

THE RELATIONSHIP BETWEEN PERSONALITY TRAITS AND LEADERSHIP STYLES
OF SELECTED COMMUNITY COLLEGE WORKFORCE DEVELOPMENT EXECUTIVES
AND CORPORATE EXECUTIVES

By

BARBARA JOANNE YANKOWY

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

2011

© 2011 Barbara J. Yankowy

To my parents, William and Nancy

ACKNOWLEDGEMENTS

First, I thank my higher power, whom I choose to call God. One of my greatest aspirations was to obtain a college education. It is obvious that, through His grace, I have been taken to a much higher level. During this program, I have grown spiritually, professionally, and personally.

I sincerely thank my parents, who have always been loving and supportive. My friends and colleagues, who have shared this experience, were a great support and encouragement.

I bestow deep and special thanks to Dr. Dale F. Campbell, for his continuous support and faith in my performance. His tremendous encouragement followed me throughout my experience as a doctoral student and the dissertation process. I appreciate his mentorship and am eternally grateful for having had the experience of working with him.

I also thank my advisory committee, Dr. David S. Honeyman, Dr. Lynne H. Leverty, and Dr. Bernard Oliver, for their willingness to share their expertise and assistance.

Many thanks go out to Dr. Matthew J. Basham for his mentorship and friendship, and especially his patience and genuine interest in my success.

I would also like to acknowledge my dear friend and colleague, Glenn B. Miller, for his support and kindness. Together we faced this program's many challenges and hurdles. Our faith in, dedication to, and support of each other made this all possible.

And a special thanks also goes out to Terri Daniels, my friend and colleague, who has endured this entire experience with me. I could not have gone another step without her.

TABLE OF CONTENTS

	<u>page</u>
ACKNOWLEDGEMENTS.....	4
LIST OF TABLES.....	8
LIST OF FIGURES.....	9
ABSTRACT.....	10
CHAPTER	
1 INTRODUCTION.....	12
Succession in Leadership.....	13
Institutional Challenges.....	15
Entrepreneurship.....	16
Leadership Development and Preparation.....	17
Personality Traits and Leadership.....	18
Statement of the Problem.....	20
Purpose of the Study.....	21
Research Question.....	22
Research Hypotheses.....	22
Definitions of Terms.....	22
Significance of the Study.....	23
Limitations.....	24
2 LITERATURE REVIEW.....	25
Leadership Succession.....	25
Succession at All Levels of Leadership.....	27
Chief Administrators.....	27
Community College Faculty.....	28
Institutional Challenges.....	29
Entrepreneurship.....	30
Entrepreneurial University.....	31
Leadership Preparation.....	33
Doctoral Programs.....	34
Investing in Leadership.....	36
Personality Traits and Leadership Styles.....	38
Personality Traits.....	39
Leadership Styles.....	40
Big Five Theory.....	41
Thinking Style.....	42
Leadership and Community College Presidents.....	43
Presidential Reflection on Leadership Style.....	44

3	METHODOLOGY	46
	Research Methodology	46
	Research Framework	46
	Purpose of the Study	47
	Research Question	47
	Research Hypotheses	47
	The Sample Population	48
	Research Instrument	48
	Instrument Validity and Reliability	49
	Data Collection	50
	Data Analysis	50
4	RESULTS	52
	Descriptive Data	52
	Descriptive Data Results	52
	Descriptive Data Analysis Results	54
	Research Hypothesis One	55
	Research Hypothesis Two	55
	Research Hypothesis Three	56
5	CONCLUSION.....	72
	Findings	72
	Conclusion	75
	Discussion.....	77
	Implications for Higher Education	78
	For Future Research.....	80
	APPENDIX: THE SCALE DESCRIPTIONS	82
	Thought Cluster	82
	Analytical Dimension	82
	Factual Dimension	82
	Rational Dimension	83
	Learning Oriented Dimension	83
	Practically Minded Dimension	83
	Insightful Dimension	84
	Inventive Dimension	84
	Abstract Dimension	84
	Strategic Dimension	85
	Influence Cluster.....	85
	Interactive Dimension	85
	Engaging Dimension	86
	Self-promoting Dimension	86
	Convincing Dimension.....	86

Articulate Dimension.....	87
Challenging Dimension.....	87
Purposeful Dimension.....	87
Directing Dimension.....	88
Empowering Dimension.....	88
Adaptability Cluster.....	89
Self-assured Dimension.....	89
Composed Dimension.....	89
Resolving Dimension.....	89
Positive Dimension.....	90
Change Oriented Dimension.....	90
Receptive Dimension.....	90
Attentive Dimension.....	90
Accepting Dimension.....	91
Involving Dimension.....	91
Delivery Cluster.....	91
Reliable Dimension.....	92
Meticulous Dimension.....	92
Conforming Dimension.....	92
Organized Dimension.....	93
Principled Dimension.....	93
Activity Oriented Dimension.....	93
Dynamic Dimension.....	94
Enterprising Dimension.....	94
Striving Dimension.....	94
REFERENCES.....	100
BIOGRAPHICAL SKETCH.....	106

LIST OF TABLES

<u>Table</u>	<u>page</u>
4-1 Psychometric profile descriptive data.....	57
4-2 Competencies profile descriptive data.....	58
4-3 Comparison of three highest/lowest mean Sten scores for psychometric profile.....	58
4-5 One-way ANOVA results of psychometric profile dimensions.....	59
4-6 Pairwise comparisons of psychometric profile variables using Tukey-Kramer method.....	60
4-7 One-way ANOVA results of competency profile dimensions.....	69
4-7 Continued.....	70

LIST OF FIGURES

<u>Figure</u>		<u>page</u>
A-1	Thought cluster sections, dimensions, and facets.	96
A-2	Influence cluster sections, dimensions, and facets.....	97
A-3	Adaptability cluster, sections, dimensions, and facets.....	98
A-4	Delivery cluster sections, dimensions, and facets.....	99

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

THE RELATIONSHIP BETWEEN PERSONALITY TRAITS AND LEADERSHIP STYLES
OF SELECTED COMMUNITY COLLEGE WORKFORCE DEVELOPMENT EXECUTIVES
AND CORPORATE EXECUTIVES

By
Barbara J. Yankowy

May 2011

Chair: Dale F. Campbell

Major: Higher Education Administration

Because community colleges contend with continuous high rate of retirements, endless turnover, and organizational challenges, these institutions of higher learning must proactively identify the leadership skills and personality traits of current leaders. Higher education faces numerous challenges, including declining budgets, limited resources, and increases in student populations. To maneuver through these rocky waters, future leaders must possess outstanding leadership traits.

There is limited empirical research on the personality styles of community college workforce administrators, community college business officers, and corporate executives. Using the Wave® personality assessment to identify these groups' leadership traits, institutions might be able to determine the crucial qualities of effective leaders, and then use this information to development successful internal and external higher education leadership programs.

The Wave® assessment revealed minor differences in the leadership characteristics of community college workforce administrators, community college business officers, and corporate workforce executives. There were moderate differences among the three groups, and

all three groups had high mean Sten scores in creating innovation, and low Sten scores in communicating with people.

Results from my study can be used to identify the essential characteristics of effective leaders, incorporate ways to foster these traits in leadership development program participants, and provide other enhancements for leadership development, such as mentoring and coaching. The research further suggests that organizations should invest in leadership programs and pay close attention to the critical traits needed in the highly skilled professions such as workforce.

Further, leadership development programs should consider communication, developing and maintaining relationships, and enhancing other soft skills, such as emotional intelligence, as key components. Developing effective communication skills is particularly important, since scores in this area were quite low. It is possible that the current economy, along with the typical challenges of community colleges, contributed to the low-to-average communication score results. Also, leaders may not have the skills to be successful in the current community college climate, a potential basis for future research.

As community colleges continue to serve area residents, especially in providing workforce education and training, future leaders should possess skills like resource identification, communication, and emotional intelligence. These skills, in addition to other personality and leadership traits, are investigated in my study, and models of this concept are discussed.

CHAPTER 1 INTRODUCTION

The mass attrition and exodus of retiring baby boomers has affected corporate businesses, leaving a gap in leadership and leadership development initiatives. The massive turnovers catapulted the concept of leadership development to the top of business agendas. Companies such as Levi Strauss, Kodak, Zenith, Firestone, Timex, Nestlé, U.S. Steel, Polaroid, Sears, and IBM are some examples of corporations suffering through this phenomenon because of modest leadership planning or lack thereof. Even though these companies foresaw the eminent mass turnovers, they only planned modest leadership development initiatives to secure their futures (O’Daniels, 2009). U.S. businesses, industries, schools, and the professions need to equip themselves to face future challenges and changes by developing leaders who successfully transform their organizations into “value enterprises” (Gardner, 2006, p. 1).

The extant literature in the community college arena predicts that there is a deficiency of qualified candidates to replace the large number of community college presidents expected to retire in the near future (Keim & Murray, 2008). Though anticipated retirements will create leadership opportunities for a new generation, not enough education professionals possess the leadership qualities equated with community college leadership (Riggs, 2009). The leadership crisis continues to worsen in the community college system, as a result of the high number of retirements among presidents, senior administrators, and faculty leaders. In addition to the succession of community college leadership, few studies have addressed the need for leadership development programs specifically geared toward community college leaders (Bisbee, 2007). Using a retrospective dataset, my study identified profiles of current community college administrators that might be used as prototypes to develop future leaders. Specifically, my study

identified the relationships between personality traits and leadership styles of selected community college workforce development executives (CCWDEs) and corporate executives.

Workforce development is one area where institutional programs are expected to meet the workforce industry's demands. Community colleges actively establishing partnerships with business and industry, fostering innovative programs to meet the region's needs. Hence, workforce development initiatives play an active role in the future of community colleges (Basham, Campbell, & Mendoza, 2008). Since community colleges experienced this evolution, workforce innovation is now part of the institutions' missions, to provide programs and a path of vocation to serve the needs of low-income adults (Jacobs & Dougherty, 2006). With the shift from a manufacturing-driven economy to an information-driven economy, community colleges have become the primary tool for workforce development (Friedel, 2008).

Succession in Leadership

According to research, a mass exodus of community college leadership is expected within the next few years. The baby boomer generation comprises 78.2 million Americans born between 1946 and 1964. With over 70 million baby boomers in the workforce and only 55 million Generation Xers to replace them, the estimated cost of losing an employee is 50–300% percent of that person's salary. Therefore, succession planning is crucial to both short-term and long-term success in many industries, including community colleges. In my study, succession planning in community college administration focused on developing and attracting new leaders, as well as quantifying the severity of the succession planning conundrum for community college administration (Leubsdorf, 2006).

Baby boomers have fueled the workforce for decades, contributing their time and labor; however, they are retiring in waves. In many community colleges, a portion of the current baby boomer administrators and faculty were initially employed in the early 1960s–1970s, partially

because of the increased number of public community colleges across the nation. From 1988–2000, community college growth has decreased to less than 1% (Fulton-Calkins & Milling, 2005). But a sizable void will open in both labor markets and community college administrations, due to baby boomers' retirements. Between 2004 and 2014, an estimated over 6,000 jobs in postsecondary administration will be vacated (Leubsdorf, 2006). This reality indicates the urgent need to retain older leaders, while concurrently developing and attracting new leaders (Salopek, 2006, p. 23).

Few positions will be unaffected by baby boomers' retirements from community college administrations. In the next few years, a significant number of community college leaders will be needed, including approximately 700 presidents and campus heads, 1,800 upper-level administrators, and 30,000 faculty members (Fulton-Calkins & Milling, 2005). In 2001, the American Association for Community Colleges reported national survey results indicating that 45% of the presidents who responded planned to retire by 2007. In another survey, Weisman and Vaughan (2006) indicated that the percentage of president retirees would increase to 79% by 2012 (Romero, 2004, p. 34). While community college presidents are retiring at an alarming rate, Chief Academic Officers (CAO) and faculty also fall into this category of attrition, as fewer faculty members are voluntarily applying for department chair positions. Hesitancy to assume administrative positions seems prevalent at all leadership levels, and this reticence can also be attributed to external factors, as higher education leadership may be discouraging individuals from seeking administrative positions.

Historically, community colleges have played a pivotal role in workforce development. However, with the sometimes uneasy existence of workforce education and the decisions to offer training for high-skilled jobs, as opposed to serving low-income workers' needs, community

college leaders do not know what direction such programs should take. The unclear future of the labor market, coupled with the demands of the other missions of community colleges, means that administrators need to be equipped with versatile leadership strengths (Jacobs & Dougherty, 2006).

Both the lack of urgency and lack of current community college leaders to fill the succession planning needs of administrations signals a problem for community college administrations, if action is not taken. The ramifications of this situation will present unique institutional challenges.

Institutional Challenges

In addition to succession planning challenges, contemporary community college leaders are pressured by various internal and external institutional challenges. Some of the internal challenges include facilities in need of upgrades, increasing retirements, decreased funding, economic turmoil, employee attrition, the influx of academically underprepared students, and rapid technology changes (Basham et al., 2008; Basham & Mathur, 2010; Doane & Pusser, 2005; Zaharia & Gibert, 2005).

The numerous external challenges include lagging sociopolitical forces, and despite a lack of financial resources, the expectation to function at an exceptional level. The increased student diversity also requires that community college leaders possess a broaden set of interpersonal skills and cultural competencies. Therefore, higher education has a growing need for entrepreneurialism (Basham, 2007).

When the internal and external institutional challenges coalesce, the result compounds the succession planning problem for community college administrators. Studies have stated that ensuring an ample supply of effective and efficient community college leaders requires research intended to better understand current leaders (Bisbee, 2007). Finding workforce development

leaders to serve community colleges adds another level of challenge, as this position requires a skill not generally vital to other administrative positions—entrepreneurship.

Entrepreneurship

Community colleges have long been regarded for their entrepreneurialism and ability to help the community and workforce solve problems through training or other means. Community college workforce departments resulted from the increase of programs involving external relations with the community and workforce, relationships that will not wane anytime soon. At the 2010 Community College Futures Assembly, building and maintaining relationships with the community and workforce was rated one of the top six critical issues in the planning, governance, and finance category and workforce development category (Basham, Campbell, & Garcia, 2010).

The entrepreneurial branch of community colleges developed from the community's need for assistance. Since the early 1900s and the development of vocational training acts, such as the Vocational Act of 1917 and the Higher Education Reauthorization Act of 1965 (the G.I. Bill), community colleges have met the needs of businesses, industries, and communities through entrepreneurial efforts, including workforce development. If community colleges did not take advantage of these entrepreneurial endeavors, other entities most likely would have. As an example, for-profit educational institutions are increasingly devoted to vocational and career training needs. On-demand skills training, contract training, and preparing students for the workforce are growing areas of community colleges. The community college is noted for providing flexibility and promptly responding to business and industry training needs, serving as a mechanism that transitions students to high-skilled jobs (Vaughn, 2000).

According to the researchers, entrepreneurial organizations and administrators must actively choose risk taking, trust, and passion, as well as cultivating insatiable appetites for

change, thriving on creative problem solving, and relying on courageous leadership. Higher education institutions will be shaped by people with unique talents and abilities, who can identify innovative responses to environmental challenges, who possess a sense of purpose, and have an unwavering commitment to achieving the college's mission (Flannigan, Greene, & Jones, 2006, p. 2). These characteristics embody the essence of workforce development in community colleges.

Leadership Development and Preparation

As previously mentioned, a variety of institutional challenges create a large problem for community colleges, including workforce development, the entrepreneurial branch. These problems are not unique to education, but the continued success of higher education institutions depends on staffing key positions at all levels with effective, competent leaders. Although the roles and responsibilities of community college leaders have changed over the past 30 years and will continually evolve, no documentation currently exists about the restructuring of university higher education leadership programs to prepare students for community college leadership positions (Brown, Martinez, & Daniel, 2002).

In 1995, the University of Florida's Department of Education Leadership, Administration, and Policy sponsored what became the annual Community College Futures Conference in Orlando, Florida. On average, 60 select chancellors, board of trustee members, presidents, and senior vice presidents from around the United States identify the top issues facing community colleges in that year. Results appear to reaffirm the issues determined at past Community College Futures Conferences, such as innovation, entrepreneurialism, collaboration with business and industry, and finding new revenue streams. Perhaps such constituents of community college leadership should be modeled and studied in professional development programs (Campbell & Basham, 2008).

One current leadership development training program for senior-level civil servants is the Federal Executive Institute of Charlottesville, Virginia, which shares knowledge about and insight of generational awareness, especially generational differences in characteristics, values, and motivations. Exploring a new way of thinking that incorporates the critical differences in generations and harnesses each constituency's best characteristics could foster a successful corporate environment (Salopek, 2006).

Advanced degrees alone do not provide sufficient preparation for community college administrators. Some researchers have recommended that graduate degree preparation should be augmented by leadership development activities, such as mentoring, internships, and professional development (Hull & Keim, 2007). Organizations also must invest in developing future cadres of leaders, particularly during times as challenging as the current economic climate. Some studies have shown that investments in leadership development have such benefits as improving financial performance, attracting and retaining skilled individuals, influencing motivation, and strengthening the organization's function. Research by Bersin and Associates shows that providing leadership development for internal staff is more effective than hiring externally. Companies with strategic approaches to leadership development are 64% more effective at increasing the quality of their leadership pipeline, 73% more effective at improving overall employee retention, and 67% more effective at increasing the engagement, retention, and teamwork of leaders (Center for Creative Leadership, 2008). Though cultivating leaders benefits institutions, understanding personality traits and leadership styles of both seasoned and incoming leaders may also contribute to the development of leadership programs.

