

ASSESSING LEADERSHIP ATTRIBUTE DEVELOPMENT IN A COMPONENT OF A
HIGHER EDUCATION ADMINISTRATION DOCTORAL PROGRAM

By

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A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF EDUCATION

UNIVERSITY OF FLORIDA

2013

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To my wife, Liz, son Cody, and daughter Sierra

ACKNOWLEDGMENTS

I would like to extend my gratitude to innumerable family members, friends, coworkers, and supervisors for their encouragement and their sacrifice to create a clear path for my selfish graduate endeavor. I thank my mentors, Dr. Brian Polding, Dr. Rodriquez Cruz, and Dr. Reta Roberts, who challenged me to pursue graduate work and anticipated that I would have an impact within community colleges. I also thank them for their exemplary ethics and professionalism, which they have imputed to me. I offer my sincerest gratitude to Dr. Dale Campbell, who supported my efforts throughout my doctoral experience and gave me the opportunity to complete this work. Additionally, I would like to thank my supervisory committee for their guidance and support, as well as the following individuals, for their motivational support: Dr. Barbara Yankowy, Dr. Matthew Basham, and Amanda C. Bauch, MFA.

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Abstract of Dissertation Presented to the Graduate School
of the University of Florida in Partial Fulfillment of the
Requirements for the Degree of Doctor of Education

ASSESSING LEADERSHIP ATTRIBUTE DEVELOPMENT IN A COMPONENT OF A
HIGHER EDUCATION ADMINISTRATION DOCTORAL PROGRAM

By

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August 2013

Chair: Dale F. Campbell

Major: Higher Education Administration

This study identified crucial aspects of higher education leadership succession. Baby boomers' increasing retirement rates and the increasing challenges that higher education faces both raise questions regarding the preparation and selection of future leaders.

The study examined a higher education leadership graduate program that combines college-level courses, coaching, and individual leadership growth. The population for this study was a group of higher education professionals who participated in the leadership graduate program through a university in the southeast United States. This leadership cohort is a 90-hour doctorate program, which can be completed in 4 years of parttime study in online classes and up to three weekend meetings per semester.

This research used an ex post-facto design with the Occupational Personality Questionnaire® (OPQ32n®), focusing on participants' personality traits and leadership styles, and comparing gender differences in leadership. After completing three classes the participants were administered the OPQ32n® pretest at the beginning of the 2010 summer term. Participants then received a detailed report outlining their work style

preferences on 32 dimensions. Attribute scores were indicated in sten score format on a 1 to 10 scale. Based on the results, each participant used the data to develop an Individual Learning Plan Assessment (LPA). With assistance from an OPQ32n® administrator, each participant selected three attributes. The participants then developed detailed goals that would improve their individual attributes and constructed an accountability protocol to measure each goal. Over three months, participants simultaneously worked on their LPAs while completing coursework and other program requirements. In addition to the data collected from the OPQ32n® pretest and posttest results, six individuals were chosen to participate in follow-up interviews.

The findings suggest that participants modified their leadership styles and behaviors as a result of the program. However, the participants did not demonstrate statistically significant differences overall on the OPQ32n®. Due to this three-month program of coursework, professional coaching, and individual development and focus, both male and female academic leaders enhanced their leadership skills. Their behavior modifications could enable them to be more effective educational leaders in the future.

CHAPTER 1 INTRODUCTION

This study examined an applied doctoral program and compared and contrasted participants' survey results regarding leadership styles and personality traits. Currently, there is a concern in higher education regarding community college leadership attrition and preparation. Also, a traditionally male-dominated arena has shifted, as women increasingly accept community college leadership roles. The literature documents the need for higher education leadership development to prepare all upcoming leaders in these professions. This section outlines the statement of the problem, purpose of the study, research questions, definitions, and limitations.

Statement of the Problem

Now more than ever, baby-boomer administrators are retiring in massive waves. Some researchers have predicted as high as 75% turnover by 2011 for education alone (Basham, Stader, & Bishop, 2009, p. 363). The American Association of Community Colleges (AACC), which recently published a comprehensive research brief about community college CEOs (Tekle, 2012), revealed that 75% of the respondents plan to retire within the next 10 years. That figure has also been corroborated by other researchers' findings (Boggs, 2003; Campbell, 2002; Campbell & Levery, 1997; Hockaday & Puyear, 2008). Additionally, the AACC research brief indicated that 43% of respondents expect to retire within the next 5 years, and 32% plan to retire in the following 5 years. Thus, additional 15 % of the respondents are expected to retire in the next 11-15 years (see Figure 1-1). Another fact contributing to understanding this research is that the CEO respondents who are projected to retire in the near future have a median age of 60 years old. Retirements will lead to an estimated 6,000 job vacancies

in postsecondary administration by 2014, creating a sizable hole in this labor market (Leubedorf, 2006). An overall constricted labor market combined with the anticipated increasing demand for educational leaders are compounded by the current retirement cycle of the baby-boomer generation. Community colleges will be faced with trying to replace large numbers of senior leaders over the next 5–10 years. As of 2006, more than 50% of college presidents plan to retire before 2012 (Berry, 2008).

Over the past two decades, much research has focused on women's leadership in higher education, although, literature on women's leadership in higher education reveals an underrepresentation of female college and university presidents (Stout-Stewart, 2005, p. 303). However, more women hold presidency positions at community colleges. Therefore, examining these individuals' characteristics, leadership styles, and decision-making processes provides a better understanding of community college leadership on the whole (Liu, 2007).

The leadership gap applies to more than community college presidents; the crisis also impacts other administrative positions. A 2009 American Council on Education study of chief academic officers found that the average tenure was 4.7 years, less than 50% the duration of presidents' tenures (Mann, 2009, p. 1). The number of female chief executive officers has increased approximately 18%. Hence, with the number of senior administrators expected to retire, the percentage of female community college presidents is expected to grow (Stout-Stewart, 2005).

With an anticipated 84% of community college presidents retiring within 10 years, there is a significant need to prepare upcoming leaders for this role. These future retirees maintain the community colleges' experiences and histories and possess an

innate understanding of the institutions' mission, values, and culture. For community colleges to remain vital, they must consider the careful selection of future presidential candidates to bridge the large leadership gap. Community college presidents must lead these institutions into complex and challenging futures. Therefore, current and future success depends on these leaders' skills (Stoeckel & Davies, 2007). Some individuals aspiring to become community college leaders are unaware of the multifaceted challenges facing today's community colleges. These potential leaders must become better acquainted with these challenges before seeking and obtaining administrative positions, regardless of the level (Green, 2008, p. 815). In the past 5 years, community colleges have been bombarded with increased enrollments, state budget cuts, limited facilities, faculty turnover, rising technology costs, and increasing numbers of students requiring remedial work (Boggs, 2004). Concurrently, community colleges hear the persistent, demanding voices of policy makers, business and industry, taxpayers, and accrediting agencies regarding accountability. Over the years, fiscal constraints have placed community colleges in an awkward position, where they have to provide evidence demonstrating how the institutions' existences benefit communities (Green, 2008).

To continue the legacy of supporting the local communities' economic development, colleges must continue to pursue their missions and support federal mandates for accountability. Achieving this goal means that community colleges need to develop successful leadership initiatives, to wisely choose and develop the next generation of leaders (Lapovsky, 2006).

Current Economic Impact

Research supporting the mass exit of higher education CEOs and faculty employees also identified a delay in baby-boomers' retirements (Hersch, 2013). According to Fidelity Investments (2013), many of the projected faculty retirements have been postponed for various reasons. This report research collected detailed data on behaviors and attitudes of baby-boomer faculty, stating that 74% of current baby boomers at age 65 or older will delay their retirement plans or never retire (para. 1). Of these professionals, 81% cited the delay for retirement was based on professional reasons; however, 69% had economic concerns and felt they needed more guidance to ensure their financial situations after retirement (para. 1).

The Fidelity report also stated that these professionals enjoy their work and felt healthy enough to continue the occupation they love. However, the strong identifier to the research is based on the economic impact on the retiree, which reveals the reality about the longevity of their career path: 55% were uncertain if they would have enough money saved to live happily and have adequate maintenance funds to keep current with the cost of living, 42% wanted to maximize their Social Security benefits, and 42% wanted to keep their current insurance protection (Fidelity, 2013, para. 2).

Additionally, 61% this of this group had concerns as to whether or not they had properly invested and feared the possibility of downturn on their current investments. Most of these baby boomers had minimal investment guidance regarding planning their retirement and wished they had more time to invest with a professional retirement planner (Fidelity, 2013). John Ragoni, an executive vice president at Fidelity, said, "As many boomer faculty have not created a formal financial plan, it's no surprise they have concerns about retirement" (Fidelity, 2013 para. 3).

For personal or economic reasons, both higher education faculty and administrators might delay their retirements. However, a consistent monitoring of this delay might indicate that it is short-lived, as overall confidence in the economy grows and baby boomers educate themselves about retirement planning and lay the foundations for successful retirements.

Purpose of the Study

The purpose of this study was to examine a community college educational leadership graduate program that combines college-level courses, mentoring, and individual leadership growth plans. The population for this study was a diverse group of working professionals in higher education, who participated in the leadership graduate program through a university in the southeast United States. This leadership cohort is a 90-hour doctorate program, which can be completed in 4 years of parttime study in online classes and up to three weekend meetings per semester. While these individuals develop their leadership abilities, they acquire innovative talents and learn to adjust their behaviors. As a result, improved leadership talent within this program prepares current and future leaders for promotion within the community college. This program also focuses on participants' identification of individual skills and weaknesses, followed by precise trait enhancement—the assessment of which is the foundation of this study.

Research Questions

This study attempted to discover what effect participation in a leadership graduate program had on administrators' leadership behaviors. The effects of program participation on the subjects' personality attributes and leadership styles were analyzed, based on the research questions specifically designed to monitor leadership progress. The study addressed the following questions:

1. Is there a difference in the personality attributes of participants in the leadership graduate program after three months of program participation?
2. Is there a relationship between personality traits, personality dimensions, and targeted attribute improvement for personal growth and development after three months of program participation?
3. Is there a relationship in personality dimensions between female and male participants in the leadership graduate program?

Research Hypotheses

For this study, six different null hypotheses were examined to support discussion of the research questions. These hypotheses are as follows:

H₁: There were no differences between OPQ32n® pretest and posttest scores for the population of higher educational professionals.

H₂: There were no differences between OPQ32n® pretest and posttest scores between male and female higher educational professionals.

H₃: There were no differences for the “Relationships with People” dimension of the OPQ32n® between pretest and posttest scores for the population higher educational professionals.

H₄: There were no differences for the “Thinking Style” dimension of the OPQ32n® between pretest and posttest scores for male and female higher educational professionals.

H₅: There were no differences for the “Feelings and Emotions” dimension of the OPQ32n® between pretest and posttest scores for male and female higher educational professionals.

H₆: There were no differences for the targeted areas for improvement with the OPQ32n® characteristics between pretest and posttest scores for higher educational professionals.

Together, these six null research hypotheses were exhaustive in seeking support for this study's research questions.

Definitions of Terms

ADMINISTRATORS. Community college employees in the position of president, vice president, director, dean, provost, or a similar position, generally above the coordinator or department manager level.

ATTRIBUTE. A personal characteristic that helps determine and delineate a person's behavior.

COMMUNITY COLLEGE. A public institution of higher education granting associate degrees, diplomas, and certificates. Often described as two-year institutions and the "people's college," community colleges serve a diverse population through various programs, including basic skills, continuing education, vocational and technical education, and college transfer preparation.

COMPETENCY. A capability described in terms of the behavior, knowledge, skill, and/or motivation that could be combined to produce a desired result.

FOLLOW-UP (SEMISTRUCTURED) INTERVIEWS. Personal interviews that the researcher conducted with several study participants.

GENDER. The sex, female and male, of both the community college president and the trustees. While some researchers distinguish between the word *gender* and the word *sex*, the former referring to the characteristics considered appropriate for each sex and the latter referring to a biological distinction (Powell, Butterfield, & Bartol, 2008, p. 169), the terms are used interchangeably in this study, with *gender* being the preferred and most frequent word choice used herein.

LEARNING GAIN. The measurement of changes in leadership attributes between the OPQ32n® pretest and the posttest.

MASTERY. Refers to the quality of being well qualified in a given skill and motivation to produce a desired result.

OCCUPATIONAL PERSONALITY QUESTIONNAIRE (OPQ®). "The OPQ provides a clear framework for understanding the impact of personality on job performance. It is internationally recognised for its accuracy of assessment" (Saville & Holdsworth, n.d., para. 1). The OPQ32n® was used to assess the population of higher education professionals that participated in the leadership graduate program.

PERSONALITY. Based on a psychometric concept, *personality* is the sum of an individual's traits and preferences that dictate his or her behaviors.

PRESIDENT. The chief executive officer of a community college who is “[responsible] for all administrative and managerial aspects of the institution” (Dowdy, 2007, p. 28), including but not limited to fiscal management; management of faculty and staff; and overseeing educational and curriculum policies.

TALENTS. Participants were competitively selected to participate in the applied doctoral program, based on criteria that included their leadership potentials or talents. Therefore, participants’ talents are their preferred work-style attributes, identified by average to high scores (ranging from 7–8) measured on the OPQ32n® administered to participants in 2010.

Limitations

The study focused on leadership styles and personality traits of higher education professionals. However, characteristics unique to higher education professionals were not addressed. Therefore, results may vary because the institutions’ environmental influence may affect such traits.

Because the population was predetermined, the independent variable could not be manipulated. This lack of manipulation threatens the study’s internal validity. Further, because of the study’s ex post facto model, the data were collected prior to the researcher’s involvement.

The study was based on participants’ self-report using the OPQ32n®, which could promote score desirability—i.e., participants may attempt to create a more desirable profile. The questionnaire used during the semistructured interview phase of the study was reviewed in advance by an expert panel, possibly mitigating data-collector bias. Finally, the length of time between the pretest and posttest and follow-up interviews may have increased attrition in the participant pool.

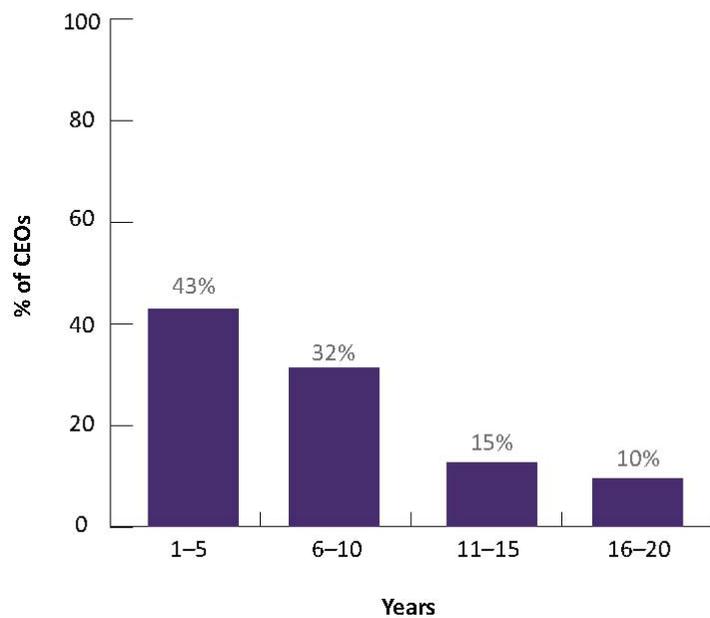


Figure 1-1. Number of years until community college CEOs plan to retire: 2012.
[Adapted from *Compensation and Benefits of Community College CEOs: 2012* (Research Brief, AACC-RB-2012-1), by R. Tekle, 2012, p. 2. Copyright 2012 by the American Association of Community Colleges.]

CHAPTER 2 LITERATURE REVIEW

Leadership Gap

Baby-boomer administrators are retiring in massive waves. By 2011, some researchers predicted as high as 75% turnover for just educational administrators (Basham et al., 2009, p. 363). By 2014, as a result of age and retirement, researchers estimate that over 6,000 jobs vacancies in postsecondary administration, leaving a sizable void in the labor market (Leubedorf, 2006). Baby boomer's current retirement cycle compounds the situation consisting of an overall constricted labor market with the anticipated increased demand for educational leaders. Community colleges will need to replace high numbers of senior leaders over the next 5 to 10 years. In 2006, more than 50% of college presidents planned to retire before 2012 (Berry, 2008). A survey conducted by Weisman and Vaughan (2006) estimated that 24% of presidents planned to retire within 1–3 years, 32% planned to retire within 4–6 years, and 28% planned to retire within 7–10 years. Furthermore, in researching this trend, the AACC surveyed 370 community college CEOs, and the results indicated that 75% of respondents planned to retire within the next 10 years, and an additional 15% projected their retirements within the next 11–15 years (Tekle, 2012, p. 1). Of the respondents, 50% had been in the presidency position for 26 or more years (Tekle, 2012, p. 4; see Figure 2-1).

Additionally, many community college vice presidents are of the same generation as the presidents; therefore, they also will be leaving their positions. All of the anticipated vacancies foster great concern about the quality of leadership experience and preparations for those who plan to partake in administrative positions of this magnitude (Wallin, 2006).

With more women entering community college presidencies—from 11% in 1991 to nearly 28% in 2001 (Liu, 2007, p. 833)—examining these leaders’ characteristics and leadership styles can lead to an enhanced understanding of community college management. Tekle (2012) added that approximately 28% of the AACC members who hold community college presidencies were women, who hold an important role in community colleges (p. 3). Therefore, replacing women within the pool of community college presidencies is a further concern.

The 21st-Century Educational Leader

Identifying leadership qualities has often proven an elusive goal, especially as such a goal pertains to higher education administrators, including community college presidents. Researching and communicating the abilities, skills, knowledge, and competencies of community college presidents and raising awareness of their attributes could inevitably result in greater future success of individuals in that crucial role (American Association of Community Colleges, 2005; Campbell & Leverty, 1997; Campbell, Syed, & Morris, 2010).

That goal brought forth the 21st Century Education Leader Project, which began in 1995 at the Institute of Higher Education at the University of Florida. The goal of this project was to focus on the students’ graduate education program of study and to campaign for those who endeavored to become community college presidents (Campbell & Leverty, 1997).

Understanding the necessity of developing this system for success of community college presidents, Campbell and Leverty (1997) developed an Attribute Based Person-Job Match Report, which objectively assesses an individual’s preferred work style based, on profile and personality provided through use of the OPQ®. Although the

OPQ® is effective and utilized in other areas, such as the corporate world, it had never been employed to develop work profiles within educational professions. One unique aspect of these assessments is that they revolve around on individual's essential attributes, allowing for focused improvement efforts. Thus, the ongoing development of the 21st Century Education Leader Project provides an opportunity for community colleges to better ensure the development and success of higher education leaders and to enhance the contribution to this profession—and ultimately to enhance students' achievements and community colleges' futures (Campbell & Levery, 1997).

Administrator Pipeline

Over the past 5 years, much research and discussion has addressed the leadership gap phenomenon. Impending retirements affect not only current leadership, but also the leadership pipeline. An investigation determined that various positions often lead to presidencies, such as chief academic officer, business financial officer, director of continuing education, and vocational educational leader (Shults, 2001). Some research estimated that 75% of chief executive officers (CEOs) would retire by 2011. Although this statistic is less documented, such additional vacancies will impact other leadership and management positions (Basham et al., 2009).

The pending retirements of community college leaders creates a need to better understand the characteristics and roles of chief academic officers (CAOs) in community college leadership. The leadership crisis extends to all levels of administration, and some suggest that the number of CAOs retiring is even more alarming than presidents' retirement rates (Keim & Murray, 2008). Traditionally, the CAO position has been viewed as the stepping stone to a presidency. However, the pipeline to the CAO position is also shrinking (Keim & Murray, 2008).

The CAO also plays a vital role in community college administration, such as developing and launching the strategic plan, refining academic programs, and recruiting and retaining faculty members. A national study conducted by Eduventures Academic Leadership Learning Collaborative found that 363 CAOs (43%) believed that provosts were holding their positions for shorter periods of time compared to 5 years ago (Mann, 2009). Factors that contributed to provosts' departures include the pursuit of a presidency at a different institution, retirement, and the desire to return to teaching or another scholarly career (Mann, 2009).

