual income from current institution only.

Table 4.6

Professional Characteristics: Frequency

Category	Frequency	Cumulative Frequency	Percentage	Cumulative Percentage
Doctorate ^a	476	476	20.62	20.62
≤ Masters	1832	2308	79.38	100.00
General Ed ^b	1238	1238	53.90	53.90
Occupational Ed ^b	1059	2297	46.10	100.00

^aDoctorate includes 1st professional degree.

^bFrequency Missing = 11; thus, N = 2297.

Table 4.7

Age Received Highest Degree

Age	Frequency	Cumulative Frequency	Percentage	Cumulative Percentage
N/A ^a	30	30	1.3	1.3
< 25	349	379	15.12	16.42
25 – 29	621	1000	26.91	43.33
30 – 34	471	1471	20.41	63.73
35 – 39	311	1782	13.47	77.21
40 – 44	271	2053	11.74	88.95
45 – 49	147	2200	6.37	95.32
≥ 50	108	2308	4.68	100.00

Note: Age = age when degree awarded.

^aN/A refers to faculty who have not earned a postsecondary degree.

Table 4.8

Academic Discipline: Principle Field of Teaching

General Education	Occupational Education
Area/ethnic/cultural/gender studies	Agricultural/natural resources/related
Arts-visual and performing	Architecture and related services
Biological and biomedical sciences	Business/management/marketing/related
Education	Communication/journalism/comm. tech
English language and literature/letters	Computer/info sciences/support/tech
Foreign languages/literature/linguistics	Construction trades
Library science	Engineering technologies/technicians
Mathematics and statistics	Family/consumer/human sciences
Multi/interdisciplinary studies	Health professions/clinical services
Philosophy, religion & theology	Legal professions and studies
Physical sciences	Mechanical/repair technologies/techs
Psychology	Parks/recreation/leisure/fitness studies
Social sciences (except psych) and history	Precision production
	Personal and culinary services
	Public administration/social services
	Science technologies/technicians
	Security & protective services
	Transportation & materials moving

Note. Eleven of the 2308 participants did not indicate an academic discipline and were excluded from the subsequent logistic regression analysis.

Analysis of Research Question

Following the exploratory factor analysis, the research question was edited to reflect the revised measurement model including the extracted factors (See Figure 4.2 and Table 4.2).

1. What are the effects of Human Capital Investments (longevity, highest degree, academic discipline, and years teaching), Intrinsic Work Rewards (teaching support, fair treatment, work itself, and career choice satisfaction), Extrinsic Organizational Rewards (number classes taught, satisfaction with compensation, and income), and Socio-Demographics (gender, race/ethnicity, age, marital status, number of dependent children, and disability) on full-time community college faculty's overall job satisfaction?

Using SAS version 9.2 statistical software, logistic regression (the surveylogistic procedure) was used to answer the research question. The PROC surveylogistic statement was used because it addresses the clustering of data inherent in the complex sampling design of the NSOPF:04 dataset. The dependent variable in the logistic equation was overall job satisfaction (0 = not satisfied, 1 = satisfied). The independent factors and variables were all modeled on this dependent variable. The (Event= '1') option was used in the PROC SURVEYLOGISTIC model statement to tell SAS to estimate the model on 1 (satisfied) rather than the default 0 (not satisfied).

The Likelihood Ratio (LR) Chi-Square test was used to test the model. The global null hypothesis: $BETA=0$ holds that all of the predictors' regression coefficients are equal to zero. The Likelihood Ratio test p -value is less than .0001 (Chi-square=20732.9641; df=16) which indicates that the model is significant overall, and at least one of the predictor variables has a coefficient not equal to zero.

The model fit statistics demonstrate values lower for the model with predictor variables (AIC=30380.808, SC=30478.377) than values for the intercept alone (AIC=51081.772, SC=51087.511). Smaller values indicate that the model is a good fit. R-square was also evaluated to determine the amount of error reduced by the full model versus the intercept only model. The R-square value of 0.2318 indicates that the model does predict a significant amount of variance in job satisfaction. Low values for R-square are the norm with logistic regression models (Allison, 1999). The C-statistic was also evaluated to determine the discriminatory power of the model. Values close to 1.0 indicate a model that highly discriminates the response versus randomly predicting the response (0.5). The C-statistic of 0.912 indicates a model that is highly discriminatory (Allison, 1999).

When using any regression model, multicollinearity results whenever strong linear associations exist among predictor variables. Variables that share a strong correlation with one another may become unstable. Further, it becomes more difficult to determine the unique effect that each variable has upon the dependent variable as multicollinearity increases (Allison, 1999). The tolerance test (PROC REG) was run on the model to diagnose multicollinearity. Low tolerance levels indicated high multicollinearity. Allison (1999) states that there is no strict cut-off level for tolerance scores; however, one should be concerned when tolerance levels drop below .40.

Initial model diagnostics using the Tolerance Test revealed that two of the variables in the model had tolerance scores below 0.40 suggesting high multicollinearity (LONGEV=0.31, YRSTEACH=0.25). One acceptable method to correct for multicollinearity

is to remove one of the problem variables from the equation. To correct for the apparent multicollinearity problem, YRSTEACH (i.e., Years in Profession) was dropped from the model. Assurance that removal of this variable would not greatly reduce the significance of the regression model was gained by calculation of the uniqueness index. According to O'Rourke, et al (2005), uniqueness index indicates the percentage of variance accounted for by an individual predictor variable. The uniqueness index is calculated by subtracting the R-square value of the reduced equation (variable removed) from the R-square value of the full equation (all variables included). The uniqueness index for YRSTEACH is $0.2315 - 0.2310 = 0.0005$. Accordingly, YRSTEACH accounts for only .05% of the unique variance in job satisfaction and was dropped from the model to correct for multicollinearity with negligible effect upon the model's significance.

Multicollinearity diagnostics demonstrate that this model now has no discernible issues with high correlations among predictor variables. As seen in Table 4.9, the tolerance values are all between .54 and .98 with none below the .40 threshold suggested by Allison (1999).

Table 4.9

Multicollinearity Diagnostics – Job Satisfaction of Community College Faculty

Variable	Tolerance	Variance Inflation
LONGEV	0.53483	1.86975
HIGHDEG	0.78443	1.27482
DISCIPLIN	0.81446	1.22780
TEACHSUP	0.71550	1.39763
FAIRTRMT	0.78920	1.26711
TEACHWRK	0.94943	1.05327
RECHOOSE	0.94338	1.06002
NUMCLASS	0.96244	1.03902
COMPENS	0.68920	1.45095
INCOME	0.66797	1.49708
GENDER	0.90803	1.10129
ETHNIC	0.95017	1.05244
AGE	0.58874	1.69855
MARITAL	0.91396	1.09414
DEPENDS	0.86673	1.15376
DISABLE	0.97664	1.02392

Note. Tolerance values <0.40 suggest high correlation. $R^2=0.2318$.

Logistic Regression Results

The results of the logistic regression model for predicting the job satisfaction of community college faculty are listed in Table 4.10. The logistic regression analysis revealed that 5 of the 16 predictor variables have a statistically significant relationship with the predicted odds of job satisfaction resulting for full-time community college faculty. Three of these predictor variables have a positive relationship (i.e., increase the log odds of job satisfaction resulting) while the other two have a negative relationship (i.e., decrease the log odds of job satisfaction resulting).

Table 4.10

Logistic Regression of Job Satisfaction

Predictor	β	SE β	<i>p</i> -value	Log Odds Ratio
Intercept	-8.2874	1.1757	<.0001	
LONGEV	-0.0195	0.0179	0.2756	0.981
HIGHDEG	0.0772	0.2029	0.7037	1.167
DISCIPLIN	0.0337	0.1308	0.7967	1.070
TEACHSUP	0.4279	0.0541	<.0001*	1.534
FAIRTRMT	0.2185	0.0832	0.0086*	1.244
TEACHWRK	0.0088	0.0064	0.1703	1.009
RECHOOSE	-0.5989	0.1476	<.0001*	0.302
NUMCLASS	0.0101	0.0530	0.8485	1.010
COMPENS	0.5633	0.0689	<.0001*	1.757
INCOME	9.398E-6	8.79E-6	0.2850	1.000
GENDER	0.2006	0.1409	0.1544	1.494
ETHNIC	-0.4327	0.1525	0.0045*	0.421
AGE	0.0013	0.0152	0.9321	1.001
MARITAL	0.1896	0.1462	0.1947	1.461
DEPENDS	0.0980	0.1180	0.4064	1.103
DISABLE	0.0854	0.2288	0.6220	1.254

Note. Likelihood Ratio ($p = <.0001$, chi-square = 20732.9641, $df = 16$); $R^2 = 0.2318$, C statistic =

0.912. *Predictors with p -value .05 or less.