Personality Traits and Leadership

Various models depict perceptions of personality and how personality relates to leadership. In the last 10–15 years, the Five-Factor Model (FFM)—a hierarchical model of personality traits

with five big traits called “domains”—framed much personality trait research (Kornør & Nordvik, 2004, p. 49). Otherwise known as the “Big Five” model (2005), the FFM is an established tool used to discern the best explanation of personality analysis, portraying traits like extroversion, agreeableness, neuroticism, conscientiousness, and openness to new experiences. Five major leadership theories—trait theory, power and influence theory, behavioral theory, symbolic and cultural theory, and contingency theory—have also been used in leadership studies. The FFM resulted from several decades of factor analytic research on trait personality. In his work, Goldberg stated that the five dimensions of rating personality could serve as a framework for many personality theories (Zhang & Huang, 2001). Therefore, the FFM served as the foundational personality model for my study.

Behavioral leadership theory proposes that leadership traits are not innate but may be fostered through teaching and experience. Lussier and Achua (2010) investigated trait theory, a belief system suggesting that some individuals have attributes that are inherent to effective leaders. Personality development is thought to result from a combination of environmental and genetic factors. Personality traits have been defined as dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings, and actions. Many studies have documented that personality traits are remarkably stable, have a significant hereditary component, and have behavioral implications—that is, they influence what situations a person might enter in, behavior in any situation and which situations persons are motivated to enter and participate in (Kornør & Nordevik, 2004, p. 49). Therefore, both the behavioral and trait theories were investigated in my study’s literature review.

Finally, the literature illustrates that three leadership behavior dimensions determine leadership effectiveness—task oriented, relationship oriented, and change development. The

individuals who scored high in all three dimensions have also been predicted to have high leadership performance, regardless of situation (Kornør & Nordvik, 2004).

Statement of the Problem

Since the 1990s, the anticipated retirements of presidents and their executive officers has been a critical issue for community colleges. Colleges are particularly vulnerable, because the retirement wave also includes administrative professionals in highly skilled areas. The nature executive positions' work has changed dramatically; hence, colleges must include leadership development in their strategic planning and decision making (Campbell, 2006).

The nation's community colleges, as with other industries, now face unprecedented challenges from both internal and external forces. In the past five years, student enrollments have escalated. College leaders have struggled to meet demand while dealing with state budget cuts, limited facilities, faculty turnover, rising technology costs, and increasing numbers of students who need remedial work before they can take college-level classes (Boggs, 2004). However, many current community college employees are not accepting the challenges and seizing the opportunities of becoming an administrator. Despite the growth of education and training programs in the public and private sectors, more programs addressing a wider variety of skill sets are needed to meet these challenges and fill leadership positions in community colleges. Without these opportunities, community colleges may be headed for failure. Though some leadership skills are typically established on the job, exceptional candidates that already possess exceptional skills are needed to in low, middle, and higher management. Though a breadth of research acknowledges the succession of community college presidents, existing research fails to indicate if the succession extends to all levels of community college administrations (Keim & Murray, 2008).

A lack of succession preparation for community college administration leadership at all levels may widen the leadership gap even further. The workforce development departments of community colleges are considered the entrepreneurial arm of these institutions, but initiatives to develop or recruit talent in this vital department have not been made a priority. Thus, community colleges must establish leadership preparation programs and ensure that these programs address what all levels of community college leadership need. Since these problems are creating shortages for community college administrators and workforce development departments and since the workforce development department is the entrepreneurial department of community colleges, similar to the corporate entity. This correlation creates opportunities to investigate the similarities and differences between CCWDEs and corporate executives (Barnett, 2005; Jacobs & Dougherty, 2006; Salopek, 2006; Zaharia & Gibert, 2005).

Purpose of the Study

The purpose of my study was to explore the relationships between the leadership styles and personality traits of corporate executives and community college workforce executives. My study extends previous research conducted on the 21st Century Leader Profile, examining other senior executive leadership roles (Campbell, 2006). This information could serve a two-fold purpose. First, the information can serve as a foundation for leadership development programs, designed to highlight the crucial skills needed to effectively lead and operate academic departments. Such information could both develop future community college leaders and enhance existing leaders' skills. Second, the information can demonstrate whether or not a corporate leader could succeed in a leadership position in a community college's workforce development department. In some respects, the potential success of an executive in a corporate leadership position is also part of my study. However, that aspect was not a desired, practical outcome, considering the supporting literature and need.

Research Question

What is the relationship between leadership styles and personality traits of community college workforce development executives, community college business officers, and corporate executives?

Research Hypotheses

H₁: There will be no differences between leadership styles and personality traits of community college workforce development executives and corporate executives.

H₂: There will be no differences between leadership styles and personality traits of community college business officers and corporate executives.

H₃: There will be no differences between leadership styles and personality traits of community college workforce development executives and community college business officers.

Definitions of Terms

COMMUNITY COLLEGE. “A regionally accredited institution of higher education that offers the associate’s degree as its highest degree” (Vaughn, 2000, p. 2).

COMMUNITY COLLEGE BUSINESS OFFICERS (CCBOs). The professional organization that supports the professional business operations staff of community colleges in the United States and Canada.

CORPORATE EXECUTIVES. The executive-level professionals of a transportation corporation.

LEADERSHIP CHARACTERISTIC. The features of the Wave® Psychometric Profile, which include the ability to perform intellectual or cognitive tasks.

LEADERSHIP TRAIT. The features of the Wave® Personal Report, which include applying expertise, accomplishing objectives, and demonstrating potential.

MIDLEVEL LEADERS. The community college directors, deans, and academic department chairs.

PERSONALITY TRAITS. The dimensions of individual differences, characterized by the display of emotions through thought patterns, thoughts, feelings, and actions (McCrae & Costa, 1989, p. 23).

SAVILLE CONSULTING WAVE®. An assessment tool developed by Saville Consulting Group, Ltd. (SCG) that includes a Personal Report and Psychometric Profile and two subscales, leadership characteristics and leadership competencies.

SENIOR ADMINISTRATORS. A group of executives that includes Chief Academic Officers (CAO), Chief Instructional Officers (CIO), and Chief Financial Officers (CFO).

Significance of the Study

Though much has been written about leadership in business management, little research has been conducted about academic leadership. The literature also states that administrators at all levels are retiring in the near future, creating a community college leadership shortage. In addition to this, some professionals working in education have no interest in advancing into leadership positions (Garza Mitchell & Eddy, 2008).

CCWDE positions may be more highly specialized than other administrative positions. Corporate executives appear to have several crucial skills for success in their work environments, such as innovation, strategy, risk taking, and the ability to lead and adapt to change. Sampling community college and corporate executives in the workforce profession could yield profiles for use as a benchmark for factors of professional development initiatives (Berry, Hammons, & Denny, 2001). With community colleges serving as key providers of workforce education, and focusing on training and development for vocational and technical education, special attention must be paid to highly skilled and specialized leadership professions (Campbell, 2006; Friedel, 2008). A better understanding of these types of professions is necessary, as the community college primarily serves nontraditional students, who desire degree and certificate programs that will facilitate immediate employment.

If advanced degrees alone do not provide adequate knowledge of the leadership skills needed for these positions, and if there is an increase in leadership succession and a decrease in the number of qualified applicants, then leadership styles and effectiveness become top priorities (Hull & Keim, 2007). An exploratory investigation of leadership styles and personality traits of CCWDEs and corporate executives—how they compare and contrast—will present needed

information about effective leadership, as well as the attributes that should be highlighted in professional development and workforce development curriculum.

Limitations

My study used a small sample size, and study participant selection was limited to community college workforce administrators at a public, four-year institution and corporate executives. Therefore, the findings will not apply to four-year universities, private colleges, or K–12 schools. Since the study was conducted in the United States, it cannot be generalized to educational entities outside of the United States. Lastly, the study used data collected in 2006, which was based on respondents' perceptions. Issues facing the participants have changed over the past few years, such as the economic downturn and other challenges.

CHAPTER 2 LITERATURE REVIEW

This chapter discusses relevant literature on of community college leadership succession and leadership characteristics. The sections include literature pertaining to leadership succession in general, succession at all levels of community college leadership, institutional challenges, entrepreneurship, leadership preparation, and personality traits and leadership styles.

Leadership Succession

The organizational talent gap has been an issue for several years. In a survey, 54% of the respondents, consisting of large and midrange companies in North America, claimed they lack sufficient internal candidates with adequate skills to succeed their current executives and managers. (Pace, 2010). Apparently, the gap phenomenon impacts both corporations and higher education. Many perceive community colleges as responsive and innovative organizations within the higher education industry. Community colleges' response to rapidly evolving workforce needs, shifting legislative requirements, and new competitors in the postsecondary marketplace draws on nimble, responsive, and fluid systems. These systems cater to short-term, continuous learning needs for students in all stages of life, needs that include flexible curricula, innovative programs that serve a dynamic, versatile population, and funding challenges (Malm, 2008).

The baby-boomer administrators are retiring in massive waves, and higher education is not immune to the effects of their departures. Some researchers have predicted turnover as high as 75% by 2011 in education alone (Basham, Stader, & Bishop, 2009). In the late 1990s, predictions regarding the approaching leadership crisis only focused on community colleges in Pacific regions. However, further research now indicates that the crisis will affect all American community colleges. These studies predict retirements between 45% and 85% among

community college presidents, potentially leaving a void in leadership mentoring for new and upcoming leaders (Keim & Murray, 2008). For example, an Iowa University study of 415 community college presidents, representing 38.2% of the national total, found that 79% will retire by 2012 and 84% by 2016 (Duree, 2008, p. 1).

In 2001, the American Association for Community Colleges (AACC) announced results of a national survey indicating that 45% of the 249 presidents who responded planned to retire by 2007 (Shults). A year later, additional research revealed that 79% of 661 community college presidents responding to the survey planned to retire in 10 years or less (Romero, 2004, p. 32). Weisman and Vaughn (2006) replicated the study, and their findings indicated that 84% of 545 responding presidents planned to retire in 10 years or less, and 56% planned to retire in 6 years or less (Keim & Murray, 2008, p. 117).

Based on these survey results, succession will most likely impact community colleges across the nation. However, since California houses the largest community college system in the country, leadership retirement has a more profound effect. High turnover rates in leadership characterize California's community colleges. For example, as a strategy to maintain chancellor positions, institutions have offered generous pay increases and leadership planning initiatives (Ashburn, 2007). In other research, Campbell, Syraj, and Morris (2010) found that the community college administrative shortage will also impact specialized administrative positions, such as registrar and financial aid director. Additionally, the skills and competencies needed for such positions are expanding, creating a greater challenge for institutions to locate candidates to fill these positions (Campbell, Syraj, & Morris, 2010).

Succession planning is widely accepted in the business world, and while community colleges value the process, it is not always implemented. To prepare for future leadership,

current leaders must develop partnerships with community colleges and other professional organizations, establish leadership development programs, provide graduate and certificate programs that target specialized skills needed by future leaders, and implement succession planning processes. This process includes establishing a vision; reviewing long-term goals and revising them as needed; developing a broad succession planning process; examining the organizational culture and potential changes; recognize the leadership skills and attributes needed for the future; and review leadership programs within the organization (Fulton-Calkins & Milling, 2005; Campbell et al., 2010).

Succession at All Levels of Leadership

Succession in community college leadership spans all levels of administration (Patton, 2004, p.16), including six senior administrator positions that lead to the presidency: chief academic officer (CAO), chief financial officer (CFO), student affairs officer (SAO), director of continuing education, business and industry liaison, and occupational/vocational education leader (Shults, 2001, p. 2). Research by AACC and others estimates that 700 new community college presidents and campus heads, 1,800 new upper-level administrators, and 30,000 new faculty members will be needed in the next decade (Patton, 2004, p. 2). The CAO position is known as a stepping-stone to the presidency. Other college and campus presidents, as well as chief instructional officers (CIOs) are also known as paths to the presidency (Ashburn, 2007). But a growing number of CAOs are leaving their positions, without enough qualified individuals possessing sufficient leadership skills to replace them (Ashburn, 2007).

Chief Administrators

While increasing numbers of community college presidents reach retirement age, CAOs are also approaching retirement and may assume the presidency. A report that examined eight listings in the *Higher Education Directory*® stated that approximately 19% of CAOs left their

positions each year. This was compared to 16% of SAOs and 14% of CFOs and presidents. In 1996, 68% of CEOs stated that they planned to retire within 10 years; this increased to 84% in 2006 (Weisman & Vaughn, 2006, p. 2). Retirement is not the only reason community college leaders leave their positions. Other factors that lead to departures include burnout, feeling unappreciated, and the pressures of organizational change. Further, because the president's role has become so complex, the number of interested candidates has decreased. CAOs, once thought to be the foremost successors to the presidency, no longer want to become presidents (Risacher, 2004, p.437). Although reasons for this interest deficit vary, certain responsibilities make the presidency less appealing, such as the emphasis on fundraising, high visibility, extensive time and travel commitments, and lack of opportunities to continue research activities. Unlike the president, the CAO's resources are not consumed by fundraising and satisfying outside constituent groups (Risacher, 2004).

Community College Faculty

The results of a study by Berry et al. (2001) stated that 64% ($N = 330$) of faculty members indicated that they anticipated retiring within 10 years (p. 130). Three concerns influence faculty retirement: access to health insurance, loss of peer communication, and other career opportunities. Some faculty avoid the administrative ladder and choose to remain in the classroom (Riggs, 2009). Nevertheless, faculty are a vital component of community college leadership. Thus, it is not uncommon for faculty to assume higher-level positions, such as academic chair, chief administrators, and other positions that can lead to serving as college presidents (Riggs, 2009).

The profile of community college faculty has significantly changed. In the National Studies of Postsecondary Faculty (NSOPF), female faculty increased from 38% in 1988 to 51% in 1999. In 1999, 30% of full-time faculty were at least 55 years old, and 52% of respondents

between the ages of 55 and 64 planned to retire by 2004. According to the 2001 AACC survey, 36% of presidents expected at least 25% of their faculty to retire by 2006 (Shults, 2001, p. 5). The majority of presidents—around 86%—held a faculty position at some point prior to becoming president. Considering the number of faculty who were expected to retire by 2006, most would not make it to presidency, or even fill an administrative position (Schults, 2001).

Institutional Challenges

Because of the declining economy, academic institutions are under scrutiny, creating a rise in public accountability and a demand that institutions' roles should be clearly defined. Contemporary education faces increasing uncertainty, instability, competitiveness, and scarcity of resources (Smith & Adams, 2008). The volume of tasks and expectations placed on leaders hinders strategic planning initiatives, which perpetuates a cycle that places leaders in constant crisis management situations (Harris, 2009). In addition, community college leaders face challenges like buildings in need of updates, massive retirements, decreased funding, economic turmoil, employee attrition, and the influx of academically underprepared students (Basham et al., 2008; Basham & Mathur, 2010; Doane & Pusser, 2005; Zaharia & Gibert, 2005).

Over six million community college students, as well as millions of students at other types of institutions and organizations, are pursuing some occupational course of study. These noncredit courses entail continuing education and job training. Hence, community colleges not only offer associate and bachelor's degrees, but also a plethora of workforce development programs (Jacobs & Dougherty, 2006). To cater to the market economy, some colleges have created continuing education, industry representation, and technology centers. This shift increased the number of nonacademic managers and administrators entering the leadership structure of higher education institutions (Zaharia & Gibert, 2005).

Entrepreneurship

Academic entrepreneurship, in its narrowest sense, involves the creation of new ventures by university and college faculty, administrators, and students. More broadly, academic entrepreneurship seeks to establish connections across disciplines, between student and academic affairs, and between the campus and community. Academic entrepreneurship draws on the spirit of innovation, creativity, and opportunity and imitates the business world's entrepreneurial activity, as a means to provide students with rich learning experiences (Bardaglio, 2005, p. 18). Colleges play a fundamental role in education and training, research and utilization of results through industrial cooperation, and regional and local development. The academy and economy work together to meet the demands of a knowledge-based society, and enterprises and businesses play an essential role in this endeavor (Zaharia & Gibert, 2005). The Community College Futures Assembly identified entrepreneurialism and innovation as critical issues for that industry. Community colleges' missions have shifted, expanding into increased education for certification education and training, as well as collaborating and developing partnerships with local business (Basham et al., 2008).

Despite the growth of entrepreneurship efforts among colleges and universities, nonprofit colleges are still considered the experts in generating revenue and accomplishing desired educational outcomes. However, over the past few decades, some higher education institutions have gained attention for their entrepreneurial approaches to research funding, partnerships with for-profit organizations and businesses, contract education, and the development of continuing education (Doane & Pusser, 2005). The declining economy drives colleges to vie more aggressively for financial resources, students, and faculty. Community colleges also offer vocational and technical certificate and degree programs, competing directly with their for-profit

counterparts, whose main focus tends to be career education (Breneman, 2005). In the context of higher education, entrepreneurialism is an example of globalization (Barnett, 2005, p. 51).

Ithaca College, a predominantly undergraduate institution, founded The New American Colleges and Universities, a national consortium whose vision is to combine liberal arts and professional education, placing a strong emphasis on experimental learning and civic engagement. The goal of this model is to produce students who are equipped to solve real-world problems, while concurrently promoting community and global citizenship (Bardaglio, 2005). Higher education institutions are expected to meet the workforce industry's demands, which include preparing future employees for a global economy. Workforce development becomes a key factor in this mission, as community colleges actively establish partnerships with business and industry and foster innovative programs to meet the region's needs. These activities require colleges to have an entrepreneurial spirit (Basham et al., 2010; Friedel, 2008).