A recently published report, *Crisis and Opportunity: Aligning the Community College Presidency with Student Success*, reported the need for a process before community college presidential candidates enter the pipeline for presidency (Aspen Institute & Achieving the Dream, 2013). First, candidates must have taken part in a traditional academic program and participated in continuing educational leadership training. While interviewing several leaders in community colleges leadership training programs, the question was posed as to how candidates for academic programs were selected. Although the response to that question might vary for individual institutions, several leaders stated that they focused on more traditional criteria, such as Graduate Record Exams (GRE) scores and aptitude to complete a dissertation (p. 17). However, those qualities do not necessarily identify the competencies of a definite community college leader, though such individuals would typically be viewed as strong candidates.

Secondly, community colleges should seek internal candidates for successors to step into leadership roles. Many community colleges feel that the most qualified candidates are put in place by choosing those with proven records of supporting their

respective institutions' goals and values. It is projected that one-third of all community college presidents were selected from within their own institutions. Most experts support choosing from within, to provide in-house training and ensure the leader is united with organization cultures. Another reason to select from within the institution is to reduce resistance from administrators and faculty members (Aspen Institute & Achieving the Dream, 2013).

However, some experts support hiring from outside of the institution, providing the ability to choose from a broad talent pool, which encompassed all levels of administrators to ensure the most accurate fit is selected to meet the changing demands of community college leadership. The report concluded that reevaluating the process of selecting candidates to training programs and to serve as future leaders—and focusing more on projected leadership competencies—will ultimately improve student outcomes (Aspen Institute & Achieving the Dream, 2013).

Leadership Theories

American higher education is an enterprise of complex heritage, mission, and governance culture—an enterprise expected to serve as both cultural curator and cultural critic. Contemporary issues, such as the call for accountability and the pressure of marketplace ideology, present colleges and universities with a possible breakpoint change moment in both mission and leadership (Bogue, 2006, p. 309). The work environment is characterized by globalization, along with accelerating rates of market changes, technologies, the workforce, and workforce expectations. Changes are transpiring in cultural patterns, role definitions, structures, policies, procedures, and technologies.

Leadership is central to this transformation, and the full-range model of leadership, with the transactional transformational distinction as basis, provides a framework for exploring leaders' roles in a changing work environment (van Eeden, Cillers, & van Deventer, 2008, p. 253). Transformational leadership is best described as behaviors that elicit extraordinary performance from followers. This type of leader engages followers' emotional involvement, builds trust, and is highly influential (Wolfram & Mohr, 2009). Historically, women have been characterized as transformational leaders, creating more congenial environments for future generations of leaders (Madden, 2005).

Transactional leaders generally work reciprocally with their associates, where the leaders bargain and negotiate, using rewards or power to influence and create change (Kezar & Eckel, 2008, p. 380). In this social exchange process, the leader clarifies the path to complete the task and specifies the incentive(s) for completing the task. The leader is proactive in identifying mistakes, complaints, infractions, and regulations.

Also, transformational leadership may vary, based on years spent working in various positions and administration levels within higher education. One researcher indicated that if a faculty member serves at a higher education institution for a lengthy time period, that would be a significant predictor of transformational leadership, while a president at a higher education institution may have a less significant predictor of transformational leadership (Jacobs, 2012). Overall, transactional forms of leadership are suggested as preferable for higher education, because authority and power is diffused (van Eeden et al., 2008; Kezar & Eckel, 2008).

A contrary form of leadership, referred to as “laissez-faire,” implies an avoidance and/or absence of leadership. The leader avoids setting goals and expectations and accomplishes small amounts of work (Wang & Berger, 2010), often burdening his or her subordinates with all of the responsibility (van Eeden et al.,2008). Hauser (2010) added that when community college presidents possesses a laissez-faire leadership style, they create uninspiring work ethics, influence low morale, and reduce group unity (p. 18).

Servant leadership is a term that Greenleaf coined in 1970. The most significant qualities of a servant leader are (1) listening and strong communication, (2) healing and the ability to connect with some of societies’ toughest issues, and (3) persuasion and the ability to steer the institution toward the goal (Cassel & Holt, 2008). The servant leader honors empathy and integrity, doing what is right because a moral principle commends that course of action. Any unethical acts can pollute the economic, political, and/or social reservoir. While the majority of higher education administrators are male, females within the same roles are more naturally inclined to adopt a servant leadership style than their male counterparts. However, females may feel the pressure to tone down the display of a servant leadership style to meet the current cultural influences (Benham & Murakami, 2013). For higher education leaders to advance their effectiveness, they must embrace the vision of the servant leadership role, which can lead to the discovery of empathy and integrity (Bogue, 2006).

Personality Traits and Leadership

Leadership defines the future, providing a vision and encompassing traits such as intelligence, determination, flexibility, and a high degree of emotional intelligence. According to Basham and Mathur (2010), more than 3,000 personality assessments are currently available in the United States. The validity of personality measures for

predicting job performance continues to be a widely investigated topic, in spite of continued pessimistic research results over the past 30–40 years. In high-stakes selection contexts, the observed validities of personality tests to predict job performance criteria are low and have not changed over time (Whetzel, McDaniel, Yost, & Powell, 2010, p. 310). A breadth of research in both corporate and educational realms exists regarding leadership traits, characteristics, and competencies. Crucial leadership traits include learning from past experiences, enriching the journey, and establishing a connection and vision while leading from center values. Collins, the author of *Good to Great*, a bestselling management guide, described two levels of leaders. Level 5 leaders are motivated and ambitious, always working for the organization's cause. When absent, the business can function without these leaders because they have provided direction and preparation. The level 4 leader self-aggrandizes, perhaps instilling the organization with fear. When selecting leaders, one must first know the organization's or institution's priorities and choose accordingly (Caulkins, 2008; Fulton-Calkins & Milling, 2005).

To identify and support the need to develop future institutional leaders, the American Association of Community College (AACC, 2005) identified five essential leadership characteristics needed for future community college administrators: (1) understanding and implementing the community college mission; (2) effective advocacy; (3) administrative skills; (4) community and economic development; and (5) personal, interpersonal, and transformational skills. Drucker (2006) identified eight characteristics of effective and competent leaders:

They ask, "What needs to be done?"; (2) They ask, "What is right for the enterprise?"; (3) They develop action plans.; (4) They take responsibility for

decisions; (5) They take responsibility for communicating; (6) They are focused on opportunities rather than problems; (7) They run productive meetings; and (8) They thought and said we rather than I. (p. xi)

Shamandi, Silong, Ismail, Samah, and Omar (2013), who researched the AACC's five essential leadership characteristics, felt that these leadership characteristics are fundamental to the success of community college leadership. Community college leaders have a duty to advance leadership competencies to enable their institutions to survive and continually develop. Community college leaders must currently and continue to meet the needs of a diverse student population, technology advances, and globalization.

Much research concerning leadership theory originated from trait theory. Traits distinguish personality characteristics, and personality is the sum of those traits (Lussier & Achua, 2007). The Five-Factor Model is a widely accepted method for measuring personality traits. The five categories of this model are: (1) surgency, dominant behavior; (2) agreeableness, warm friendly behavior, higher job performance; (3) adjustment, emotional stability; (4) conscientiousness, reliable, and organized; and (5) openness to experience, willingness to change (Lussier & Achua, 2007; Whetzel et al., 2010).

Using a Delphi process, an Illinois college conducted research on characteristics crucial for future community college presidents. The research identified the characteristics, competencies, and professional experiences valued by college trustees: dependable, calm under pressure, understanding of multiculturalism, politically savvy, visionary, and student focused. Such findings can guide the selection of professional development opportunities (Plinske & Packard, 2010).

Online Personality Assessment

When administering personality assessments, the latest trend has progressed through the advancements of the Internet (Bartram, 2001). In 2003, Salgado and Moscoso forecasted that in the 10 years following their research, the Internet would become essential for workplaces that use job-related personality instruments as a tool for hiring and job development. Currently, according to Joubert and Kriek (2009) these predictions have come true, because the majority of personality assessments are administered online. The traditional form of paper-and-pencil personality questionnaires have given way to well-constructed, easy-to-follow questionnaires, which provide more thorough and complete assessment (Brown, Bartram, Holtzhausen, Mylonas, & Carstairs, 2005), immediate scoring (Buchanan & Smith, 1999; Mead & Drasgow, 1993), and prevention of lost data (Cronk & West, 2002; Rosenfeld, Booth-Kewley, & Edwards, 1993).

Cronbach (1990), who has made major contributions in educational psychological testing and measurement research, identified the need to define the similarity of scores on a measuring instrument when it is used multiple times or with multiple methods. Therefore, it is vital to examine the psychometric properties of traditional paper-and-pencil assessments that are modified for the Internet. Joubert and Kriek's (2009) literature review of aforementioned research indicate that there is an equivalence relationship between paper-and-pencil tests and Web-based personality assessment instruments that are reliable and commonly recognized (Bartram & Brown, 2004; Brown et al., 2005; Buchanan & Smith, 1999; Mylonas & Carstairs, 2003; Templer, 2005; Trippe, 2005). Collectively, numerous doctoral students at a prominent research institution in Florida have researched several forms of online personality

assessment instruments and reported reliable forms of personality assessment (Basham, 2007; Litt, 2010; O'Daniels, 2010; Salvano, 2005; Tunks, 2007; Yankowy, 2011).

Preparation and Talent Selection

With 80 million baby boomers expected to retire in the next 25 years, businesses and educational institutions have incorporated leadership strategies and opportunities to prepare for the potential impact (Sacks, 2006). Upcoming retirements are significant, and future community college leaders must be well prepared for higher education leadership. Succession planning is needed to prepare future leaders for 2010 and beyond. Such practices could include developing a vision, consistently reviewing long-term goals, incorporating a mentoring process, and critically examining the institutional culture (Fulton-Calkins & Milling, 2005).

Leaders do not just exist—they must be developed (Luoma, 2010, p. 4). The Chair Academy is an organization committed to providing the necessary skills to become an effective leader in higher education. The academy's mission is to provide worldwide training programs to postsecondary institutions. The overall goal is to advance academic leadership. The Luoma Leadership Academy is designed to provide necessary leadership theories and practices that support existing and upcoming leaders. This academy has served colleges, in particular Minnesota State College, where faculty and staff who aspire to leadership learn crucial skills for education administration (Luoma, 2010). Both academies exemplify academic leadership preparation programs committed to providing exemplary leadership training to educational institutions.

In addition to such organizations as the aforementioned academies, Gallup has been researching top-performing leaders for more than 40 years. One crucial discovery has been that top performance is strongly correlated to seven main leadership activities: (1) visioning, (2) maximizing values, (3) challenging experience, (4) mentoring, (5) building continuity, (6) making use of experience, and (7) knowing self (Conchie & Hadd, 2009, p. 13). Mentorship is a valuable tool for leadership development. Great leaders mentor their talent, bringing these followers to their highest potential. Effective leaders understand the mentees' potential and place them in positions where their talents become strengths (Conchie & Hadd, 2009).

The *Crisis and Opportunity* report detailed the importance of leadership programs and developing future community college leaders (Aspen Institute & Achieving the Dream, 2013). The report did not assess leadership programs but merely identified key competencies that leadership programs should contain. To acquire key leadership competencies, leadership training programs should be able to house plenty of seats for students who desire to seek administration and presidency positions. But most of all, leadership training's core purpose is to give these aspiring students leadership skills that will lead to student success. This report suggests that many leadership training programs lack key qualities that impede student success. Nevertheless, leadership training programs should possess the following qualities to assure that skills are met and students' outcomes are successful : deep commitment to student access and success; willingness to take significant risks to advance student success; the ability to create lasting change within the college; having a strong, broad, strategic vision for the college and its students, reflected in external partnerships; and raise and allocate

resources in ways aligned to student success(Aspen Institute & Achieving the Dream, 2013).

Collins's previously mentioned management guide, *Good to Great*, has impacted the business sector, highlighting metaphors such as "getting the right people on the right bus," "facing the brutal facts," and "operating the fly wheel." Higher education institutions are more likely to be familiar with Collins's CEO model than with recent research on education leadership (Caulkins, 2008).

When searching for talent, trustees typically search for presidential candidates who are familiar with the educational system, community needs, economic demands, history of the institution, and who possess a vision for the college's future success (Plinske & Packard, 2010). Though these characteristics may be essential for successful leadership, incoming administrators should consider the organization's culture. Several leadership approaches ultimately form an institution's culture. For example, egalitarian leadership promotes freedom within the organization. On the other end of the spectrum, cult-driven leadership instills fear, leaving employees anxious and powerless. Both egalitarian and cult-driven leadership are extreme styles. Ideally, leadership models that fall somewhere in between the leadership spectrum should be explored and promoted (Caulkins, 2008).

Knirk's (2013) research encouraged college leaders to be committed to recognizing and cultivating fresh leadership talent from within their own institutions and to present current leadership with future leadership opportunities. However, Knirk's (2013) research did not find evidence for talented individuals who are consistently and intentionally being identified as future leaders as guaranteed prospects. Knirk's study

added that certain leadership characteristics succession planning may fall short due to limited mentoring and placing prospects in positions where leadership roles cannot develop thoroughly, confusing the prospective talent regarding possible leadership role advancements.

Gender and Leadership Research

Over the past two decades, research has focused on women's leadership in higher education, although literature on women's leadership in higher education reveals an underrepresentation of female presidents (Stout-Stewart, 2005, p. 303). With more women entering community college presidencies, examining these leaders' characteristics and leadership styles will lead to an overall enhanced understanding of community college management.

Since 1991, people inquiring about the status of the community college presidency frequently ask one question: how many current presidents are women? Three prior surveys saw increases from 11% in 1991 to 28% in 2001 (Liu, 2007, p. 833). However, a 2006 survey showed only a 1% increase, bringing the 2006 percentage of female presidents to 29%. Thus, over a 15-year period, the percentage of female presidents has increased by 18%, although this development has noticeably leveled off during the past 5 years (Weisman & Vaughn, 2006, p. 3).

Presently, women account for only 31% of community college presidents (Cook & Kim, 2012), whereas those positions held makeup more than 54% of executive, administrative, and managerial positions; 53% of the faculty; and 57% of all fulltime community college employees (U.S. Department of Education, 2010). Researchers have studied various and diverse potential reasons of the constant gender imbalance,

while the studies augment the comprehensive discourse on gender inequity within community college presidents.

Related to gender inequity in community college presidencies, researchers have not yet studied the views of community colleges' boards of trustees members. Boards of trustees have the duty of recruiting, hiring, and evaluating their institutions' presidents. Thus far, there is no existing literature on the topic of trustees' perceptions of women as presidents (Dean, 2013).

Over the course of time, considerable research has been conducted that compares and contrasts men's and women's leadership styles, particularly as such pertain to gender and leadership (Barbuto, Fritz, Matkin, & Marx, 2007; Eagly, 2007; Eagly, Johannesen-Schmidt, & van Engen, 2003; Gardiner & Tiggemann, 1999; Mandell & Pherwani, 2003; Sikdar & Mitra, 2009; Stout-Stewart, 2005; van Engen, Van der Leeden, & Willemsen, 2001; Young, 2004). Literature reviews exploring the topic of female leadership often established that women displayed a transformational leadership style more often than men, as well as the conditional incentive characteristic of the transactional leadership style (Eagley et al., 2003). Eagly (2007) recommended that gender alone may not account for this variance.

Eagly's (2007) literature review suggested that women have to be more qualified than their male colleagues to attain a place in leadership. Consequently, women have to possess more effective leadership styles and behaviors that are associated with a transformation leadership style. Therefore, Eagly suggested that women in leadership roles might be adapting their leadership skills to overcome the barriers to attaining leadership positions.

In addition, Sternberg's (1995) research compared thinking styles of men and woman. Sternberg defined thinking styles as a way of processing information in the mind. Balkis and Isiker (2005) built on this research, investigating thinking styles and the characters of males and females. Males tend to use a judicial and external thinking style, and females tend to use executive thinking styles (p. 292).

Kachik's (2003) study focused on personality traits of male and female administrators from both the community college and business sectors. Using the Occupational Personality Questionnaire ® (OPQ®), Kachik conducted six significant pair-wise combinations and MANOVA to identify interactions. Findings concluded that characteristics did demonstrate gender-related differences. Kachik's six pair-wise combinations included

- community college female administrators compared to community college male administrators;
- community college female administrators compared to female corporate managers;
- community college female administrators compared to male corporate managers;
- community college male administrators compared to female corporate managers;
- community college male administrators compared to male corporate managers; and
- female corporate managers compared to male corporate managers. (O'Daniels, 2009, p. 25)

For each pair-wise combination see Figure 2-2, which provides a summary of the characteristics Kachik found, with the highest and lowest significance ($p < 0.0083$).

Desjardin (1994) researched the leadership styles and competencies of community college presidents. Using equal numbers of males and female, Desjardin determined the competencies of 72 community college presidents. Figure 2-3 depicts gender-related competencies. The majority of males tended to have a justice/rights orientation, whereas the majority of females tended to have a care/connected

orientation. Male moral-orientation tendencies included fairness reasoning, objectivity, universality, valuing autonomy, and reciprocity. Females tended to be included in the care/connected moral orientation (Figure 2-4). Care/connected moral orientation includes attachment, care, and concern for others' needs (O'Daniels, 2009). Behavioral preferences may also vary by gender.

Women engage in more positive social behavior and agreement than men, who are more task oriented and disagree more than women. Direct language, disagreement, and autocratic and dominating leadership are less well received from women. Hence, women are more constrained in the kinds of behaviors that they can engage in and still be as influential as their male counterparts (Madden, 2005, p. 6).

Results of previous research support the premise that there is a need to train, educate, and prepare future administrators for higher education. With the mass exodus of higher education leaders predicted in the current decade, the decrease of qualified leaders will affect a number of departments in the educational arena (Boggs, 2003; Campbell, 2002; Campbell & Levery, 1997; Hockaday & Puyear, 2008). This prediction may not only impact the balance of leadership as a whole, but also may add to the already strained challenges faced by community colleges, such as budget constraints, student access, and enrolment practices.

This research focuses on how the OPQ32® assessment is used to identify leadership qualities and a development plan to help improve in deficient skill areas. Recent studies have also used this tool to determine quality leadership in both a pretest and posttest setting (Salvano, 2005; Tunks, 2007). These studies in particular highlight this method of assessment and yield similar results. Both studies were designed with a

two-pronged approach. Participants completed a pretest and posttest of the OPQ32®. Results of the pretest determined each participant's leadership plan, which was reviewed and followed by the development of an action plan. Both researchers approached the study using an ex post facto design.

Though each study showed some improvement in leadership qualities, results were minimal. Tunks's (2007) comparisons of gender did not reveal any significant differences in leadership styles, while Salvano's (2005) did reveal some significant changes, but none that could be directly credited to the research design. Similar to this study, Salvano's recent research also used a small sample size, adding an additional limitation to the study.

Participants commented on their positive experiences with the learning plans and how they felt their leadership qualities improved over the course of the study. Yet again, results were minimally significant. Conclusions drawn from both studies suggested that the leadership program should last more than one year, allowing participants ample time to receive training and improve their leadership skills. Another suggestion that Tunks (2007) made was to add a mentoring piece, which would allow participants to work one on one with a seasoned administrator, serving as a guide through the leadership development process.