Increased Odds for Job Satisfaction

As reported in Table 4.10, contracted compensation (COMPENS), institutional support for teaching (TEACHSUP), and fair treatment of protected populations (FAIRTRMT) all had a statistically significant and positive association with greater odds of

job satisfaction being present. Faculty who were satisfied with the fairness of their contracted compensation (i.e., salary, benefits and workload) were 1.8 times more likely to be satisfied with their jobs than faculty who were not satisfied with the fairness of their contracted compensation. Faculty who were satisfied with the support for teaching provided by their institution were 53 % more likely to be satisfied with their jobs than those who were not satisfied with teaching support provided by their institutions. Continuing, faculty who perceived that vulnerable populations (i.e., females and ethnic/racial minorities) are treated fairly by their academic institutions were 1.2 times more likely to be satisfied with their job than those who did not feel that females and racial/ethnic minorities were treated fairly.

Decreased Odds for Job Satisfaction

Two variables were found to be statistically significantly associated with decreased odds of job satisfaction being present (i.e., negatively related) in community college faculty: race/ethnicity (ETHNIC), and re-choosing a career in academe (RECHOOSE) (See Table 4.10). Faculty who self-identified as a racial/ethnic minority (American Indian/Alaska Native, Asian/Pacific Islander, Black/African American non-Hispanic, and Hispanic White or Hispanic Black) were only 0.42 times as likely to be satisfied in their jobs than those faculty who indicated they were racial/ethnic majority members (White non-Hispanic). Stated another way, minority faculty were 58% less likely to be satisfied with their jobs as White faculty.

With all other variables held constant, faculty who indicated that they would re-choose a career in academe if given the opportunity to decide again are only 0.30 times as

likely to be satisfied in their jobs than those who indicate they would not re-choose a career in academe. Restated, community college faculty who indicated that they would re-choose a career in academe are 70 % less likely to be satisfied in their jobs as those who would not re-choose an academic career.

Summary

In summary, logistic regression determined that 5 of the 16 variables in the predictive model for job satisfaction of community college faculty have a significant effect. Three predictor variables were associated with increased odds of job satisfaction resulting (i.e., positive), while two were associated with lower odds of job satisfaction being present (i.e., negative). The variables positively associated with job satisfaction in order of effect size include: contracted compensation (odds ratio = 1.76), institutional support for teaching (odds ratio = 1.53), and perceived fair treatment of vulnerable populations at one's institution (odds ratio = 1.24). The variables related to lower odds of job satisfaction being present include: being a member of a racial/ethnic minority (odds ratio = 0.42), and indicating one would re-choose a career in academe (odds ratio = 0.30). In Chapter 5, the results of this study will be discussed including the impact upon previous research and implications for future practice.

CHAPTER 5: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

The purpose of this study was to examine variables that influence overall job satisfaction among full-time community college faculty including human capital investments, intrinsic work rewards, extrinsic organizational rewards, and socio-demographics/professional characteristics. This research used a cross-sectional correlational design utilizing secondary data analysis of the 2004 National Study of Postsecondary Faculty (NSOPF:04) database. The NSOPF:04 survey collected data from 26,110 faculty and instructional staff within 980 educational institutions nationwide. The sample used for this study included the 2308 faculty who were employed full-time at public 2-year institutions and whose principle activity was teaching for-credit courses during Fall 2003. The primary objective for this study was to explore methods for predicting and impacting the overall job satisfaction of full-time community college faculty. In this chapter, the conclusions and implications drawn from the research results will be discussed in comparison with prior research findings. Additionally, the results will be applied to formulate applications for current policy and practice, as well as disclosing opportunities for future research.

Conclusions and Discussion

Job satisfaction was defined as “the pleasurable emotional state resulting from the appraisal of one’s job as achieving or facilitating the achievement of one’s job values” (Locke, 1969, p. 316). For this study, overall job satisfaction (i.e., global job satisfaction)

was examined rather than faceted job satisfaction (i.e., satisfaction as a function of the various contributions from its multidimensional facets) (Berry & Morris, 2008). The major purpose of this study was to develop a model for predicting the overall job satisfaction of full-time community college faculty. Using logistic regression, sixteen independent variables were analyzed for their predictive abilities. Prior to conducting the logistic regression analysis, an exploratory factor analysis (EFA) of the 11 satisfaction and opinion questions included in the NSOPF:04 survey was performed. Following the EFA, intrinsic work rewards and extrinsic organizational rewards were changed to include the emerged factors, and the research question was edited to the following:

1. What are the effects of Human Capital Investments (longevity, highest degree, academic discipline, and years teaching), Intrinsic Work Rewards (teaching support, fair treatment, work itself, and career choice satisfaction), Extrinsic Organizational Rewards (number classes taught, satisfaction with compensation, and income), and Socio-Demographics (gender, race/ethnicity, age, marital status, number of dependent children, and disability) on full-time community college faculty's overall job satisfaction?

The research revealed that there is a significant relationship between overall job satisfaction and the following five independent variables: contracted compensation, institutional support for teaching excellence, fair treatment of vulnerable populations, race/ethnicity, and again choosing an academic career. Each of these variables will be discussed in order of descending magnitude for its predictive power of overall job

satisfaction. Discussion will include comparisons to previous research, impacts upon current research, and implications for policy and practice.

Variable 1: Contracted Compensation

The research revealed that faculty who scored higher on the contracted compensation variable were 76% more likely to be satisfied overall with their jobs than faculty who scored lower. Contracted compensation was the most powerful predictor (odds ratio: 1.76) for overall job satisfaction of community college faculty. Contracted compensation was a 3-item scale measuring faculty's satisfaction with salary, benefits and workload. It is concluded that faculty who are more satisfied with their contracted compensation are more likely to be those who are satisfied with their jobs overall.

When comparing the results to previous research, these findings are consistent with those of Cook, et al. (2009) who found that faculty in higher education are motivated primarily by intrinsic rewards (e.g., personal satisfaction, feeling appreciated and supported by peers and supervisors, joy of teaching) *unless* extrinsic rewards (e.g., salary, benefits, and course releases) are perceived as unfair or inadequate. Continuing, community college faculty are primarily motivated by the opportunity to teach and to extend opportunity to students with limited college options (Townsend & Twombly, 2007). To summarize, if faculty perceive salary, benefits, and workload (i.e., extrinsic rewards) to be equitably distributed, then job satisfaction will more likely ensue. This research used secondary data analysis of the NSOPF:04 database. The proxy measures used for intrinsic rewards were somewhat limited and likely impacted the findings.

Jacobson (2003) found that in general, community college faculty are well paid, and are satisfied with their autonomy, flexible work load, and ability to emphasize teaching rather than research. In contrast, Hardy and Laanan (2006) found that full-time community college faculty have high levels of job satisfaction but are least satisfied with salary and benefits. Similarly, Zhou and Volkwein (2003) found seniority, satisfaction with job security, and satisfaction with compensation were key predictors for turnover. Valadez and Anthony (2001) found part-time community college faculty to be satisfied with their choices to pursue a career in academe, but concerned about low salaries, lack of benefits and lack of job security. Rosser's (2005) findings suggest that faculty's perceptions of worklife and satisfaction change over time and with changing circumstances, which could explain why research findings are contradictory.

It is important to note that contracted compensation takes into account not only pay and benefits for full-time faculty, but also workload. Salary and benefits for community college faculty are traditionally modest and state revenue-dependent. Declining state revenues have led to stagnated salary rates and eroded benefit packages for all state employees, including community college faculty (Boggs, 2004; Townsend & Twombly, 2007). Concurrently, community colleges are being relied upon to meet the post-secondary educational needs for a variety of expanding groups including traditional college-age students and displaced workers. Community colleges spend 44.5% of their budget on instruction compared to 39.6% for private research institutions and 36.1% at public research institutions. Community college faculty earn less and teach more than faculty in other sectors

of higher education (Mullin, 2010). The expectation for community colleges is that they will meet increasing student demands with fewer resources. Thus, contracted compensation for all community college faculty should be equitably impacted by the effects of the economic challenges of the current economy. The findings here suggest that job satisfaction will decline among faculty where disparities of pay, benefits, and workload are perceived to exist.

Community college faculty expect variations in faculty salary and benefits according to differences in academic discipline, longevity, advanced and professional degree attainment, and institutional traits such as wealth, size and geographic location. Findings here reinforce that equity is anticipated in contracted compensation among faculty within a similar group. Faculty seek equity when comparing themselves to colleagues most similar in job status. Perceived differences will create negative job attitudes and behaviors such as decreased job satisfaction, eroded organization commitment and intent to leave. These research findings demonstrate that the single most effective strategy for building job satisfaction among full-time faculty is to maintain equity in contracted compensation. Policy for workload, salary, and benefit structures should be developed, widely disseminated, and strictly adhered to in order to propagate the perception of organizational equity regarding contracted compensation.

College administrators who offer generous salary and benefit packages to attract new and talented faculty applicants will run the risk of alienating current faculty who may perceive inequities in contracted compensation (Chuanzhong, 2005). Faculty are the front-line employees who interact with students and are essential components in producing

measurable student learning outcomes, the primary product of the community college. As more emphasis is placed upon community colleges to produce, committed faculty have become increasingly important. Ultimately, measurable student learning outcomes will determine the organizations' acquisition of essential commodities for sustainability (e.g., funding levels, accreditation status). According to the findings of this study, the most effective method to encourage faculty commitment and intent to stay is to enforce equitable contracted compensation for faculty. Securing the commitment of faculty will be the first essential step in producing measurable student learning outcomes and organizational sustainability.