Entrepreneurial University

Within corporations, advocacy is a general and commonplace practice. Corporate leaders advocate for ideas and issues that promote profitability, quality, and performance (London, 2008). As higher education becomes more akin to the business arena, academic leaders must foster a sense of movement and change and take risks, while at the same time risking reputation and possible financial difficulty. To become an entrepreneurial university, risk is necessary. Risk can manifest in different areas, such as capital, intellectual, economic, and staff attrition, along with the awareness that some changes are irreversible (Barnett, 2005). Some researchers propose a direct relationship between risk propensity and entrepreneurial intentions. Individuals with high risk propensity comfortably handle risk and do not perceive certain situations as risky (Zhao, Seibert, & Hills, 2005). The entrepreneurial university takes a risky course of action, possibility risking more than it realizes, and perhaps morphing into a completely different

institution (London, 2008). Zhao, Seibert, and Hills (2005) listed other individual characteristics that motivate advocacy, such as conviction about caring for others, self-confidence, self-efficacy, communication, and transformational skills.

Self-efficacy, an individual construct, influences an individual's choice of activities, goals, persistence, and performance in a range of contexts. An important component of social cognitive theory concerns the malleability of self-efficacy judgments and the process of judgment formation. According to social cognitive theory, an individual's sense of self-efficacy can be influenced through four processes: enactive mastery, role modeling and vicarious experience, social persuasion, and judgments of one's psychological states, such as arousal and anxiety (Zhao et al., 2005).

For-profit institutions have embraced the risks of entrepreneurial universities, positioning these entities as significant competitors of public higher education institutions. One way for-profit schools have embraced risk is by establishing an array of credited degree programs that offer classes structured to suit the nontraditional student. Working adults' needs are met through a variety of a learning environments, flexible schedules, and course delivery methods, such as online, hybrid, and face-to-face. The versatile offerings of for-profit institutions captured the open market of continuing education (Barnett, 2005; Breneman, 2005). Traditional higher education institutions no longer meet the needs of a modern institution and are being replaced by a more cooperate management model. Under these circumstances, higher education institutions will be characterized by the increasing influence of external stakeholders, particularly those that influence institutional funding, place a strong emphasis on strategic planning at an instructional level, and will advocate for the adoption and adaptation of attitudes and techniques characteristic of corporations (Yielder & Colding, 2004, p. 318).

Leadership Preparation

In this world of information superhighways, consumerism, calls for increased accountability, and costs of education rising, academic leadership has become more complex and multidimensional (Bisbee, 2007, p.77). While numerous studies focus on leadership succession at community colleges, there is paucity of research on community college leadership programs and preparation for such roles (Hull & Keim, 2007, p. 689).

In the next 10 years, community colleges will need to replace 800 of their 1,150 current presidents. Yet the preparation of presidents and other community college leaders has declined, and the number of people prepared to step into leadership roles at higher levels, including the presidency, has dramatically diminished (McPhail, Robinson, & Scott, 2008, p. 363). For many years, some colleges have not given much attention to succession planning or developing new leaders; others colleges created stockpiles of leadership candidates, without sufficient internal leadership positions for all of these candidates. Both of these actions resulted in a small leadership pool, creating a problem not only for educational administrators, but also for those in the entrepreneurial departments of community colleges (Basham et al., 2009).

Community college leaders appear to acquire their skills primarily through on-the-job training, professional development, and mentoring. Some administrators have developed their skills incrementally, using previous positions to hone skills required for higher-level administrative positions (McNair, 2010). To ensure that individuals are being prepared for community college leadership positions, the AACC facilitated several leadership development efforts, including identifying existing leadership preparation programs by level of degree required and maintaining a list of graduate programs, both of which are available on their Website (Romano, Townsend, & Mamiseishvili, 2009). Vaughn (2000) predicted that there will be 129 presidential vacancies each year in the nation's community colleges, and only 30% of

these vacancies might be filled (Peterman, 2002, p. 546). Peterman (2002) suggests the following strategies to prepare future community college leaders: (a) each community college president in the nation should serve as a mentor for at least one individual, (b) graduate programs in higher education should enroll individuals referred by the president, and (c) states should cooperate to offer graduate education (Peterman, 2002).

The largest administrative group in higher education might be department chairs. These administrators must juggle numerous roles and responsibilities, despite the lack of training offered in leadership or management (Whitsett, 2007). Many who become community college department chairs are unprepared for the long hours, multiple demands, and continuous change. Factors that can hinder a department chair's success are the skills and knowledge brought from previous faculty roles, the unfamiliarity of the new position, and the methods used for learning the position's responsibilities. Some community college chairs learn these skills by observing their colleagues (Smith & Stewart, 1999). With the challenges of finding effective and efficient leaders for all levels of academic leadership, additional research is needed to better understand how current leaders are identified and trained (Bisbee, 2007).

Doctoral Programs

Ample opportunities exist for community college administrators to pursue doctoral degrees in education administration and leadership. Such programs focus on community college leadership or higher education leadership in general. Though these programs respond to local needs, leadership must be considered from a broader perspective, preparing graduates for potential administrative challenges applicable to any U.S. region (McNair, 2010). Doctoral degrees were once considered a passport to community college leadership, which led to increased enrollments in these programs. Percentages of two-year college presidents with doctorates ranged from 44% in 1960, to 76% in the mid-1980s, and 87% in 2005 (Hull & Keim,

2007). In a follow-up analysis, a study of prospective of community college leadership surveyed 1,700 community college administrators across 14 position titles. Presidents were more likely to hold a doctoral degree than those responding (86% versus 79.3%). A higher percentage of presidents in 2000 had PhDs (50%) than the 1985 respondent group (39.5%). Men were somewhat more likely than women to hold a PhD than an EdD (Amey, VanDerLinden, & Brown, 2002, p. 576). The number of advanced degrees conferred in community college administration decreased 78% between 1983 and 1997 (McPhail et al., 2008, p. 363). Some institutions are addressing the succession of community college presidents and vice presidents by offering presidential two-year programs with online classes about topics like budgeting, strategies, and interpersonal skills (Bagnato, 2004).

Additionally, the impact of these programs on college students' attitudes toward the community college and the necessary leadership skills had rarely, if ever, been studied (Romano et al., 2009). To address this issue, 18 community college institutions participated in a survey depicting a demographic profile of doctoral students and their attitudes toward the community college and competencies needed for community college leadership. Of the respondents ($n = 153$), 79.7% indicated that they learned their skills by working at a community college, 62.7% in the classroom environment and/or as a professor, and 56.3% via their assignments connected with their classes (Romano et al., 2009). Researchers have argued that graduate programs alone are inadequate preparation for administrative positions and that the research component of graduate programs is inappropriate for the field. Therefore, graduate programs should include practical, applicable curricula, augmented with case studies and other leadership development activities (Romano et al., 2009). Other components that can be incorporated into leadership programs are pre- and postassessments, including individualized plans for improvement, cohort

programs, learning gains tracking, and mentorship provision, all of which contribute to effective learning, development, and preparation of future leaders (Campbell et al., 2010).

Investing in Leadership

To sustain a company's growth, there must be a path to leadership, including a development plan highlighting career progression. Corporations even offer coaching and training for their employees, hoping to add value to their organizations. Forty percent of survey respondents plan to hire future leaders within their companies, and 23% plan to recruit outside of their organizations (Pace, 2010). Despite a growing and ongoing debate about whether hiring leaders internally or externally is preferable, community colleges often seek to promote internal candidates as leaders.

One way to groom potential leaders is to provide them with training, support, and encouragement. Some institutions are taking responsibility for developing and launching their own leadership programs, with customized curriculum leading to a masters or doctoral degree in community college leadership, online leadership courses, day-long retreats, and one-year programs, which include mentoring and weekly workshops. Future leaders need opportunities to learn and develop their skills by participating in internships and mentorships that focus on skill development (Bisbee, 2007; Campbell et al., 2010). Human resources departments must face the challenge of identifying leaders within their own organizations. To ensure quality leadership, organizations need to examine their existing training and development programs and consider delivery method trends and performance consulting, as well as identifying effective leadership training that produces results, and evaluating those results (Bos, 2007).

The AACC replicated Shults's (2001) research on leadership development, as a strategy to close the leadership gap and prepare future leaders for community college presidency and other executive positions. The purpose of the study was to explore the issue of leadership succession.

Findings indicated that not only were presidency positions affected by succession and lack of preparation, but highly skilled professional positions would also suffer from the leadership gap. Furthermore, at the time of the study, no direct career paths were available for highly skilled professional positions, leaving a void in that area (Campbell, 2006). The AACC identified several high priority managerial skills for community college leaders: (a) planning and organizing, (b) quality orientation, (c) specialist knowledge, (d) problem solving and analysis, (e) strategic, and (f) motivation (Campbell, 2006). Additional activities beneficial to leadership development that should be included in leadership development programs are mentoring, on-the-job experience, and networking (McNair, Duree, & Ebbers, 2010).

Many schools have developed programs to grow their own leaders by establishing conferences, seminars, and training opportunities for middle and/or lower management. Schools that have initiated these programs include Georgia Perimeter College and Daytona Beach Community College (Basham et al., 2009). The University of Florida Department of Education Leadership, Administration, and Policy sponsors the annual Community College Futures Conference in Orlando, Florida. An average of 60 select chancellors, board of trustee members, presidents, and senior vice presidents from around the United States attend the conference, participating in discussions to identify the top issues facing community colleges (Basham et al., 2009).

There are also career-building options for midcareer college professionals. In the Massachusetts Community College Leadership Academy, experienced faculty are invited to speak to a group of fellows chosen from around the state. Participants can earn graduate credit by attending the seminars (Bagnato, 2004). In identifying the career paths of presidents, 22% were promoted into the presidency from within their present institutions, an additional 66% were

hired into their current positions from other community colleges, and the remainder moved into a presidency position from other sectors (Amey et al., 2002).

Personality Traits and Leadership Styles

Measuring the psychological characteristics of individuals began with Hippocrates in 400 BC, when he tried to define four basic temperament types, each caused by a predominant body fluid, or “humour.” In Hippocrates’ system, blood made an individual sanguine (optimistic), black bile caused melancholy (depression), yellow bile made a person choleric (irritable), and phlegm correlated with being phlegmatic (listless and sluggish). In the 19th century, Sir Francis Galton first attempted to measure individuals’ mental abilities by discriminating between stimuli and collating the results, a practice still prevalent today (Murphy, 2005).

Though using personality assessments to make hiring decisions has been criticized for many years, the strategy appears to be increasingly popular and prevalent, especially in the workplace. Particular jobs may have specific roles within an organization. Determining the work and management styles needed for such positions can allow employers to identify what criterion would allow a candidate to excel in that position. Personality tests can assist with this process (Berry et al., 2008).

Forty percent of medium-size companies reported using personality questionnaires to assist with interviewing and hiring. In the same report, only 4% of community colleges used this method. As a long-term strategy for hiring administrators, personality assessments ultimately save the college money, especially since choosing the right person for an administrative position is crucial for the college’s future. Though no candidate selection method is perfect, colleges should use multiple methods to maximize validity and make effective hiring decisions (Campbell, 2009).

Personality Traits

When determining an individual's personality traits, one commonsensical approach would be to ask the person. To find out how people feel, what they experience, what they remember, what their emotions and motives are like, and their reasons for acting as they do, a simple method is to ask them (Bernard, Walsh, & Mills, 2005, p. 40). The concept of personality includes how individuals interact with others, what their typical problem solving methods are, and how they react in the presence of difficult and unusual problems and situations (Balkis & Isiker, 2005, p. 286). Thus, personality types refer to people with similar intra-individual organizations of their experiences and behaviors.

Even so, empirical research over the last 50 years has treated personality almost exclusively from a variable-centered perspective, such as the FFM (Asendorpf, 2002, p. s1). Previous trait studies lacked theoretical explanations for the correlation between certain traits and potential aptitude in leadership roles. Traits can potentially explain why people seek leadership positions and why they act as they do in these positions (Hendricks & Payne, 2007, p. 318). The consistency of personality types is far from perfect. Consistency is difficult to achieve, because studies may differ in language, culture, selectivity and sample size, instrument used, self-report, and method for deriving personality types (Asendorpf, 2002).

Carl Jung (1875–1961) developed a personality typology that distinguished introversion and extroversion. Extroverts prefer to associate with people, to be involved in activities, and are enthusiastic about the external world. On the contrary, introverts prefer the internal world of thoughts, feelings, fantasies, and dreams (Boeree, 2006). According to Jung, a person functions in four basic ways: (a) sensing getting information by looking and listening; (b) thinking, decision making, rational, and evaluative thinking; (c) intuiting like sensing, perception skills; and (d) feeling or relying on one's emotional response (Boeree, 2006). To understand individual

differences in personality traits, one must consider the three central supertraits that Eysenck (1990) identifies as introversion versus extroversion, neuroticism, and psychoticism (Sato, 2005). Today, researchers still develop questionnaires based on these personality traits (Sato, 2005).

Leadership Styles

Traits such as intelligence, toughness, determination, flexibility, and vision are traditionally known as ideal for leadership. However, studies indicate that emotional intelligence, a soft skill, may be a key attribute for successful leadership (Basham & Mathur, 2010). Fulton-Calkins and Milling (2005) identified crucial leadership traits essential for future leaders: (a) learning from the past while embracing the future, (b) enriching the inward journey, (c) leading from core values, (d) having a vision and enriching connections, (e) searching for talent, (f) planning succession and providing leadership opportunities, (g) keeping faculty aware of new processes and changes, (h) seeking and maintaining business and industry connections, (i) making students the primary focus, and (j) preparing for the future workforce.

Organizations need frontline and middle managers to accept leadership accountability for driving results, managing teams, developing talent, and leading change. Though technological skills are useful and expected in leaders, more organizations are focusing on leaders who have the potential to develop and maintain relationships (Bos, 2007). In researching traits, leadership effectiveness is defined as both influencing a group toward a common goal and accepting consequences for one's actions (Hendricks & Payne, 2007). Leadership traits that are paramount to producing a trusting and collaborative environment are executive leadership styles, reflecting change, authority through influence, autonomy, and maintaining core academic values and mission (Smith & Adams, 2008). Creators of the authentic leadership construct claim that there is a decrease in ethical leadership and that existing frameworks are insufficient for developing future leaders. Ultimately, the goal is to train and develop leaders who will foster positive

environments and conduct business in an ethical manner (Cooper, Scandura, & Schriesheim, 2005).

Big Five Theory

The Big Five theory is a taxonomy of personality traits, a coordinate system that maps which traits go together. The Big Five are an empirically based phenomenon, not a theory of personality. The Big Five factors were discovered through a statistical procedure called “factor analysis,” which was used to analyze how various personality traits correlated in humans (Srivastava, 2009, p. 2).

The Big Five personality dimension is a scale that consists of 40 adjectives and is an abbreviated list of Goldberg’s 100 adjectives, using a 5-point accuracy scale. The theory identifies five broad factors of personality traits—extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience (Srivastava, 2009). This personality model is well established and frequently used to measure personality on a global level.

Personality has been used to understand leadership because behavior is a function of personality; what people do is a function of who they are (Strang & Kuhnert, 2009). Hendricks and Payne (2007) examined traits as mediators of relationships between distal traits and leadership effectiveness, focusing on goal orientation, motivation to lead, and leadership self-efficacy, controlling for the Big Five personality traits. Goal orientation was positively related to leadership self-efficacy, suggesting that individuals with leadership goal orientation more likely want to lead because they feel obligated to lead (Hendricks & Payne, 2007). Ones, Viswesaran, and Dilchert (2005) are known as providers of the best personality analysis explanation, portraying traits such as extroversion, conscientiousness, and openness to experience. The five primary leadership theories—trait theory, power and influence theory, behavioral theory, symbolic and cultural theory, and contingency theory—have also been used in the study of

leadership. Behavioral leadership theory proposes that leadership traits are not innate but must be fostered through teaching and experience (Ones, Viswesaran, & Dilchert, 2005). Compared to other theories, the Big Five has been known to provide concise information regarding personality analysis. On this scale, leaders typically score higher in extroversion, conscientiousness, and openness to experience (Won, 2006).

The Big Five, or Five-Factor Model, was coined by Lew Goldberg and originally associated with studies of personality traits used in natural language. The term “Five-Factor Model” (FFM) has been more commonly associated with studies of traits that use personality questionnaires (Srivastava, 2009, p. 2). The FFM has been used to assess desirable personality and work outcomes, such as job performance and satisfaction. More recently, the FFM has been used to predict less desired personality characteristics and job outcomes, highlighting dysfunctional behavior and performance (De Fruyt et al., 2009). The FFM was formulated by McCrae and Costa (1990). The theory includes a number of propositions about the nature, origins, and development of personality traits, and about the relationship of traits to many of the other personality variables. The FFM presents a biological account of personality traits, in which learning and experience have little, if any, influence on the Big Five (Srivastava, 2009).

Thinking Style

Thinking style is defined as a preferred way of thinking (Balkis & Isiker, 2005). The theory of mental self-government addresses different thinking styles. The metaphor “mental self-government” portrays the way the human mind works. Just as there are different ways to govern society, there are different ways to manage people’s daily activities. These ways managing daily activities are called “thinking styles.” This theory describes 13 thinking styles that fall along five dimensions. These functions include the legislative, executive, and judicial styles; forms, including the hierarchical, oligarchic, monarchic, and anarchic styles; levels,

including the global and local styles; scopes, including the internal and external styles; and learning, including the liberal and conservatives styles of mental self-government (Zhang & Huang, 2001, p. 466).