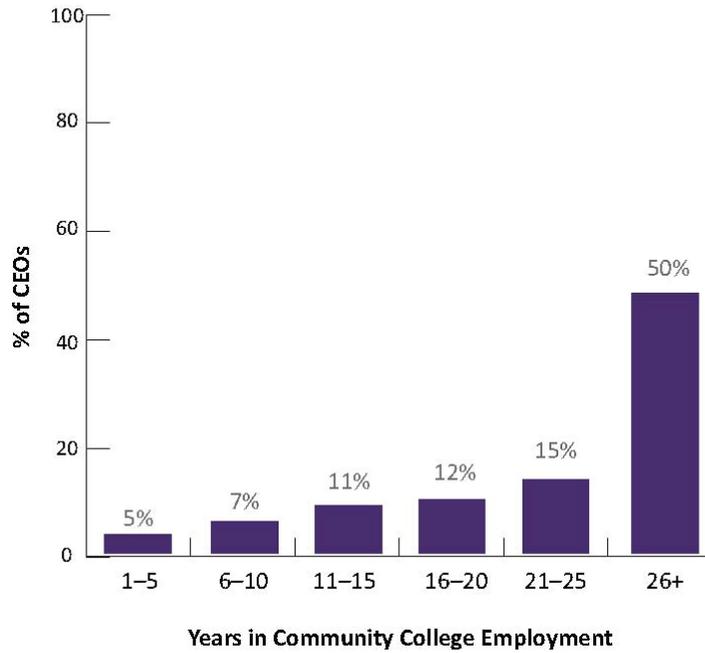


Figure 2-1. Current community college CEOs' years of employment in all community college positions: 2012. [Adapted from *Compensation and Benefits of Community College CEOs: 2012* (Research Brief, AACCRB-2012-1), by R. Tekle, 2012, p. 2. Copyright 2012 by the American Association of Community Colleges.]

Significant Pair-Wise Combinations MANOVA

($p < 0.0083$)

$N = 294$ community college administrators

$n = 141$ females

$n = 153$ males

$N = 296$ private sector managers

$n = 142$ females

$n = 154$ males

Community college female administrators compared to community college male administrators

$n = 141$

$n = 153$

Highest Significance

Lowest Significance

practical

behavioral

competitiveness

Community college female administrators compared to female corporate managers

$n = 141$

$n = 142$

Highest Significance

Lowest Significance

controlling

corporate

independent

practical

democratic

traditional

caring

behavioral

change-oriented

innovative

forward planning

critical active

competitive

achieving

Community college female administrators compared to male corporate managers

$n = 141$

$n = 154$

Highest Significance

Lowest Significance

controlling

practical

independent

traditional

democratic

worrying

caring

competitive

behavioral

change-oriented

innovative

forward planning

critical

active

competitive

achieving

Figure 2-2. Results of Kachik's 2003 study, which utilized the Occupational Personality Questionnaire® (OPQ®). [Adapted from *21st Century Educational Leadership Profiles* by Cynthia J. Kachik, 2003, pp. 63, 64.]

| Women | Men |
|---|--|
| 1. View selves objectively and laugh at absurdities. | 1. Perceive selves as able to make important contributions to society. |
| 2. Recover quickly from setbacks. | 2. Prefer environments that are dynamic and open to change. |
| 3. Take personal responsibility for things that go wrong at their institutions. | 3. Enjoy challenges and seek them out. |
| 4. Comfortably discuss their own strengths. | 4. Move swiftly to take advantage of opportunities. |
| 5. Set high standards for their own performances. | 5. Set goals that are challenging but realistic. |
| 6. Identify problems before they become critical. | 6. Build behind-the-scenes support for positions. |
| 7. Make unilateral decisions when the situation demands. | 7. Exhibit a consistent pattern of casual interaction with people at their institutions. |
| 8. Help people understand implications of policies and decisions. | 8. Take time to get to know all faculty members. |
| 9. Provide opportunities for subordinates to be in the spotlight. | |
| 10. Take people's feelings into account when making decisions. | |

Figure 2-3. Summary of Desjardins's leadership competencies. [Adapted from *Leadership and Gender Issues in the Community College* by Carolyn Desjardins, as cited in Hofmann and Julius, 1994, p.153.]

Community college male administrators compared to female corporate managers

| <i>n</i> = 153 | <i>n</i> = 142 |
|----------------------|---------------------|
| Highest Significance | Lowest Significance |
| persuasive | affiliate |
| controlling | traditional |
| independent | worrying |
| modest | |
| democratic | |
| data rational | |
| change-oriented | |
| conceptual | |
| innovative | |
| forward planning | |
| relaxed | |
| tough-minded | |
| critical | |
| active | |
| competitive | |
| achieving | |
| decisive | |

Community college male administrators compared to male corporate managers

| <i>n</i> = 153 | <i>n</i> = 154 |
|----------------------|---------------------|
| Highest Significance | Lowest Significance |
| independent | traditional |
| modest | worrying |
| democratic | |
| caring | |
| change-oriented | |
| forward planning | |
| relaxed | |
| critical | |
| achieving | |
| social desirability | |

Female corporate managers compared to male corporate managers.

| <i>n</i> = 141 | <i>n</i> = 154 |
|----------------------|---------------------|
| Highest Significance | Lowest Significance |
| caring | persuasive |
| | data rational |
| | active |
| | competitive |
| | decisive |

n = 72 Community College Presidents

| | |
|-----------------------------|-------------------------------|
| Highest Percentage | |
| Males: Justice/Rights (50%) | Females: Care/Connected (66%) |
| Lowest Percentage | |
| Males: Care/Connected (28%) | Females: Justice/Rights (17%) |

Figure 2-4. Summary of Desjardins's Leadership Modes. [Adapted from *Leadership and Gender Issues in the Community College* by Carolyn Desjardins, as cited in Hofmann and Julius, 1994, p. 150.]

CHAPTER 3 METHODOLOGY

Chapter 3 builds on the literature reviewed in the previous chapter and identifies the purpose of the study, provides an overview of the research questions, and describes the desired population. This chapter also details the survey instruments, research design, data collection methods, data analysis, and limitations.

Purpose of the Study

This study examined leadership behaviors of higher education professionals, based on a leadership graduate program. The purpose of this study was to explore a theoretical framework of community college leadership advancement, by examining two models designed to increase leadership competencies. The initial design proposed utilizing a blend of professional coaching and individual development and focus. Individuals would possess innovative talents, and adjust behaviors while developing their leadership abilities. Improved leadership talent within this study embraced the future leaders for promotion within a community college. The study also identified individual skills and weaknesses, followed by precise trait enhancement, which was the foundation of this study.

Research Questions

This study attempted to discover what effect participation in a leadership graduate program had on participants' leadership behaviors. The effects of program participation on the subjects' personality attributes and leadership styles were analyzed, based on the research questions specifically designed to monitor leadership progress.

The study addressed the following questions:

1. Is there a difference in the personality attributes of participants in the leadership graduate program after three months of program participation?

2. Is there a relationship between personality traits, personality dimensions, and targeted attribute improvement for personal growth and development after three months of program participation?
3. Is there a relationship in personality dimensions between female and male participants in the leadership graduate program?

Research Hypotheses

For this study, six different null hypotheses were examined to support discussion of the research questions. These hypotheses are as follows:

H₁: There were no differences between OPQ32n® pretest and posttest scores for the population of higher educational professionals.

H₂: There were no differences between OPQ32n® pretest and posttest scores between male and female of higher educational professionals.

H₃: There were no differences for the “Relationships with People” dimension of the OPQ32n® between pretest and posttest scores for the population of higher educational professionals

H₄: There were no differences for the “Thinking Style” dimension of the OPQ32n® between pretest and posttest scores for male and female higher educational professionals.

H₅: There were no differences for the “Feelings and Emotions” dimension of the OPQ32n® between pretest and posttest scores for male and female higher educational professionals.

H₆: There were no differences for the targeted areas for improvement with the OPQ32n® characteristics between pretest and posttest scores for higher educational professionals

Together, these six null research hypotheses were exhaustive in seeking support for this study’s research questions.

The Leadership Program

The leadership graduate program is a commutative 90-hour program, created for students who are working professionals in diverse higher education positions. Attending parttime, students can complete the program in approximately four years, with an earned Doctor of Education (EdD). This program is constructed in an online cohort setting, which offers graduate-level curriculum in a blended design. In addition to the online classes, students are required to attend in-person gatherings three weekends per semester, which are rotated at different college campuses in the state of Florida.

The core coursework consists of relevant higher educational classes, as well as educational research and research design, which provides the conceptual groundwork for a doctoral dissertation. Each year, students also attend at least one in-state, national, or international professional conference associated to their professional goals in the program. Required courses include the following:

- Higher Education Administration
- Higher Education Finance
- The Community College in America
- Theory of Student Development
- Curriculum in Higher Education
- Diversity Issues in Higher Education
- Organizational Leadership
- Law and Higher Education
- Resource Development in Higher Education

Population

The population for this study was a group of higher education professionals who participated in a leadership graduate program through a university in southeast Florida. All participants had to apply and obtain acceptance into the program. The selection process for entrance into the leadership training program is highly competitive, based

on various criteria: (a) a bachelor's degree was required, and preference was given to those holding a master's degree; (b) all admissions packages are judged by the admissions committee in totality; (c) the committee weighs each package based on the applicant's GPA, GRE score, years in the field, level of responsibility, unique talents, and accomplishments; (d) letters of recommendation; and (e) a writing sample.

The program cohort had 15 participants, consisting of five males and ten females, with a range of ages and ethnicities. The age and ethnicity data were not collected, but was based on the researcher's observations. The participants encompassed diverse administrative duties within community colleges located throughout the Southeastern United States.

Instruments

Since the creation of Kraepelin's free association test in 1892, the field of personality testing for psychological assessments has evolved dramatically and currently demonstrates both reliability and validity (Anastasi & Urbina, 1997). However, psychological personality assessment instruments have also advanced into the practice of information technology and technological improvements. The two data collection instruments used in this study were the OPQ32n® and a brief follow-up interview, administered with a questionnaire after the posttest. Both tools have previously demonstrated validity and reliability (Bain & Mabey, 1999; Kachik, 2003; Salvano, 2005; Saville, Sik, Nyfield, Hackston, & MacIver, 1996). The OPQ32n®, which was specifically designed to develop a comprehensive assessment within the workplace, was the basis for a personality profile created for this study.

The OPQ32n® is considered the standard for identifying work-style profiles, job-based matches, and the instrument is used for leadership development and executive

consideration. As a personality assessment instrument, the OPQ32n® is used internationally by more than 1,000 diverse corporations, who are seeking key individual identifiers to promote their companies' success (Campbell et al., 2010). Specifically, evidence supporting the validity of the OPQ® instruments has been reported in numerous studies (Robertson & Kinder, 1993; Saville et al., 1996). The British Psychological Society (BPS) studied the OPQ32® and concluded that the OPQ32® is one of the frontrunners of personality questionnaires (Marshall & Lindley, 2007). The studies led to the OPQ32® earning the highest possible ranking for quality, including a remarkable rating for reliability and validity (Marshall & Lindley, 2007; Campbell et al., 2011).

In addition, statistical reliability studies using Cronbach's coefficient alpha exhibited that the internal consistency reliability of the OPQ® ranged from .67 to .88, with a median score .81. The test-retest correlation coefficient of OPQ® scales ranged from .64 to .91, with a test-retest interval of one month (Saville & Holdsworth [SHL], 2001).

The version of the OPQ32n® used in this for this study was the OPQ32n®, which is capable of gathering information to create a 32-dimension personality profile, based on specific traits. This OPQ32® personality questionnaire was designed to provide information on individual workplace styles or preferences. The OPQ32n® contains 230 occupationally relevant questions that can be applied to effectively assess critical work behaviors. This instrument of behavior is broken down into three specific dimensions: Relationships with People (10 traits), Thinking Style (12 traits), and Feelings and Emotions (10 traits). By combining the scores from these three dimensions, researchers

have created desired employment profiles. The OPQ32n® asked participants a series of questions. Each question had four statements, and participants had to choose one statement as a response to each question. Statements ranged from *most like me* to *least like me*.

Data collected from the OPQ32n® can be grouped into combinations to accurately assess preferred leadership style, preferred team type, and work-related behaviors that are matched to employees' profiles. The OPQ32n® also measures another area, Social Desirability. This scale is used to assess the consistency of subjects' responses, and whether or not subjects answered questions based on their interpretations of test administrators' results preferences. OPQ32n® results used in this study were presented in a Stein score format (Saville & Holdsworth, 1996).

The OPQ32n® relies on styles referred to by Bass (1990), which describe preferred leadership styles such as directive, consultative, delegative, participative, and negotiative. Utilizing the OPQ32n®, an employer has the ability to gain information about a current or potential employee's specific work behaviors, leadership styles, and team type. Using the OPQ32n® enables the employer to gain valuable information for employee selection, as well as determining employee development purposes. To ensure a more precise job match, combining the OPQ32n® data with the SHL® Work Profiling System results in identifying the employee's strengths and areas for improvement, as related to a specific job profile (Saville & Holdsworth, 2001).

To further investigate the effects that learning plan activities might have on subjects' overall leadership development, a second data collection instrument—a follow-up interview questionnaire—was used in this study. Questions directly related to

participants' commitment level and improvement; the questions were created to assess the individual effects that the learning plan activities may have had on overall leadership development. A panel of experts juried the questions in advance of instrument implementation. A minimal number of participants were chosen for follow-up interviews, based on behavior level and leadership style change. Based on selection, all participants' OPQ32n® pre- and posttest scores were compared and evaluated, to determine which participants' OPQ32n® scores changed the most significantly from the pretest to the posttest (Tunks, 2007). From the group, a total of six participants were chosen for follow-up interviews, based on their individual levels of behavior and leadership style changes (Salvano, 2005; Tunks 2007).

In order to present data to reflect score increases or decreases, assumptions were made to identify recognizable changes. Categories were used to group the scores, to determine the direction in behaviors from the pretest to the posttest as accurately as possible. For the purpose of this study, the guidelines were broken down into the following categories:

- Low: Scores ranging from 1 – 2
- Low-Average: Scores ranging from 3 – 4
- Average: Scores ranging from 5 – 6
- High-Average: Scores ranging from 7 – 8
- High: Scores ranging from 9 – 10

By utilizing and understanding this scoring platform, researchers were able to identify the levels of variation within participants' behaviors. Although the participants' attribute scores were analyzed to establish any changes in leadership behaviors, the variation in the scale was not to reflect whether these score changes were positive or negative, but simply recognized as either an increase or decrease in the scores. The

purpose was to determine the direction of the movement, whether toward the low end or high end of the scale. However, adapting this scoring technique allowed researchers to identify participants' scoring, either at the low end or high end of the scale, as extreme behaviors recognizing the possibility of those participants lacking a preferred leadership style in most environments.

Research Design

The study focused on learning gains and changes in community college administrator's leadership behaviors within a professional development program. This development program was comprised of instructor-led coursework and self-guided learning plans. Parry (1998) revealed that most leadership studies were conducted using quantitative research methods. Parry also stated that leadership is a social influence process and therefore compatible with qualitative research methods. Combining quantitative and qualitative research methods creates the model approach to study leadership and provides a framework for the design of this study, as well as the data collection and analysis. Therefore, the study used a nonexperimental ex post facto research design. The lack of control groups or randomization within the groups presents several limitations for this study, which will be discussed in further detail in that section of this chapter.

Data Collection

After the researcher received Institutional Review Board approval to conduct the study, data collection commenced (see Appendix A). The community college cohort participants were administered the OPQ32n® at the beginning of their applied doctoral program. Dr. Dale F. Campbell, a qualified SHL® Test User, administered the OPQ32n® to all subjects online. OPQ32n® scores outlined the identification of each

subject's personality traits and leadership style (see Appendix B). Participants could then use the information provided to prepare and create an individual Learning Plan Assessment (LPA). With assistance from an OPQ® qualified administrator, subjects were encouraged to create an action plan by selecting one to three attributes that indicated room for improvement, which could be enhanced to contribute to leadership success. Participants were instructed to create specific goals and construct objectives designed to develop characteristics needed for professional development and accountability (see Appendix C).

For a period of 15 weeks, during the 2010 summer semester, participants took the pre- and posttest OPQ32n®, attended three weekend meetings, completed a LPA, underwent mentoring, and completed three college-level leadership courses. Each of these courses was worth three credit hours, and participants concurrently worked on their LPAs while taking the courses. During the first course, Education Policy Development, participants developed their LPAs. While taking the second course, Community Colleges of America, participants continued to work on their LPAs and being mentored. During the third and final course of the summer semester, Leading Change, participants evaluated their LPAs.

After the program concluded and the course of study ended, all participants evaluated their individual progress by completing a written assessment of their achievements regarding their LPA objectives. As a posttest, Campbell administered the OPQ32n® a second time via the Internet, and participants were notified of their scores and provided with a second report of the findings.

Data Analysis

The descriptive data were calculated for the population to ensure a standard normal distribution and to ensure that there were no outliers. As mentioned, the population size for this study was 15 participants, 10 females and 5 males. Therefore, nonparametric techniques were used to statistically evaluate the quantitative data. The Wilcoxon signed-rank tests offered the preliminary analysis of the data to establish a generality distinction, linking the pretest and posttest scores as a whole. Secondly, the Kruskal-Wallis one-way analysis of variance (ANOVA) was used to determine differences between the pretest and posttest scores of participants' intended attributes (see Appendices D and E). Finally, qualitative data collected during the follow-up interviews was used to further explore and illustrate participants' experiences in the program (see Appendix F).

Limitations

The study focused on community college administrators' leadership styles and personality traits. However, characteristics unique to community college administrators were not addressed. Therefore, results may vary because the institutions' environmental influence may have affected such traits.

Because the population was predetermined, the independent variable could not be manipulated. This lack of manipulation threatens the study's internal validity. Further, because of the ex post facto model, the data were collected prior to the researcher's involvement. Additionally, the sample size was small and did not allow controls for demographic criteria such as age, ethnicity, income, and so forth.

In this chapter the discussion built on the reviewed literature and identified the purpose of the study, provided an overview of the research questions, and described

the population. Details were also provided about the survey instruments, research design, data collection, data analysis, and limitations. The next chapter will present the data analysis and results.

CHAPTER 4 RESULTS

This study examined higher education professionals in a leadership graduate program and the program's relationships to leadership behaviors of higher education administrators. In this chapter the descriptive data, statistical data analysis of the research hypotheses, and results of qualitative reports from a subgroup of participants are presented.

Descriptive Data

The descriptive data were analyzed to determine whether any outliers or anomalies existed for the population ($N = 15$). Both pretest and posttest descriptive data had fairly normal distributions with no need to remove any outlier data, as shown in Table 4-1. In the pretest group data the three characteristics with the highest means were independent minded, outgoing, and variety seeking ($M = 6.67$), outspoken and decisive ($M = 6.47$), and caring ($M = 6.33$). The lowest means were modest and vigorous ($M = 4.67$), persuasive ($M = 4.13$), and data rationale ($M = 3.93$). In the posttest group data the three characteristics with the highest means were independent minded ($M = 7.00$); outspoken, evaluative, behavioral, and forward thinking ($M = 6.60$); and variety seeking ($M = 6.40$). The lowest means were modest ($M = 4.73$), vigorous ($M = 4.53$), and persuasive ($M = 4.33$).

Both pretest and posttest data showed several variables with slightly large standard deviations. The pretest group included worrying ($SD = 2.17$), tough minded ($SD = 2.23$), and trusting ($SD = 2.41$), while the posttest group included evaluative ($SD = 2.10$), conscientious ($SD = 2.25$), tough minded ($SD = 2.23$), and vigorous ($SD = 2.29$). The social desirability scale data were calculated for the pretest data ($M = 7.60$,

$SD = 1.24$) and posttest data ($M = 7.73$, $SD = 1.44$). After calculating and examining the descriptive data, the hypotheses were statistically tested and analyzed.

Statistical Analysis

This section relates the statistical testing of the research hypotheses and presents the subsequent analysis of each hypothesis.

H1: There were no differences between work style preferences pretest and posttest scores for the population of higher educational professionals.

This hypothesis was tested using the nonparametric Wilcoxon signed-rank test to determine the differences between overall OPQ32n® pretest and posttest scores for the population. Five participants had higher pretest scores than those they achieved after the leadership training, as shown in Table 4-2. However, nine participants had higher sten scores after the training, and one participant had no change in sten score. Generally higher scores were reported on the posttest ($M = 185.40$, $SD = 10.58$, $N = 15$) than those reported on the pretest ($M = 181.33$, $SD = 12.54$, $N = 15$). Results from Wilcoxon signed-rank tests showed no statistical difference ($p > 0.05$) between the two groups: $z = -1.01$, $p = 0.32$ (two-tailed).

H2: There were no differences between work style preferences pretest and posttest scores between male and female higher educational professionals.