Workload, another construct factored into the contracted compensation variable, is also being influenced by the emerging "do more with less" mantra. Full-time community college faculty are required to serve on committees and perform other service duties for the college. Also, the administrative tasks associated with institutional effectiveness and accreditation status add to "other" tasks assigned to full-time faculty. For faculty who seek out and are awarded grants, compulsory student performance tracking follows. Faculty are also mandated to accomplish professional development tasks required to remain current in their field or discipline. These administrative-type obligations are in addition to scaled-up approaches for classroom instruction, mastery of distance educational technologies, and accommodations for larger class sizes, all initiatives designed to meet escalating student demand.

Perhaps increasing workload is reaching a critical tipping point (Townsend & Twombly, 2007). It is possible that additional duties are continually added to the list of expected duties for full-time faculty without consideration for the effects upon workload. It is also likely that some academic areas and disciplines accrue disproportionately greater amounts of new duties creating inequities in workload. The findings here suggest that college administrators must be attentive to the effects upon faculty's contracted compensation that additional mandated duties produce.

Community college faculty are attracted by the opportunity to focus on teaching and interfacing with students. The typical full-time community college instructor spends 85% of his/her time on instructional and student related activities compared to 73% for college faculty and 66% for university faculty (Townsend & Twombly, 2007). Duties that infringe upon time that is traditionally spent preparing for and teaching classes can diminish job satisfaction. Added duties for faculty that increase overall workload can upset the work-life balance, particularly in a climate of flat salary rates. This research study indicates that community college administrators need to be cognizant of the implications of increasing workload among full-time faculty. Faculty teaching online and those learning new instructional technologies have corresponding increased workload demands. Stipends, course releases, and technology training and support are some strategies that can be offered as contracted compensation adjustments for those faculty (Cook, et al., 2009).

It is possible that the results of this study were impacted by the age of the respondents. Nearly 70% of the full-time faculty in this sample were age 45 and above.

Perhaps retirement planning was already shaping the values of the respondents. Financial planning and fiscal security are important considerations for retirement planning. As retirements continue to reshape the collective membership of the community college professoriate, the values that characterize the group will evolve. It is likely that the rewards that foster job satisfaction will change as well (Townsend & Twombly, 2007; Twombly & Townsend, 2008). Younger workers typically demand better work/life balance as many are facing challenges such as single-parenting and dual-career families (Smith, 2008). Support for younger faculty may include work-life balance needs such as flex-time and work from home options. Single parents in particular benefit from creative scheduling options. Health concerns can arise for faculty experiencing role overload and feelings of being overwhelmed. Persistent strain results in job dissatisfaction, which ultimately affects feelings of well-being and psychological health. Faculty tend to leave institutions when they experience high levels of workplace stress and burnout created by an “overwhelming set of role expectations” (Daly & Dee, 2006, p. 777).

Expectations within the higher education workplace are dynamic and require monitoring for changes that affect faculty’s work attitudes. As external constituencies place increasing demands upon postsecondary faculty for accountability and student learning outcomes, faculty’s work-life balance, values, and expectations may likewise shift (Daly & Dee, 2006; Rosser, 2005). College administrators have the ability to be responsive by adjusting contracted compensation structures to more closely match the values of the changing faculty body in order to impact job satisfaction and retention of faculty. In order for

job satisfaction to result, work rewards must be valued by faculty, result from ones' efforts on-the-job, and be equitably distributed to all employees who have earned them (Borkowski, 2005; Porter & Lawler, 1968; Smerek & Peterson, 2007). This research demonstrates that the single variable that most significantly impacts the overall job satisfaction of full-time community college faculty is faculty's satisfaction with contracted compensation. Armed with this knowledge, community college administrators must advocate for more equity in the contracted compensation (i.e., salary, benefits, and workload) of full-time faculty.

Variable 2: Institutional Support for Teaching Excellence

Results showed that faculty who scored higher on institutional support and value for teaching excellence were 1.53 times as likely to be satisfied with their jobs overall than faculty who scored lower on institutional support and value for teaching excellence. Institutional support for teaching excellence was the second strongest predictor (odds ratio: 1.53) for overall job satisfaction in this model. Institutional support for teaching excellence was a 3-item scale measuring faculty's satisfaction with technology based activities, satisfaction with equipment and facilities, and satisfaction with institutional support for teaching improvement. It is concluded that community college faculty who are more satisfied with the value and support their institutions offer to facilitate student learning are those who are more satisfied with their jobs overall.

The findings are consistent with previous research that demonstrated postsecondary faculty most strongly value teaching and the promotion of learning in adult students (Levin, 2006). The value for teaching is a strong motivator for community college faculty as they are

collectively found to be more highly rewarded from the work itself, defined simply as teaching and learning (Jacobson, 2003). Community college faculty derive greater satisfaction from increased opportunities to interact with students in the classroom and in supporting student learning activities. In short, community college faculty experience high levels of satisfaction and intrinsic rewards from being allowed to focus on the thing they most love--teaching (Townsend and Twombly, 2007).

The results of this research show that instructional support significantly influences the job satisfaction of full-time community college faculty. This finding supports previous research findings that show faculty who are motivated to teach and work with students to facilitate learning rather than conduct research and publish are naturally more attracted to community colleges primarily due to community colleges' reputation as centers for teaching and learning (Anderson, et al., 2002; Jacobson, 2003; Townsend & Twombly, 2007). It is then not surprising that support for teaching would be highly valued among community college faculty. Community college administrators can foster positive job attitudes in faculty by implementing strategies that demonstrate value for and support of instructional excellence.

Distance education preparation and delivery can present challenges and frustration for faculty by infringing upon student interaction time (Mars & Ginter, 2007; Wallin, 2003). Without adequate Instructional Technology (IT) support, faculty become annoyed and students experience disruptions in learning. As the trend toward distance education continues to grow, it is essential that faculty be supported. Faculty who responded in this study were

perhaps indicating their desire for IT support and professional development opportunities pertaining to distance learning given the current growth in distance education. Support should include regular equipment upgrades, responsive IT support teams to minimize disruptions, and ongoing opportunities for faculty to upgrade their skills to properly interact with and implement instructional technologies. Given the increasing use of technology in higher education for innovative instructional delivery (Akroyd, et al., 2004), it is understandable that faculty list technology as their most critical area of need for professional development (Mars & Ginter, 2007; Wallin, 2003).

Community college administrators must recognize that an investment in new technologies requires an accompanying investment in IT support and professional development for faculty. Failure to implement proper support will result in escalating frustration for faculty, and interruption in student learning. Ultimately, negative work attitudes such as reduced job satisfaction will result.

Other actions that can indicate support for faculty is implementation of upgrades to the workplace environment. At a minimum, community college faculty expect a safe workplace environment for themselves and students. Adequate parking, amply stocked classrooms, and visible security, particularly for remote college locations and night classes are basics presumed to be provided by the college. Workspace enhancements such as improved indoor air quality, ergonomically designed furniture, proper lighting, and noise control have been shown to increase productivity and reduce workspace stress. Stressors can affect both the physical and mental performance ability of workers. Other factors that affect

worker comfort include colors and decorations, signage, artwork, and design details.

Workspace quality that supports worker comfort by supplying an optimal work environment positively impacts worker productivity.

Community college administrators can demonstrate value for faculty by investing in resources that will increase faculty productivity while reducing stress. Although budgets may be limited, simple facilities improvements such as painting classrooms and offices, or reconfiguring workspaces can demonstrate a concern for the well-being of faculty.

Community college faculty respond positively to investments tailored to improve interactions with students and increase learning opportunities, however simple. Findings from this research show that support for faculty is the second most effective method to positively impact the job satisfaction of community college faculty.

Community college administrators can also demonstrate a commitment to faculty and teaching excellence by investing in professional development opportunities designed to improve teaching. Faculty who feel valued, supported and rewarded will “exhibit greater commitment to an organization” (Umbach, 2007, p. 93). Committed faculty display increased performance, positive work-related behaviors, and higher levels of organizational commitment.

As previously stated, community college faculty are committed to teaching above all else. They are typically attracted to community colleges by the opportunity to teach and interact with students. Thus, it is not surprising that faculty respond positively and strongly for support in becoming better educators. Faculty represent one of the greatest financial

commodities within higher education. Institutions invest significant amounts of time and money in recruiting, training and retaining qualified faculty. Faculty should also be developed to maintain relevance, competence, and value in their respective disciplines, and to generate a return on investment for stakeholders and taxpayers (Layzell, et al., 1994).

In addition, professional development opportunities foster “a belief on the part of instructors that administrators support and value good teaching” (Townsend & Twombly, 2007, p. 43). Faculty are more likely to remain at an institution that addresses the professional development needs of its faculty by investing time and resources for quality professional development programs. The quality of faculty is important because of the impacts upon measures of institutional effectiveness as well (Sprouse, et al., 2008). Improved quality in teaching will result in improved learning for students (Wallin, 2003).