Thinking styles depend on time, situations, and culture. There are two types of thinking styles. The first, creativity, is more complex (e.g., legislative, judicial, and liberal), and the second style is more simplistic (e.g., executive and conservative) (Zhang & Huang, 2001). Practical research exists that investigates thinking styles and personality types. Thinking style and personality type affect decision making, judgment, evaluation, problem solving, and communication (Balkis & Isiker, 2005). The literature supports that some thinking styles and personality types are significantly correlated (Balkis & Isiker, 2005).

Leadership and Community College Presidents

Malm (2008) observed organizational challenges and uncertainties by observing six community college presidents through guided conversations, for the purpose of identifying organizational pressures, change processes, and leadership approaches. Participants defined leadership as mobilizing people to a common goal, vision, risk taking, providing direction, accountability, and personal responsibility. Three leadership approaches are highlighted—situational, collaborative, and directive. Situational leadership is an approach that varies from institution to institution, depending on organizational changes and relationship dynamics between the leaders and others. The presidents described the collaborative approach as visionary, empowering, and inclusive. The goal of this approach is to build consensus, maintain flexibility, and communicate. Two of the presidents used the directive approach in certain situations. This leadership approach is affiliated with power and how the leader used that power at their institution. In this particular case, the community college presidents obtained their leadership skills through personal and professional experience, participating in formal and

informal training, leadership assessments, observing successful leaders, and interviewing for president positions at various institutions (Malm, 2008).

Presidential Reflection on Leadership Style

Previous studies have investigated community college presidential traits and characteristics. However, few studies have examined presidential reflection. In a 2007 study by Stoeckel and Davies, eight community college presidents were interviewed. Three major characteristics emerged—mindfulness, discovery, and authenticity. Mindfulness is a deliberate attentiveness to the internal and external environment, people, and Socratic dialogue. Discovery involves a self-exploratory journey to achieve personal understanding by paying attention to origins and values, personal growth, and vulnerability and struggle. The presidents demonstrated authenticity, searching for personal growth based on self-understanding. Actions are measured by values and being consistent in the process (Stoeckel & Davies, 2007). Additionally, the presidents felt their behavior revealed their authentic selves. Selecting and prizing values was inadequate; the presidents felt they had to act on what they cherished. Expressions of authenticity were critical to merging the themes of mindfulness and discovery in their self-reflections. In acting on their values, presidents transformed self-reflection from an intellectual exercise into meaningful expression. Authenticity was based on individual presidential values and institutional values (Stoeckel & Davies, 2007, p. 908).

The AACC identified four traits of effective leaders—quiet confidence, willingness to learn from mistakes, excellent communication skills, and ability to replenish oneself through relaxation (Patton, 2004). Campbell et al. (2010) authored an update of the AACC research, identifying valuable competencies for community colleges: (a) organizational strategy, (b) resource management, (c) communication, (d) collaboration, (e) advocacy, and (f) professionalism. Results from a national study of community college presidents, conducted by

McNair, Duree, and Ebbers's (2010), corroborated the competencies identified by the AACC. Respondents agreed that the six competencies were valuable for leadership preparation and should be considered when creating leadership development programs.

Though analytical skills and reasoning have been traditionally considered the most essential leadership traits, emotional intelligence is perhaps a more important and preferred skill, one that elevates outstanding leaders above average leaders. Self-awareness, self-regulation, motivation, sympathy, and social interaction are the attributes of emotional intelligence. Individuals can improve emotional intelligence by committing to the learning process and receiving support and executive coaching (Campbell et al., 2010). Authentic leadership is thought to be necessary for successful, functional leaders. Authentic leaders are described as confident, hopeful, optimistic, resilient, and of high moral character. Like social intelligence, authenticity is desired in leadership positions (Cooper et al., 2005). Finally, corresponding with the AACC research, resource management is identified as one of the most important skills needed in community college leadership. Aspiring leaders need to develop skills in budgeting and other fiscal issues, knowledge of local and state funding, and technical nuances of budgets (McNair et al., 2010).

CHAPTER 3 METHODOLOGY

In this chapter, an overview of the research methodology precedes a description of purpose of my study, the research question, the research hypotheses, the sample population, the research framework, the research instrument, the data collection, and the data analysis to be used in my study.

Research Methodology

My study employs quantitative analysis as the primary research methodology. The research design examined the relationships among three groups, using a one-time administered assessment. The three groups were CCWDEs from a national community college workforce organization, community college business officers, and corporate executives from a transportation company located in Florida. My study design was retrospective, using a post hoc dataset. The data was collected during a previous administration of the Wave® personality assessment, which measured personality characteristics of community college administrators. The dependent variables, leadership characteristics and leadership competencies, were ordinal and categorical, and the independent variable was leadership level.

Research Framework

Constructivism, one of several interpretivist paradigms, concerns the ways people construct their worlds. Constructivist researchers investigate meanings about broad concepts, such as cultural values, or more specific issues or ideas, such as the possible features of a dynamic, creative public library in the future and how to create it. There are two major constructivist approaches, one focusing on individual, personal constructions and the other on shared meanings, which reflect social constructions (Williamson, 2006, p. 85). Positivist approaches to the social sciences assume things can be studied as hard facts, and the

relationships among these facts can be established as scientific laws. For positivists, such laws have the status of truth, and social objects can be studied in a similar manner as natural objects. The basic reasoning of positivism assumes that an objective reality exists, one that is independent of human behavior and is therefore not a creation of the human mind. Auguste Comte suggested that all real knowledge should be derived from human observation of objective reality (Crossan, 2003, p. 49). The design of my study is based on positivism.

Purpose of the Study

The purpose of my study was to determine if differences exist among CCWDEs, CCBOs, and corporate executives. The information derived from this exploration could serve as a guiding factor in the creation of leadership development programs, which would be designed to highlight the crucial skills needed to effectively lead and operate higher education institutions. Such information could also enhance existing leaders' skills and develop future community college leaders.

Research Question

What is the relationship between leadership styles and personality traits of community college workforce development executives, community college business officers, and corporate executives?

Research Hypotheses

H₁: There will be no differences between leadership styles and personality traits of community college workforce development executives and corporate executives.

H₂: There will be no differences between leadership styles and personality traits of community college business officers and corporate executives.

H₃: There will be no differences between leadership styles and personality traits of community college workforce development executives and community college business officers.

The Sample Population

The sample population was composed of executives from both community colleges and the corporate realm. The first group comprised CCWDEs from across the United States ($N = 27$), who also maintained membership in the national community college workforce development organization. The titles of those individuals included: Assistant Dean of Continuing Education and Workforce Development; Assistant Dean of Economic Development; Associate Vice President of Workforce Development; Business and Industry Training Director; Dean of Continuing Education and Workforce Development; Dean of Corporate and Continuing Education; Dean of Corporate Services; Director of the Adult Education Center; Director of Workforce Training; Executive Director, Center for Professional Development; Executive Director, Center for Workforce Solutions; Personal and Professional Development Director; Vice President of Workforce Development; and Vice Provost for Economic and Workforce Development.

The second group comprised corporate executives from a transportation corporation located in Florida ($N = 21$). The corporate executives' ranks included executives, executive managers, human resources personnel, and vice presidents.

The third group, community college business officers ($N = 24$), represented personnel from community college business operations offices. This group included chief executive officers, chief business officers, controllers/accountants, administrative services officers, purchasing personnel, information technology personnel, and auxiliary services officers.

Research Instrument

The Wave® personality assessment instrument was used for my research. The instrument was developed by Peter Saville of Saville Consulting Group, Ltd. (SCG), utilizing more than 30 years of research and development in industrial-organizational psychology assessments (Basham,

2007, p.61). The Wave® instrument is proprietary and protected under copyright laws, both within the United States and internationally; therefore, the entire assessment cannot be presented in my paper. However, the theoretical constructs and reporting mechanisms can be presented.

The Wave® is the latest design of the newest generation of behavioral questionnaires (O’Daniels, 2009, p. 34). The Saville Consulting Wave® Professional Styles development program specifically focuses on creating cutting-edge assessments. The Wave® is grounded in the theories of the Five-Factor Model that measures 108-facets using nine-point Likert-type normative scale items (very strongly disagree, strongly disagree, disagree, slightly disagree, unsure, slightly agree, agree, strongly agree, and very strongly agree).

The Wave® questionnaire measures personal motives, talents, competency potential, and preferred culture, an integrated model that captures individual development and fosters career planning and performance management. The assessment consists of 215 questions divided into 12 competencies and 36 characteristics, measures 108 behavioral facets (Figures A-1–A-4). After finishing the assessment, which takes approximately 40 minutes, the participant receives a personal report (Saville, MacIver, & Kurz, 2009).

Instrument Validity and Reliability

The Wave® draws on items from a database of over 5,000 questions, to assess talent and motive in a way that directly links to competencies and job performance. The Wave® has strong reliabilities averaging 0.86 and optimized validity through the use of normative and ipsative response formats. Validity with managers and professionals averaged 0.46. In a 2008 validation study, Wave® Professional Styles outperformed the OPQ32i®, NEO PI-R™, Hogan Personality Inventory, and 16PF® on both work competencies and overall global measures of performance (Saville et al., 2009).

The WAVE® has been correlated against the 16PF®, the Myers-Briggs Type Indicator®, the Gordon Personal Profile Inventory, and the DISC. The WAVE® is a valid instrument based on construct validity. Reliability and validity of the Wave® has been consistent over time and is resilient to the flaws of personality testing, such as overcoming issues of self-rated scales and mode of delivery, and maintains validity regardless of culture and language differences. Based on the history of the Wave® as a robust instrument, I selected it as the assessment tool for my study (Basham, 2007). The dynamic normative and ipsative format, coupled with invited and supervised online access, reduces the risk of dishonest results. Also, normative and ipsative results work in concert with rating acquiescence and response consistency to detect dishonesty easily (Saville et al., 2009).

Data Collection

In July and October 2006, SCG facilitated a train-the-trainer session in Jacksonville, Florida. Participants from fifteen community colleges in 12 states and affiliate councils from the AACC were invited to participate in the norming process. The online questionnaire was available between August and December 2006, and a personal report was provided at the end of the data collection process. Privacy and anonymity was assured, following the ethical standards of the American Psychological Association. SCG agreed to release a small subset of data for the purpose of dissertation research, provided that the company was granted the first viewing rights of the final product after the dissertation defense (Basham, 2007).

Data Analysis

Results from the Wave® Psychometric Profile are presented in the Expert Report. The 9-point Likert responses are converted into standardized Sten scores that allow ordinal data to be interpreted with the standardized bell curve scoring system. With this conversion, 68% of candidate scores fall within one standard deviation of the mean ($M = 5$), and scores within the 1–

2 or 10 range are at least three standard deviations from the mean (O'Daniels, 2009). The data was examined to determine if pairwise comparisons and relationships existed for the leadership characteristics among the three groups. The data indicated that this was the case, so comparisons among individual traits were examined, to determine strength and direction of those relationships. Overall, the results provided sufficient support for my research questions and hypotheses.

This chapter presented the research methodology, purpose of my study, the research question, the research hypotheses, the sample population, the research framework, the research instrument, the data collection, and the data analysis used in my study. The next chapter presents the data analysis results.

CHAPTER 4 RESULTS

In this chapter the data analysis results of the descriptive data, analysis of variance (ANOVA), and follow-up procedures are presented. The data was analyzed using the Statistical Package for the Social Sciences (SPSS) version 17.0 software. These analysis techniques were selected to demonstrate the strength and directions of any relationships between the personality traits and leadership styles of CCWDEs and corporate executives.

The Tukey-Kramer method was preferred in conjunction with ANOVA, to determine which means were significantly different from one another. This method compared all possible pairs (pairwise comparisons, comparing entities in pairs) of means for all three groups, with a distribution similar to the t-test. Results provide a narrower confidence limit, which is more powerful than Scheffé's method.

Descriptive Data

The means and standard deviations for the CCWDEs, CCBOs, and corporate executives are presented in Table 4-1 (Psychometric Profile descriptive data) and Table 4-2 (Competency Profile descriptive data). The descriptive data results and analysis of the results are discussed next.

Descriptive Data Results

The data for the CCWDEs appeared to be distributed normally, with no large deviations (Tables 4-1 and 4-2). The three highest mean Sten scores of leadership Psychometric Profile data for CCWDEs were striving ($M = 8.00$), strategic ($M = 7.85$), and directing ($M = 7.67$). The three lowest mean Sten scores of leadership Psychometric Profile data for CCWDEs were challenging ($M = 4.33$), rational ($M = 4.96$), and resolving ($M = 4.96$) (Table 4-3). The three highest mean Sten scores of leadership Competency Profile data for CCWDEs were achieving

success ($M = 7.96$), providing leadership ($M = 7.63$), creating innovation ($M = 7.41$). The three lowest mean Sten scores of leadership Competency Profile data for CCWDEs were executing assignments ($M = 5.33$), providing support ($M = 5.89$), and communicating with people ($M = 5.96$) (Table 4-4).

The data for CCBOs appeared evenly distributed, with no large deviations (Tables 4-1 and 4-2). The highest mean Sten scores of leadership Psychometric Profile data for CCBOs were strategic ($M = 7.08$), change oriented ($M = 6.92$), and empowering ($M = 6.75$). The three lowest mean Sten scores of leadership Psychometric Profile data for CCBOs were accepting ($M = 4.75$), conforming ($M = 4.92$), and engaging ($M = 4.96$) (Table 4-3). The three highest Sten scores of leadership Competency Profile data for CCBOs were creating innovation ($M = 6.88$), evaluating problems ($M = 6.75$), and achieving success ($M = 6.71$). The three lowest Sten scores of leadership Competency Profile data for CCBOs were communicating with people ($M = 5.42$), executing assignments ($M = 5.42$), and providing support ($M = 5.46$) (Table 4-4).

The data for corporate executives appeared normally distributed, with no large deviations (Tables 4-1 and 4-2). The three highest mean Sten scores of leadership Psychometric Profile data for corporate executives were analytical ($M = 8.20$), abstract ($M = 7.30$), and rational ($M = 7.10$). The three lowest mean Sten scores of leadership Psychometric Profile data for corporate executives were engaging ($M = 4.20$), self-promoting ($M = 4.25$), and attentive ($M = 4.95$) (Table 4-3). The three highest mean Sten scores of leadership Competency Profile data for corporate executives were evaluating problems ($M = 8.05$), creating innovation ($M = 6.80$), and making judgments ($M = 7.45$). The three lowest mean Sten scores of leadership Competency Profile data for corporate executives were communicating with people ($M = 4.25$), providing support ($M = 5.30$), and projecting confidence ($M = 5.85$) (Table 4-4).

Descriptive Data Analysis Results

When comparing the three groups, some similarities and differences were noted in the descriptive data, which are discussed herein. The similarities and differences among the psychometric data will be discussed first, followed by the competencies data and a summary.

In the psychometric data there were almost no personality traits shared among the three groups (Table 4-3), except for being strategic (a common trait of CCWDEs [$M = 7.85$] and CCBOs [$M = 7.08$]). However, being strategic was high rated in the corporate executive group ($M = 7.08$). This finding did not prevent the assertion that this was a high-rated personality trait similarly found among all three groups. Likewise, being engaging was one of the lower self-rated personality traits shared among the three groups. Since the mean Sten score of each group equaled or almost equaled the mean Sten of 5.00, there was no cause to find “being engaging” was a personality trait lacking in any of the groups. The trait happened to be the lowest rated, and the other personality traits were rated higher.

Nevertheless, the competencies data revealed several shared competencies (Table 4-4). But these results might be attributed to the smaller number of variables in the competency section (12 rather than 36). The competencies data showed similarities among all three groups for creating innovation, communicating with people, and providing support.

The CCWDEs tended to rate themselves more positively or rate themselves higher on many of the leadership characteristics, as evidenced by the mean Sten scores (Table 4-1 and Table 4-2). In the CCWDE mean scores, there were 10 mean Sten scores above 7.00, representing approximately one standard deviation from the mean Sten score of 5.00, whereas there were no mean Sten scores above 7.00 for the corporate executive group and only one mean Sten score above 7.00 for the CCBOs group. In contrast, there were no mean Sten scores below one standard deviation for the groups, which suggested similarities among the groups, although

conclusions could not be drawn from the mean Sten scores. Thus, further analysis using tests to compare the strengths and directions among the mean Sten scores was conducted.

Research Hypothesis One

The first hypothesis examined the relationship between personality traits and leadership styles of CCWDEs and corporate executives. This hypothesis was analyzed using descriptive statistics, t-tests, one-way ANOVA, and post hoc tests.

H₁: There will be no differences between leadership styles and personality traits of community college workforce development executives and corporate executives. For hypothesis one, the ANOVA results (Table 4-5) showed that corporate executives significantly differed in 2 of the 36 dimensions of the psychometric profile rational, and resolving ($p < 0.05$) did not significantly differ in any of the 12 dimensions of the competency profile (Table 4-6).

CCWDEs significantly differed in 4 of the 36 dimensions of the psychometric profile, directing, accepting, self-assured ($p < 0.05$), and striving ($p < 0.00$) (Table 4-5), and in 2 of the 12 dimensions of the competency profile, achieving success and providing leadership ($p < 0.05$) (Table 4-6).