As indicated in Table 4-3, the data for female participants demonstrated that three subjects had higher pretest scores than posttest scores. However, six female participants had higher posttest sten scores, and one participant had no change in sten score. The results from the Wilcoxon signed-rank tests for the females ($n = 10$) showed no statistical difference ($p > 0.05$) between the rankings within the females: $z = -0.711$, $p = 0.48$ (two-tailed).

Of the male participants, two had higher pretest scores than posttest scores, and three participants had higher posttest scores, as displayed in Table 4-4. The results from the Wilcoxon signed-rank tests for the males ($n = 5$) showed no statistical difference ($p > 0.05$) between the rankings within the males: $z = -0.68$, $p = 0.50$ (two-tailed).

H3: There were no differences for the OPQ32n® “Relationships with People” dimension between pretest and posttest scores for the population of higher educational professionals.

This hypothesis was tested using the nonparametric Wilcoxon signed-rank tests to determine the differences between overall OPQ32n® pretest and posttest scores for the whole sample population, females only, and males only, in the OPQ32n® “Relationships with People” dimension. Table 4-5 displays data for the entire sample population. Although reported posttest scores were generally higher ($M = 57.67$, $SD = 5.62$, $N = 15$) than reported pretest scores ($M = 57.20$, $SD = 5.95$, $N = 15$), results from Wilcoxon signed-rank tests showed no statistical difference ($p > 0.05$) between the two groups in the OPQ32n® “Relationships with People” dimension: $z = -0.32$, $p = 0.75$ (two-tailed).

Unlike the sample population data, the results from the female posttest data ($M = 56.70$, $SD = 5.38$, $n = 10$) showed slightly lower scores than those reported on the pretest ($M = 57.10$, $SD = 7.16$, $n = 10$). As displayed in Table 4-6, results from the Wilcoxon signed-rank tests showed no statistical difference ($p > 0.05$) between the pretest and posttest scores for the female group in the OPQ32n® “Relationships with People dimension: $z = -0.26$, $p = 0.80$ (two-tailed).

Like the population data, the results from the male posttest data ($M = 59.60$, $SD = 6.19$, $n = 5$) showed slightly higher scores than those reported on the pretest data ($M = 57.40$, $SD = 2.97$, $n = 5$). As shown in Table 4-7, results from Wilcoxon signed-rank tests showed no statistical difference ($p > 0.05$) between the pretest and posttest scores for the male group in the OPQ32n® “Relationships with People” dimension: $z = -0.74$, $p = 0.46$ (two-tailed).

H4: There were no differences for the OPQ32n® “Thinking Style” dimension between pretest and posttest scores for male and female higher educational professionals.

This hypothesis was tested using the nonparametric Wilcoxon signed-rank test to determine the differences between overall OPQ32n® pretest and posttest scores for the whole sample population, females only, and males only, for the OPQ32n® “Thinking Style” dimension. Table 4-8 displays data for the entire sample population. Although reported posttest scores were generally higher ($M = 72.40$, $SD = 7.32$, $N = 15$) than reported pretest scores ($M = 69.07$, $SD = 6.78$, $N = 15$), results from Wilcoxon signed-rank tests showed no statistical difference ($p > 0.05$) between the two groups in the OPQ32n® “Thinking Style” dimension: $z = -1.48$, $p = 0.14$ (two-tailed).

Like the overall sample population data, the results from the female posttest data ($M = 71.90$, $SD = 8.37$, $n = 10$) showed slightly lower scores than those reported on the pretest ($M = 67.90$, $SD = 6.47$, $n = 10$). As displayed in Table 4-9, results from Wilcoxon signed-rank tests showed no statistical difference ($p > 0.05$) between the pretest and posttest scores for the female group in the OPQ32n® “Thinking Style” dimension: $z = -1.33$, $p = 0.19$ (two-tailed).

Also similar to the overall sample population data, the results from the male posttest data ($M = 73.40$, $SD = 5.27$, $n = 5$) showed slightly higher scores than those reported on the pretest data ($M = 71.40$, $SD = 7.54$, $n = 5$). As shown in Table 4-10, results from Wilcoxon signed-rank tests showed no statistical difference ($p > 0.05$) between the pretest and posttest scores for the male group in the OPQ32n® “Thinking Style” dimension: $z = -0.54$, $p = 0.59$ (two-tailed).

H5: There were no differences for the OPQ32n® “Feelings and Emotions” dimension between pretest and posttest scores for male and female higher educational professionals.

This hypothesis was tested using the nonparametric Wilcoxon signed-rank tests to determine the differences between overall OPQ32n® pretest and posttest scores for the whole sample population, females only, and males only, in the OPQ32n® “Feelings and Emotions” dimension. Table 4-11 displays data for the entire sample population. Although reported posttest scores were slightly higher ($M = 55.33$, $SD = 6.57$, $N = 15$), than reported pretest scores ($M = 55.07$, $SD = 5.98$, $N = 15$), results from Wilcoxon signed-ranked tests showed no statistical difference ($p > 0.05$) between the two groups in the OPQ32n® “Feelings and Emotions” dimension: $z = -0.085$, $p = 0.93$ (two-tailed).

Like the population data, the results from the female posttest data ($M = 56.90$, $SD = 5.15$, $n = 10$) showed only slightly higher scores than those reported on the pretest ($M = 56.00$, $SD = 4.94$, $n = 10$). As displayed in Table 4-12, results from Wilcoxon signed-rank tests showed no statistical difference ($p > 0.05$) between the pretest and posttest scores for the female group in the OPQ32n® “Feelings and Emotions” dimension: $z = -0.25$, $p = 0.80$ (two-tailed).

Unlike the population data, the results from the male posttest data ($M = 52.20$, $SD = 8.56$, $n = 5$) showed slightly lower scores than those reported on the pretest ($M = 53.20$, $SD = 7.98$, $n = 5$). As shown in Table 4-13, results from Wilcoxon signed-ranked tests showed no statistical difference ($p > 0.05$) between the pretest and posttest scores for the male group in the OPQ32n® “Feelings and Emotions” dimension: $z = -0.67$, $p = 0.50$ (two-tailed).

H6: There were no differences for the Targeted Areas for Improvement with the OPQ32n® characteristics between pretest and posttest scores for higher educational professionals.

This hypothesis was examined using both quantitative and qualitative analysis. Study participants selected targeted attributes for personal growth using the OPQ32n®; selected attributes are listed in Table 4-14. For the quantitative analysis, this hypothesis also was tested using the nonparametric Wilcoxon signed-rank tests to determine the differences between overall OPQ32n® pretest and posttest scores for the whole sample population. Although slightly higher scores were reported on the posttest ($M = 4.70$, $SD = 1.81$, $N = 46$) than those reported on the pretest ($M = 3.46$, $SD = 1.68$, $N = 46$), results from Wilcoxon signed-rank tests showed a high statistical difference ($p > 0.05$) between the two attributes targeted for improvement using the OPQ32n®: $z = -3.71$, $p = 0.00$ (two-tailed).

A Kruskal-Wallis test was conducted to determine any statistical significance between females and males in the sample population. Data derived from the Kruskal-Wallis test showed a statistically significant difference between the pretests ($M = 3.46$, $SD = 1.68$, $N = 46$), with a mean rank of 25.97 for females and 18.88 for males, and the

posttest ($M = 4.70$, $SD = 1.81$), with a mean rank of 24.95 for females and 20.78 for males (Table 4-14). Participants can have significant gains when targeted attributes are identified: females targeted attributes greatest significant gains where persuasive, evaluative, and data rational, and males significant gains were persuasive and data rational. As indicated in the Kruskal-Wallis mean ranking, female participants had lower reported scores on the targeted attributes posttest than the scores male participants reported; however, no significance was found ($X^2 = 1.038$, $df = 1$, $p = 0.31$).

Learning Plan Assessment

Participants completed Learning Plan Assessments (LPAs) twice during the summer semester while in the leadership graduate program. A total of 30 LPAs were collected; the first LPAs were completed after the OPQ32n® pretest, and the second LPAs were collected after the OPQ32n® posttest. For the qualitative analysis of the final research hypothesis, the interview data were analyzed for common themes. Three closely-related predominant themes were identified: the usefulness of the OPQ32n®, including the mastering of individual targeted attributes, and the response received as a result of their changes in leadership styles and work behaviors.

Usefulness of the OPQ32n®

Similar to previous research, participants agreed that the OPQ32n® was an essential tool for measuring leadership behaviors. Overall, the leadership program provided a detailed analysis in which participants could reflect on their experiences and establish goals to become better leaders. Subjects gained insight to their current leadership practices and to which areas needed improvement. Several participants discussed the immediate value of taking the OPQ32n® and how the OPQ32n® assessment added to their development as a leader. A female participant stated, “Once

I received my OPQ results, it was like looking in the mirror. I saw me, and I wanted to make a better me.”

Identifying common themes among participants, the persuasive attribute was an area of improvement several male participants wanted develop. A participant that was employee at a state college explained:

After reviewing my results online, I was not shocked. The score represents who I was. My low scores explained who I was, and I needed do some work on myself. Focusing every day on my low score, I wanted to make a change. I know I needed to work on my persuasiveness, and I did every chance I got.

I volunteered to become a part of the Information Technology Committee to help with the design and implementation of a new system using virtual computers in the college. My responsibility will be “convincing” other faculty members the implementation will ultimately benefit them, so they become advocates of the new system. To be able to sell the virtual computer project to the stakeholders, my colleagues at the college, I will first need to learn more about the project. Currently the project is in the first stage of implementation.

A manager overseeing student success at a state college in Florida found that being persuasive was not an easy task, and one that he will have to continue working on:

Because of the OPQ . . . In order to be affective at persuasion, listening is the key. When meeting with staff and others, I allow them to speak first; this has allowed me to hear their concerns first so that I can ensure that I address their needs and concerns. In the past I would usually begin meeting with my comments and/or opinions, as I was the only one at the meeting. That has changed. At each meeting, I chose someone different to lead the meeting. It’s kind of fun and less stressful for everyone.

After one male participant received his score from his posttest, he was happy that he received two scores higher.

For the past few months I have already been successful at contributing my view and changing the direction of several keys policies in our program and further into the institution of a local community college. Part of this is presenting viewpoints that I hold, and part is presenting information to back

the viewpoint. I would also say [I've achieved] moderate success in the area.

Mastering Targeted Attributes and Response Received from Changed Behaviors

In addition to the general usefulness of the OPQ32n®, other participants noted ways in which their results helped them master their targeted attributes, as well as responses they received from others regarding their changed behaviors. For example, one participant commented on the continuation of achieving learning and performance objectives:

I think I have been pretty successful overall. I know I have spent more time in what I thought was probably my weakest area than the other areas. But I can tell that I have made progress and just from some of the feedback when I speak to people about different projects that I may be working on at work. So I think I have been pretty successful.

Continuing to master the attributes identified in the LPA promotes continuous growth in leadership. One participant shared an anecdote about confidence in mastering those skills.

I think I am headed in that direction. I wouldn't say I mastered it—I would say the progress has been significant. I know now what I don't know, so it has better positioned me to strengthen it even more.

Since I wasn't aware of [what] the OPQ leadership skills had been, you know, I was not actively engaged in becoming successful in those areas. Once I became aware of the OPQ, I became actively engaged by getting involved in different leadership styles and skills necessary to become a successful leader. For example, I got involved with the Faculty Senate, where you are involved with different groups. I got involved in the development where you are involved with activities and talking to people about the institution, and I have been trying to become more involved with data collection and data analysis to develop those skills as well.

Some participants shared the learning activities that were instrumental in helping them achieve their learning objectives. For instance, one participant stated the following:

The first one is—and this is not necessarily like a workshop—these are things that I just do on a regular basis now, and I visit with or sit and talk with our research specialist on a regular basis, as far as the numbers, back to the data rationale again. The second thing is now when I go to conferences, I am more likely to identify a breakout session that deals with outcomes and assessments, things that deal with those areas that I am not as strong with. I am more likely now to attend something that is difficult to shy away from in terms of coming out of my comfort zone in terms of the workshops that I attend. The third thing I would say would be [that] I attend a lot of meetings, so in terms of activities, I make sure that I have substitute basically support—what I am saying [is] that I spend a little more time. These are kind of individual activities, as opposed to being in a conference or reading this book. I spend more time in those areas that I am just strong in.

On the whole, participants agreed that the OPQ32n® was useful in helping to master targeted leadership attributes. The interview data supported the hypothesis of using the OPQ32n® for measuring leadership behaviors and targeted attributes for personal improvement.

Recommendations to Maintain Mastery Attributes

The final theme emerging from the data involved recommendations to enhance and maintain mastery of attributes. One participant addressed this concept in the interview comments:

One of the things that I have done—it is not differently—I kind of do it after the fact. We have at our institution what we call a Professional Development Plan. In that Professional Development Plan, the accountability part comes in our annual evaluation. In other words, how are you keeping up with your knowledge, skills, and abilities and those kind of things that you need to strengthen upon? If I had to do [something] differently, or from the beginning, I probably would have taken my learning plan and incorporated some of those things and actually taken [them] off my learning plan and put them into my Professional Development Plan, where it is up front and center, where you see it all the time—where you are more accountable when it is in your face, when you have to be, when you have to address those issues as opposed to, you know, “here is my plan,” and put it to the side for a few months and get back to it kind of check it out: “Yeah, I think I am doing this and doing that.” That would make it more measurable, something that you could actually react to each one of the points in more of a structured way.

I will say that I am 80% there. There are a few that I have not had an opportunity to develop like I plan. I plan to do an internship—what is the word for that? I was planning to shadow one of the VPs in the institution and get a different perspective of her work here, and I haven't had the opportunity because, basically, I am a faculty member, and she is a VP, and her time and our schedules don't always work together. But it is one of those skills I would like to develop further. Vice Presidents and people at that level.

All of the qualitative interview data were very positive regarding the use of the OPQ32n® in personal growth and development plans, particularly in targeted growth and development.

A female participant, who was an administrator at a private university, stated the following during the interview:

This has become an every day focus point for me. Every day when I go to work, there are constant fires I am putting out from students, faculty, and bosses. Oh, I can't leave out my own personal issues . . . family, relationships, getting the pool clean, feeding the cat, and just paying bills. It is hard to stay focused when so many things are thrown at me every day. Talking about this [staying focused] to another student in the program, she starting working out at a gym—she called it “her time,” and “her time” really helped out. I found two things that work for me: when I get up in the morning, before anyone else, I take 10 to 15 minutes to meditate, think positive about me, my day, and how I can impact people who I come in contact with, even if it is an email. Secondly, when I get home, I run, I started out walking, and now I can run up to a mile. I reflect on my day, positive things only and how to do it better the next time—plus, I feel better.

See, this leadership stuff [i.e., the leadership program, courses, and OPQ] is life stuff too. It not just for work. It's who I am and who I want to be. I can't just be a leader at work because I have to a leader to kids and everyone around me as well.

Reviewing the data from the LPA, a common theme among participants was that they wanted to start or they had just started a physical activity program. During an interview, a participant was asked about this theme, and he responded,

During the program, one of the students had lost weight and just had a better attitude, and we all recognized this. While at a social function with other students, we cornered that this guy and asked what [was] the story behind all the changes? He shared about working out, eating better, and having a positive attitude—and how times were hard at work and at home,

he needed to make changes. This guy's story and change in behavior inspired all of us. His testament actually rubbed off on each of us and for me, I started working out myself.

Toward the end of each interview, a final lead-in question was asked about participants' thoughts on the leadership program and ways to improve the program. All six participants selected for the follow-up interview applauded the leadership program and said that they would recommend the program to other colleges. They believed that the program helped participants develop into leaders that could advance in their careers. Three of the participants had already been promoted, crediting their advancements to their involvement in the program.

However, four out of the six participants stated that they would like for the OPQ® pretest, the LPA, and the OPQ® posttest spread out over several semesters. When participants took the OPQ32n® pretest and posttests and completed two LPAs, it was over a summer term that was approximately four months in duration. In the past, participants had a year between their OPQ32n® pre- and posttests, they completed more than two LPAs, and they took double the amount of classes. This extra time and the additional activities gave participants a longer amount of time to develop leadership skills and behaviors. One of the male participants, who had already received a promotion since starting the program, was eager to share his recommendations:

I was excited when I found out that my OPQ score improved in such a short period of time. My lowest score was data rational, a 3. I increased my score to a 5. I know if I had more time in between the tests, I could have scored even better. Actually, I know if I take the OPQ now, my overall score will improve, because of new experiences, additional leadership training, more college classes, learning from professors and students, lessons learned, etc.

In this chapter the descriptive data, statistical data analysis of the research hypotheses, and results of qualitative reports from a subgroup of participants was

presented. The next chapter will present a discussion of these results, implications for future research, suggestions for practitioners who use this research, and conclusions from the study.

Table 4-1. Pretest descriptive data

| OPQ32n® Characteristics | Pretest | | | Posttest | | |
|-------------------------|----------|-----------|-------|----------|-----------|-------|
| | <i>M</i> | <i>SD</i> | Skew | <i>M</i> | <i>SD</i> | Skew |
| Persuasive | 4.13 | 1.41 | 1.15 | 4.33 | 1.18 | -0.45 |
| Controlling | 5.33 | 1.45 | -0.68 | 5.33 | 1.45 | -0.68 |
| Outspoken | 6.47 | 1.13 | 0.96 | 6.60 | 1.40 | 1.19 |
| Independent minded | 6.67 | 1.40 | 1.05 | 7.00 | 1.56 | 0.26 |
| Outgoing | 6.67 | 1.99 | 0.03 | 6.27 | 1.94 | 0.37 |
| Affiliative | 5.80 | 1.86 | 0.49 | 5.67 | 1.54 | -0.83 |
| Socially confident | 5.67 | 1.40 | 0.33 | 5.60 | 1.18 | 0.23 |
| Modest | 4.67 | 1.05 | -1.37 | 4.73 | 1.03 | -1.18 |
| Democratic | 5.47 | 1.41 | 0.43 | 5.73 | 1.49 | -0.68 |
| Caring | 6.33 | 1.63 | 0.97 | 6.20 | 1.32 | 0.01 |
| Data rationale | 3.93 | 1.79 | 0.11 | 5.40 | 1.76 | -0.17 |
| Evaluative | 5.67 | 1.59 | -0.23 | 6.60 | 2.10 | -1.31 |
| Behavioral | 5.87 | 1.68 | 0.86 | 6.60 | 1.40 | -0.24 |
| Conventional | 5.27 | 0.88 | 0.12 | 5.40 | 1.18 | 0.27 |
| Conceptual | 6.53 | 1.25 | 0.30 | 6.67 | 1.45 | 0.35 |
| Innovative | 5.87 | 1.81 | -0.11 | 6.33 | 1.76 | 0.41 |
| Variety seeking | 6.67 | 1.23 | 0.21 | 6.40 | 1.06 | -0.12 |
| Adaptable | 6.20 | 1.26 | 0.06 | 5.60 | 1.40 | 0.66 |
| Forward thinking | 6.07 | 1.44 | 0.70 | 6.60 | 1.55 | 0.12 |
| Detail conscientious | 5.73 | 1.33 | -0.06 | 6.00 | 1.65 | -0.55 |
| Conscientious | 5.73 | 1.67 | -0.15 | 5.73 | 2.25 | 0.56 |
| Rule following | 5.53 | 1.06 | -0.52 | 5.07 | 1.49 | 0.17 |
| Relaxed | 6.00 | 1.96 | -0.13 | 6.13 | 1.81 | 0.27 |
| Worrying | 5.47 | 2.17 | -0.94 | 5.00 | 1.69 | 0.00 |
| Tough minded | 5.47 | 2.23 | 0.38 | 5.80 | 2.08 | 0.14 |
| Optimistic | 5.07 | 1.67 | -1.40 | 5.60 | 1.76 | -0.37 |
| Trusting | 5.33 | 2.41 | -0.21 | 5.60 | 1.92 | -0.04 |
| Emotionally controlled | 5.80 | 1.57 | -2.19 | 5.73 | 1.44 | -0.13 |
| Vigorous | 4.67 | 1.80 | -0.27 | 4.53 | 2.29 | 0.42 |
| Competitive | 5.20 | 1.21 | -0.16 | 5.27 | 1.10 | -0.24 |
| Achieving | 5.60 | 1.24 | 1.41 | 5.40 | 1.24 | 0.65 |
| Decisive | 6.47 | 1.19 | 0.09 | 6.27 | 1.10 | 0.13 |
| Social desirability | 7.60 | 1.24 | -0.65 | 7.73 | 1.44 | -0.96 |