In summary, value and support for student learning is demonstrated by community college administrators who supply their faculty with functional equipment, facilities, and technology to facilitate student interactions, and by offering professional development opportunities designed to promote teaching excellence. College administrators will need to allocate funding in support of classroom technology and instruction, and in support of professional development opportunities for faculty that promote teaching excellence and the use of classroom technology in order to positively impact faculty’s job satisfaction. Community college administrators should pay particular attention to the IT support of classroom instruction, and the professional development needs of faculty in efforts to both increase faculty job satisfaction and improve student learning measures. Findings from this

study reveal that faculty's satisfaction with support for instruction is the variable that has the second most predictive capability for the job satisfaction of community college faculty.

Variable 3: Fair Treatment of Vulnerable Populations

Fair treatment of vulnerable populations was the third most powerful predictor (odds ratio: 1.24) for the overall job satisfaction of community college faculty. Faculty who scored higher on their perceptions that female and racial minority employees are treated fairly within their institutions were 24% more likely to feel satisfied overall with their job than those who scored lower on the perception of fair treatment for these vulnerable groups. It is concluded that faculty who are more satisfied with the treatment that vulnerable populations within their institutions receive are more likely to be satisfied with their jobs overall.

It is interesting to note that of the 2308 full-time community college faculty who participated in this national study, 43% were female and 30% were minorities. Clearly the significance of fair treatment of female and minority faculty is not attributable to the sample being over-representative of the protected populations (i.e., female and minorities). Stated another way, the sample that produced the finding that fair treatment of women and minority faculty was important for their job satisfaction was 57% male and 70% white non-hispanic.

According to 2012 statistics, the current full-time community college faculty population is 51% female and 17% minority (NCES). It is reasonable to assume that the fair treatment of female and minority faculty continues to be a significant predictor for job satisfaction. Community colleges have previously established a positive record for job satisfaction of faculty who are members of the protected populations. Earlier research has

demonstrated that female faculty members consistently were treated more fairly in community colleges than in 4-year universities (Hagedorn, 2007). African American faculty in 2-year institutions were more likely to experience job satisfaction (50% reported being very satisfied overall, 40% were somewhat satisfied overall) than faculty at 4-year institutions (33% reported being very satisfied overall, 51% were somewhat satisfied overall) (Flowers, 2005).

This finding suggests that community college faculty value a climate of inclusiveness and respect for diversity among faculty and students. Fair treatment of protected populations within an organization indicates a culture of fairness that can be extrapolated broadly across the institution. Such a climate is clearly visible to all members of an organization and signals fair treatment across all other employee groups as well. Organizations that have developed a reputation of fair treatment toward its employees will engender positive work attitudes among its workers including job satisfaction, commitment, and intent to stay. Likewise, a community college that has developed a reputation for valuing and supporting its faculty will attract new faculty applicants, as well as retain those already employed (Hardy & Laanan, 2006; Murray & Cunningham, 2004; Rosser & Townsend, 2006).

Retention of faculty is an important issue for community colleges for budgetary implications and for student learning outcomes. Faculty turnover creates additional costs for institutions that must recruit and train new faculty to replace vacancies. Institutions that experience problems retaining faculty will also experience a decline in institutional reputation, which will subsequently create recruitment challenges. High rates of turnover are

also problematic for student learning outcomes due to the disruption of continuity in instruction, mentoring and advising (Berry & Morris, 2008; Jaeger & Eagan, 2009; Rosser & Townsend, 2006).

Although the effect is indirect, turnover also negatively impacts an organization's awarded budget as increasingly more educational systems are shifting toward performance – based funding. Under such systems, productivity drives funding awards to institutions. Productivity for community colleges is defined in terms of student learning outcomes such as persistence, completion, transfer and matriculation (Daly & Dee, 2006; Jaeger & Eagan, 2009; Skolits & Graybeal, 2007).

Federal mandates issued by the U.S. Department of Education add to the pressures for accountability and its funding implications. Additionally, accrediting bodies increase the pressure on colleges and faculty by requiring outcomes assessments to measure student learning. As a result, faculty often are required to do administrative duties geared toward outcomes assessment that detract from instructional-related duties (Townsend & Twombly, 2007). Faculty turnover ultimately affects funding by negatively impacting student learning outcomes.

It is unrealistic to expect that females and minorities have never been marginalized in their roles as community college faculty. Lester (2008) focused upon gender socialization among community college faculty. The researcher found that organizational culture socialization explains how individual faculty members “come to understand gender within the context of the college” (Lester, 2008, p. 288). The researcher explains how social

interactions between male and female colleagues influenced perceptions of appropriate behaviors and roles for each gender. Incidences of workplace bullying and tokenism were experienced by female instructors in male-dominated vocational programs such as welding. These interactions were perceived by the females as efforts by the males to construct gender role expectations.

Mamiseishvili (2011) found that foreign-born minority faculty in community colleges reported lower mean scores on all employment satisfaction measures. This difference was in part “attributed to cultural differences in job expectations and values that can consequently lead to differences in job satisfaction” (Mamiseishvili, 2011, p. 40). Findings also showed that more foreign-born faculty than U.S.-born faculty possessed a doctorate degree which could likely impact job expectations. It was unclear whether employment was first unsuccessfully sought at 4-year institutions which would imply faculty’s having “to settle for” employment at 2-year institutions, thus negatively influencing job satisfaction (Mamiseishvili, 2011).

Although instances of unfair treatment toward women and minorities have been reported in past research, it is important to establish that fair treatment for these vulnerable populations emerged as the third most significant predictor for overall job satisfaction of community college faculty. Community college administrators will need to assure the fair treatment of protected populations in order to positively impact the job satisfaction of all full-time faculty. The implications of job satisfaction are important for the retention, recruitment, commitment, and productivity of faculty. Ultimately, the implications are important for

determining student learning outcomes and funding (Berry & Morris, 2008; Jaeger & Eagan, 2009; Rosser & Townsend, 2006; Townsend & Twombly, 2007).

Variable 4: Race/Ethnicity

Race/ethnicity was yet another factor that proved to significantly affect community college faculty's overall job satisfaction. Minority faculty were 58% less likely to be satisfied in their jobs overall than White non-Hispanic faculty. Being a racial or ethnic minority was one of two predictor variables that demonstrated a negative association (odds ratio: 0.42) with overall job satisfaction. The racial/ethnic majority for this study was White non-Hispanic. Conversely, all other racial/ethnic groups (American Indian/Alaska Native, Asian/Pacific Islander, Black/African American non-Hispanic, and Hispanic White or Hispanic Black) were collectively classified as racial/ethnic minority. The sample included 29.6% minority faculty. The conclusion was made that community college faculty who are racial/ethnic minorities are less likely to be overall satisfied with their jobs than White non-Hispanic faculty. Because minority faculty were grouped together for this research, it is not clear whether all minority groups were less satisfied with their jobs, or perhaps certain minority groups were those feeling less satisfied.

Past research findings were mixed regarding job satisfaction of racial/ethnic minority faculty at community colleges. Minority community college faculty were found to be significantly more likely than nonminority faculty to perceive that discriminatory practices occur against women and minority faculty and administrators (Bower, 2002). Minority faculty for Bower's (2002) research included African American, Hispanic, Asians, Pacific

Islanders, and American Indian/Alaskan Native. Some long-term minority faculty recounted experiences of “isolation, alienation, overt discrimination by peers and students, and a sense of separation” (Bower, 2002, p. 83). Minority faculty perceived race to affect relationships with both white and minority students. According to accounts by minority faculty, white students discounted the expertise of minority faculty while minority students expected special liberties. Perhaps the minority faculty included in this study experienced feelings of isolation, alienation and discrimination as Bower’s sample expressed.

Recent research by Mamiseishvili, (2011) exploring the job satisfaction and workplace perceptions of foreign-born faculty at public 2-year institutions supports Bower’s (2002) findings. Using the NSOPF:04 database, this body of research included all foreign-born faculty including naturalized U.S. citizens, and noncitizens with temporary immigrant or permanent visas (N=440). The findings consistently showed lower satisfaction and more negative perceptions of the workplace for foreign-born faculty than U.S.-born faculty. When comparing the means of the two groups, the largest differences were found for the following variables: satisfaction with benefits, satisfaction with salary, satisfaction with workload, and perceptions of fair treatment of minority faculty. The variable that contributed to the most variance in job satisfaction of the two faculty groups was the perception of fair treatment of minority faculty. This finding indicates that race/ethnicity (Variable 4) is highly related to fair treatment of vulnerable populations (Variable 3).

Mamiseishvili (2011) highlighted the value that foreign-born faculty add to 2-year institutions as community colleges push to become more internationalized. Foreign-born

faculty's knowledge of diverse cultures, settings, and languages will prove invaluable for 2-year institutions as they strive to instill global awareness and multinational competencies within the 21st century workforce. It is likely that foreign-born faculty encounter unique cultural challenges that exacerbate feelings of isolation and alienation. Those emotions would impact the responses expressed in the survey used for this study. Minority faculty may also feel isolated and marginalized, particularly when greatly underrepresented within a department or organization overall (Hagedorn & Laden, 2002).