Research Hypothesis Two

The second research hypothesis examined the relationship between personality traits and leadership styles of CCBOs and corporate executives. This hypothesis was analyzed using descriptive statistics, t-tests, one-way ANOVA, and post hoc tests.

H₂: There will be no differences between leadership styles and personality traits of community college business officers and corporate executives. There were differences between CCBOs and corporate executives in 2 of the 36 dimensions of the psychometric profile, empowering and composed ($p < 0.05$) (Table 4-5).

CCBOs (Table 4-5) differed in 4 of the 36 dimensions of the psychometric profile, practically minded, analytical, factual, and conforming ($p < 0.05$), and in 1 of the 12 dimensions of the competency profile, evaluating problems ($p < 0.05$) (Table 4-6).

Research Hypothesis Three

The third hypothesis examined the relationship between personality traits and leadership styles of CCWDEs and CCBOs. This hypothesis was analyzed using descriptive statistics, t-tests, one-way ANOVA, and post hoc tests.

H₃: There will be no differences between leadership styles and personality traits of community college workforce development executives and community college business officers. CCWDEs (Table 4-5) differed from CCBOs in 6 of the 36 dimensions of the psychometric profile, directing, empowering, articulate, self-promoting, striving, and enterprising ($p < 0.05$), and in 2 of the 12 dimensions of the competency profile, achieving success ($p < 0.05$) and providing leadership ($p < 0.01$) (Table 4-6).

CCBOs (Table 4-5) differed from CCWDEs in 5 of the 36 dimensions of the psychometric profile abstract, analytical, challenging, meticulous, and conforming ($p < 0.05$), rational ($p < 0.000$), and did not score significantly higher in any of the 12 dimensions of the competency profile (Table 4-6).

Table 4-1. Psychometric profile descriptive data.

Psychometric profile	CCWDEs (<i>n</i> = 27)		CCBOs (<i>n</i> = 24)		Corporate executives (<i>n</i> = 20)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Inventive	6.89	1.72	6.58	2.00	5.65	2.08
Abstract	6.11	1.60	6.58	1.67	7.30	1.75
Strategic	7.85	1.83	7.08	1.67	6.90	2.05
Insightful	6.93	1.38	6.08	1.44	7.05	1.54
Practically minded	5.56	1.50	4.79	1.79	6.35	1.76
Learning oriented	6.11	1.60	6.54	1.82	6.60	1.64
Analytical	6.48	1.81	6.58	1.98	8.20	1.85
Factual	5.96	2.03	5.29	1.85	6.70	1.72
Rational	4.96	1.87	6.29	1.92	7.10	1.07
Purposeful	6.74	1.58	6.29	1.63	5.75	1.68
Directing	7.67	1.24	6.33	1.66	6.50	1.40
Empowering	6.93	1.44	6.75	1.70	5.45	1.23
Convincing	5.59	2.00	5.96	1.94	5.70	1.89
Challenging	4.33	1.92	5.29	1.57	5.70	2.18
Articulate	6.85	1.73	6.25	1.51	5.55	2.04
Self-promoting	5.52	1.93	5.00	1.35	4.25	1.48
Interactive	5.52	1.91	5.46	1.41	5.00	1.84
Engaging	5.30	1.77	4.96	1.76	4.20	1.85
Involving	5.33	1.69	5.92	2.22	5.55	1.90
Attentive	5.48	1.97	5.42	1.69	4.95	1.79
Accepting	6.07	1.77	4.75	1.57	5.50	1.70
Resolving	4.96	1.32	6.00	1.69	5.30	1.53
Self-assured	6.70	1.75	5.42	1.93	6.05	1.85
Composed	6.37	1.57	6.54	1.89	5.20	1.79
Receptive	6.04	2.14	5.33	1.46	6.40	1.88
Positive	6.07	2.29	5.42	1.35	5.50	2.40
Change oriented	6.33	1.71	6.92	1.67	6.60	1.57
Organized	6.56	1.42	5.88	2.13	5.75	1.94
Principled	6.78	1.63	6.17	1.83	6.90	1.52
Activity oriented	5.96	1.58	5.92	1.56	5.85	1.87
Dynamic	7.56	2.45	6.17	2.06	6.10	2.00
Striving	8.00	1.24	6.00	1.87	6.75	1.29
Enterprising	7.07	1.82	6.29	2.10	5.05	1.32
Meticulous	5.19	1.73	5.50	2.04	6.54	1.19
Reliable	5.96	1.87	5.67	1.90	5.55	1.85
Conforming	4.63	1.55	4.92	1.93	6.25	2.02

Note. Equal variances assumed, *df* = 36

Table 4-2. Competencies profile descriptive data.

Competencies profile	CCWDEs (n = 27)		CCBOs (n = 24)		Corporate executives (n = 20)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Achieve success	7.96	1.65	6.71	2.14	6.20	1.44
Adjust to change	7.19	1.78	6.63	1.58	6.50	1.54
Communicate	5.96	1.89	5.42	1.56	4.25	1.74
Creating innovation	7.41	1.74	6.88	1.94	6.80	2.02
Evaluate problems	6.44	1.76	6.75	1.96	8.05	1.39
Executing assignments	5.33	1.82	5.42	2.10	6.00	1.84
Make judgments	7.33	1.30	6.58	1.84	7.45	1.47
Presenting information	6.89	1.53	6.50	1.72	6.05	1.85
Projecting confidence	6.78	1.28	6.58	1.77	5.85	2.08
Providing leadership	7.63	1.21	6.54	1.64	6.05	1.39
Providing support	5.89	1.76	5.46	1.93	5.30	2.00
Structuring tasks	7.26	1.48	6.13	2.23	6.30	2.00

Note. Equal variances assumed, $df = 36$.

Table 4-3. Comparison of three highest/lowest mean Sten scores for psychometric profile.

	CCWDEs		CCBOs		Corporate executives	
	Psychometric profile	<i>M</i>	Psychometric profile	<i>M</i>	Psychometric profile	<i>M</i>
Highest						
1	striving	8.00	strategic	7.08	analytical	8.20
2	strategic	7.85	change oriented	6.92	abstract	7.30
3	directing	7.67	empowered	6.75	rational	7.10
Lowest						
34	challenging	4.33	accepting	4.75	engaging	4.20
35	rational	4.96	conforming	4.92	self-promoting	4.25
36	resolving	4.96	engaging	5.96	attentive	4.95

Table 4-4. Comparison of three highest/lowest mean Sten scores for competencies profile.

	CCWDEs		CCBOs		Corporate executives	
	Competencies profile	<i>M</i>	Competencies profile	<i>M</i>	Competencies profile	<i>M</i>
Highest						
1	achieving success	7.96	creating innovation	7.08	evaluating problems	8.20
2	providing leadership	7.63	evaluating problems	6.75	making judgments	7.45
3	creating innovation	7.41	achieving success	6.71	creating innovation	6.80
Lowest						
10	executing assignments	5.33	communication ¹	5.42	communication ¹	4.25
11	providing support	5.89	executing assignments	5.42	providing support	5.30
12	communication ¹	5.96	providing support	5.46	projecting confidence	5.85

¹communicating with people

Table 4-5. One-way ANOVA results of psychometric profile dimensions.

Section	Dimension	$F(1, 52)$	p	M	SD
Imaginative	Inventive	2.494	0.090	6.440	1.962
	Abstract	2.929	0.060	6.610	1.711
	Strategic	1.841	0.167	7.320	1.865
Investigative	Insightful	3.078	0.053	6.680	1.491
	Practically minded	4.721	0.012*	5.520	1.764
	Learning oriented	0.621	0.540	6.390	1.677
Evaluative	Analytical	5.704	0.005*	7.000	2.000
	Factual	3.041	0.054	5.940	1.941
	Rational	9.503	0.000*	6.010	1.901
Assertive	Purposeful	2.134	0.126	6.310	1.653
	Directing	6.485	0.003*	6.890	1.545
	Empowering	6.439	0.003*	6.450	1.593
Impactful	Convincing	0.230	0.795	5.750	1.933
	Challenging	3.316	0.042*	5.040	1.953
	Articulate	3.176	0.048*	6.280	1.806
Sociable	Self-promoting	3.484	0.036*	4.990	1.686
	Interactive	0.581	0.562	5.350	1.725
	Engaging	2.197	0.119	4.870	1.820
Supportive	Involving	0.579	0.563	5.590	1.932
	Attentive	0.547	0.581	5.310	1.817
	Accepting	3.923	0.024*	5.460	1.755
Resilient	Resolving	3.066	0.053	5.410	1.555
	Self-assured	3.111	0.051	6.080	1.895
	Composed	3.746	0.029*	6.100	1.814
Flexible	Receptive	1.911	0.156	5.900	1.883
	Positive	0.771	0.467	5.690	2.047
	Change oriented	0.788	0.459	6.610	1.652
Structured	Organized	1.376	0.260	6.100	1.845
	Principled	1.282	0.284	6.610	1.677
	Activity oriented	0.027	0.974	5.920	1.637
Driven	Dynamic	3.479	0.036*	6.680	2.279
	Striving	1.694	0.000*	6.970	1.707
	Enterprising	7.298	0.001*	6.240	1.953
Conscientious	Meticulous	3.243	0.045*	5.650	1.774
	Reliable	0.311	0.734	5.750	1.857
	Conforming	4.928	0.010*	5.190	1.922

Table 4-6. Pairwise comparisons of psychometric profile variables using Tukey-Kramer method.

Dependent variable	Group		<i>I - J</i> Mean difference	<i>SE</i>	<i>p</i>	95% Confidence interval	
	<i>I</i> Var1	<i>J</i> Var2 Var3				Lower	Upper
Inventive	CCWDE	CCBO	1.239	0.567	.081	-0.12	2.60
		Corp	0.306	0.539	.838	-0.99	1.60
	CCBO	CCWDE	-1.239	0.567	.081	-2.60	0.12
		Corp	-0.933	0.582	.250	-2.33	0.46
	Corp	CCWDE	-0.306	0.539	.838	-1.60	0.99
		CCBO	0.933	0.582	.251	-0.46	2.33
Abstract	CCWDE	CCBO	-1.189	0.491	.047*	-2.37	-0.01
		Corp	-0.472	0.467	.573	-1.59	0.65
	CCBO	CCWDE	1.189	0.491	.047*	0.01	2.37
		Corp	0.717	0.504	.336	-0.49	1.93
	Corp	CCWDE	0.472	0.467	.573	-0.65	1.59
		CCBO	-0.717	0.504	.336	-1.93	0.49
Strategic	CCWDE	CCBO	0.952	0.544	.194	-0.35	2.25
		Corp	0.769	0.517	.304	-0.47	2.01
	CCBO	CCWDE	-0.952	0.544	.194	-2.25	0.35
		Corp	-0.183	0.558	.942	-1.52	1.15
	Corp	CCWDE	-0.769	0.517	.304	-2.01	0.47
		CCBO	0.183	0.558	.942	-1.15	1.52
Insightful	CCWDE	CCBO	-0.124	0.427	.955	-1.15	0.90
		Corp	0.843	0.406	.103	-0.13	1.82
	CCBO	CCWDE	0.124	0.427	.955	-0.90	1.15
		Corp	0.967	0.438	.078	-0.08	2.02
	Corp	CCWDE	-0.843	0.406	.103	-1.82	0.13
		CCBO	-0.967	0.438	.078	-2.02	0.08

Table 4-6. Continued.

Dependent variable	Group		<i>I - J</i> Mean difference	<i>SE</i>	<i>p</i>	95% Confidence interval	
	<i>I</i> Var1	<i>J</i> Var2 Var3				Lower	Upper
Practically minded	CCWDE	CCBO	-0.794	0.495	.250	-1.98	0.39
		Corp	0.764	0.470	.243	-0.36	1.89
	CCBO	CCWDE	0.794	0.495	.250	-0.39	1.98
		Corp	1.558	0.508	.009*	-0.34	2.77
	Corp	CCWDE	-0.764	0.470	.243	-1.89	0.36
		CCBO	-1.558	0.508	.009*	-2.77	-0.34
Learning oriented	CCWDE	CCBO	-0.489	0.498	.590	-1.68	0.70
		Corp	-0.431	0.473	.636	-1.56	0.70
	CCBO	CCWDE	0.489	0.498	.590	-0.70	1.68
		Corp	0.058	0.511	.993	-1.17	1.28
	Corp	CCWDE	0.431	0.473	.636	-0.70	1.56
		CCBO	-0.058	0.511	.993	-1.28	1.17
Analytical	CCWDE	CCBO	-1.719	0.554	.008*	-3.05	-0.39
		Corp	-0.102	0.527	.980	-1.36	1.16
	CCBO	CCWDE	1.719	0.554	.008*	0.39	3.05
		Corp	1.617	0.569	.016*	0.25	2.98
	Corp	CCWDE	0.102	0.527	.980	-1.16	1.36
		CCBO	-1.617	0.569	.016*	-2.98	-0.25
Factual	CCWDE	CCBO	-0.737	0.557	.387	-2.07	0.60
		Corp	0.671	0.529	.418	-0.60	1.94
	CCBO	CCWDE	0.737	0.557	.387	-0.60	2.07
		Corp	1.408	0.571	.042*	0.04	2.78
	Corp	CCWDE	-0.671	0.529	.418	-1.94	0.60
		CCBO	-1.408	0.571	.042*	-2.78	-0.04

Table 4-6. Continued.

Dependent variable	Group		<i>I</i> – <i>J</i> Mean difference	<i>SE</i>	<i>p</i>	95% Confidence interval	
	<i>I</i> Var1	<i>J</i> Var2 Var3				Lower	Upper
Rational	CCWDE	CCBO	-2.137	0.503	.000*	-3.34	-0.93
		Corp	-1.329	0.478	.019*	-2.47	-0.18
	CCBO	CCWDE	2.137	0.503	.000*	0.93	3.34
		Corp	0.808	0.516	.267	-0.43	2.05
	Corp	CCWDE	1.329	0.478	.019*	0.18	2.47
		CCBO	-0.808	0.516	.267	-2.05	0.43
Purposeful	CCWDE	CCBO	0.991	0.480	.105	-0.16	2.14
		Corp	0.449	0.456	.589	-0.64	1.54
	CCBO	CCWDE	-0.991	0.480	.105	-2.14	0.16
		Corp	-0.542	0.492	.517	-1.72	0.64
	Corp	CCWDE	-0.449	0.456	.589	-1.54	0.64
		CCBO	0.542	0.492	.517	-0.64	1.72
Directing	CCWDE	CCBO	1.167	0.424	.020*	0.15	2.18
		Corp	1.333	0.403	.004*	0.37	2.30
	CCBO	CCWDE	-1.167	0.424	.020*	-2.18	-0.15
		Corp	0.167	0.435	.922	-0.88	1.21
	Corp	CCWDE	-1.333	0.403	.004*	-2.30	-0.37
		CCBO	-0.167	0.435	.922	-1.21	0.88
Empowering	CCWDE	CCBO	1.476	0.437	.003*	0.43	2.52
		Corp	0.176	0.416	.906	-0.82	1.17
	CCBO	CCWDE	-1.476	0.437	.003*	-2.52	-0.43
		Corp	-1.300	0.449	.014*	-2.37	-0.23
	Corp	CCWDE	-0.176	0.416	.906	-1.17	0.82
		CCBO	1.300*	0.449	.014*	0.23	2.37

Table 4-6. Continued.

Dependent variable	Group		<i>I - J</i> Mean difference	<i>SE</i>	<i>p</i>	95% Confidence interval	
	<i>I</i> Var1	<i>J</i> Var2 Var3				Lower	Upper
Convincing	CCWDE	CCBO	-0.107	0.577	.981	-1.49	1.27
		Corp	-0.366	0.548	.783	-1.68	0.95
	CCBO	CCWDE	0.107	0.577	.981	-1.27	1.49
		Corp	-0.258	0.592	.900	-1.68	1.16
	Corp	CCWDE	0.366	0.548	.783	-0.95	1.68
		CCBO	0.258	0.592	.900	-1.16	1.68
Challenging	CCWDE	CCBO	-1.367	0.558	.044*	-2.70	-0.03
		Corp	-0.958	0.531	.175	-2.23	0.31
	CCBO	CCWDE	1.367	0.558	.044*	0.03	2.70
		Corp	0.408	0.573	.757	-0.96	1.78
	Corp	CCWDE	0.958	0.531	.175	-0.31	2.23
		CCBO	-0.408	0.573	.757	-1.78	0.96
Articulate	CCWDE	CCBO	1.302	0.517	.037*	0.06	2.54
		Corp	0.602	0.492	.443	-0.58	1.78
	CCBO	CCWDE	-1.302	0.517	.037*	-2.54	-0.06
		Corp	-0.700	0.531	.390	-1.97	0.57
	Corp	CCWDE	-0.602	0.492	.443	-1.78	0.58
		CCBO	0.700	0.531	.390	-0.57	1.97
Self-promoting	CCWDE	CCBO	1.269	0.481	.027*	0.12	2.42
		Corp	0.519	0.457	.496	-0.58	1.61
	CCBO	CCWDE	-1.269	0.481	.027*	-2.42	-0.12
		Corp	-0.750	0.493	.288	-1.93	0.43
	Corp	CCWDE	-0.519	0.457	.496	-1.61	0.58
		CCBO	0.750	0.493	.288	-0.43	1.93

Table 4-6. Continued.