Table 4-2. Overall Wilcoxon signed-rank test scores

| Participant | Gender (M / F) | Pretest | Posttest | Diff | Sign | Absolute diff | Rank | Signed rank |
|-------------|-------------------|---------|----------|------|------|------------------|------|----------------|
| Subject 1 | F | 174 | 191 | -17 | - | 17 | 9 | -9 |
| Subject 2 | F | 168 | 191 | -23 | - | 23 | 12 | -12 |
| Subject 3 | F | 196 | 176 | 20 | + | 20 | 10.5 | 10.5 |
| Subject 4 | F | 208 | 179 | 29 | + | 29 | 14 | 14 |
| Subject 5 | F | 176 | 176 | 0 | + | 0 | -- | -- |
| Subject 6 | F | 176 | 202 | -26 | - | 26 | 13 | -13 |
| Subject 7 | F | 172 | 192 | -20 | - | 20 | 10.5 | -10.5 |
| Subject 8 | F | 188 | 198 | -10 | - | 10 | 4 | -4 |
| Subject 9 | F | 178 | 173 | 5 | + | 5 | 2 | 2 |
| Subject 10 | F | 174 | 177 | -3 | - | 3 | 1 | -1 |
| Subject 11 | M | 167 | 183 | -16 | - | 16 | 8 | -8 |
| Subject 12 | M | 168 | 179 | -11 | - | 11 | 5.5 | -5.5 |
| Subject 13 | M | 185 | 171 | 14 | + | 14 | 7 | 7 |
| Subject 14 | M | 192 | 203 | -11 | - | 11 | 5.5 | -5.5 |
| Subject 15 | M | 198 | 190 | 8 | + | 8 | 3 | 3 |

$z = -1.00, p = 0.32$

Table 4-3. Wilcoxon signed-rank test scores for females

| Participant | Pretest | Posttest | Diff | Sign | Absolute diff | Rank | Signed rank |
|-------------|---------|----------|------|------|------------------|------|----------------|
| Subject 1 | 174 | 191 | -17 | - | 17 | 9 | -9 |
| Subject 2 | 168 | 191 | -23 | - | 23 | 12 | -12 |
| Subject 3 | 196 | 176 | 20 | + | 20 | 10.5 | 10.5 |
| Subject 4 | 208 | 179 | 29 | + | 29 | 14 | 14 |
| Subject 5 | 176 | 176 | 0 | + | 0 | -- | -- |
| Subject 6 | 176 | 202 | -26 | - | 26 | 13 | -13 |
| Subject 7 | 172 | 192 | -20 | - | 20 | 10.5 | -10.5 |
| Subject 8 | 188 | 198 | -10 | - | 10 | 4 | -4 |
| Subject 9 | 178 | 173 | 5 | + | 5 | 2 | 2 |
| Subject 10 | 174 | 177 | -3 | - | 3 | 1 | -1 |

$z = -0.71, p = 0.48$

Table 4-4. Wilcoxon signed-rank test scores for males

| Participant | Pretest | Posttest | Diff | Sign | Absolute diff | Rank | Signed rank |
|-------------|---------|----------|------|------|---------------|------|-------------|
| Subject 11 | 167 | 183 | -16 | - | 16 | 8 | -8 |
| Subject 12 | 168 | 179 | -11 | - | 11 | 5.5 | -5.5 |
| Subject 13 | 185 | 171 | 14 | + | 14 | 7 | 7 |
| Subject 14 | 192 | 203 | -11 | - | 11 | 5.5 | -5.5 |
| Subject 15 | 198 | 190 | 8 | + | 8 | 3 | 3 |

$z = -0.68, p = 0.49$

Table 4-5. Overall Wilcoxon signed-rank test scores for “Relationships with People” dimension

| Participant | Gender | Pretest | Posttest | Diff | Sign | Absolute diff | Rank | Signed rank |
|-------------|--------|---------|----------|------|------|---------------|------|-------------|
| Subject 1 | F | 51 | 52 | 1 | + | 1 | 2 | 2 |
| Subject 2 | F | 52 | 57 | 5 | + | 5 | 7.5 | 7.5 |
| Subject 3 | F | 63 | 56 | -7 | - | 7 | 10 | -10 |
| Subject 4 | F | 70 | 60 | -10 | - | 10 | 14 | -14 |
| Subject 5 | F | 54 | 61 | 7 | + | 7 | 10 | 10 |
| Subject 6 | F | 62 | 67 | 5 | + | 5 | 7.5 | 7.5 |
| Subject 7 | F | 47 | 51 | 4 | + | 4 | 5.5 | 5.5 |
| Subject 8 | F | 61 | 60 | -1 | - | 1 | 2 | -2 |
| Subject 9 | F | 51 | 50 | -1 | - | 1 | 2 | -2 |
| Subject 10 | F | 60 | 53 | -7 | - | 7 | 10 | -10 |
| Subject 11 | M | 53 | 62 | 9 | + | 9 | 12.5 | 12.5 |
| Subject 12 | M | 57 | 53 | -4 | - | 4 | 5.5 | -5.5 |
| Subject 13 | M | 61 | 61 | 0 | + | 0 | -- | -- |
| Subject 14 | M | 59 | 68 | 9 | + | 9 | 12.5 | 12.5 |
| Subject 15 | M | 57 | 54 | -3 | - | 3 | 4 | -4 |

$z = -0.32, p = 0.75$

Table 4-6. Wilcoxon signed-rank test scores for “Relationships with People” dimension for females

| Participant | Pretest | Posttest | Diff | Sign | Absolute diff | Rank | Signed rank |
|-------------|---------|----------|------|------|---------------|------|-------------|
| Subject 1 | 51 | 52 | 1 | + | 1 | 2 | 2 |
| Subject 2 | 52 | 57 | 5 | + | 5 | 7.5 | 7.5 |
| Subject 3 | 63 | 56 | -7 | - | 7 | 10 | -10 |
| Subject 4 | 70 | 60 | -10 | - | 10 | 14 | -14 |
| Subject 5 | 54 | 61 | 7 | + | 7 | 10 | 10 |
| Subject 6 | 62 | 67 | 5 | + | 5 | 7.5 | 7.5 |
| Subject 7 | 47 | 51 | 4 | + | 4 | 5.5 | 5.5 |
| Subject 8 | 61 | 60 | -1 | - | 1 | 2 | -2 |
| Subject 9 | 51 | 50 | -1 | - | 1 | 2 | -2 |
| Subject 10 | 60 | 53 | -7 | - | 7 | 10 | -10 |

$z = -0.26, p = 0.80$

Table 4-7. Wilcoxon signed-rank test scores for “Relationships with People” dimension for males

| Participant | Pretest | Posttest | Diff | Sign | Absolute diff | Rank | Signed rank |
|-------------|---------|----------|------|------|---------------|------|-------------|
| Subject 11 | 53 | 62 | 9 | + | 9 | 12.5 | 12.5 |
| Subject 12 | 57 | 53 | -4 | - | 4 | 5.5 | -5.5 |
| Subject 13 | 61 | 61 | 0 | + | 0 | -- | -- |
| Subject 14 | 59 | 68 | 9 | + | 9 | 12.5 | 12.5 |
| Subject 15 | 57 | 54 | -3 | - | 3 | 4 | -4 |

$z = -0.74, p = 0.46$

Table 4-8. Overall Wilcoxon signed-rank test scores for “Thinking Style” dimension

| Participant | Gender (M / F) | Pretest | Posttest | Diff | Sign | Absolute diff | Rank | Signed rank |
|-------------|-------------------|---------|----------|------|------|------------------|------|----------------|
| Subject 1 | F | 73 | 80 | 7 | + | 7 | 3.5 | 3.5 |
| Subject 2 | F | 62 | 76 | 14 | + | 14 | 7 | 7 |
| Subject 3 | F | 74 | 69 | -5 | - | 5 | 2.5 | -2.5 |
| Subject 4 | F | 74 | 60 | -14 | - | 14 | 7 | -7 |
| Subject 5 | F | 60 | 56 | -4 | - | 4 | 0.5 | -0.5 |
| Subject 6 | F | 63 | 70 | 7 | + | 7 | 3.5 | 3.5 |
| Subject 7 | F | 71 | 81 | 10 | + | 10 | 5 | 5 |
| Subject 8 | F | 67 | 79 | 12 | + | 12 | 6 | 6 |
| Subject 9 | F | 76 | 74 | -2 | - | 2 | 1 | -1 |
| Subject 10 | F | 59 | 74 | 15 | + | 15 | 8 | 8 |
| Subject 11 | M | 70 | 79 | 9 | + | 9 | 4 | 4 |
| Subject 12 | M | 60 | 70 | 10 | + | 10 | 5 | 5 |
| Subject 13 | M | 76 | 66 | -10 | - | 10 | 5 | -5 |
| Subject 14 | M | 71 | 76 | 5 | + | 5 | 2.5 | 2.5 |
| Subject 15 | M | 80 | 76 | -4 | - | 4 | 0.5 | -0.5 |

$z = -1.48, p = 0.14$

Table 4-9. Wilcoxon signed-rank test scores for “Thinking Style” dimension for females

| Participant | Pretest | Posttest | Diff | Sign | Absolute diff | Rank | Signed rank |
|-------------|---------|----------|------|------|------------------|------|----------------|
| Subject 1 | 73 | 80 | 7 | + | 7 | 3.5 | 3.5 |
| Subject 2 | 62 | 76 | 14 | + | 14 | 7 | 7 |
| Subject 3 | 74 | 69 | -5 | - | 5 | 2.5 | -2.5 |
| Subject 4 | 74 | 60 | -14 | - | 14 | 7 | -7 |
| Subject 5 | 60 | 56 | -4 | - | 4 | 0.5 | -0.5 |
| Subject 6 | 63 | 70 | 7 | + | 7 | 3.5 | 3.5 |
| Subject 7 | 71 | 81 | 10 | + | 10 | 5 | 5 |
| Subject 8 | 67 | 79 | 12 | + | 12 | 6 | 6 |
| Subject 9 | 76 | 74 | -2 | - | 2 | 1 | -1 |
| Subject 10 | 59 | 74 | 15 | + | 15 | 8 | 8 |

$z = -1.33, p = 0.19$

Table 4-10. Wilcoxon signed-rank test scores for “Thinking Style” dimension for males

| Participant | Pretest | Posttest | Diff | Sign | Absolute diff | Rank | Signed rank |
|-------------|---------|----------|------|------|---------------|------|-------------|
| Subject 11 | 70 | 79 | 9 | + | 9 | 4 | 4 |
| Subject 12 | 60 | 70 | 10 | + | 10 | 5 | 5 |
| Subject 13 | 76 | 66 | -10 | - | 10 | 5 | -5 |
| Subject 14 | 71 | 76 | 5 | + | 5 | 2.5 | 2.5 |
| Subject 15 | 80 | 76 | -4 | - | 4 | 0.5 | -0.5 |

$z = -0.54, p = 0.59$

Table 4-11. Overall Wilcoxon signed-rank test scores for “Feelings and Emotions” dimension

| Participant | Gender (M / F) | Pretest | Posttest | Diff | Sign | Absolute diff | Rank | Signed rank |
|-------------|----------------|---------|----------|------|------|---------------|------|-------------|
| Subject 1 | F | 50 | 59 | 9 | + | 9 | 14 | 14 |
| Subject 2 | F | 54 | 58 | 4 | + | 4 | 8.5 | 8.5 |
| Subject 3 | F | 59 | 51 | -8 | - | 8 | 13 | -13 |
| Subject 4 | F | 64 | 59 | -5 | - | 5 | 10 | -10 |
| Subject 5 | F | 62 | 59 | -3 | - | 3 | 5.5 | -5.5 |
| Subject 6 | F | 51 | 65 | 14 | + | 14 | 15 | 15 |
| Subject 7 | F | 54 | 60 | 6 | + | 6 | 12 | 12 |
| Subject 8 | F | 60 | 59 | -1 | - | 1 | -- | -- |
| Subject 9 | F | 51 | 49 | -2 | - | 2 | 3.5 | -3.5 |
| Subject 10 | F | 55 | 50 | -5 | - | 5 | 10 | -10 |
| Subject 11 | M | 44 | 42 | -2 | - | 2 | 3.5 | -3.5 |
| Subject 12 | M | 51 | 56 | 5 | + | 5 | 10 | 10 |
| Subject 13 | M | 48 | 44 | -4 | - | 4 | 8.5 | -8.5 |
| Subject 14 | M | 62 | 59 | -3 | - | 3 | 5.5 | -5.5 |
| Subject 15 | M | 61 | 60 | -1 | - | 1 | -- | -- |

$z = -0.09, p = 0.93$

Table 4-12. Wilcoxon signed-rank test scores for “Feelings and Emotions” dimension for females

| Participant | Pretest | Posttest | Diff | Sign | Absolute diff | Rank | Signed rank |
|-------------|---------|----------|------|------|---------------|------|-------------|
| Subject 1 | 50 | 59 | 9 | + | 9 | 14 | 14 |
| Subject 2 | 54 | 58 | 4 | + | 4 | 8.5 | 8.5 |
| Subject 3 | 59 | 51 | -8 | - | 8 | 13 | -13 |
| Subject 4 | 64 | 59 | -5 | - | 5 | 10 | -10 |
| Subject 5 | 62 | 59 | -3 | - | 3 | 5.5 | -5.5 |
| Subject 6 | 51 | 65 | 14 | + | 14 | 15 | 15 |
| Subject 7 | 54 | 60 | 6 | + | 6 | 12 | 12 |
| Subject 8 | 60 | 59 | -1 | - | 1 | -- | -- |
| Subject 9 | 51 | 49 | -2 | - | 2 | 3.5 | -3.5 |
| Subject 10 | 55 | 50 | -5 | - | 5 | 10 | -10 |

$z = -0.26, p = 0.80$

Table 4-13. Wilcoxon signed-rank test scores for “Feelings and Emotions” dimension for males

| Participant | Pretest | Posttest | Diff | Sign | Absolute diff | Rank | Signed rank |
|-------------|---------|----------|------|------|---------------|------|-------------|
| Subject 11 | 44 | 42 | -2 | - | 2 | 3.5 | -3.5 |
| Subject 12 | 51 | 56 | 5 | + | 5 | 10 | 10 |
| Subject 13 | 48 | 44 | -4 | - | 4 | 8.5 | -8.5 |
| Subject 14 | 62 | 59 | -3 | - | 3 | 5.5 | -5.5 |
| Subject 15 | 61 | 60 | -1 | - | 1 | -- | -- |

$z = -0.67, p = 0.50$

Table 4-14. Occurrence of targeted attributes for improvement by gender

| Attribute | Number of times targeted by | |
|---------------------------------------|-----------------------------|-------|
| | Females | Males |
| "Relationships with People" Dimension | | |
| Persuasive | 5 | 3 |
| Controlling | 2 | 0 |
| Outspoken | 1 | 0 |
| Independent Minded | 0 | 0 |
| Outgoing | 2 | 1 |
| Affiliative | 1 | 0 |
| Socially Confident | 1 | 0 |
| Modest | 1 | 0 |
| Democratic | 0 | 0 |
| Caring | 0 | 0 |
| "Thinking Style" Dimension | | |
| Data Rationale | 4 | 4 |
| Evaluative | 3 | 0 |
| Behavioral | 0 | 1 |
| Conventional | 0 | 0 |
| Conceptual | 0 | 0 |
| Innovative | 0 | 0 |
| Variety Seeking | 0 | 0 |
| Adaptable | 0 | 0 |
| Forward Thinking | 1 | 0 |
| Detail Conscious | 2 | 0 |
| Conscientious | 0 | 0 |
| Rule Following | 1 | 0 |
| "Feelings and Emotions" Dimension | | |
| Relaxed | 0 | 1 |
| Worrying | 0 | 1 |
| Tough Minded | 2 | 0 |
| Optimistic | 0 | 2 |
| Trusting | 0 | 2 |
| Emotionally Controlled | 1 | 0 |
| Vigorous | 1 | 1 |
| Competitive | 1 | 0 |
| Achieving | 1 | 0 |
| Decisive | 0 | 0 |

$z = -3.71, p < 0.000^*$

Note. Kruskal-Wallis test statistics: $X^2 = 1.04, df = 1, p = 0.31$

CHAPTER 5 DISCUSSION

Introduction

Chapter 5 begins with an overview of the study. After the overview, this chapter will present the study's descriptive statistics, as they pertain to the research hypothesis. The descriptive statistics will be followed by the discussion of the findings, including how those findings relate to the research hypothesis. Additionally, this chapter will present implications of the study, recommendations for future research, and conclusions drawn from the study.

Overview of the Study

With American community colleges experiencing a leadership shortage, it is essential that institutions recognize this issue and embrace leadership development for future leaders. As the literature review indicated, the exodus of current community college leaders will create a gap in leadership positions and a dearth of qualified individuals to fill those positions. Such a situation highlights the importance of building qualified leaders through meaningful leadership graduate programs. As discussed in the literature review, one technique that can be used to help build qualified leaders is leadership assessments.

Although no leadership assessment is perfect, most have common attributes—demographics, personality styles, and mentorship programs—and have been used in both corporate and continuing education leadership graduate programs. As supported by the research, a combination of professional development, experience, and mentorship can provide individuals with the necessary skills to function and sometimes excel in leadership positions. Identifying individual skills and offering the opportunity to

improve those skills is the cornerstone approach to leadership development. As suggested in past studies (Salvano, 2005; Tunks, 2007), through the use of assessments in leadership development and training, the next generation of community college leaders could be fully developed and better equipped to perform their duties in America's higher education institutions.

A key component of this study was to examine the outcomes of a diverse group of working professionals in higher education who were participating in a leadership program. This examination process included using leadership assessments to measure participants' personality traits and leadership styles. This research intends to build on current research and to investigate a potential method to reduce the impact of the leadership gap and to develop strategies to fill those positions with qualified, skilled employees.

Before examining the meaning and implications of base leadership characteristics, and any discernable changes after applying a treatment the note from Chapter 4 concerning the social desirability scores, which are indicators of accuracy of self-rating and are somewhat high, must be reemphasized. Individually and as a group for both the pre- and posttest scores, there is no reason to believe the ratings are less critical in their responses than they should be, meaning the data itself may be inaccurate.

Descriptive Statistics

The researcher wanted to ensure that the data assumed a fairly normal distribution and analyzed the results of the descriptive statistics, to identify significant changes in group characteristics. The researcher analyzed and compared the standard deviations from the pretests and posttests—examining data results outside of 1

standard deviation, the skewness for a normal distribution, and the means—to identify significant changes in reported behavior. Most of the reported responses showed standard deviations of approximately 1 or 1.5, indicating that each individual's raw scores were similar, probably between 4 and 6, closer to the median. However, some responses had data results closer to 2 standard deviations, indicating a broader range of raw scores.

Upon examining the pre- and posttest descriptive mean statistics, the researcher saw indications that statistically significant changes for the group as a whole for evaluative, behavioral, forward thinking, and data rationale might be found. The descriptive statistics data changes after the treatment seem to support the information from the posttest interviews in which several respondents noted the awareness of deficiencies in these areas and alerted them to these areas for growth during the treatment. Moreover, the group as a whole, from the descriptive statistics data, rated independent minded as their overall highest scoring leadership characteristic both pre- and posttest. Someone who scores high on this characteristic “prefers to follow own approach, prepared to disregard majority decisions” (OPQ32n®). Thus, rated being highly independent minded infers their resistance to change. According to the OPQ32n® results, LPAs, and follow-up interviews, this group as a whole exhibited a willingness to change; however, the collective environmental constraints in their individual workplaces probably had a profound effect on this leadership characteristic. In addition to this observation, another constraint could have been the duration of this portion of the leadership program (four months), which might not have given participants adequate time to make this change.