Typically, African American faculty at community colleges are more satisfied overall than those at other types of postsecondary institutions. Flowers (2005) used the NSOPF:99 database to compare job satisfaction of African American faculty at 2-year and 4-year institutions. In contrast to foreign-born minority faculty, data revealed that African American faculty at 2-year institutions are more likely to be overall very satisfied than those at 4-year institutions.

However, African American faculty at community colleges found more dissatisfaction with their opportunity to advance in rank than those at 4-year institutions. The intrinsic satisfaction attributed to feelings of making a difference in the lives of students, the satisfying freedom of faculty life, and appreciation of autonomy are what kept the African American faculty motivated to remain at community colleges in spite of perceptions of discriminatory practices on campuses (Flowers, 2005). It is possible that advancement disappointments for minority faculty contributed to the decreased job satisfaction disclosed in this study.

Findings here suggest that perhaps workload is adversely affected by being a minority faculty. In previous research, some minority faculty expressed that they were overburdened with committee work and service assignments. When minority faculty are greatly underrepresented within an organization, demands on their time to represent diversity within hiring committees and other service work can quickly exceed equitable distribution among the total faculty population. Further, the practice of being the only minority representative within departments, on committees or on teams led some minority faculty to experience feelings of loneliness and isolation (Hagedorn & Laden, 2002). These findings are congruent with those of contracted compensation (Variable 1) where perceived balance of workload and equity were highly predictive of job satisfaction.

It is unclear what particular aspects of minority membership led to decreased job satisfaction for community college faculty in this study. Perhaps minority faculty were lone representatives within their department. It is also possible that employment was unsuccessfully sought at a 4-year institution prior to settling for the community college. College administrators must be particularly mindful of the needs, values, and workload demands of each faculty racial/ethnic group. Although racial/ethnic minority faculty has been collectively grouped for this research, the minority group is composed of a variety of individuals representing diverse backgrounds, experiences, cultures, and values. Thus, the individual's needs may easily become masked in the aggregate.

Variable 5: Again Choosing an Academic Career

Results indicated that faculty's response regarding the opportunity to again choose an academic career had significant association with overall job satisfaction. Full-time community college faculty who indicated that they would re-choose a career in academe were 70 % less likely to be overall satisfied in their jobs as those who would not re-choose an academic career. Again choosing an academic career was the second of two variables negatively associated (odds ratio: 0.30) with overall job satisfaction. It is concluded that community college faculty who affirm that they would again choose an academic career are less likely to be satisfied overall with their jobs than faculty who state they would not re-choose academe. Although somewhat perplexing and counterintuitive, these findings indicated that community college faculty who were more committed to academics as a profession (demonstrated by re-choosing an academic career) were less likely to be satisfied overall with their jobs. This finding is important because it indicates that although community college faculty may be dissatisfied with certain aspects of their employment such as inadequate pay and benefits, and increasing workload, they are still committed to community colleges and academe.

It has already been established that 2-year college faculty were attracted by the opportunity to more frequently interact with students in the classroom and in learning support areas than 4-year university faculty are able to do (Jacobson, 2003). Similarly, community college faculty experience high levels of satisfaction from being able to devote more of their time to teaching and learning (Townsend & Twombly, 2007). Faculty's satisfaction with

their work encourages them to come to work more regularly, to remain with their institution, and to interact with and help their students (Issac & Boyer, 2007). Community college faculty are loyal to the profession because they recognize their work with students as meaningful and important (Kinjerski & Skrypnek, 2008).

This finding gives rise to the following questions: What is happening within the work experiences of the full-time community college faculty who are committed to academe (i.e., would re-choose an academic career) that is causing them to be less satisfied with their jobs? Is it perhaps that the work experiences of community college faculty are changing in some manner that is less satisfactory than previously experienced? Or is it possible that community college faculty are committed to an academic career, but would prefer to work in some other type of institution of higher education?

Perhaps the increasing workload for full-time faculty coupled with the trend of hiring more part-time faculty has diminished job satisfaction. Full-time faculty are expected to assume primary responsibility for committee and service duties within the community college structure. In 2000, 58% of the community college faculty were part-time compared to 66% in 2005 (Jaeger & Eagan, 2009; Valadez & Anthony, 2001). As the percentage of part-time faculty teaching within community colleges continues to increase, more committee and service duties are added to the already demanding workload for full-time faculty, thereby reducing time available for the more preferable duties of classroom instruction and student interactions (Townsend & Twombly, 2007). Increasing numbers of part-time employees within an institution decreases the satisfaction of all employees regardless of their

employment status of full-time or part-time. The intensification of service duties expected from full-time faculty explains decreased satisfaction for full-time faculty. The uncertainty of continued employment and the lack of benefits, particularly when full-time status is preferred, explains decreased satisfaction for part-time faculty (Umbach, 2009).

Another possible explanation for community college faculty to experience a downward shift in job satisfaction is student unpreparedness for college level work. As institutions committed to an open-door policy, community colleges admit higher percentages of students who require developmental (i.e., remedial or pre-curricular) work prior to being academically prepared to enroll in college level courses (Townsend & Twombly, 2007). Faculty's perception of student quality has been identified as a strongly influential factor for job satisfaction of community college faculty. Student quality included aspects of student preparedness, institutions' remedial needs, student appreciation for learning, and student interest in learning (Milosheff, 1990) .

As previously discussed, it is likely that the increasing demand on faculty to use technology for distance education (e.g., online, hybrid and web-enhanced instruction), to track outcomes for assessments, and to perform other administrative-type duties is negatively impacting faculty's job satisfaction. These duties increase workload, require IT support, demand professional development investments, and take time away from the preferred activities of classroom instruction and student interactions. When comparing to traditional instruction, some faculty note that online instruction generates added duties for their workload. Others feel pressured to raise enrollment caps allowing for increased class size

when instructing online courses. Additionally, an increased focus targeting outcomes and accountability add to the non-instructional tasks, stressors, and pressures for funding and budgetary purposes.

The demographic profile of the faculty sample may offer some clues as to why this group of faculty who are committed to academe (as indicated by satisfaction with the choice of an academic career and would re-choose) was 70% less likely to be satisfied with their jobs overall. Less than 20% of the faculty was under age 40 while more than 70% was age 45 and older (See Table 4.3). Nearly 57% of the sample was male faculty and the average length of employment at the current institution was over 11 years. The average number of years invested in an academic career was more than 15 years (See Tables 4.4 & 4.5). Employees who remain within a designated profession for lengthy periods, and/or remain employed at an institution long-term are making investments in their own human capital by gaining valuable experience and improving their skills. Simultaneously, they are contributing to the overall success of the organization by helping to accomplish its work goals (Wang, et al., 2008).

It is possible that this group of long-term faculty feel undervalued by their institutions for their contributions over the years. It is also possible that this group is beginning to look toward retirement and the outlook is gloomy. As the majority of the community college faculty body advances in age and longevity, values and priorities will also shift. Age and generational differences profoundly affect job satisfaction across all major fields and industries (Smith, 2008). As retirements continue to reshape the demographic mix of the community college faculty body, age and generational differences will persistently influence

job satisfaction. Younger workers place higher importance upon work/life balance than older workers. Younger workers are also more apt to switch jobs for better pay or work schedules (Bailey, 2008). This research highlights for administrators the importance of constantly monitoring the factors important for faculty to be satisfied with their jobs.

Faculty's positive perception of the work environment is paramount for the achievement of successful learning outcome measures in postsecondary educational institutions. The values of the faculty body are undergoing a dramatic shift as the majority of the group become long-term employees approaching retirement age. Perhaps full-time community college faculty are more satisfied with being a faculty member and with teaching than with the organization or department wherein their employment resides. College administrators should explore options to enhance faculty perceptions of their departments and institutions in order to increase organizational commitment, student learning outcomes, and faculty intent to stay (Daly & Dee, 2006; Umbach, 2007). Administrators should also determine how the values of the full-time community college faculty are changing as more faculty transition toward retirement age. In summary, community college faculty are dedicated to the community college mission and the opportunity to impact the lives of their students. In spite of being overworked, underpaid and undervalued, they would do it all again. Table 5.1 summarizes the variables that have predictive ability for the overall job satisfaction of community college faculty.

Table 5.1

Summary of Variables Affecting Overall Job Satisfaction of Community College Faculty

Variables	Overall Job Satisfaction	
	Increased	Decreased
	Odds	Odds
Contracted Compensation	76%	
Institutional Support for Teaching Excellence	53%	
Fair Treatment of Vulnerable Populations	24%	
Race/Ethnicity: Minority ^a		58%
Again Choosing an Academic Career		70%

^a Minority includes American Indian/ Alaska Native, Asian/ Pacific Islander, Black / African

American non-Hispanic, Hispanic White, and Hispanic Black.

Intrinsic and Extrinsic Rewards

Of the previously discussed variables, research reveals that both intrinsic and extrinsic rewards are useful when predicting job satisfaction of workers. It is essential for administrators to know the value system of employees in order to accurately predict motivational rewards. Being aware of employees' motivators, values, and expectations allows employers to match valued rewards with worker expectations. Employers can influence employees' productivity, commitment, attendance, and intent to remain by properly matching rewards with values of the employees.