Dependent variable	Group		<i>I - J</i> Mean difference	<i>SE</i>	<i>p</i>	95% Confidence interval	
	<i>I</i> Var1	<i>J</i> Var2 Var3				Lower	Upper
Interactive	CCWDE	CCBO	0.519	0.512	.571	-0.71	1.74
		Corp	0.060	0.487	.992	-1.11	1.23
	CCBO	CCWDE	-0.519	0.512	.571	-1.74	0.71
		Corp	-0.458	0.525	.659	-1.72	0.80
	Corp	CCWDE	-0.060	0.487	.992	-1.23	1.11
		CCBO	0.458	0.525	.659	-0.80	1.72
Engaging	CCWDE	CCBO	1.096	0.528	.102	-0.17	2.36
		Corp	0.338	0.502	.780	-0.87	1.54
	CCBO	CCWDE	-1.096	0.528	.102	-2.36	0.17
		Corp	-0.758	0.542	.347	-2.06	0.54
	Corp	CCWDE	-0.338	0.502	.780	-1.54	0.87
		CCBO	0.758	0.542	.347	-0.54	2.06
Involving	CCWDE	CCBO	-0.217	0.573	.924	-1.59	1.16
		Corp	-0.583	0.545	.536	-1.89	0.72
	CCBO	CCWDE	0.217	0.573	.924	-1.16	1.59
		Corp	-0.367	0.588	.808	-1.78	1.04
	Corp	CCWDE	0.583	0.545	.536	-0.72	1.89
		CCBO	0.367	0.588	.808	-1.04	1.78
Attentive	CCWDE	CCBO	0.531	0.540	.589	-0.76	1.82
		Corp	0.065	0.513	.991	-1.16	1.29
	CCBO	CCWDE	-0.531	0.540	.589	-1.82	0.76
		Corp	-0.467	0.554	.678	-1.79	0.86
	Corp	CCWDE	-0.065	0.513	.991	-1.29	1.16
		CCBO	0.467	0.554	.678	-0.86	1.79

Table 4-6. Continued.

Dependent variable	Group		<i>I - J</i> Mean difference	<i>SE</i>	<i>p</i>	95% Confidence interval	
	<i>I</i> Var1	<i>J</i> Var2 Var3				Lower	Upper
Accepting	CCWDE	CCBO	0.574	0.497	.485	-0.62	1.77
		Corp	1.324	0.473	.018*	0.19	2.46
	CCBO	CCWDE	-0.574	0.497	.485	-1.77	0.62
		Corp	0.750	0.511	.312	-0.47	1.97
	Corp	CCWDE	-1.324	0.473	.018*	-2.46	-0.19
		CCBO	-0.750	0.511	.312	-1.97	0.47
Resolving	CCWDE	CCBO	-0.337	0.446	.731	-1.40	0.73
		Corp	-1.037	0.424	.044*	-2.05	-0.02
	CCBO	CCWDE	0.337	0.446	.731	-0.73	1.40
		Corp	-0.700	0.457	.283	-1.80	0.40
	Corp	CCWDE	1.037	0.424	.044*	0.02	2.05
		CCBO	0.700	0.457	.283	-0.40	1.80
Self-assured	CCWDE	CCBO	0.654	0.543	.455	-0.65	1.95
		Corp	1.287	0.516	.040*	0.05	2.52
	CCBO	CCWDE	-0.654	0.543	.455	-1.95	0.65
		Corp	0.633	0.557	.495	-0.70	1.97
	Corp	CCWDE	-1.287	0.516	.040*	-2.52	-0.05
		CCBO	-0.633	0.557	.495	-1.97	0.70
Composed	CCWDE	CCBO	1.170	0.515	.067	-0.06	2.41
		Corp	-0.171	0.490	.935	-1.35	1.00
	CCBO	CCWDE	-1.170	0.515	.067	-2.41	0.06
		Corp	-1.342	0.529	.036*	-2.61	-0.07
	Corp	CCWDE	0.171	0.490	.935	-1.00	1.35
		CCBO	1.342	0.529	.036*	0.07	2.61

Table 4-6. Continued.

Dependent variable	Group		<i>I - J</i> Mean difference	<i>SE</i>	<i>p</i>	95% Confidence interval	
	<i>I</i> Var1	<i>J</i> Var2 Var3				Lower	Upper
Receptive	CCWDE	CCBO	-0.363	0.549	.786	-1.68	0.95
		Corp	0.704	0.522	.373	-0.55	1.95
	CCBO	CCWDE	0.363	0.549	.786	-0.95	1.68
		Corp	1.067	0.563	.148	-0.28	2.42
Positive	Corp	WFD	-0.704	0.522	.373	-1.95	0.55
		CCBO	-1.067	0.563	.148	-2.42	0.28
	CCWDE	CCBO	0.574	0.606	.612	-0.88	2.03
		Corp	0.657	0.578	.492	-0.72	2.04
	CCBO	CCWDE	-0.574	0.606	.612	-2.03	0.88
		Corp	0.083	0.622	.990	-1.41	1.57
Change oriented	Corp	CCWDE	-0.657	0.576	.492	-2.04	0.72
		CCBO	-0.083	0.622	.990	-1.57	1.41
	CCWDE	CCBO	-0.267	0.489	.849	-1.44	0.90
		Corp	-0.583	0.465	.425	-1.70	0.53
	CCBO	CCWDE	0.267	0.489	.849	-0.90	1.44
		Corp	-0.317	0.502	.803	-1.52	0.89
Organized	Corp	CCWDE	0.583	0.465	.425	-0.53	1.70
		CCBO	0.317	0.502	.803	-0.89	1.52
	CCWDE	CCBO	0.806	0.541	.303	-0.49	2.10
		Corp	0.681	0.515	.388	-0.55	1.91
	CCBO	CCWDE	-0.806	0.541	.303	-2.10	0.49
		Corp	-0.125	0.556	.972	-1.46	1.21
Corp	CCWDE	-0.681	0.515	.388	-1.91	0.55	
	CCBO	0.125	0.556	.972	-1.21	1.46	

Table 4-6. Continued.

Dependent variable	Group		<i>I - J</i> Mean difference	<i>SE</i>	<i>p</i>	95% Confidence interval	
	<i>I</i> Var1	<i>J</i> Var2 Var3				Lower	Upper
Principled	CCWDE	CCBO	-0.122	0.493	.967	-1.30	1.06
		Corp	0.611	0.469	.398	-0.51	1.73
	CCBO	CCWDE	0.122	0.493	.967	-1.06	1.30
		Corp	0.733	0.506	.322	-0.48	1.95
	Corp	CCWDE	-0.611	0.469	.398	-1.73	0.51
		CCBO	-0.733	0.506	.322	-1.95	0.48
Activity oriented	CCWDE	CCBO	0.113	0.490	.971	-1.06	1.29
		Corp	0.046	0.466	.995	-1.07	1.16
	CCBO	CCWDE	-0.113	0.490	.971	-1.29	1.06
		Corp	-0.067	0.503	.990	-1.27	1.14
	Corp	CCWDE	-0.046	0.466	.995	-1.16	1.07
		CCBO	0.607	0.503	.990	-1.14	1.27
Dynamic	CCWDE	CCBO	1.456	0.650	.072	-0.10	3.01
		Corp	1.389	0.618	.070	-0.09	2.87
	CCBO	CCWDE	-1.456	0.650	.072	-3.01	0.10
		Corp	-0.067	0.667	.995	-1.66	1.53
	Corp	CCWDE	-1.389	0.618	.070	-2.87	0.09
		CCBO	0.067	0.667	.995	-1.53	1.66
Striving	CCWDE	CCBO	1.250	0.441	.016*	0.19	2.31
		Corp	2.000	0.419	.000*	1.00	3.00
	CCBO	CCWDE	-1.250	0.441	.016*	-2.31	-0.19
		Corp	0.750	0.452	.229	-0.33	1.83
	Corp	CCWDE	-2.000	0.419	.000*	-3.00	-1.00
		CCBO	-0.750	0.452	.229	-1.83	0.33

Table 4-6. Continued.

Dependent variable	Group		<i>I - J</i> Mean difference	<i>SE</i>	<i>p</i>	95% Confidence interval	
	<i>I</i> Var1	<i>J</i> Var2 Var3				Lower	Upper
Enterprising	CCWDE	CCBO	2.024	0.530	.001*	0.75	3.29
		Corp	0.782	0.504	.274	-0.43	1.99
	CCBO	CCWDE	-2.024	0.530	.001*	-3.29	-0.75
		Corp	-1.242	0.544	.065	-2.55	0.06
	Corp	WFD	-0.782	0.504	.274	-1.99	0.43
Meticulous	CCWDE	CCBO	1.242	0.544	.065	-0.06	2.55
		Corp	-1.265	0.507	.040*	-2.48	-0.05
	CCBO	CCWDE	-0.315	0.482	.791	-1.47	0.84
		Corp	1.256	0.507	.040*	0.05	2.48
	Corp	CCWDE	0.950	0.521	.169	-0.30	2.20
Reliable	CCWDE	CCBO	0.315	0.482	.791	-0.84	1.47
		Corp	-0.950	0.521	.169	-2.20	0.30
	CCBO	CCWDE	0.413	0.553	.737	-0.91	1.74
		Corp	0.296	0.526	.840	-0.96	1.56
	Corp	CCWDE	-0.413	0.553	.737	-1.74	0.91
Conforming	CCWDE	CCBO	-0.117	0.568	.977	-1.48	1.24
		Corp	-0.296	0.526	.840	-1.56	0.96
	CCBO	CCWDE	0.117	0.568	.977	-1.24	1.48
		Corp	-1.620	0.538	.010*	-2.91	-0.33
	Corp	CCWDE	-0.287	0.511	.841	-1.51	0.94
Conforming	CCWDE	CCBO	1.620	0.538	.010*	0.33	2.91
		Corp	1.333	0.552	.048*	0.01	2.66
	CCBO	CCWDE	0.287	0.511	.841	-0.94	1.51
		Corp	-1.333	0.552	.048*	-2.66	-0.01

Table 4-7. One-way ANOVA results of competency profile dimensions.

Variable	Pop 1	Pop2 Pop3	Mean difference	SE	p	95% Confidence interval	
						Lower	Upper
Achieving success	CCWDE	CCBO	1.763	0.525	.004*	0.51	3.02
		Corp	1.255	0.499	.038*	0.06	2.45
	CCBO	CCWDE	-1.763	0.525	.004	-3.02	-0.51
		Corp	-0.508	0.539	.651	-1.80	0.78
	Corp	CCWDE	-1.255	0.499	.038*	-2.45	-0.06
		CCBO	0.508	0.539	.615	-0.78	1.80
Adjusting to change	CCWDE	CCBO	0.685	0.486	.342	-0.48	1.85
		Corp	0.560	0.462	.450	-0.55	1.67
	CCBO	CCWDE	0.685	0.486	.342	-1.85	0.48
		Corp	-0.125	0.499	.966	-1.32	1.07
	Corp	CCWDE	-0.560	0.462	.450	-1.67	0.55
		CCBO	0.125	0.499	.966	-1.07	1.32
Communicating with people	CCWDE	CCBO	1.713	0.514	.004*	0.48	2.94
		Corp	0.546	0.489	.507	-0.63	1.72
	CCBO	CCWDE	-1.713	0.514	.004*	-2.94	-0.48
		Corp	-1.167	0.528	.507	-0.63	0.10
	Corp	CCWDE	-0.546	0.489	.004	-2.94	0.64
		CCBO	1.167	0.528	.076	-0.10	2.43
Creating innovation	CCWDE	CCBO	0.607	0.557	.523	-0.73	1.94
		Corp	0.532	0.530	.576	-0.74	1.80
	CCBO	CCWDE	-0.607	0.557	.523	-1.94	0.73
		Corp	-0.075	0.572	.991	-1.44	1.29
	Corp	CCWDE	-0.532	0.530	.576	-1.80	0.74
		CCBO	0.075	0.572	.991	-1.29	1.44

Table 4-7. Continued.

Variable	Pop 1	Pop2 Pop3	Mean difference	SE	p	95% Confidence interval	
						Lower	Upper
Evaluating problems	CCWDE	CCBO	-1.606	0.514	.007*	-2.84	-0.37
		Corp	0.306	0.488	.807	-1.48	0.86
	CCBO	CCWDE	-1.606	0.514	.007*	0.37	2.84
		Corp	1.300	0.527	.042*	0.04	2.56
	Corp	CCWDE	0.306	0.488	.807	-0.86	1.48
		CCBO	-1.300	0.527	.042*	-2.56	-0.04
Executing assignments	CCWDE	CCBO	-0.667	0.568	.473	-2.03	0.69
		Corp	-0.083	0.540	.987	-1.38	1.21
	CCBO	CCWDE	0.667	0.568	.473	-0.69	2.03
		Corp	0.583	0.583	.579	-0.81	1.98
	Corp	CCWDE	0.083	0.540	.987	-1.21	1.38
		CCBO	-0.583	0.583	.579	-1.98	0.81
Making judgments	CCWDE	CCBO	-0.117	0.456	.965	-1.21	0.98
		Corp	0.750	0.434	.202	-0.29	1.79
	CCBO	CCWDE	0.117	0.456	.965	-0.98	1.21
		Corp	0.867	0.468	.161	-0.26	1.99
	Corp	CCWDE	-0.750	0.434	.202	-1.79	0.29
		CCBO	-0.867	0.468	.161	-1.99	0.26
Presenting information	CCWDE	CCBO	0.839	0.498	.218	-0.35	2.03
		Corp	0.389	0.473	.691	-0.75	1.52
	CCBO	CCWDE	-0.839	0.498	.218	-2.03	0.35
		Corp	-0.450	0.511	.654	-1.67	0.77
	Corp	CCWDE	-0.389	0.473	.691	-1.52	0.75
		CCBO	0.450	0.511	.654	-0.77	1.67

Table 4-7. Continued.

Variable	Pop 1	Pop2 Pop3	Mean difference	SE	<i>p</i>	95% Confidence interval	
						Lower	Upper
Projecting confidence	CCWDE	CCBO	0.928	0.502	.162	-0.28	2.13
		Corp	0.194	0.478	.913	-0.95	1.34
	CCBO	CCWDE	-0.928	0.502	.162	-2.13	0.28
		Corp	-0.733	0.515	.335	-1.97	0.50
	Corp	CCWDE	-0.194	0.478	.913	-1.34	0.95
		CCBO	0.733	0.515	.335	-0.50	1.97
Providing leadership	CCWDE	CCBO	1.580*	0.419	.001*	0.58	2.58
		Corp	1.088*	0.398	.022*	0.13	2.04
	CCBO	CCWDE	-1.580*	0.419	.001*	-2.58	-0.58
		Corp	-0.492	0.430	.491	-1.52	0.54
	Corp	CCWDE	-1.088*	0.398	.022*	-2.04	-0.13
		CCBO	0.492	0.430	.491	-0.54	1.52
Providing support	CCWDE	CCBO	0.589	0.557	.544	-0.75	1.92
		Corp	0.431	0.530	.697	-0.84	1.70
	CCBO	CCWDE	-0.589	0.557	.544	-1.92	0.75
		Corp	-0.158	0.572	.959	-1.53	1.21
	Corp	CCWDE	-0.431	0.530	.697	-1.70	0.84
		CCBO	0.158	0.572	.959	-1.21	1.53
Structuring tasks	CCWDE	CCBO	0.959	0.563	.212	-0.39	2.31
		Corp	1.134	0.536	.094	-0.15	2.42
	CCBO	CCWDE	-0.959	0.563	.212	-2.31	0.39
		Corp	0.175	0.578	.951	-1.21	1.56
	Corp	CCWDE	-1.134	0.536	.094	-2.42	0.15
		CCBO	-0.175	0.578	.951	-1.56	1.21

CHAPTER 5 CONCLUSION

This research explored differences in leadership styles among community college workforce development executives (CCWDEs), community college business officers (CCBOs), and corporate executives. By understanding these differences, community colleges can develop meaningful and productive professional development and leadership programs to foster growth in existing and future leaders, particularly in the area of workforce development.

The Wave® instrument was used to identify personality differences among three groups of leaders, CCWDEs, CCBOs, and corporate executives. There were moderate significant comparisons among the three groups. Stronger significant scores were found in the areas of striving, enterprising, rational, and conforming. Further implications of this data are discussed in the next section.

Findings

Moderate differences in personality traits and leadership styles were found on the 36 dimensions of the Wave® psychometric profile and the 12 dimensions of the competencies profile. Overall, the results did not sufficiently indicate that one particular group would best serve in a workforce leadership role. Each group appeared to have few similarities in personality traits and leadership styles. Though some valuable differences emerged in the data, these were not enough to conclude that a corporate executive or existing community college leader would be best suited for a position in workforce leadership.

Some of the data aligned with prior research using the Wave®. The CCWDE group scored higher on the dimension of striving, while the CCBO and corporate executive group had a higher mean Sten score on the dimension of analytical. On the contrary, with prior Wave® research, the CCBO group had a lower mean Sten score in conforming. Also, similar to previous research

using the Wave®, the CCBO group reflected low scores for communicating with people. In the case of my study, all three groups were similar in this category. Further, research performed by the AACC identified analytical and strategic as two vital dimensions for future leaders' managerial competencies.

The study conducted by Iowa State University concluded that community college leaders were less likely to be equipped with the necessary skill sets for organizational strategy, resource management, planning and organizing—categories similar to those identified by the AACC. This information directly correlates with the data of my study, where none of the three groups maintained a significant score in the organized dimension. Surprisingly, CCWDEs and CCBOs appeared to have dissimilar skill sets. One might assume that both community college groups would have similar personality and leadership styles, but that is contrary to the findings of my study.