When observing the descriptive data as a whole, some areas may show significance; however, with the independent-minded leadership characteristic showing very highly, one must reason that there will be little significance for this study, since the group exhibits some resistance to change. This is not unlike findings from previous leadership studies (O'Daniels, 2009; Salvano, 2005; Tunks, 2007), which also showed slight significance in the studies using the same instrument. Tunks's (2007) research identified that participants were able to modify their leadership styles and behaviors as a result of the leadership program. However, the group overall did not demonstrate statistically significant differences using the OPQ®. Salvano (2005) identified some differences in subgroups, comparing gender, but little significant change as a group using the OPQ®. When comparing gender, O'Daniels (2009) found very few leadership trait differences when using the OPQ®. Overall, as discussed, the significance showed slight gains as a group. This research and past research support the findings that leadership programs can change behaviors, but looking solely at OPQ® statistical significance as a group indicated no or slight statistical change.

As a group, the participants scored high in the "independent minded" trait (see Appendix D, Table D-3), which leads to the belief that this group would be resistant to change. While conducting follow-up interviews, several subjects mentioned increased workloads, the threat of being laid off, budget cutbacks for their respective departments, and constant changes in upper managements, all of which created more stressful work environments. During a follow-up interview, one participant said, "Professionally, this is the hardest time in my life." And the work stress excluded external personal pressures from relationships, children's illnesses, financial loss, and absence of recreational

functions. For example, one individual provided in-depth details about the heavy burden and incessant demands of caring for ill parents, which compounded workplace stress.

With such additional stressors, enacting the necessary changes to make the journey of developing into a future leader becomes infinitely more complicated. Even if an individual has clearly identified transparent recommendations, labeling specific leadership trait improvements, making those changes would be difficult, reflecting a resistance to treatment. If change is to occur, a person must possess mental focus and desire to improve their personality leadership traits. Therefore, to become a well-rounded leader, one must first be eager to learn and invite the willingness to change, fostering the development of future community college leadership.

Changes in Personality Attribute Scores

This section will examine the research hypotheses based upon statistical analysis between pre- and posttest scores. In research hypothesis one the researcher looked for no differences in the group as a whole between the pre-and posttests after the treatment and I found support for the hypothesis: there is no difference. These results hold for research hypothesis two examining differences between females and males as well. The research in this study supports the earlier findings of Kachik (2003), Desjardin (1994), O'Daniels (2009) and Tunks (2007). When examining the descriptive data for the group as a whole three leadership characteristics in particular stand out: Persuasive, modest, and vigorous. On each of these leadership characteristics these three were at or near the bottom of the overall group mean scores. This finding indicates that the group as a whole tends not to be adept at selling ideas and that group members are not able to build off their successes or even follow through on their ideas or their teams' ideas.

When research hypothesis three and four findings were examined, the researcher also found no significant differences between men and women for either relationships with people or thinking styles. The researcher did, however, find slightly lower scores posttest for females and slightly higher scores posttest for males in both sections. This is reverse of the literature reviewed by Madden (2005) who said women would exhibit more positive social behavior than men. However, there are two factors underlying this lack of findings contrary to the literature reviewed. First, the overall higher social desirability scores can lead to the conclusion these results are less than what they really are and may be flawed. Secondly there are the phenomena where scores can change under a microscope. Therefore, since the females were being observed on their ability to increase their data rationale and thinking style scores, they may have rated themselves higher in those areas, rather than the relationship scores.

Research hypothesis five examined similar trends in the feelings and emotions section and found different results. Here the opposite was found: the females exhibited slightly higher mean scores and the males exhibited slightly lower scores. The logic for these findings follows from the hypothesis three and four: (1) higher social desirability scores undermines the credibility of the findings and (2) these scores are the reverse of the literature reviewed, most notably the work of Madden (2005), Desjardin (1994), and O'Daniels (2009). During the follow-up interviews, females appeared to be carrying heavier work and personal stressors than males. Female participants who felt the pressure to make changes may have discovered this through the OPQ32n®, leading to a goal to increase the social desirability scores. Regardless, the span of three months between the OPQ32® pre- and posttests may not have been enough time for males to

change behaviors. Therefore, future research should study the implications of the time span between the administration of the OPQ32® pretest and posttest.

Finally, research hypothesis six examined the viability of targeted objectives for use in professional development. The data presented in Chapter 4 indicated a very high statistical significance, giving the impression that the work-style preferences assessment is a viable tool for professional development. However, as mentioned throughout the preceding two chapters, a modicum of caution should be used when interpreting the data, because the social desirability index was very high for both the pre- and posttest scores. Considering that social desirability scores were identified as high, the participants may have found the need to create a positive impression to other participants, professors, and the researcher.

To some extent, the leadership graduate program affected participants' behavior and leadership skills. However, this conclusion is limited, because the findings are general at best. Results indicated a significant difference between pretest and posttest scores. In addition, several attributes between the pretest and posttest averaged more than one full-point difference of the total population, which substantiates that the leadership graduate program influences participants' individual mastery of leadership behaviors. Also, participants stated their overall satisfaction with the program, sharing that they achieved some level of success in enhancing their leadership skills and behaviors. Although all of the data did not yield statistical results, some participants shared how they had attained mastery of each of the attributes identified in their individual learning plans.

These findings are consistent with previous research indicating that leadership graduate programs have an overall positive effect on participants' behaviors and leadership styles. Salvano's work (2005) stated similar outcomes that highlighted four critical themes that surfaced from the interviews: participants indicated mastery of their targeted attributes; participants modified their behaviors; participants' overall behavior improved; and participants valued the educational opportunity and the chance to interact with their peers. With the help of one-on-one coaching, course work, and individual development, both groups made improvements and enhanced their leadership skills.

Overall, even in small groups, the mixed method approach worked well in targeting growth plans. During the interview process, many participants openly discussed the value of and how well the OPQ32n® pretests and posttests, LPAs, and mentoring worked together to improve individual targeted results. Each method was valuable in developing participants' end results. The mixed method research design collects and analyzes both qualitative and quantitative data, which identifies various details of the research processes. The mixed methods research was a reliable methodology for this study, an assertion supported by past research designs (Tunks, 2006). Collecting and processing the statistical data provided a strong foundation of information, while obtaining data through accepted predetermined set of interview questions provided further in-depth knowledge of the participants' personal experiences, which statistical measurement would not attain.

Implications of the Study

The results of this study contribute to the existing literature pertaining to community college and higher education leadership, which discusses the need to recruit

and to prepare future higher education leaders. Numerous higher education leadership positions will soon become vacant because of the massive exodus of leaders intending to retire in the near future. Due to this predicted mass vacancy, the literature stressed the importance of further research on leadership development as a means to produce effective leaders. Leadership graduate programs can be a direct pathway to increasing leadership skills that are applicable in the work setting.

Though traditional behavioral theory explores the individual leadership styles and behaviors of effective leaders, a hybrid model that combines trait and behavioral theory may provide a more effective method for measuring leadership effectiveness. Such an approach in higher education would produce transformational growth among professionals, which in turn would promote opportunities for individual growth and advancement.

For this group of individuals, based on the results of this study, one could recommend that they focus on their pure leadership skills first, and then focus on individual leadership characteristics, in order to move up their respective career ladders. While working on individual characteristics is laudable, some baseline leadership weaknesses first need to be overcome—most notably, resistance to change, persuasive skills, modesty, and ability to follow through on projects and ideas.

Leadership graduate programs can guide participants in that direction, emphasizing the importance of developing baseline and essential leadership skills as the primary objective of the program. After sufficient strides have been made in those areas, the programs can then guide participants to address the more individual characteristics, to supplement improvements already made in the essential areas.

Additionally, participants should receive assistance in learning how to both maintain and continually improve both baseline leadership and individual characteristics.

Recommendations for Future Research

The results of this study have answered important questions and indicated possible directions for future research. The study's population was comprised of a preexisting doctorate cohort of diverse higher education professionals. All data collection was performed prior to the involvement of the primary researcher. This ex post facto design was a limitation of this study; however, an experimental design would increase the validity and reliability of this study. It is also suggested that a longitudinal design, including a larger subject base and a broader population, would improve this research. Further, this research was limited to self-report of the mastery of behavioral change, creating potential bias and the need for social acceptance. Immediately following participants' receipt of their results from the OPQ32n® posttest, a follow-up interview discussing results may produce a true generalization of the learned leadership attributes.

Previous research suggested that achieving mastery in certain traits is more difficult than others, which poses a challenge to individuals who attempt to change their own behaviors. In this study, females demonstrated learning gains in dimensions and traits that are harder to modify. In contrast, males demonstrated less change in dimensions and traits that are reported to be more challenging to modify. Further investigation into the difficulty of modifying specific dimensions and traits would perhaps produce a clearer picture of this discrepancy.

Another recommendation is the implementation of 360 with supervision. Such an approach would allow students an opportunity to receive constant feedback on weak

areas and create strategic development plans for identified improvements. After taking the OPQ32® pretest, students can receive feedback on the results and, working with a coach, create goals based on identified weaknesses. Then, students could routinely complete a LPA with the coach and discuss goals and whether or not prior goals have been met. The continuous feedback would allow future leaders to develop leadership skills over the course of the leadership training. At the completion of the leadership training, the student would complete the OPQ32® posttest. When the student received their scores, they would have a final discussion with the coach and discuss changes in behavior, based on the OPQ32® scores. This process is not recommended for short-term leadership training programs, but for programs that have a minimum duration of one year or three traditional semesters.

The diverse sample size with regards to age and stage of life prohibited the inclusion of the intervening variable, yet there was inadequate age variation among the participants to allow a true analysis of the impact of age on the leadership graduate program outcomes. In the follow-up interviews, some participants referred to their abilities in working with faculty, indicating that demographic differences, such as age, might not influence successful leadership as much as experience with and the ability to develop relationships.

Examining the meaning and implications of base leadership characteristics, and any discernible changes after applying a treatment, the note from Chapter 4 concerning the social desirability scores, which are indicators of accuracy of self-rating and are somewhat high, must be reemphasized. Individually and as a group for both the pre-

and posttest scores, the researcher has reason to believe the ratings are less critical in their responses than they should be, meaning the data itself may be inaccurate.

Overall, the social desirability trait was high for both the OPQ32n® pretests and posttests, with females attaining slightly higher scores. The cause for this, the researcher believe, is that while under the “microscope,” participants want to be viewed favorable by others and to present themselves in the best light possible. A participant who complete a self-report and does not answer the questions honestly can affect the validity of the assessment. This type of bias is known as social desirability bias.

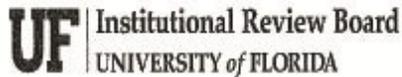
The participants for this study measured somewhat high on social reliability, which could indicate that members of this group sought to present positive images of themselves. For the participants, working closely with other colleagues and mentors, participants may have felt the need to answer the survey in a way that made them appear to have the needed traits to be a future leader. With that knowledge, it is recommended that measures be taken to minimize the social desirability bias. One strategy that can be applied is to have a discussion with participants before they take the assessment, stressing the importance of each question being answered with honesty.

Conclusion

This study explored the theoretical framework of leadership development by examining the leadership skills and behaviors of participants in diverse higher educational positions. The results of statistical analysis suggested that participants were able to modify their targeted behaviors after completing the OPQ32n® pretest and posttest and participating in a leadership graduate program. Within this leadership program, the combination of OPQ32n®, college courses, mentorship, and LPAs,

participants could change their behaviors and develop their leadership traits. This research adds to existing literature that focused on the importance of leadership development and how leadership programs will capture areas of behavior that need modification and ultimately prepare individuals for a position in higher education leadership.

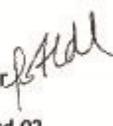
APPENDIX A
INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL LETTER



PO Box 112250
Gainesville, FL 32611-2250
352-392-0433 (Phone)
352-392-9234 (Fax)
irb2@ufl.edu

DATE: September 13, 2011

TO: Glenn Miller

FROM: Ira S. Fischler, PhD; Chair 
University of Florida
Institutional Review Board 02

SUBJECT: **Approval of UFIRB # 2011-U-0620**
*The Relationship between Personality Traits and Leadership Styles among
Community College Administrators*

SPONSOR: None

I am pleased to advise you that the University of Florida Institutional Review Board has recommended approval of this protocol. Based on its review, the UFIRB determined that this research presents no more than minimal risk to participants. Your protocol was approved as an expedited study under category 7: *Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.*

Given this status, it is essential that you obtain signed documentation of informed consent from each participant. Enclosed is the dated, IRB-approved informed consent to be used when recruiting participants for the research. If you wish to make any changes to this protocol, *including the need to increase the number of participants authorized*, you must disclose your plans before you implement them so that the Board can assess their impact on your protocol. In addition, you must report to the Board any unexpected complications that affect your participants.

It is essential that each of your participants sign a copy of your approved informed consent that bears the IRB approval stamp and expiration date.

Your approval is valid through **September 13, 2012**. If you have not completed the protocol by this date, please telephone our office (392-0433), and we will discuss the renewal process with you. It is important that you keep your Department Chair informed about the status of this research protocol.

ISF:dl

Informed Consent

Protocol Title:

A Comparison of the Outcomes of a Community College Leadership Development Program on the Leadership Behaviors of Community College Administrators

Please read this consent document carefully before you decide to participate in this study.

Purpose of the research study:

The purpose of this study is to examine the effects of a leadership development program on the leadership behaviors of program participants. This study is a comparative examination of leadership training program outcomes achieved by Community College Leaders in the State of Florida.

What you will be asked to do in the study:

1. You will be asked to allow the researcher to analyze the data that have already been collected including: (a) your scores on the Occupational Personality Questionnaire (OPQ) administered at two intervals and, (b) the information you provided on your Learning Plan Assessment. Based on the analysis of the data for your cohort, follow-up questions regarding the leadership development program will be formulated
2. You will be asked to participate in a semi-structured interview that the researcher will conduct with you via telephone or in person. Interviews will be audiotape recorded to ensure accuracy. The researcher will transcribe and code the interview data for analysis and the audiotape will be erased.

Time required:

The time required for the semi-structured interview is estimated to be 45 minutes and will not exceed one hour.

Confidentiality:

Your identity will be kept confidential to the extent provided by law. Your information will be assigned a code number. The list connecting your name to this number will be destroyed when the study is completed and the data have been analyzed. Neither your name or any other identifying information, nor that of your institution will be identified in the study.

Risks and Benefits:

No more than minimal risks or benefits are anticipated.

Compensation:

Compensation will not be awarded for participation in this study

Voluntary participation:

Your participation in this study is completely voluntary. There is no penalty for not participating.

| |
|--|
| <p>Approved by University of Florida Institutional Review Board 02 Protocol # 2011-U-0620 For Use Through 09-13-2012</p> |
|--|

Right to withdraw from the study:

You have the right to withdraw from the study at anytime without consequence.

Whom to contact if you have questions about the study:

If you have questions about the study, you may contact Glenn Miller, Ed. D. Candidate, School of Human Development and Organizational Studies in Education (HDOSE), University of Florida, 200 Norman Hall, Gainesville, FL 32611. You may contact me by email at gbmiller@ufl.edu or by telephone at 904-814-0433 or Dr. Dale Campbell, Professor and Intern Director of HDOSE, 229A Norman Hall, University of Florida, Gainesville, FL 32611; 352-273-4300; dfc@coe.ufl.edu.

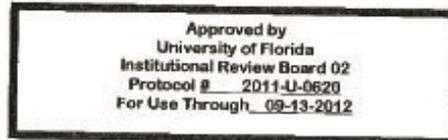
Whom to contact about your rights as a research participant in the study:

UFIRB Office, Box 112250, University of Florida, Gainesville, FL 32611-2250; ph 392-0433.

Agreement:

I have read the procedure described above. I voluntarily agree to participate in the procedure and I have received a copy of this description.

Participant: _____ Date: _____
Principal Investigator: _____ Date: _____



APPENDIX B SAMPLE OPQ32® REPORT

| RELATIONSHIPS WITH PEOPLE | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | |
|---------------------------|---|-------------------------------|---|---|---|---|---|---|---|---|----|---|-----------|-----------------------|
| 10 | rarely pressures others to change their views, dislikes selling, less comfortable using negotiation | Persuasive | | | | | | | | | | enjoys selling, comfortable using negotiation, likes to change other people's view | INFLUENCE | |
| 8 | happy to let others take charge, dislikes telling people what to do, unlikely to take the lead | Controlling | | | | | | | | | | likes to be in charge, takes the lead, tells others what to do, takes control | | |
| 8 | holds back from criticising others, may not express own views, unprepared to put forward own opinions | Outspoken | | | | | | | | | | freely expresses opinions, makes disagreement clear, prepared to criticise others | | |
| 8 | accepts majority decisions, prepared to follow the consensus | Independent Minded | | | | | | | | | | prefers to follow own approach, prepared to disregard majority decisions | | |
| 8 | quiet and reserved in groups, dislikes being centre of attention | Outgoing | | | | | | | | | | lively and animated in groups, talkative, enjoys attention | SOCIALITY | |
| 5 | comfortable spending time away from people, values time spent alone, seldom misses the company of others | Affiliative | | | | | | | | | | enjoys others' company, likes to be around people, can miss the company of others | | |
| 9 | feels more comfortable in less formal situations, can feel awkward when first meeting people | Socially Confident | | | | | | | | | | feels comfortable when first meeting people, at ease in formal situations | EMPATHY | |
| 1 | makes strengths and achievements known, talks about personal success | Modest | | | | | | | | | | dislikes discussing achievements, keeps quiet about personal success | | |
| 2 | prepared to make decisions without consultation, prefers to make decisions alone | Democratic | | | | | | | | | | consults widely, involves others in decision making, less likely to make decisions alone | | |
| 2 | selective with sympathy and support, remains detached from others' personal problems | Caring | | | | | | | | | | sympathetic and considerate towards others, helpful and supportive, gets involved in others' problems | ANALYSIS | |
| THINKING STYLE | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | |
| 3 | prefers dealing with opinions and feelings rather than facts and figures, likely to avoid using statistics | Data Rational | | | | | | | | | | likes working with numbers, enjoys analysing statistical information, bases decisions on facts and figures | | |
| 6 | does not focus on potential limitations, dislikes critically analysing information, rarely looks for errors or mistakes | Evaluative | | | | | | | | | | critically evaluates information, looks for potential limitations, focuses upon errors | | |
| 8 | does not question the reasons for people's behaviour, tends not to analyse people | Behavioural | | | | | | | | | | tries to understand motives and behaviours, enjoys analysing people | | |
| 5 | favours changes to work methods, prefers new approaches, less conventional | Conventional | | | | | | | | | | prefers well established methods, favours a more conventional approach | | CREATIVITY AND CHANGE |
| 8 | prefers to deal with practical rather than theoretical issues, dislikes dealing with abstract concepts | Conceptual | | | | | | | | | | interested in theories, enjoys discussing abstract concepts | | |
| 7 | more likely to build on than generate ideas, less inclined to be creative and inventive | Innovative | | | | | | | | | | generates new ideas, enjoys being creative, thinks of original solutions | | |
| 6 | prefers routine, is prepared to do repetitive work, does not seek variety | Variety Seeking | | | | | | | | | | prefers variety, tries out new things, likes changes to regular routine, can become bored by repetitive work | | |
| 4 | behaves consistently across situations, unlikely to behave differently with different people | Adaptable | | | | | | | | | | changes behaviour to suit the situation, adapts approach to different people | | STRUCTURE |
| 3 | more likely to focus upon immediate than long-term issues, less likely to take a strategic perspective | Forward Thinking | | | | | | | | | | takes a long-term view, sets goals for the future, more likely to take a strategic perspective | | |
| 2 | unlikely to become preoccupied with detail, less organised and systematic, dislikes tasks involving detail | Detail Conscious | | | | | | | | | | focuses on detail, likes to be methodical, organised and systematic, may become preoccupied with detail | | |
| 3 | sees deadlines as flexible, prepared to leave some tasks unfinished | Conscientious | | | | | | | | | | focuses on getting things finished, persists until the job is done | | |
| 4 | not restricted by rules and procedures, prepared to break rules, tends to dislike bureaucracy | Rule Following | | | | | | | | | | follows rules and regulations, prefers clear guidelines, finds it difficult to break rules | | |
| FEELINGS AND EMOTIONS | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | |
| 8 | tends to feel tense, finds it difficult to relax, can find it hard to unwind after work | Relaxed | | | | | | | | | | finds it easy to relax, rarely feels tense, generally calm and untroubled | EMOTION | |
| 2 | feels calm before important occasions, less affected by key events, free from worry | Worrying | | | | | | | | | | feels nervous before important occasions, worries about things going wrong | | |
| 8 | sensitive, easily hurt by criticism, upset by unfair comments or insults | Tough Minded | | | | | | | | | | not easily offended, can ignore insults, may be insensitive to personal criticism | | |
| 9 | concerned about the future, expects things to go wrong, focuses on negative aspects of a situation | Optimistic | | | | | | | | | | expects things will turn out well, looks to the positive aspects of a situation, has an optimistic view of the future | DYNAMISM | |
| 3 | wary of others' intentions, finds it difficult to trust others, unlikely to be fooled by people | Trusting | | | | | | | | | | trusts people, sees others as reliable and honest, believes what others say | | |
| 8 | openly expresses feelings, finds it difficult to conceal feelings, displays emotion clearly | Emotionally Controlled | | | | | | | | | | can conceal feelings from others, rarely displays emotion | | |
| 7 | likes to take things at a steady pace, dislikes excessive work demands | Vigorous | | | | | | | | | | thrives on activity, likes to keep busy, enjoys having a lot to do | | |
| 10 | dislikes competing with others, feels that taking part is more important than winning | Competitive | | | | | | | | | | has a need to win, enjoys competitive activities, dislikes losing | | |
| 10 | sees career progression as less important, looks for achievable rather than highly ambitious targets | Achieving | | | | | | | | | | ambitious and career-centred, likes to work to demanding goals and targets | | |
| 8 | tends to be cautious when making decisions, likes to take time to reach conclusions | Decisive | | | | | | | | | | makes fast decisions, reaches conclusions quickly, less cautious | | |
| 7 | has responded less consistently across the questionnaire | Consistency | | | | | | | | | | has responded more consistently across the questionnaire | | |

OPQ32i Standardisation 1999

APPENDIX C
LEARNING PLAN ASSESSMENT

Name:

Title:

College:

Date:

Part I. Learning Proposal

“The learning college engages learners as full partners in the learning process, with learners assuming primary responsibility for their own choices” (O’Banion, 1997, p. 49).