Findings from this study did not support previous findings that intrinsic rewards more strongly predict job satisfaction. The strongest predictor for job satisfaction in this model was

contracted compensation which was categorized as an extrinsic organizational reward. Contracted compensation was a 3-item scale that included satisfaction with salary, benefits, and workload. Three of the predictor variables included in this model were categorized as intrinsic rewards: institutional support for teaching excellence, fair treatment of vulnerable populations, and satisfaction with the choice of an academic career as indicated by re-choosing it. The remaining variable in this predictive model was race/ethnicity, a socio-demographic variable.

Interestingly, none of the human capital variables proved to be significant predictors of job satisfaction for this sample of full-time community college faculty. It is likely that the age and longevity of this faculty group impacted its concern with contracted compensation. As more faculty approach retirement age, compensation and benefits become increasingly important issues. The predictive model presented here suggests that the strongest predictor of overall job satisfaction for full-time community college faculty is equity of salary and benefits, and workload balance.

Inconsistencies are found in the grouping of rewards from previous research. For example, pay and benefits have been categorized as intrinsic by some researchers and extrinsic by others. Some researchers claim money (e.g. merit raise, performance bonus) is a motivator for worker satisfaction and behavior (intrinsic reward) while others claim money is simply associated with membership in the organization (extrinsic reward). Extrinsic rewards (pay and benefits) are weak motivators for performance because they are associated with organizational membership rather than individual effort (Slocum, 1970).

Recognition is another reward that has dual categorization in past literature. When recognition was a public reward visible to all employees it was considered extrinsic. Conversely, when recognition referred to the employee's sense of pride, accomplishment, and self-worth resulting from public praise, the reward was labeled intrinsic (Grant, 2008; Klein, et al., 2008). Intrinsic rewards (e.g., feeling of accomplishment) strongly motivate individuals' performance in a specific job (Slocum, 1970). Inconsistencies in classification of rewards variables lead to some confusion when interpreting research findings. Thus, caution is advised when discussing job satisfaction in terms of intrinsic versus extrinsic rewards.

For this research, extrinsic motivation was defined as "the desire to expend effort to obtain outcomes external to the work itself, such as rewards or recognition" (Grant, 2008, p. 49). In contrast, "intrinsic motivation refers to the desire to expend effort based on interest in and enjoyment of the work itself" (Grant, 2008, p. 49). Both extrinsic and intrinsic rewards have been found to predict job satisfaction. The value that workers place upon rewards of either type may vary considerably resulting in differences in job satisfaction levels among workers within institutions. Klein, et al. (2008) states that:

An individual's values determine which types of actions and events are desirable and undesirable by providing criteria that are used in evaluating and defining actions and events. As such, attractiveness of attaining a goal is judged in part by one's values. (p. 115)

Much of the past research devoted to job satisfaction for faculty within higher education reports that intrinsic rewards were most strongly tied to job satisfaction (Brecke,

2007; Chen, et al., 2006; Plowfield, 2005; Zhou & Volkwein, 2003). Faculty in higher education were primarily motivated by intrinsic rewards unless extrinsic rewards were perceived as unfair or inadequate (Cook, et al., 2009). Intrinsic rewards were also linked to productivity, student learning outcomes, institutional effectiveness and intent-to-stay (Zhou & Volkwein, 2003).

In the context of community college faculty, extrinsic rewards are distributed by the institution, are associated with the work environment, and are clearly visible to all workers within the organization. In contrast, intrinsic rewards are generated within the faculty member and are associated with doing tasks of the work itself (i.e., teaching, class preparation, working with students) (Borkowski, 2005; Mottaz, 1985; Porter & Lawler, 1968; Smerek & Peterson, 2007).

Implications for Policy and Practice

Community college faculty play a key role in the accomplishment of institutional mission and goals. Research suggests that satisfied workers are more productive, healthier, and come to work more regularly. Job satisfaction of faculty has been linked to improved student learning outcomes and achievement; thus, students benefit and institutional performance measures are boosted when faculty are satisfied with their jobs. Satisfied faculty demonstrate lower levels of turnover and absenteeism, and more willingly assist and interact with students (Hutton & Jobe, 1985; Isaac & Boyer, 2007). Faculty who feel they were valued, supported and equitably rewarded by their employers respond by becoming committed to their institutions (Umbach, 2007). Committed faculty tend to remain at an

institution (i.e., increased retention), and therefore enhance the organization's reputation and recruitment power.

Community college administrators face the challenges of retaining non-retiring faculty and recruiting new faculty to replace the significant numbers of vacancies projected to occur as present-day faculty retire. Winter, Petrosko and Rodriguez (2007) found salary, benefits and hours of work to be the most important attraction tools for community college faculty applicants. However, community colleges function as public institutions where pay and benefit structures are controlled by state budgets. Although current economic conditions prevent generous pay and benefit packages from being offered, one tactic to keep current faculty on board, while simultaneously attracting a pool of qualified applicants is to gain the reputation as an institution where faculty members are highly satisfied with their jobs (Murray & Cunningham, 2004; Rosser & Townsend, 2006; Zhou & Volkwein, 2003). A community college that works to become known as an institution that treats faculty well will have positive impacts upon learning outcomes, faculty retention, and recruitment. From the findings of this study, three common themes emerged as important for faculty to be satisfied in their work: equity, support, and fairness. Essentially, community college faculty wish to be equitably rewarded, sufficiently supported, and fairly treated as they strive to facilitate student learning.

Equity

In order for faculty to develop positive attitudes toward work, the salary, benefits, and workload must be equitably enforced across the institution. A current version of the faculty

handbook that can be easily accessed and is clearly and concisely written will serve as a valuable resource for all. The handbook should include a published pay scale, summary of benefits, formulas for workload (i.e., course load calculations), and clearly defined policy and procedures. Pay scale must not favor gender or any other demographic to avoid becoming a dissatisfier. Equity implies that recognition of rank, longevity, credentialing, experience, and academic discipline will be impartially applied across the board. Policy that establishes parity among similar groups of faculty is critical. Hiring managers must avoid the offering of generous recruitment packages when seeking new talent as disparity will reduce satisfaction among the established faculty, thereby negatively impacting morale.

Equitable enforcement of all handbook policies and procedures is essential for job satisfaction of faculty to be enhanced. The tone of the handbook should demonstrate value and respect. Faculty should have a voice in the development of the workplace policies and procedures. An active faculty senate serves as a legitimate avenue for faculty to submit ideas, suggestions, and receive feedback. Additionally, allowing faculty to offer input during the creation of policies and procedures will encourage conformity, ownership and buy-in. Further, administration signals value for faculty's autonomy by maintaining continuous dialogue with faculty and publicly recognizing their contributions.

Workload is another area that requires equity of enforcement to assure boosts to job satisfaction. Besides teaching load, time allowances must be made for faculty to prepare for class and interact with students. Full-time faculty are also given primary responsibility for service tasks and committee appointments. Additionally, accountability measures and

assessments for institutional effectiveness require faculty to increasingly assume more administrative duties such as assessment tracking and outcomes reporting. Administrators must allow adequate time for these duties to be accomplished, particularly in a climate of accountability for funding purposes. Extra duties may feel more burdensome for those departments where very few faculty are employed. In disciplines where only one or two faculty make up the entire team, added duties make a greater impact on workload for each faculty member. Administrators may be able to relieve some of the burden on faculty for assessment reporting by granting release time, reducing course loads, offering stipends, or supplying administrative assistance to support faculty's efforts.

Support

College administrators can encourage job satisfaction in the early stages of a faculty member's tenure by hiring new faculty that possess values and expectations clearly aligned with those of the organization. Assuring a 'good fit' during the recruitment and screening phase will require concise instructions to hiring committees to convey a shared understanding and a clear vision for the characteristics and skills of the candidate of choice. Once hired, new faculty should be properly oriented to establish a successful onboarding process. The assignment of a faculty mentor will help to develop a welcoming sense of comfort and belonging.

Faculty must also feel that administrators are concerned for the work environment and for the comfort and safety of faculty and students in order to feel supported and satisfied with their job. Well-lit classrooms and campuses, a visible security presence, and adequately

maintained buildings and parking areas are required at the most basic level. Other ways to exhibit support for faculty include workplace environment enhancements such as: proper signage to help direct vehicle and foot traffic, ergonomics, lighting, air quality, noise control and reduction, and work spaces designed for increased efficiency and learning

Administrators can indicate additional support for faculty by assuring that current instructional technology is installed in classrooms, and proper supplies and equipment are available upon demand. In addition, IT support must be available and responsive to assure that technology functions properly during instructional activities. Faculty must also be properly trained to interface with classroom technologies. As the trend toward online and hybrid instruction escalates, IT support becomes essential to prevent disruptions. Online “how-to” videos and FAQ’s offer quick and easy access to useful information as needed.