CCBOs need adequate skills to manage fiscal and budgetary responsibilities, while the CCWDEs are responsible for building partnerships and maintaining contacts, both of which are essential for successful operation in the workforce environment. Therefore, it is no surprise that the CCWDE group scored higher in the dimensions of enterprising and providing leadership, which are useful skills to perform the duties and responsibilities required to meet the position's demands.

In addition to using ANOVA and post hoc tests, a comparison of the three highest and lowest mean Sten scores for both the psychometric and competencies profiles was generated for all three groups. In the psychometric profile, CCWDEs scored high in the striving dimension, CCBOs scored high in the strategic dimension, and corporate executives scored high in the analytical dimension. On the competencies profile, all three groups reflected high mean Sten

scores in creating innovation and low mean Sten scores in communication and providing support. Supported by Campbell (2006) and results from the Community College Futures Assembly, innovation and entrepreneurialism are critical issues for community colleges, and communication is one of the essential managerial skills for community college leaders. Findings may also indicate that both community college groups share some common profiles, but ultimately, both positions have different responsibilities and may require different skill sets.

Fulton-Calkins and Milling (2005) identified essential traits for future leaders. Some of the findings in my research do not align with the authors' theory. To become an effective leader, especially in the area of workforce, one must focus on maintaining and enriching connections with business and industry. Based on the groups' low ratings in communication, perhaps all three groups are deficient in these areas, though this is a careful assumption. Bos (2007) stated the importance of future leaders' technological skills, but that more organizations are focusing on leaders who have the potential to develop and maintain relationships. Further, according to Basham et al. (2010), the mission of community colleges has shifted, expanding certification education training and collaborating partnerships with local business, the latter of which would require strong communication between the institution and the partner. Hence, if higher education institutions focus on fostering skills that enable leaders to develop and maintain relationships, helping to establish a common goal and vision with the general populous, then relationship building should be a key component of leadership development.

Based on my research, each group evidently has a unique set of personality traits and leadership styles. The duties and responsibilities of such administrators, combined with their working environments, may have influenced the results of my study. It would not be accurate to conclude that one group is better suited for an administrative position in community college

workforce development. Perhaps each group has something unique to offer to the workforce profession. However, because of the complex issues facing community colleges, along with the challenges of providing opportunities for the community, as well as balancing daily operations and managing a variety of departmental staff, a corporate executive might not easily transition into and function in such an environment. The literature addresses the importance of communication and building relationships both inside and outside the community college setting.

Emotional intelligence is also one of the most sought-after leadership qualities. All three groups reflected lower mean scores in the area of communicating with people. Because these results are based on self-reported information, one cannot presume that none of the groups would prosper in this area. Participants possibly overlooked and/or determined this construct “less important” on the overall scale, compared to other constructs.

Investing in leadership development is one recommendation derived from my study’s results, especially as such programs pertain to future leaders. Some components of leadership development programs include mentoring, shadowing, and providing real-life scenarios. Relationship building and effective communication should be infused into leadership development curriculum as well, especially since both paradigms are prioritized in the pertinent literature.

Conclusion

Difficult circumstances, such as a declining economy, high turnover, attrition, and personnel who may not wish to enter leadership positions, remain issues for community colleges across the nation. For community colleges to both survive and succeed, they must recruit, train, and nurture the effective leaders. With the impending leadership gap, lack of preparation and leadership talent, and the ever-increasing challenges that must be faced, community colleges should have measures in place to prepare future leaders. These measures should particularly

focus on developing workforce leaders, since the mission of recruitment and retention has shifted to expanding partnerships and offering programs that train and certify students for the workforce. Future leaders inside or outside higher education should have the necessary skills to lead effectively and efficiently. Though institutions and businesses may share a vision and certain goals, difference in ratings on some of the leadership competencies among higher education institutions and corporate entities causes some concern.

While secession in community college leadership rapidly approaches, and many current higher education professionals are not prepared to handle the complexities of such roles, organizations should invest in developing leadership programs to better prepare and retain future leaders. From the leadership development perspective, institutions should consider incorporating leadership development programs with professional development practices, fusing mentorship and entrepreneurial opportunities, while focusing on honing soft skills, such as effective communication, emotional intelligence, and relationship building and maintenance. Developing effective communication skills is especially important, since scores in this area were low. However, the communication scores may have been impacted by economic factors, along with the typical challenges of community colleges. Regardless, the low scores indicate that leaders may not have the skills to succeed in a modern community college climate, which is a basis for future research.

As part of new leaders' probationary period after accepting an administrative position, they could shadow their seasoned counterparts, studying their leadership styles and learning more about the institution as a whole. With respect to higher education leadership graduate and postgraduate programs, internships should be part of the curriculum, utilizing leadership development strategies and exposing students to the dynamics of higher education leadership.

Incorporating assessments such as the Wave® or other similar tools can help identify characteristics needed to become an effective leader. As community colleges continue to persevere through the turbulent waters of leadership succession, a leveled economy, and the continuous demands of the community, they should rise to meet the challenge of developing future workforce leaders. Though a seemingly daunting task, this goal can be reached; historically, community colleges have weathered many storms. Community colleges can prepare their future leaders to succeed in even the most complex areas of higher education, such as workforce development.

Discussion

My research creates an awareness of the differences in leadership characteristics among CCWDEs, CCBOs, and corporate executives, and the Wave® assessment tool facilitated this increased understanding. Comparisons such as those in my study can serve as a benchmark for developing leadership programs, paying particular attention to the critical skills needed by professionals working in specialized areas, such as workforce development. Even in their initial stages of existence, community colleges persevered, meeting the needs of a nationwide population and weathering the considerable challenges faced by institutions to this day. This is especially important when addressing future leadership succession, specifically in higher education. As noted in the literature, chief academic officers, chief financial officers, and similar leadership professionals are currently retiring or planning to retire at alarming rates. According to Basham et al., these rates could reach as high as 75% by 2011 (Basham et al., 2009). This information provides only one critical reason to justify investing in leadership succession planning.

For decades, corporate entities and their business counterparts have competed for revenue and partnerships, demonstrating entrepreneurial behavior by maintaining a competitive edge.

Such behavior would then require one to make sound judgments based on facts, thinking clearly, and using reason and logic to propel initiatives to the next level. For-profit higher education institutions have practiced this behavior consistently, since career education has historically been their main focus. The nation's economic decline should inspire community colleges to act more aggressively, gaining entrepreneurial status in research funding, partnerships with local business, and offering vocational, technical, two-year, and four-year certificate and degree programs.

My study introduced a variety of information related to personality traits and leadership styles. Because each group appeared to possess different rather than similar qualities, leadership skills may be fostered through experience, instead of relying on the idea that leadership skills are innate and thus unable to be fully developed through external endeavors. Core leadership competencies would grow and mature over time, as opposed to what skills can be acquired in short-term leadership programs. The question still remains as to whether or not corporate executives or existing community college leaders are better suited for administrative positions in workforce development. Determining that one group would excel over the other is a casual assumption, since the profiles of these two groups demonstrated few significant differences.

Implications for Higher Education

The findings of my study support the critical need to prepare future community college administrators, who must handle the complex environments of and challenges faced by today's community colleges. Like business and industry, community colleges should prioritize leadership development and use assessments that determine personality characteristics and leadership traits to foster in future leaders. The convoluted and dynamic environments of community colleges call for leadership to recognize and act on the increasing budget constraints, the evolving workforce needs, and the learning needs of community college students, along with the responsibility of preparing students from various ethnic and socioeconomic backgrounds.

Therefore, leadership programs comprised of lessons specific to workforce development should be available to those interested in entering that field.

In terms of entrepreneurialism, community colleges should consider tailoring leadership development programs to reflect the AACCC-identified competencies, especially communication and location of resources, both vital skills for CCWDEs. Effective skills in these areas may facilitate high-quality business partnerships, which are needed to provide successful workforce development programs for students. Higher education institutions can benefit from researching the entrepreneurial activities of other institutions, to seek both ideas and inspiration.

Hiring someone from the corporate realm may seem like a logical solution to staff a community college workforce development department. However, this solution has its caveats. Corporate executives may not be as adept in leading staff, faculty, and students as their CCWDE counterparts. Moreover, lacking skills in attentiveness, communication, and engaging hampers the ability to reach community colleges' various goals, many of which require exceptional interpersonal skills. However, further individual assessment is required to provide more information on this matter, since my research used a small sample size.

Reflecting on the FFM assessment (De Fruyt et al., 2009), higher education institutions should identify less desirable leadership behaviors and use that information to improve career coaching programs and in predicting hiring trajectories. A proactive approach to addressing the paucity of research in leadership development and preparation could spawn the creation of leadership development curriculum. Focal areas of this curriculum could include entrepreneurship, communication skills, and mentorship. The emotional intelligence construct, as noted by Campbell (2006) and Basham and Mathur (2010), may be worth investigating. According to the literature about emotional intelligence, that trait is perhaps the most essential

for successful leadership. Training, development, mentoring, and coaching programs should not only address common leadership skills, such as rational, analytical, vision, and communication, but also address leadership soft skills, such as emotional intelligence.

For Future Research

Work style profiles can be excellent tools to develop benchmarks for leadership positions. Historically, empirical research on personality treated the concept as a single variable, not considering the complexity or providing theoretical explanations. Similar studies have highlighted leadership styles, suggesting that some individuals are innately equipped to be effective leaders. One approach to ensuring proper leadership selection is to develop clear expectations for workforce development positions, enhancing baseline profiles of existing and future leadership positions. Another approach is to see how a candidate's background relates to the community college position he/she hopes to procure.

Future research can replicate and extend my study by expanding the sample size and scope of the geographic location. Demographic data could be extended to include age, ethnicity, years of professional experience, and level of education, in addition to considering educational backgrounds other than academic. More refined research could expand the population to include professionals from both public and private institutions. The lower scores in communication imply that leadership development programs should include modules and activities based on communication, relating to others, and maintaining relationships.

Though the succession rates have significantly impacted community colleges, their presidents may delay filling some vacancies, because of the current economic strain in the United States. As a result, future leaders may be burdened with increased responsibilities outside the realms of their already taxing positions. Further, contrary to high succession rates, the current economic crisis might force baby boomers to retain their leadership positions longer than

anticipated, based on previous research and survey results. The literature for my study was collected before the economic downturn, so a future study could highlight the longevity of those remaining in their leadership positions and how professional development can be improved in the current economy. Further research could examine leaders' effectiveness, especially in light of the economic crisis. My study could be replicated, using a variety of assessment instruments to avoid potential bias and to determine the critical traits needed to succeed under the pressures of assuming additional leadership duties.

With the continuous economic decline and the challenges facing community colleges, future leaders must possess the leadership skills needed to successfully bring community colleges to the next level. Communication and relationship building are valuable leadership assets, and these skills should be taught and practiced in leadership development. Community colleges lead the way in developing the future workforce, creating a dire situation if community college administrative positions—particularly in workforce development—remain either vacant or are filled with people lacking essential leadership traits. Therefore, community colleges, as well as the residents and businesses they serve, should strive together to build up future leaders, helping to cultivate the potential of these individuals and ensure the survival of the community college as an institution.

APPENDIX THE SCALE DESCRIPTIONS

The Wave® consists of four clusters—thought, influence, adaptability, and delivery. Each cluster is divided into three sections, with three dimensions per section and three facets per dimension, yielding a total of 12 sections, 36 dimensions, and 108 facets (Figures A-1–A-4).

Thought Cluster

The thought cluster (Figure A-1) is composed of evaluative, investigative, and imaginative sections, which consist of the analytical, factual, rational, learning oriented, practically minded, insightful, inventive, abstract, and strategic dimensions (Figure A-1).

Analytical Dimension

The analytical dimension is composed of problem solving, analyzing information, and probing facets. More than half of the benchmark group scored high in the analytical dimension, making this a “frequent” attribute. High scorers “see problem solving as one of their strengths; enjoy, and consider themselves good at, analyzing information; see themselves as having a great deal of curiosity; are good at asking probing questions” (Saville et al., 2009). If someone scores high on the analytical dimension, he/she will likely score high on being rational ($r = 0.50$) and abstract ($r = 0.48$).

Factual Dimension

The factual dimension is composed of written communication, logical, and fact finding facets. More than half of the benchmark group scored high in the factual dimension, making this a “frequent” attribute. High scorers “consider that they communicate well in writing; readily understand the logic behind an argument; go to some lengths to ensure that they have all the relevant facts” (Saville et al., 2009). The factual dimension does not correlate with any other dimensions.

Rational Dimension

The rational dimension is composed of number fluency, technology aware, and objective facets. More than half of the benchmark group scored high in the rational dimension, making this a “frequent” attribute. High scorers “are very comfortable working with numerical data, are interested in, and regard themselves as, well-versed in information technology; rely heavily on facts and hard, objective data in making decisions” (Saville et al., 2009). If someone scores high on the rational dimension, he/she will likely score high on being analytical ($r = 0.50$). In this dimension, “males report higher scores than females (SD diff = 0.58)” (Saville et al., 2009).

Learning Oriented Dimension

The learning oriented dimension is composed of open to learning, learning by reading, and quick learning facets. More than half of the benchmark group scored high in the learning oriented dimension, making this a “frequent” attribute. High scorers “are motivated by, and actively seek opportunities for learning new things; enjoy, and believe they learn a great deal through reading; consider themselves to be very quick learners” (Saville et al., 2009). If someone scores high on the learning oriented dimension, he/she will likely score high on being abstract ($r = 0.51$). In this dimension, “younger people tend to report higher scores (SD diff = 0.36)” (Saville et al., 2009).

Practically Minded Dimension

The practically minded dimension is composed of being practical, learning by doing, and common sense focused facets. More half of the benchmark group scored high in the practically minded dimension, making this a “frequent” attribute. High scorers “are very oriented towards practical work; enjoy, and consider themselves good at, practical tasks; much prefer to learn by doing; like to apply common sense” (Saville et al., 2009). The practically minded dimension does not correlate to any other dimensions.

Insightful Dimension

The insightful dimension is composed of the discerning, seeking improvement, and intuitive facets. More than half of the benchmark group scored high in the insightful dimension, making this a “frequent” attribute. High scorers “consider themselves very quick at getting to the core of a problem; have a constant need to improve things and believe they are good at identifying ways in which things can be improved; very much trust their intuition about whether things will work” (Saville et al., 2009). If someone scores high on the insightful dimension, he/she will likely score high on strategic ($r = 0.44$) and inventive ($r = 0.41$).

Inventive Dimension

The inventive dimension is composed of the creative, original, and radical facets. Less than 40% of the benchmark group scored high in the inventive dimension, making this a “less than usual” attribute. High scorers for the inventive dimension “are fluent in generating ideas, produce lots of ideas; are confident in their ability to generate unusual ideas; favor radical solutions to problems; very much enjoy the creative process” (Saville et al., 2009). If someone scores high on the inventive dimension, he/she will likely score high on being strategic ($r = 0.49$), abstract ($r = 0.44$), and insightful ($r = 0.41$), and is likely to score low on being conforming ($r = -0.50$). If someone scores in the moderate range on the inventive dimension, he/she will likely score high on being change oriented ($r = 0.36$), empowering ($r = 0.34$), dynamic ($r = 0.31$), learning oriented ($r = 0.31$), convincing ($r = 0.31$), and analytical ($r = 0.30$).

Abstract Dimension

The abstract dimension is composed of the conceptual, theoretical, and learning by thinking facets. About half of the benchmark group scored high in the abstract dimension, making this a “common” attribute. High scorers “enjoy thinking about and developing concepts; develop concepts well; apply theories a lot; like applying theories and believe they do this

effectively; need to understand the underlying principles to learn effectively” (Saville et al., 2009). If someone scores high on the abstract dimension, he/she will likely score high on being learning oriented ($r = 0.51$), analytical ($r = 0.48$), and inventive ($r = 0.33$).

Strategic Dimension

The strategic dimension is composed of the developing strategy, visionary, and forward thinking facets. About half of the benchmark group scored high in the strategic dimension, making this a “common” attribute. High scorers “are good at developing effective strategies and derive real satisfaction from this; need to have, and feel able to create, an inspiring vision for the future; think long-term; are likely to be seen as visionary” (Saville et al., 2009). If someone scores high on the strategic dimension, he/she will likely score high on being inventive ($r = 0.49$), insightful ($r = 0.44$), dynamic ($r = 0.41$), striving ($r = 0.41$), and empowering ($r = 0.40$) and is likely to be low on conforming ($r = -0.38$).

Influence Cluster

The influence cluster is composed of sociable, impactful, and assertive sections, which consist of the purposeful, directing, empowering, convincing, challenging, articulate, self-promoting, interactive, and engaging dimensions (Figure A-2).

Interactive Dimension

The interactive dimension is composed of networking, talkative, and lively facets. More than half of the benchmark group scored high in the interactive dimension, making this a “frequent” attribute. High scorers “attach a high degree of importance to networking and believe they network very well; are extremely talkative; consider themselves to be very lively” (Saville et al., 2009). If someone scores high on the interactive dimension, he/she will likely score high on engaging ($r = 0.58$) and self-promoting ($r = 0.43$).

Engaging Dimension

The engaging dimension is composed of establishing rapport, friendship seeking, and initial impression facets. About half of the benchmark group scored high in the engaging dimension, making this a “common” attribute. High scorers “very quickly establish rapport with people; have limited interest in making new friends; are unlikely to make a strong first impression” (Saville et al., 2006). If someone scores high on the engaging dimension, he/she will likely score high on interactive ($r = 0.58$).