1. Please identify the specific the one to three attribute(s) and sten score(s) from your initial OPQ that you have been working on for your Learning Contract (i.e., persuasive (4), etc.).

(a) Attribute:

Sten Score:

(b) Attribute:

Sten Score:

(c) Attribute:

Sten Score:

2. What learning activities have you completed?

3. How successful have you been in achieving your objectives?

4. What evidence do you have that you are making progress to achieve your goals (i.e., unsolicited comments from your supervisor, coworkers, classmates, etc.)?

Part II. Self-Assessment

Part of assuming responsibility for your own learning includes your own assessment of that learning. You have been working on achieving the goals in your Learning Contract since our initial individual conference. Please give me a realistic assessment of the extent of your commitment and effort you have put forth in achieving the goals in your Learning Contract.

1. Circle one of the following levels that best describe the extent of your commitment from lowest to highest levels (I–V) in attaining mastery of the attributes you identified to work on in your Learning Contract.

Level I: New Year’s Resolution (Soon slips back to regular pattern of behavior).

Level II: Go on a Diet (Purchase a book on a new diet and/or enroll in a seminar). You make a plan and achieve some short-term success. However, you soon slip back into regular eating habits.

Level III: Join a Health Club (Pay a monthly fee for services and your amount of participation is at your discretion). You do make progress and achieve a basic level of knowledge of what you should do and some level of mastery. Requires some stretch outside of your comfort zone and some monetary investment.

Level IV: Hire a Personal Trainer (Have a regular appointment and receive one on one coaching). Individual trainer holds you accountable and ensures that you stretch to attain stated goals. Requires a higher monetary investment. The more you progress your confidence builds and you attain mastery. You no longer see your goals as that big of a stretch.

Level V: Learning is Internalized (Actual behavioral change occurs). No longer outside your comfort zone. Mastery is not only achieved, it becomes your preferred style.

2. Considering the above, what do you believe your attribute sten score(s) will be for each attribute on the post assessment? Please specify.

Part III. Post-Assessment Reflections (Complete after you have been given your actual scores.)

1. Record your new actual sten score(s) for each attribute on you were working on from your post assessment. Do the scores surprise you in anyway? If so, why?

2. What, if anything, would you do differently or recommend that others do to further enhance the likelihood that you would achieve mastery of the attributes that you identified?

APPENDIX D
PRETEST AND POSTTEST SCORES

Table D-1. Raw sten scores for female participants

| Attributes | Subject 1 | | Subject 2 | | Subject 3 | | Subject 4 | | Subject 5 | | Subject 6 | | Subject 7 | | Subject 8 | | Subject 9 | | Subject 10 | |
|--------------------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|------------|------|
| | Pre | Post | Pre | Post |
| Persuasive | 3 | 3 | 3 | 5 | 4 | 3 | 3 | 2 | 4 | 4 | 3 | 5 | 3 | 4 | 7 | 5 | 4 | 4 | 7 | 6 |
| Controlling | 3 | 6 | 3 | 5 | 7 | 6 | 6 | 4 | 4 | 6 | 6 | 10 | 7 | 6 | 7 | 6 | 3 | 4 | 6 | 5 |
| Outspoken | 6 | 5 | 6 | 7 | 8 | 6 | 8 | 6 | 6 | 9 | 7 | 6 | 6 | 6 | 6 | 7 | 5 | 7 | 6 | 5 |
| Independent Minded | 7 | 6 | 6 | 8 | 7 | 5 | 5 | 5 | 6 | 9 | 7 | 8 | 7 | 8 | 5 | 6 | 9 | 7 | 6 | 6 |
| Outgoing | 5 | 4 | 8 | 8 | 9 | 7 | 9 | 9 | 4 | 4 | 10 | 7 | 4 | 5 | 8 | 7 | 4 | 4 | 7 | 6 |
| Affiliative | 5 | 5 | 6 | 6 | 7 | 7 | 10 | 8 | 7 | 5 | 8 | 6 | 3 | 2 | 6 | 7 | 3 | 4 | 5 | 5 |
| Socially Confident | 4 | 4 | 5 | 5 | 5 | 5 | 8 | 6 | 6 | 7 | 5 | 8 | 4 | 6 | 6 | 6 | 6 | 4 | 7 | 5 |
| Modest | 5 | 4 | 5 | 5 | 5 | 5 | 3 | 5 | 6 | 6 | 2 | 4 | 5 | 6 | 4 | 2 | 5 | 5 | 4 | 5 |
| Democratic | 5 | 7 | 5 | 3 | 4 | 6 | 8 | 7 | 5 | 5 | 8 | 6 | 4 | 3 | 5 | 6 | 6 | 6 | 6 | 5 |
| Caring | 8 | 8 | 5 | 5 | 7 | 6 | 10 | 8 | 6 | 6 | 6 | 7 | 4 | 5 | 7 | 8 | 6 | 5 | 6 | 5 |
| Data Rational | 5 | 5 | 3 | 7 | 7 | 8 | 4 | 4 | 5 | 4 | 4 | 5 | 5 | 5 | 3 | 7 | 1 | 2 | 3 | 5 |
| Evaluative | 6 | 6 | 4 | 8 | 7 | 5 | 5 | 1 | 3 | 5 | 5 | 5 | 7 | 9 | 3 | 8 | 7 | 8 | 5 | 6 |
| Behavioral | 8 | 9 | 5 | 5 | 6 | 7 | 9 | 7 | 4 | 6 | 5 | 7 | 5 | 5 | 5 | 7 | 9 | 8 | 5 | 4 |
| Conventional | 5 | 6 | 4 | 4 | 7 | 7 | 6 | 5 | 5 | 5 | 4 | 5 | 6 | 5 | 6 | 5 | 4 | 6 | 5 | 8 |
| Conceptual | 6 | 6 | 5 | 5 | 6 | 5 | 7 | 6 | 5 | 6 | 7 | 5 | 7 | 8 | 5 | 8 | 8 | 9 | 5 | 5 |
| Innovative | 7 | 6 | 3 | 5 | 4 | 3 | 6 | 6 | 8 | 7 | 3 | 6 | 5 | 10 | 6 | 9 | 9 | 7 | 6 | 5 |
| Variety Seeking | 7 | 5 | 8 | 8 | 6 | 5 | 5 | 7 | 6 | 5 | 6 | 7 | 5 | 6 | 5 | 7 | 8 | 6 | 7 | 7 |
| Adaptable | 5 | 4 | 5 | 5 | 8 | 9 | 6 | 6 | 6 | 3 | 7 | 5 | 5 | 5 | 6 | 5 | 8 | 7 | 7 | 5 |
| Forward Thinking | 6 | 7 | 8 | 8 | 5 | 4 | 6 | 5 | 5 | 7 | 8 | 9 | 9 | 8 | 5 | 8 | 6 | 6 | 5 | 6 |
| Detail Conscious | 6 | 8 | 5 | 7 | 6 | 6 | 8 | 6 | 4 | 2 | 6 | 7 | 6 | 7 | 7 | 5 | 7 | 6 | 4 | 9 |
| Conscientious | 6 | 10 | 6 | 9 | 6 | 4 | 7 | 3 | 5 | 3 | 4 | 6 | 7 | 9 | 9 | 5 | 3 | 4 | 3 | 7 |
| Rule Following | 6 | 8 | 6 | 5 | 6 | 6 | 5 | 4 | 4 | 3 | 4 | 3 | 4 | 4 | 7 | 5 | 6 | 5 | 4 | 7 |
| Relaxed | 6 | 8 | 6 | 7 | 6 | 4 | 8 | 7 | 7 | 6 | 3 | 6 | 5 | 6 | 6 | 5 | 5 | 5 | 7 | 6 |
| Worrying | 7 | 7 | 7 | 6 | 5 | 5 | 5 | 6 | 6 | 4 | 9 | 5 | 5 | 3 | 5 | 4 | 7 | 5 | 5 | 4 |
| Tough Minded | 4 | 6 | 3 | 3 | 5 | 4 | 5 | 3 | 8 | 8 | 2 | 7 | 6 | 7 | 4 | 6 | 3 | 3 | 6 | 4 |

Table D-1. Continued

| | | | | | | | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Optimistic | 5 | 7 | 6 | 8 | 5 | 4 | 7 | 6 | 6 | 5 | 5 | 8 | 6 | 8 | 6 | 6 | 7 | 6 | 5 | 5 |
| Trusting | 7 | 8 | 4 | 5 | 5 | 6 | 9 | 9 | 5 | 6 | 6 | 8 | 2 | 4 | 6 | 5 | 5 | 5 | 5 | 3 |
| Emotionally Controlled | 5 | 3 | 7 | 6 | 6 | 5 | 5 | 4 | 6 | 6 | 1 | 7 | 7 | 8 | 7 | 5 | 6 | 6 | 7 | 8 |
| Vigorous | 3 | 5 | 5 | 5 | 7 | 6 | 8 | 9 | 5 | 3 | 5 | 5 | 5 | 5 | 6 | 8 | 2 | 3 | 5 | 4 |
| Competitive | 3 | 4 | 6 | 7 | 6 | 6 | 4 | 4 | 7 | 7 | 6 | 6 | 5 | 5 | 7 | 6 | 5 | 6 | 5 | 5 |
| Achieving | 4 | 5 | 5 | 6 | 6 | 4 | 6 | 4 | 6 | 6 | 9 | 8 | 5 | 7 | 6 | 7 | 5 | 5 | 5 | 5 |
| Decisive | 6 | 6 | 5 | 5 | 8 | 7 | 7 | 7 | 6 | 8 | 5 | 5 | 8 | 7 | 7 | 7 | 6 | 5 | 5 | 6 |
| Consistency | 7 | 8 | 7 | 8 | 8 | 7 | 9 | 8 | 6 | 9 | 9 | 9 | 9 | 9 | 7 | 7 | 8 | 9 | 5 | 5 |

Table D-2. Raw sten scores for male participants

| Attributes | Subject 11 | | Subject 12 | | Subject 13 | | Subject 14 | | Subject 15 | |
|------------------------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|
| | Pretest | Posttest |
| Persuasive | 5 | 6 | 3 | 5 | 5 | 5 | 3 | 5 | 5 | 3 |
| Controlling | 6 | 5 | 5 | 5 | 5 | 3 | 6 | 7 | 6 | 5 |
| Outspoken | 5 | 7 | 6 | 5 | 9 | 10 | 6 | 7 | 7 | 6 |
| Independent Minded | 7 | 8 | 5 | 5 | 10 | 10 | 7 | 8 | 6 | 6 |
| Outgoing | 6 | 6 | 7 | 5 | 8 | 10 | 6 | 8 | 5 | 4 |
| Affiliative | 5 | 7 | 7 | 6 | 4 | 4 | 6 | 6 | 5 | 7 |
| Socially Confident | 4 | 5 | 4 | 4 | 7 | 6 | 8 | 7 | 6 | 6 |
| Modest | 5 | 5 | 5 | 4 | 5 | 5 | 6 | 6 | 5 | 4 |
| Democratic | 5 | 6 | 6 | 7 | 3 | 4 | 5 | 7 | 7 | 8 |
| Caring | 5 | 7 | 9 | 7 | 5 | 4 | 6 | 7 | 5 | 5 |
| Data Rational | 5 | 6 | 1 | 5 | 3 | 3 | 3 | 8 | 7 | 7 |
| Evaluative | 6 | 9 | 5 | 7 | 8 | 8 | 6 | 6 | 8 | 8 |
| Behavioral | 4 | 8 | 7 | 8 | 6 | 7 | 4 | 6 | 6 | 5 |
| Conventional | 6 | 6 | 5 | 6 | 5 | 5 | 6 | 3 | 5 | 5 |
| Conceptual | 7 | 7 | 6 | 6 | 9 | 8 | 7 | 7 | 8 | 9 |
| Innovative | 6 | 7 | 4 | 6 | 6 | 5 | 8 | 8 | 7 | 5 |
| Variety Seeking | 8 | 6 | 6 | 5 | 7 | 7 | 7 | 7 | 9 | 8 |
| Adaptable | 5 | 5 | 8 | 6 | 7 | 6 | 4 | 7 | 6 | 6 |
| Forward Thinking | 7 | 9 | 4 | 5 | 5 | 6 | 5 | 5 | 7 | 6 |
| Detail Conscious | 4 | 5 | 4 | 5 | 7 | 5 | 7 | 7 | 5 | 5 |
| Conscientious | 6 | 6 | 4 | 5 | 7 | 3 | 7 | 6 | 6 | 6 |
| Rule Following | 6 | 5 | 6 | 6 | 6 | 3 | 7 | 6 | 6 | 6 |
| Relaxed | 2 | 3 | 6 | 7 | 5 | 4 | 8 | 8 | 10 | 10 |
| Worrying | 7 | 7 | 7 | 8 | 5 | 6 | 1 | 3 | 1 | 2 |
| Tough Minded | 7 | 7 | 4 | 5 | 7 | 7 | 8 | 7 | 10 | 10 |
| Optimistic | 1 | 2 | 4 | 5 | 2 | 3 | 6 | 5 | 5 | 6 |
| Trusting | 2 | 4 | 6 | 6 | 1 | 2 | 8 | 6 | 9 | 7 |
| Emotionally Controlled | 7 | 4 | 6 | 6 | 5 | 5 | 7 | 7 | 5 | 6 |

Table D-2. Continued

| | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|
| Vigorous | 1 | 2 | 4 | 3 | 4 | 2 | 6 | 7 | 4 | 1 |
| Competitive | 4 | 3 | 4 | 5 | 6 | 5 | 6 | 5 | 4 | 5 |
| Achieving | 6 | 5 | 4 | 4 | 5 | 4 | 7 | 6 | 5 | 5 |
| Decisive | 7 | 5 | 6 | 7 | 8 | 6 | 5 | 5 | 8 | 8 |
| Consistency | 8 | 9 | 6 | 5 | 8 | 9 | 8 | 6 | 9 | 8 |

Table D-3. Targeted attribute scores for select participants with significant gains pre-post OPQ32n®

| Attributes | Subject 6 (F) | | Subject 8 (F) | | Subject 10 (F) | | Subject 12 (M) | | Subject 14 (M) | | Subject 15 (M) | |
|------------------------|---------------|------|---------------|------|----------------|------|----------------|------|----------------|------|----------------|------|
| | Pre | Post | Pre | Post | Pre | Post | Pre | Post | Pre | Post | Pre | Post |
| Persuasive | | | | | | | 3 | 5 | 3 | 5 | 5 | 3 |
| Controlling | | | | | | | | | | | | |
| Outspoken | | | | | | | | | | | | |
| Independent Minded | 7 | 8 | | | | | | | | | | |
| Outgoing | | | | | | | | | | | | |
| Affiliative | | | | | | | | | | | | |
| Socially Confident | 5 | 8 | | | | | | | | | | |
| Modest | | | | | | | | | | | | |
| Democratic | | | | | | | | | | | | |
| Caring | | | | | 3 | 5 | | | | | | |
| Data Rational | | | | | 5 | 6 | 1 | 5 | 3 | 8 | 7 | 7 |
| Evaluative | | | 3 | 8 | | | | | | | | |
| Behavioral | | | | | | | | | | | | |
| Conventional | | | | | | | | | | | | |
| Conceptual | | | | | | | | | | | | |
| Innovative | | | | | | | 4 | 6 | | | | |
| Variety Seeking | | | | | | | | | | | | |
| Adaptable | | | | | | | | | 4 | 7 | 6 | 6 |
| Forward Thinking | | | | | | | | | | | | |
| Detail Conscious | | | 7 | 5 | 4 | 9 | | | | | | |
| Conscientious | | | | | | | | | | | | |
| Rule Following | | | | | | | | | | | | |
| Relaxed | | | | | | | | | | | | |
| Worrying | | | | | | | | | | | | |
| Tough Minded | | | 4 | 6 | | | | | | | | |
| Optimistic | | | | | | | | | | | | |
| Trusting | 6 | 8 | | | | | | | | | | |
| Emotionally Controlled | | | | | | | | | | | | |
| Vigorous | | | | | | | | | | | | |
| Competitive | | | | | | | | | | | | |
| Achieving | | | | | | | | | | | | |
| Decisive | | | | | | | | | | | | |
| Consistency | | | | | | | | | | | | |

APPENDIX E
TARGETED ATTRIBUTE SCORES GUIDELINE PROFILE CHART

| Attributes | Low | | | Average | | | | High | | |
|------------------------|-----|---|---|---------|---|---|---|------|---|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Persuasive | | | | | | X | | | | |
| Controlling | | | | | | | | | | |
| Outspoken | | | | X | X | | | | | |
| Independent Minded | | | | | | | X | | | |
| Outgoing | | | | | X | | | | | |
| Affiliative | | | | | | | | | | |
| Socially Confident | | | | | X | | | | | |
| Modest | | | | | | | X | | | |
| Democratic | | | | | | X | | | | |
| Caring | | | | | | | | X | | |
| Data Rational | | | | | | | X | | | |
| Evaluative | | | | | | X | | | | |
| Behavioral | | | | | X | | | | | |
| Conventional | | | | | X | | | | | |
| Conceptual | | | | | | | X | | | |
| Innovative | | | | | | X | | | | |
| Variety Seeking | | | | X | | | | | | |
| Adaptable | | | | X | | | | | | |
| Forward Thinking | | | | | | X | | | | |
| Detail | | | | | | X | | | | |
| Conscious | | | | | | | | | | |
| Conscientious | | | | | X | | | | | |
| Rule Following | | | | | | | X | | | |
| Relaxed | | | | | | | X | | | |
| Worrying | | | | X | | | | | | |
| Tough Minded | | | | | | X | | | | |
| Optimistic | | | | | X | | | | | |
| Trusting | | | | | X | | | | | |
| Emotionally Controlled | | | | | | X | | | | |
| Vigorous | | | | | | X | | | | |
| Competitive | | | | | | | X | | | |
| Achieving | | | | | | | | X | | |
| Decisive | | | | | | | X | | | |
| Consistency | | | | | | X | | | | |

APPENDIX F
FOLLOW-UP QUESTIONNAIRE

Respondent ID: [to be assigned by researcher]

At the beginning of the Leadership Graduate Program, you developed a learning plan to improve your skills or behaviors relevant to specific attributes. Here are the attributes that you identified and your corresponding OPQ scores:

| Attribute | OPQ Score (Pre) | OPQ Score (Post) |
|-----------|-----------------|------------------|
|-----------|-----------------|------------------|

1. Since the beginning the Leadership Graduate program until now, how successful have you been in achieving your learning and development objectives for each of the attributes that you identified in your learning plan?