Faculty who are allowed professional development opportunities and funding feel supported and valued by college administrators. Professional development addressing distance learning strategies and new instructional technologies (e.g., e-gradebooks, web-advising, web-attendance, and course management software) are topic areas most often requested by faculty (Mars & Ginter, 2007; Wallin, 2003). Other professional development topic areas that interest faculty include: opportunities to remain current and relevant in one’s field or discipline, instructional pedagogy and best practices, and sessions addressing retirement planning. Faculty professional development is particularly important in community colleges where faculty are often hired from business and industry and do not have a background in educational practices (Townsend & Twombly, 2007).

Support for younger faculty may include work-life balance needs such as flex-time and work from home options. Single parents in particular benefit from creative scheduling options. Employee Assistance Programs that offer professional counseling, freedom to use exercise equipment, and stress management support classes also indicate support. Most importantly, faculty should be regularly monitored for new and emerging areas where support may be needed.

Fairness

Fair treatment is a work environment quality that is valued by faculty. When vulnerable groups of faculty such as women and minorities are treated fairly, the presumption is that everyone else is treated fairly as well. A climate that exudes a cultural sensitivity must be cultivated within all faculty and staff as well as students. Diversity within the faculty ranks will generate a level of comfort and belonging for students as they see a faculty body more reflective of the student population mix. Administrators may demonstrate value for diversity by recruiting and supporting international students and encouraging faculty to pursue Fulbright scholarship opportunities. Sensitivity to the cultural needs of minority new hires must be apparent campus-wide. Minority faculty are of particular value in helping to create an environment where students are immersed in a more global-minded and diverse atmosphere reflective of the 21st century workplace. Establishing mentors for new hires will facilitate the onboarding process by creating a sense of welcome and belonging. Mentors can also monitor the unique concerns of the minority faculty adjusting to a new environment.

Most importantly, a mentoring relationship will prevent feelings of isolation, alienation and perceptions of discrimination from developing.

Fairness is paramount when enlisting faculty to contribute time and talents for college committee tasks. Administrators must exercise care when designating service assignments to not overburden underrepresented minority faculty in attempts to diversify committees. Opportunities for advancement should be available to all faculty as well. Succession planning should include elements of diversification that reinforce fairness and equity.

Most community college faculty are satisfied with their choice of teaching at a community college. In spite of changing workplace demands that decrease job satisfaction, a significant number of community college faculty are happy with their decision to teach at a community college. Elements that full-time community college faculty identify as contributing to their decreased job satisfaction include: intensification of service duty demands, students unprepared for college-level work, more distance education requirements, increased assessments and outcomes tracking, pressures to increase enrollment and retention, and feelings of being undervalued for their long-term dedication to the institution.

Administrators can capitalize on the commitment of community college faculty by building organizational pride. Campus all-reads, theme tee-shirts, and celebrations of successes are some initiatives that can enhance feelings of unity. Students will benefit from the atmosphere of pride and belonging that stems from a committed faculty that melds as a community.

In summary, college administrators should continually monitor faculty's values for shifts as the mix is reshaped by retirements and new hires. Community college administrators

can demonstrate value and support for faculty in a variety of methods including: course release, sabbaticals, funding to remain current in one's discipline, and tuition reimbursement for pursuing a higher degree. John Murray, a renowned scholar in community college research, offers the following list of additional professional development activities that are valued by community college faculty: financial support for conference attendance, bringing outside professionals to campus, waiver of tuition at the home institution for full-time faculty, released time for projects related to teaching, and mini-grants to improve teaching (Grant & Keim, 2002).

College administrators should honestly examine current practices with the underlying motive of making adjustments in order to improve the job satisfaction of faculty. As a result, administrators will see impacts upon faculty commitment, retention and recruitment, and student learning outcomes. Performance funding will be sustained and students will meet their educational objectives. Ultimately, the institution will experience an enhanced reputation that will prove invaluable during the predicted period of high student enrollment and substantial faculty retirements.

Limitations

It is important for administrators to consider that this study used NSOPF:04 data that was collected during Fall 2003. At that time, 70% of the faculty who responded was age 45 and older. Nearly 9 years have passed since the data for this study was collected. It is likely that the values and expectations of faculty respondents have experienced substantial change due to events and aging considerations. During this timeframe, the U.S. experienced an

economic downturn, and faculty has continued to approach retirement. Many faculty have already retired and newer faculty with differing values and expectations have been hired. Shifting values of the “new” faculty body can create misalignment with standing organizational values that could impact current faculty’s satisfaction levels.

It should also be noted that these results are based on national data rather than local data. Findings for specific geographic locations may differ. Considerations for institutionally unique characteristics such as union status are not made. When administrators are considering implementations for improvement within ones’ institution, an evaluation for weaknesses and areas needing improvements should be conducted prior to the adoption of strategies and initiatives offered here. Not all areas addressed may necessitate strategies for enhancement.

Suggestions for Future Research

Community colleges are facing a unique opportunity to reshape the demographics of the community college professoriate. The opportunity exists to restructure the community college faculty to more closely resemble the students they serve. As the workplace of current and future graduates becomes more globally connected, a broader context of world markets and cultural diversity will be essential. A more diverse faculty population will support this initiative. At the same time, the values and expectations of a more diverse faculty will require adjustments in the ways faculty are supported at work. More research should be conducted to evaluate the changing expectations for community college faculty.

The current research has bundled minority faculty and examined their needs, expectations and values collectively. Future research that disaggregates the minority groups for evaluation of the various groups independently will offer valuable insight for institutions attempting to recruit and retain diverse faculty bodies.

Other questions that have arisen since this data was collected include the following: How has the population of full-time community college faculty changed during the timeframe since this data was collected (i.e., Fall 2003)? How have the advancing age and increasing number of retirements reshaped the values and expectations of the current community college professoriate? How has the economic downturn since 2008 impacted the job satisfaction of the community college faculty collectively, particularly in light of the negative impacts (e.g., stagnate pay, increased workload, larger class size, less travel funds) state budgets have experienced? How has the rapid pace of technological advancements impacted the community college environment for faculty and instruction? Has support and training for faculty regarding the emerging technologies kept pace with the rate of change? Finally, how has the increased national spotlight focused on community colleges during the Obama administration impacted the satisfaction, values and expectations of faculty?

Summary

Community college full-time faculty are a valuable resource that greatly impacts student learning outcomes, institutional reputation, and the nation's future workforce. More than half of high school graduates will enroll in one of the community colleges across the U.S. In a climate of competition for qualified faculty, community college administrators must

seek methods for producing a desirable work environment and climate for faculty. This research offers data-supported methods for community college administrators to adopt in efforts toward accomplishing that objective. This research supports the conclusion that community college administrators who create a culture of equity, support and fairness for faculty will generate positive attitudes in their faculty including increased job satisfaction. In a period of increased competition for qualified community college faculty, these findings will gain increasing significance and value.

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APPENDICES

Appendix A: Program for SAS SurveyLogistic Procedure

```

libname fl "C:\Documents and Settings\facultyadmin\My
Documents\Dissertation Data";
data one; set fl.faculty;
if q2 = 1; /*had instructional duties/;
if q3 = 1; /*did you have faculty status/;
if q4 = 1; /*principal activity teaching/;
if q5 = 1; /*full time employment/;
if x103q0 = 3; /*public 2 year/;
run;

data two; set work.one;
Q61a = 5 - Q61a;
Q61b = 5 - Q61b;
Q61c = 5 - Q61c;
Q61d = 5 - Q61d;
Q62a = 5 - Q62a;
Q62b = 5 - Q62b;
Q62c = 5 - Q62c;
Q62d = 5 - Q62d;
Q82a = 5 - Q82a;
Q82b = 5 - Q82b;
Q82c = 5 - Q82c;
Q82d = 5 - Q82d;

data three; set work.two;

JOBSAT = Q62d; /*overall job satisfaction/;
LONGEV = Q9; /*years at current institution/;
HIGHDEG = Q17a1; /*highest degree earned/;
YRSTEACH = Q23; /*years in postsecondary edu/;
TEACHSUP = Q61b + Q61c + Q61d; /*Factor 1: satisfaction with inst. support
for teaching excellence: score 3-12/;
FAIRTRMT = Q82c + Q82d; /*Factor 2: opinion fair treatment protected
populations: score 2-8/;
TEACHWRK = Q32a; /* percent time spent on instructional activities/;
COMPENS = Q62b + Q62c + Q62a; /*Factor 3: satisfaction with salary,
benefits, workload: score 3-12/;
INCOME = Q66a + Q66b; /*income from institution/;
GENDER = Q71; /*1=male, 2=female/;
ETHNIC = Q73;
ETHNIC = Q74;
AGE = Q72; /*2003 - year of birth/;
MARITAL = Q77; /*marital status/;
DEPENDS = Q79; /*number dependent children, 0 - 10/;
DISCIPLIN = Q16cd2; /*academic discipline: occed v. gen ed/;
DISABLE = Q75; /*any limiting disability yes or no/;
RECHOOSE = Q83; /*choose academic career again yes or no/;
NUMCLASS = Q35a1; /*number classes taught for credit, 0-20/;