2. How well have you succeeded in attaining a mastery of each of the attributes that you identified in your learning plan? [Interviewer follow-up: Please give an example...]

3. How well have you succeeded in mastering these behaviors to the extent that you would say that they have become your preferred style? [Interviewer follow-up: Please describe how this has/has not occurred...]

4. What are three learning activities in which you have participated that have been instrumental in helping you to achieve your objectives?

5. What, if anything, would you do differently or recommend that others do to further enhance the likelihood of achieving mastery of the attributes?

6. What feedback have you received to let you know that you have been successful in achieving your goals?

LIST OF REFERENCES

- American Association of Community Colleges. (2005). *Competencies for community college leaders*. Retrieved from <http://www.aacc.nche.edu/Resources/competencies/Documents/competenciesforleaders.pdf>
- Anastasi, A., & Urbina, S. (1997). *Psychological testing* (7th ed.). New York, NY: Prentice Hall.
- The Aspen Institute & Achieving the Dream. (2013, June 21). *Crisis and opportunity: Aligning the community college presidency with student success*. Retrieved from http://www.aspeninstitute.org/sites/default/files/content/docs/pubs/CEP_Final_Report.pdf
- Bain, N., & Mabey, B. (1999). *The people advantage: Improving results through better selection and performance*. London, UK: Macmillan.
- Balkis, M., & Isiker, G. B. (2005). The relationship between thinking styles and personality types. *Social Behavior and Personality: An International Journal*, 33, 283–294.
- Barbuto, J. E., Jr., Fritz, S. M., Matkin, G. S., & Marx, D. B. (2007). Effects of gender, education, and age upon leaders' use of influence tactics and full range leadership behaviors. *Sex Roles*, 56(1–2), 71–83. doi: 10.1007/s11199-006-9152-6
- Bartram, D. (2001, April). *Testing through the Internet: Mapping the issues for managing the future*. Paper presented at the 16th Annual Society for Industrial and Organizational Psychology Conference, San Diego, CA.
- Bartram, D., & Brown, A. (2004, September). Online testing: Mode of Administration and the stability of OPQ32i scores. *International Journal of Selection and Assessment*, 12(3), 278–284.
- Basham, M. J. (2007). *Cognitive applications of personality testing: Measuring entrepreneurialism in America's community colleges* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3299337)
- Basham, M. J., & Mathur, R. P. (2010). Dynamic leadership development in community college administration: Theories, applications, and implications. *Directions for Community Colleges*, 149, 25–32. doi: 10.1002/cc.392
- Basham, M. J., Stader, D. L., & Bishop, H. N. (2009). How “pathetic” is your hiring process? An application of the Lessig “pathetic dot” model to educational hiring practices. *Community College Journal of Research and Practice*, 33(3-4), 363–385.

- Bass, B. M. (1990). *Bass & Stogdill's handbook of leadership: Theory, research and managerial applications* (3rd ed.). New York, NY: Free Press.
- Benham, M., & Murakami, E. T. (2013). Engaging in educational leadership. In M. Grogan (Ed.), *The Jossey-Bass reader on educational leadership* (3rd ed., pp. 148–165). San Francisco, CA: Wiley.
- Berry, J. W. (2008). *Baseline development to streamline executive selection* (Master's thesis). Retrieved from http://ufdcimages.uflib.ufl.edu/UF/UF/E0/02/27/20/00001/berry_j.pdf
- Boggs, G. R. (2003, Fall). Leadership context for the twenty-first century. *New Directions for Community Colleges*, 123, 15–25. doi: 10.1002/cc.118
- Boggs, G. R. (2004). Community colleges in a perfect storm. *Change Magazine*, 36(6), 6–11.
- Bogue, E. G. (2006). A breakpoint moment: Leadership visions and values for trustees of collegiate mission. *Innovative Higher Education*, 30(5), 309–326.
- Brown, A., Bartram, D., Holtzhausen, G., Mylonas, G., & Carstairs, J. (2005, April). *Online personality and motivation testing: Is unsupervised administration an issue?* Paper presented at the 20th annual Society for Industrial and Organizational Psychology Conference, Los Angeles, CA.
- Buchanan, T., & Smith, J. L. (1999). Using the Internet for psychological research: Personality testing on the World Wide Web. *British Journal of Psychology*, 90, 125–144.
- Campbell, D. F. (Ed.). (2002). *The leadership gap: Model strategies for leadership development*. Washington, DC: Community College Press.
- Campbell, D. F., & Leverty, L. H. (1997). Developing and selection of leaders for the 21st century. *Community College Journal*, 67(4), 34–36.
- Campbell, D. F., Syed, S., & Morris, P. A. (2010, Spring). Minding the gap: Filling a void in community college leadership development. *New Directions for Community Colleges*, 149, 33–39. doi: 10.1002/cc.393
- Cassel, J., & Holt, T. (2008, October). The servant leader. *American School Board Journal*, 195(10), 34.
- Caulkins, D. D. (2008). Re-theorizing Jim Collins's culture of discipline in Good to Great. Innovation: *The European Journal of Social Science Research*, 21(3), 217–232. doi: 10.1080/13511610802404880
- Conchie, B., & Hadd, J. (2009). Discovering how your future leaders think. *Leadership*, 15(2), 13–15.

- Cook, B. & Kim, Y. (2012). *The American college president 2012*. Washington, DC: American Council on Education.
- Cronbach, L. J. (1990). *Essentials of psychological testing* (5th ed.). New York, NY: HarperCollins.
- Cronk, B. C., & West, J. L. (2002, May). Personality research on the Internet: A comparison of Web-based and traditional instruments in take-home and in-class settings. *Behavior Research Methods, Instruments, & Computers*, 34(2), 177–180.
- Dean, C. I. (2013). *Effects of gender on North Carolina community college boards of trustees' perceptions of community college presidents* (Doctoral dissertation). Retrieved from <http://digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=1735&context=doctoral>
- Desjardins, C. (1994). Leadership and gender issues in the community college. In A. M. Hoffman & D. J. Julius (Eds.), *Managing community and junior colleges: Perspectives for the next century* (147–161). Washington, DC: The College and University Personnel Association.
- Dowdy, H. B. (2007). *A manual for trustees: Role, responsibilities, relationships* (3rd ed.). Cary, NC: North Carolina Association of Community College Trustees.
- Drucker, P. F., & Maciariello, J. A. (2005). *The effective executive in action: A journal for getting the right thing done*. New York, NY: HarperCollins.
- Eagly, A. H. (2007, March). Female leadership advantage and disadvantage: Resolving the contradictions. *Psychology of Women Quarterly*, 31(1), 1–12. doi: 10.1111/j.1471-6402.2007.00326.x
- Eagly, A. H., Johannesen-Schmidt, M. C., & van Engen, M. (2003, July). Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin*, 129(4), 569–591.
- Fidelity Investments. (2013). Three-fourths of higher education baby boomer faculty members plan to delay retirement, or never retire at all. *Yahoo! Finance*. Retrieved from <http://finance.yahoo.com/news/three-fourths-higher-education-baby-130000427.html>
- Fulton-Calkins, P., & Milling, C. (2005). Community college leadership: An art to be practiced: 2010 and beyond. *Community College Journal of Research and Practice*, 29, 233–250. doi: 10.1080/10668920590901176
- Gardiner, M., & Tiggemann, M. (1999, September). Gender differences in leadership style, job stress and mental health in male- and female-dominated industries.

Journal of Occupational & Organizational Psychology, 72(3), 301–315. doi: 10.1348/096317999166699

- Green, V. (2008). Reflections from one community college leader. *Community College Journal of Research and Practice*, 32, 812–821.
- Hauser, J. D. (2010). *The North Carolina community college system critical success factor 1 and the association with leadership styles practiced by North Carolina community college presidents* (Doctoral dissertation). Retrieved from http://libres.uncg.edu/ir/asu/f/Hauser,%20Jonathan_2010_Dissertation.pdf
- Hersch, W. S. (2013, June 24). *Boomer faculty members delaying retirement*. LifeHealthPro. Retrieved from <http://www.lifehealthpro.com/2013/06/24/boomer-faculty-members-delaying-retirement>
- Hockaday, J., & Puyear, D. E. (2008). *Community college leadership in the new millennium*. Retrieved from <http://www.aacc.nche.edu/Resources/aaccprograms/pastprojects/Pages/ccleadershipnewmillenium.aspx>
- Hoffman, A. M., & Julius, D. J. (Eds). *Managing community and junior college: Perspectives for the next century*. Washington, DC: College and University Personnel Association.
- Jacobs, M. J. (2012, January 1). *An examination of midwest community college presidents' leadership styles* (Doctoral dissertation). Retrieved from http://digitalcommons.wayne.edu/cgi/viewcontent.cgi?article=1509&context=oa_dissertations
- Joubert, T., & Kriek, H. J. (2009). Psychometric comparison of paper-and-pencil and online personality assessments in a selection setting. *South African Journal of Industrial Psychology*, 35(1), 78–88. doi: 10.4102/sajip.v35i1.727
- Kachik, C. J. (2003). *The Five-Factor Model and Holland's theory: Community college and corporate leaders* (Doctoral dissertation). Retrieved from http://etd.fcla.edu/UF/UFE0000912/kachik_c.pdf
- Keim, M. C., & Murray, J. P. (2008). Chief academic officers' demographics and educational backgrounds. *Community College Review*, 36(2), 116–132. doi: 10.1177/0091552108324657
- Kezar, A., & Eckel, P. (2008). Advancing diversity agendas on campus: Examining transactional and transformational presidential leadership styles. *International Journal in Leadership Education: Theory & Practice*, 11(4), 379–405.
- Knirk, B. D. (2013). *Community college administrative roles in identifying faculty for future management positions: A phenomenological study of retired administrators*

- (Doctoral dissertation). Retrieved from http://idea.library.drexel.edu/bitstream/1860/4099/1/Knirk_BrianEdD.pdf
- Lapovsky, L. (2006). The best-laid succession plans. *Trusteeship*, 14(1), 20–24.
- Leubsdorf, B. (2006, September 1). Boomer's retirement may create talent squeeze. *The Chronicle of Higher Education*, p. A51.
- Litt, S. D. (2010). *Mediating leadership deficits among supervision and management undergraduates* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3416695)
- Liu, A. (2007). UCLA community college bibliography: Women community college presidents. *Community College Journal of Research and Practice*, 31(10), 833–840.
- Luoma, J. A. (2010). A persuasive voice for growing our own leaders. *Leadership*, 16(1), 3–9.
- Lussier, R. N., & Achua, C. F. (2007). *Leadership: Theory, application, & skill development* (3rd ed). Mason, OH: Thomson/SouthWestern.
- Madden, M. E. (2005). 2004 Division 35 presidential address: Gender and leadership in higher education. *Psychology of Women Quarterly*, 29(1), 3–14. doi: 10.1111/j.1471-6402.2005.00162.x
- Mandell, B., & Pherwani, S. (2003, Spring). Relationship between emotional intelligence and transformational leadership style: A gender comparison. *Journal of Business and Psychology*, 17(3), 387–404.
- Mann, T. (2010, June 27). Attrition among chief academic officers threatens strategic plans. *The Chronicle of Higher Education*. Retrieved from <http://chronicle.com/article/Turnover-of-Chief-Academic/66064/?key=QT1wL1Q+NiBIMHU3eiUUeyRfb3cqIE4tOnBFZCoaYI9W>
- Marshall, L. A., & Lindley, P. A. (Eds.). (2007). Occupational Personality Questionnaire (OPQ32). In *Review of personality assessment instruments: (Level B) for use in occupational settings*. Leicester, UK: BPS.
- Mead, A. D., & Drasgow, F. (1993). Equivalence of computerized and paper-and-pencil cognitive ability tests: A meta-analysis. *Psychological Bulletin*, 114, 449-458.
- Mylonas, G., & Carstairs, J. (2003). *Comparison of a computer-administered motivation questionnaire under supervised and unsupervised conditions*. Macquarie, New South Wales, Macquarie University.

- O'Daniels, T. B. (2009). *Gender in community college administration* (Doctoral dissertation). Available from ProQuest Dissertations & Theses database. (UMI No. 3385975)
- O'Daniels, T. B. (2010). *Gender in community college administration* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3385975)
- Parry, K. W. (1998). Grounded theory and social process: A new direction for leadership research. *Leadership Quarterly*, 9(1), 85–106.
- Plinske, K., & Packard, W. J. (2010). Trustees' perceptions of the desired qualifications for the next generation of community college presidents. *Community College Review*, 37(4), 291–312. doi: 10.1177/0091552109356980
- Powell, G. N., Butterfield, D. A., & Bartol, K. M. (2008). Leader evaluations: A new female advantage? *Gender in Management: An International Journal*, 23(3), 156–174.
- Robertson, I. T., & Kinder, A. (1993). Personality and job competencies: An examination of the criterion-related validity of some personality variables. *Journal of Occupational and Organizational Psychology*, 65, 225–244.
- Rosenfeld, P., Booth-Kewley, S., & Edwards, J. E. (1993). Computer-administered surveys in organizational settings: Alternatives, advantages, and applications. *American Behavioral Scientist*, 36(4), 485–511.
- Sacks, D. (2006). Scenes from the culture clash. *Fast Company*, 102, 72.
- Salgado, J. F., & Moscoso, S. (2003). Internet-based personality testing: Equivalence of measures and assessee's perceptions and reactions. *International Journal of Selection and Assessment*, 11, 194–205.
- Salvano, C. R. (2005). *Effect of a community college leadership development program on the leadership behaviors of community college administrators at a Florida community college* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3174996)
- Saville & Holdsworth Ltd. (SHL). (1996). *Occupational Personality Questionnaire manual and user's guide*. Boston, MA: Author.
- Saville & Holdsworth Ltd. (SHL). (2001). *Occupational Personality Questionnaire manual and user's guide*. Boston, MA: Author.
- Saville & Holdsworth Ltd. (SHL). (n.d.). *Occupational Personality Questionnaire OPQ32n: Product fact sheet*. Retrieved from http://www.shl.com/us/solutions/products/?utm_source=homepage&utm_medium=sidebar&utm_campaign=catalog-search

- Saville, P., Sik, G., Nyfield, G., Hackston, J., & MacIver, R. (1996). A demonstration of the validity of the Occupational Personality Questionnaire (OPQ) in the measurement of job competencies across time and in separate organizations. *Applied Psychology: An International Review*, 45, 243–262. doi: 10.1111/j.1464-0597.1996.tb00767.x
- Shahmandi, E., Silong, A. D., Ismail, I. A., Samah, B. A., & Omar, Z. (2013). Structural equation modeling test for relationship between selected leadership competencies and effective academic leadership styles. *World Applied Sciences Journal*, 21(11), 1566–1576.
- Shults, C. (2001). *The critical impact of impending retirements on community college Leadership* (Leadership Series No. 1, AACC-RB-01-5). Retrieved from American Association of Community Colleges Website: <http://www.aacc.nche.edu/Publications/Briefs/Documents/11062001leadership.pdf>
- Sikdar, A., & Mitra, S. (2009). An exploration of gender stereotypes in perception and practice of leadership. In *9th Global Conference on Business and Economics*. Cambridge, UK: Cambridge University Press. Retrieved from http://www.gcbe.us/9th_GCBE/data/confcd.htm
- Stenberg, R. J. (1995). *In search of the human mind*. Orlando, FL: Harcourt Brace.
- Stoeckel, P. R., & Davies, T. G. (2007). Reflective leadership by selected community college presidents. *Community College Journal of Research and Practice*, 31(11), 895–912.
- Stout-Stewart, S. (2005, April–May). Female community-college presidents: Effective leadership patterns and behaviors. *Community College Journal of Research and Practice*, 29(4), 303–315.
- Tekle, R. (2012). *Compensation and benefits of community college CEOs: 2012* (Research Brief AACC-RB-2012-1). Washington, DC: American Association of Community Colleges. Retrieved from <http://www.aacc.nche.edu/AboutCC/Trends/Documents/CEOCCompensationResearchBrief.pdf>
- Templer, K. (2005, April). *Internet testing: Equivalence between proctored lab and unproctored field conditions*. Paper presented at the 20th Annual SIOP Conference, Los Angeles, CA.
- Trippe, D. M. (2005, April). *Equivalence of online and traditional forms of a Five Factor Model measure*. Paper presented at the 20th Annual SIOP Conference, Los Angeles, CA.

- Tunks, L. U. (2007). *Comparison of the outcomes of leadership behaviors of community college administrators* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3271206)
- U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2010). *Employees in degree-granting institutions, by employment status, sex, control and type of institution, and primary occupation: Fall 2009* [Table 255]. Retrieved from http://nces.ed.gov/programs/digest/d10/tables/dt10_255.asp
- van Eeden, R., Cillers, F., & van Deventer, V. (2008). Leadership styles and associated personality traits: Support for the conceptualization of transactional and transformation leadership. *South African Journal of Psychology, 38*(2), 253–267.
- van Engen, M. L., Van der Leeden, R., & Willemsen, T. M. (2001, December). Gender, context and leadership styles: A field study. *Journal of Occupational and Organizational Psychology, 74*(5), 581–598. doi: 10.1348/096317901167532
- Wallin, D. L. (2006). Short-term leadership development: Meeting a need for emerging community college leaders. *Community College Journal of Research and Practice, 30*(7), 513–528. doi: 10.1080/10668920500210092
- Wang, V. C., & Berger, J. (2010). Critical analysis of leadership needed in higher education. *International Forum of Teaching and Studies, 6*(2), 3–12.
- Weisman, I. M., & Vaughan, G. B. (2006). *The community college presidency: 2006*. Retrieved September 18, 2009, from <http://www.aacc.nche.edu/Publications/Briefs/Documents/09142007presidentbrief.pdf>
- Whetzel, D. L., McDaniel, M. A., Yost, A. P., & Kim, N. (2010, September). Linearity of personality-performance relationships: A large-scale examination. *International Journal of Selection and Assessment, 18*(3), 310–320.
- Wolfram, H-J., & Mohr, G. (2009). Transformational leadership, team goal fulfillment, and follower work satisfaction: The moderating effects of deep-level similarity in leadership dyads. *Journal of Leadership & Organizational Studies, 15*(3), 260–274. doi: 10.1177/1548051808326595
- Yankowy, B. J. (2011). *The relationship between personality traits and leadership styles of selected community college workforce development executives and corporate executives* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3467599).
- Young, P. (2004, February). Leadership and gender in higher education: A case study. *Journal of Further and Higher Education, 28*(1), 95–106.

BIOGRAPHICAL SKETCH

Glenn B. Miller began his undergraduate career at Southern Illinois University, Carbondale. During his first year, he decided to pursue a Bachelor of Science degree in workforce education. Eager to continue his education, Glenn chose to attend the University of Phoenix in Jacksonville, Florida, where he earned a Master of Arts in Leadership. After graduation, Glenn began teaching as an adjunct instructor at Florida State College at Jacksonville (FSCJ) in the Department of Public Safety. At FSCJ, Glenn has been contracted to create college courses and vocational training for the United States Military, using multiple technological devices and delivery methods.

While working as a detective for the Jacksonville Sheriff's Office, Glenn continued to teach and work toward his Doctor of Education degree at the University of Florida. In addition, Glenn has and continues to serve on numerous committees and boards in higher education. Glenn also serves on the board of Veterans Affairs for Florida State College of Jacksonville. However, his greatest love is volunteering and serving as a board member for the Safe Harbor Maritime Academy, which strives to create men of character, integrity, and vision. Mr. Miller currently resides in Yulee, Florida, with his wife and two children.