```

APPENDIX A, Continued

```

JOBSAT = .; */job satisfaction overall/;
if q62d IN (3,4) then JOBSAT = 1; */satisfied/;
else if q62d IN (1,2) then JOBSAT = 0; */not satisfied/;

LONGEV = 2003 - q9;

HIGHDEG = .;
if q17a1 IN (0,5,6,7) then highdeg = 0; */bachelors, associates,
certificate, diploma, no degree/;
if q17a1 IN (1,2,3,4) then highdeg = 1; */masters,doctorate/;

YRSTEACH = 2003 - q23;

GENDER = .;
if q71 = 1 then GENDER = 1; */male/;
if q71 = 2 then GENDER = 0; */female/;

ETHNIC = .;
if q73 = 1 then ETHNIC = 1; */minority/;
else if q73 = 0 then ETHNIC = 0; */majority: white/;
if q74a = 1 then ETHNIC = 1; */minority/;
else if q74a = 0 then ETHNIC = 0; */majority: white/;
if q74b = 1 then ETHNIC = 1; */minority/;
else if q74b = 0 then ETHNIC = 0; */majority: white/;
if q74c = 1 then ETHNIC = 1; */minority/;
else if q74c = 0 then ETHNIC = 0; */majority: white/;
if q74d = 1 then ETHNIC = 1; */minority/;
else if q74d = 0 then ETHNIC = 0; */majority: white/;

AGE = 2003 - q72;

MARITAL = .;
if q77 IN (1,4) then MARITAL = 1; */single/;
else if q77 IN (2,3) then MARITAL = 0; */not single/;

DISABLE = .;
if q75 = 1 then DISABLE = 1; */has disability/;
else if q75 = 0 then DISABLE = 0; */no disability/;

RECHOOSE = .;
if q83 = 1 then RECHOOSE = 1; */ yes, would choose academic career again/;
if q83 = 0 then RECHOOSE = 0; */no, would not choose academic career
again/;

*Academic Discipline: 0 = occupational ed, 1 = general ed/;
DISCIPLIN = .;
if q16cd2 IN (1,2,6,7,8,9,11,13,15,16,19,21,22,23,27,28,29,31) then
discplin = 0; */occed/;

```

APPENDIX A, Continued

```
else if q16cd2 IN (3,4,5,10,12,14,17,18,20,24,25,26,30) then disciplin = 1;
*/gen ed/;
```

```
/*PROC FREQ; tables Q2 Q3 Q4 Q5 x103q0 JOBSAT LONGEV HIGHDEG YRSTEACH
TEACHSUP FAIRTRMT
TEACHWRK RECHOOSE NUMCLASS COMPENS INCOME GENDER ETHNIC AGE MARITAL
DEPENDS DISCIPLIN DISABLE;*/
```

```
/*PROC CORR; var JOBSAT LONGEV HIGHDEG YRSTEACH TEACHSUP FAIRTRMT
TEACHWRK RECHOOSE NUMCLASS COMPENS INCOME GENDER ETHNIC AGE MARITAL
DEPENDS DISCIPLIN DISABLE;*/
```

```
/*proc surveyreg data=WORK.THREE;
model JOBSAT = LONGEV HIGHDEG /*YRSTEACH TEACHSUP FAIRTRMT TEACHWRK
RECHOOSE NUMCLASS COMPENS INCOME GENDER ETHNIC AGE MARITAL DEPENDS
DISCIPLIN DISABLE / solution;
stratum fstratum;
cluster fpsu;
WEIGHT WTA00;*/
```

```
proc surveylogistic data=WORK.THREE;
```

```
class HIGHDEG RECHOOSE GENDER ETHNIC MARITAL DISCIPLIN DISABLE;
cluster fpsu;
model JOBSAT(Event= '1')= LONGEV HIGHDEG TEACHSUP FAIRTRMT TEACHWRK
RECHOOSE NUMCLASS COMPENS /*INCOME*/ GENDER ETHNIC AGE MARITAL DEPENDS
DISCIPLIN DISABLE;
strata fstratum;
WEIGHT WTA00;
```

```
run;
```

Appendix B: Output for SAS SurveyLogistic Procedure

The SAS System 11:47 Monday, March 26, 2012 1

The SURVEYLOGISTIC Procedure

Model Information

Data Set	WORK.THREE	
Response Variable	JOBSAT	
Number of Response Levels	2	
Stratum Variable	FSTRATUM	Analysis stratum for all faculty
Number of Strata	211	
Cluster Variable	FPSU	Analysis replicate (PSU) for all faculty
Number of Clusters	396	
Weight Variable	WTA00	Study weight for all faculty
Model	Binary Logit	
Optimization Technique	Fisher's Scoring	
Variance Adjustment	Degrees of Freedom (DF)	

Number of Observations Read	2308
Number of Observations Used	2297
Sum of Weights Read	94957.5
Sum of Weights Used	94489.1

Response Profile

Ordered Value	JOBSAT	Total Frequency	Total Weight
1	0	171	7234.400
2	1	2126	87254.700

Probability modeled is JOBSAT=1.

NOTE: 11 observations were deleted due to missing values for the response or explanatory variables.

Class Level Information

Class	Value	Design Variables
HIGHDEG	0	1
	1	-1
RECHOOSE	0	1
	1	-1
GENDER	0	1
	1	-1
ETHNIC	0	1
	1	-1
MARITAL	0	1

APPENDIX B, Continued

The SAS System

11:47 Monday, March 26, 2012 2

The SURVEYLOGISTIC Procedure

Class Level Information

Class	Value	Design Variables
	1	-1
DISCIPLIN	0	1
	1	-1
DISABLE	0	1
	1	-1

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	51081.772	30778.405
SC	51087.511	30870.235
-2 Log L	51079.772	30746.405

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	20333.3667	15	<.0001
Score	21774.3600	15	<.0001
Wald	1066.5680	15	<.0001

Type 3 Analysis of Effects

Effect	DF	Wald Chi-Square	Pr > ChiSq
LONGEV	1	0.5265	0.4681
HIGHDEG	1	0.1802	0.6712
TEACHSUP	1	68.6594	<.0001
FAIRTRMT	1	5.0565	0.0245
TEACHWRK	1	1.0731	0.3003
RECHOOSE	1	16.6425	<.0001
NUMCLASS	1	0.0025	0.9602
COMPENS	1	74.0570	<.0001

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Type 3 Analysis of Effects

Effect	DF	Wald	
		Chi-Square	Pr > ChiSq
GENDER	1	1.4740	0.2247
ETHNIC	1	329.6872	<.0001
AGE	1	0.0422	0.8373
MARITAL	1	0.9590	0.3274
DEPENDS	1	0.9401	0.3322
DISCIPLIN	1	0.0604	0.8059
DISABLE	1	0.1505	0.6980

Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald	
				Chi-Square	Pr > ChiSq
Intercept	1	-1.1246	1.0819	1.0804	0.2986
LONGEV	1	-0.0116	0.0159	0.5265	0.4681
HIGHDEG 0	1	0.0912	0.2148	0.1802	0.6712
TEACHSUP	1	0.4167	0.0503	68.6594	<.0001
FAIRTRMT	1	0.1869	0.0831	5.0565	0.0245
TEACHWRK	1	0.00650	0.00628	1.0731	0.3003
RECHOOSE 0	1	-0.5980	0.1466	16.6425	<.0001
NUMCLASS	1	0.00257	0.0516	0.0025	0.9602
COMPENS	1	0.5667	0.0659	74.0570	<.0001
GENDER 0	1	0.1717	0.1414	1.4740	0.2247
ETHNIC 0	1	-6.5903	0.3630	329.6872	<.0001
AGE	1	0.00313	0.0152	0.0422	0.8373
MARITAL 0	1	0.1445	0.1476	0.9590	0.3274
DEPENDS	1	0.1147	0.1183	0.9401	0.3322
DISCIPLIN 0	1	0.0320	0.1304	0.0604	0.8059
DISABLE 0	1	0.0883	0.2276	0.1505	0.6980

Odds Ratio Estimates

Effect		Point Estimate	95% Wald Confidence Limits	
LONGEV		0.988	0.958	1.020
HIGHDEG 0 vs 1		1.200	0.517	2.785
TEACHSUP		1.517	1.375	1.674
FAIRTRMT		1.205	1.024	1.419
TEACHWRK		1.007	0.994	1.019
RECHOOSE 0 vs 1		0.302	0.170	0.537
NUMCLASS		1.003	0.906	1.109
COMPENS		1.762	1.549	2.005
GENDER 0 vs 1		1.410	0.810	2.454
ETHNIC 0 vs 1		<0.001	<0.001	<0.001

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Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
AGE	1.003	0.974	1.034
MARITAL 0 vs 1	1.335	0.749	2.381
DEPENDS	1.121	0.889	1.414
DISCIPLIN 0 vs 1	1.066	0.640	1.777
DISABLE 0 vs 1	1.193	0.489	2.911

Association of Predicted Probabilities and Observed Responses

Percent Concordant	90.8	Somers' D	0.821
Percent Discordant	8.7	Gamma	0.824
Percent Tied	0.4	Tau-a	0.113
Pairs	363546	c	0.910