Self-promoting Dimension

The self-promoting dimension is composed of immodest, attention seeking, and praise seeking facets. About half of the benchmark group scored high in the self-promoting dimension, making this a “common” attribute. High scorers “want people to know about their successes and go to some lengths to bring their achievements to others’ attention; like to be, and often find themselves, the center of attention; have a strong need for praise and seek praise when they have done well” (Saville et al., 2009). If someone scores high on the self-promoting dimension, he/she is very likely to score high on being interactive ($r = 0.43$). The overall low self-rating in this dimension indicates that most people view self-promoting as a negative trait (Saville et al., 2009).

Convincing Dimension

The convincing dimension is composed of persuasive, negotiatory, and asserting views facets. About half of the benchmark group scored high in the convincing dimension, making this a “common” attribute. High scorers “are eager to bring people round to their point of view and see themselves as very persuasive; want to get the best deal and believe they negotiate well; are determined to make people listen to their views and put their point across forcibly” (Saville et al., 2009). If someone scores high on the convincing dimension, he/she will likely score high on

challenging ($r = 0.55$), enterprising ($r = 0.47$), purposeful ($r = 0.45$), and directing ($r = 0.42$), but is moderately likely to score low on being conforming ($r = -0.30$). In this dimension, “males report higher scores (SD diff = 0.39)” (Saville et al., 2009).

Articulate Dimension

The articulate dimension is composed of giving presentations, eloquent, and socially confident facets. More than half of the benchmark group scored high in the articulate dimension, making this a “frequent” attribute. High scorers “enjoy, and believe they are good at, giving presentations; enjoy explaining things and consider that they do this well; enjoy meeting and are confident with new people” (Saville et al., 2009). The articulate dimension does not correlate with any other dimensions.

Challenging Dimension

The challenging dimension is composed of challenging ideas, prepared to disagree, and argumentative facets. About half of the benchmark group scored high in the challenging dimension, making this a “common” attribute. High scorers “frequently challenge other people’s ideas; want people to know when they disagree with them and are open in voicing disagreements; really enjoy arguing with people and regularly get involved in arguments” (Saville et al., 2009). If someone scores high on the challenging dimension, he/she is moderately likely to score low on being conforming ($r = -0.31$).

Purposeful Dimension

The purposeful dimension is composed of decisive, making decisions, and definite facets. More than half of the benchmark group scored high in the purposeful dimension, making this a “frequent” attribute. High scorers “are very comfortable making quick decisions; relish the responsibility for, and are prepared to make, big decisions; hold definite opinions on most issues and rarely change their mind” (Saville et al., 2009). If someone scores high on the purposeful

dimension, he/she will likely score high on being directing ($r = 0.50$), convincing ($r = 0.45$), and dynamic ($r = 0.45$), likely to score low on being involving ($r = -0.30$), and very likely to score low on being conforming ($r = -0.40$). In this dimension, “males (SD diff = 0.47) and older people (SD diff = 0.31) report higher scores” (Saville et al., 2009).

Directing Dimension

The directing dimension is composed of leadership oriented, CCBO seeking, and coordinating people facets. About half of the benchmark group scored high in the directing dimension, making this a “common” attribute. High scorers “definitely want to take the lead and see leadership as one of their key strengths; are very much inclined to take CCBO of things; enjoy, and believe they are good at, coordinating people” (Saville et al., 2009). If someone scores high on the directing dimension, he/she will likely score high on being empowering ($r = 0.55$), purposeful ($r = 0.50$), dynamic ($r = 0.47$), convincing ($r = 0.42$), and enterprising ($r = 0.40$), but is moderately likely to score low on being conforming ($r = -0.31$).

Empowering Dimension

The empowering dimension is composed of motivating others, inspiring, and encouraging facets. Less than half of the benchmark group scored high in the empowering dimension, making this a “less usual” attribute. High scorers “attach importance to being able to motivate other people and consider themselves adept at finding ways to do this; want, and believe they are able to, to be inspirational to others; go out of their way to encourage others” (Saville et al., 2009). If someone scores high on the empowering dimension, he/she will likely score high on being directing ($r = 0.55$) and strategic ($r = 0.40$), and is likely to score low on being conforming ($r = -0.30$).

Adaptability Cluster

The adaptability cluster is composed of resilient, flexible, and supportive sections, which consist of the self-assured, composed, resolving, positive, change oriented, receptive, attentive, involving, and accepting dimensions (Figure A-3).

Self-assured Dimension

The self-assured dimension is composed of self-confident, self-valuing, and self-directing facets. More than half of the benchmark group scored high in the inventive dimension, making this a “frequent” attribute. High scorers “are self-confident; feel very positive about themselves; have a strong sense of their own worth; feel in CCBO of their own future” (Saville et al., 2009). The self-assured dimension does not correlate with any other dimensions.

Composed Dimension

The composed dimension is composed of calm, poised, and copes with pressure facets. About half of the benchmark group scored high in the composed dimension, making this a “common” attribute. High scorers “are calm; see little point in worrying, before important events; rarely get anxious during important events; work well under pressure” (Saville et al., 2009). If someone scores high on the composed dimension, he/she will likely score highly on being change oriented ($r = 0.43$), and is moderately likely to score low on being conforming ($r = -0.39$). In this dimension, “males report higher scores than females (SD diff = 0.34)” (Saville et al., 2009).

Resolving Dimension

The resolving dimension is composed of conflict resolution, handling angry people, and coping with upset people. About half of the benchmark group scored high in the resolving dimension, making this a “common” attribute. High scorers “quickly resolve disagreements; consider themselves effective at calming angry people down; believe they cope well with people

who are upset” (Saville et al., 2009). If someone scores high on the resolving dimension, he/she will likely score high on being attentive ($r = 0.46$).

Positive Dimension

The positive dimension is composed of optimistic, cheerful, and buoyant facets. About half of the benchmark group scored high in the positive dimension, making this a “common” attribute. High scorers “are optimistic; are very cheerful; recover quickly from setbacks” (Saville et al., 2009). The positive dimension does not correlate with any other dimensions.

Change Oriented Dimension

The change oriented dimension is composed of accepting challenges, accepting change, and tolerant of uncertainty facets. About half of the benchmark group scored high in the change oriented dimension, making this a “common” attribute. High scorers “enjoy new challenges and adapt readily to new situations; are positive about and cope well with change; cope well with uncertainty” (Saville et al., 2009). If someone scores high on the change oriented dimension, he/she will likely score high on being composed ($r = 0.43$).

Receptive Dimension

The receptive dimension is composed of receptive to feedback, open to criticism, and feedback seeking facets. More than half of the benchmark group scored high in the receptive dimension, making this a “frequent” attribute. High scorers “respond well to feedback from others; encourage people to criticize their approach; actively seek feedback on their performance” (Saville et al., 2009). The receptive dimension does not correlate with any other dimensions, and “younger people report higher scores (SD diff = 0.32)” (Saville et al., 2009).

Attentive Dimension

The attentive dimension is composed of empathic, listening, and psychologically minded facets. About half of the benchmark group scored high in the attentive dimension, making this a

“common” attribute. High scorers “attach importance to, and believe they are good at, understanding how others are feeling; regard themselves as good listeners; are interested in, and consider themselves adept at, understanding why people behave as they do” (Saville et al., 2009). If someone scores high on the attentive dimension, he/she will likely score high on being accepting ($r = 0.53$), involving ($r = 0.51$), and resolving ($r = 0.46$). In this dimension, “females report higher scores than males (SD diff = 0.45)” (Saville et al., 2009).

Accepting Dimension

The accepting dimension is composed of trusting, tolerant, and considerate facets. About half of the benchmark group scored high in the accepting dimension making this a “common” attribute. High scorers “are very trusting of people; are tolerant; place great emphasis on being considerate towards other people” (Saville et al., 2009). If someone scores high on the accepting dimension, he/she will likely score highly on being involving ($r = 0.53$) and attentive ($r = 0.52$).

Involving Dimension

The involving dimension is composed of team oriented, democratic, and decision sharing facets. More than half of the benchmark group scored high in the involving dimension, making this a “frequent” attribute. High scorers “believe they work well, and enjoy being in a team; take full account of other people’s views; go to considerable lengths to include others in the final decision” (Saville et al., 2009). If someone scores high on the involving dimension, he/she will likely score high on accepting ($r = 0.53$) and attentive ($r = 0.51$), but is moderately likely to score low on being purposeful ($r = -0.30$).

Delivery Cluster

The delivery cluster is composed of conscientious, structured, and driven sections, which consist of the reliable, meticulous, conforming, organized, principled, activity oriented, dynamic, enterprising, and striving dimensions (Figure A-4).

Reliable Dimension

The reliable dimension is composed of meeting deadlines, finishing tasks, and punctual facets. About half of the benchmark group scored high in the reliable dimension, making this a “common” attribute. High scorers “are conscientious about meeting deadlines; believe they rarely leave things unfinished; consider themselves highly punctual” (Saville et al., 2006). If someone scores high on the reliable dimension, he/she will likely score highly on being organized ($r = 0.60$), meticulous ($r = 0.48$), and conforming ($r = 0.47$).

Meticulous Dimension

The meticulous dimension is composed of quality oriented, thorough, and detailed facets. Less than half of the benchmark group scored high in the meticulous dimension, making this a “less usual” attribute. High scorers “regard themselves as perfectionists; ensure a high level of quality; want things done properly and consider themselves very thorough in their approach; see themselves as highly attentive to detail” (Saville et al., 2006). If someone scores high on the meticulous dimension, he/she will likely score high on being organized ($r = 0.50$), reliable ($r = 0.48$), and conforming ($r = 0.42$).

Conforming Dimension

The conforming dimension is composed of rule bound, following procedures, and risk adverse facets. Less than half of the benchmark group scored high in the change oriented dimension, making this a “less usual” attribute. High scorers “need to have rules and adhere strictly to them; like to follow set procedures; and regard themselves as decidedly risk averse” (Saville et al., 2006). If someone scores high on the conforming dimension, he/she will likely score high on being reliable ($r = 0.43$), organized ($r = 0.42$), and meticulous ($r = 0.42$), and is moderately likely to score low on being composed ($r = -0.39$), strategic ($r = -0.38$), dynamic ($r = -0.37$), directing ($r = -0.31$), challenging ($r = -0.31$), empowering ($r = -0.30$), convincing ($r = -$

0.30), and enterprising ($r = -0.30$). In this dimension, “females report higher scores than males (SD diff = 0.40)” (Saville et al., 2006).

Organized Dimension

The organized dimension is composed of self-organized, planning, and prioritizing facets. Less than half of the benchmark group scored high in the organized dimension, making this a “less usual” attribute. High scorers “are well organized; attach importance to planning; make effective plans; establish clear priorities” (Saville et al., 2006). If someone scores high on the organized dimension, he/she will likely score highly on being reliable ($r = 0.60$), meticulous ($r = 0.50$), and conforming ($r = 0.42$).

Principled Dimension

The principled dimension is composed of proper, discreet, and honoring commitments facets. About half of the benchmark group scored high in the principled dimension, making this a “common” attribute. High scorers “are concerned with ethical matters and believe they behave in an ethical fashion; consider maintaining confidentiality to be among their key strengths and can be relied upon to be discreet; view themselves as honoring the commitments they have agreed to” (Saville et al., 2009). The principled dimension does not correlate with any other dimensions. The overall high self-rating in this dimension indicates that most people view being principled as a positive trait (Saville et al., 2009).

Activity Oriented Dimension

The activity oriented dimension is composed of quick working, busy, and multitasking facets. About half of the benchmark group scored high in the activity oriented dimension, making this a “common” attribute. High scorers “work at a fast pace; work well when busy; cope well with multi-tasking” (Saville et al., 2009). The activity oriented dimension does not

correlate with other dimensions, and “females report higher scores than males (SD diff = 0.51)” (Saville et al., 2009).

Dynamic Dimension

The dynamic dimension is composed of energetic, initiating, and action oriented facets. More than half of the benchmark group scored high in the dynamic dimension, making this a “frequent” attribute. High scorers “consider themselves to be very energetic; see themselves as impatient to get things started and good at starting things off; are focused on making things happen” (Saville et al., 2009). If someone scores high on the dynamic dimension, he/she will likely score high on being directing ($r = 0.47$), purposeful ($r = 0.45$), striving ($r = 0.42$), enterprising ($r = 0.42$), and strategic ($r = 0.41$), but is moderately likely to be low on conforming ($r = -0.37$).

Enterprising Dimension

The enterprising oriented dimension is composed of competitive facets. About half of the benchmark group scored high in the enterprising dimension, making this a “common” attribute. High scorers “regard themselves as highly competitive, with a strong need to win; believe they are good at, and derive real satisfaction from, identifying business opportunities; see themselves as very sales oriented” (Saville et al., 2009). If someone scores high on the enterprising dimension, he/she will likely score high on striving ($r = 0.53$), convincing ($r = 0.47$), dynamic ($r = 0.42$), and directing ($r = 0.40$), and is moderately likely to score low on conforming ($r = -0.30$). In this dimension, “males score more highly than females (SD diff = 0.70)” (Saville et al., 2009).

Striving Dimension

The striving dimension is composed of ambitious, results driven, and persevering facets. More than half of the benchmark group scored high in the striving dimension, making this a “frequent” attribute. High scorers “see themselves as very ambitious and want to be successful;

attach great importance to achieving outstanding results and believe they do so; are very persevering and keep going no matter what” (Saville et al., 2009). If someone scores high on the striving dimension, he/she will likely score high on being enterprising ($r = 0.53$), dynamic ($r = 0.42$), and strategic ($r = 0.41$). In this dimension, “males report higher scores (SD diff = 0.39)” (Saville et al., 2009).

CLUSTER	Sections	Dimensions	Facets
THOUGHT	Evaluation	<i>Analytical</i>	Problem solving
			Analyzing information
			Probing
		<i>Factual</i>	Written communication
			Logical
			Fact finding
		<i>Rational</i>	Number fluency
			Technology aware
			Objective
	Judgment	<i>Learning Oriented</i>	Discerning
			Seeking improvement
			Intuitive
		<i>Practically Minded</i>	Practical
			Learning by doing
			Common sense focused
<i>Insightful</i>	Open to learning		
	Learning by reading		
	Quick learning		
Vision	<i>Inventive</i>	Creative	
		Original	
		Radical	
	<i>Abstract</i>	Conceptual	
		Theoretical	
		Learning by thinking	
	<i>Strategic</i>	Developing strategy	
Visionary			
Forward thinking			

Figure A-1. Thought cluster sections, dimensions, and facets.

CLUSTER	Sections	<i>Dimensions</i>	Facets		
INFLUENCE	Sociable	<i>Interactive</i>	Immodest Attention seeking Praise seeking		
		<i>Engaging</i>	Networking Talkative Lively		
		<i>Interactive</i>	Establishing rapport Friendship seeking Initial impression		
		Impactful	<i>Convincing</i>	Persuasive Negotiatory Asserting views	
			<i>Articulate</i>	Challenging ideas Prepared to disagree Argumentative	
			<i>Challenging</i>	Giving presentations Eloquent Socially confident	
			Assertive	<i>Purposeful</i>	Decisive Making decisions Definite
				<i>Directing</i>	Leadership oriented CCBO seeking Coordinating
				<i>Empowering</i>	Motivating others Inspiring Encouraging

Figure A-2. Influence cluster sections, dimensions, and facets.

CLUSTER	Sections	Dimensions	Facets	
ADAPTABILITY	Resilient	<i>Self-assured</i>	Conflict resolution Handling angry people Coping with upset people	
		<i>Composed</i>	Self-confident Self-valuing Self-directing	
		<i>Resolving</i>	Calm Poised Copes with pressure	
		Flexible	<i>Positive</i>	Receptive to feedback Open to criticism Feedback seeking
			<i>Change Oriented</i>	Optimistic Cheerful Buoyant
			<i>Receptive</i>	Accepting challenges Accepting change Tolerant of uncertainty
		Supportive	<i>Attentive</i>	Team oriented Democratic Decision sharing
			<i>Involving</i>	Empathic Listening Psychologically minded
			<i>Accepting</i>	Trusting Tolerant Considerate

Figure A-3. Adaptability cluster, sections, dimensions, and facets.

CLUSTER	Sections	Dimensions	Facets	
DELIVERY	Conscientious	Reliable	Quality oriented Thorough Detailed	
		Meticulous	Meeting deadlines Finishing tasks Punctual	
		Conforming	Rule bound Following procedures Risk adverse	
		Structured	Organized	Self-organized Planning Prioritizing
			Principled	Proper Discreet Honoring commitments
			Activity Oriented	Quick working Busy Multitasking
		Driven	Dynamic	Energetic Initiating Action oriented
			Enterprising	Ambitious Results driven Persevering
			Striving	Competitive Entrepreneurial Selling

Figure A-4. Delivery cluster sections, dimensions, and facets.

REFERENCES

- Amey, M. J., VanDerLinden, K. E., & Brown, D. F. (2002). Perspectives on community college leadership: Twenty years in the making. *Community College Journal of Research and Practice*, 26, 573–589.
- Asendorpf, J. B. (2002). The puzzle of personality types [Editorial]. *European Journal of Personality*, 16(1), S1–S5. doi: 10.1002/per.446
- Ashburn, E. (2007, September 14). Wave of leaders' retirements hits Calif. 2-year colleges. *The Chronicle of Higher Education*, 54(3), A1–A21.
- Bagnato, K. (2004, August 26). Brave new leadership: With community college presidents retiring left and right, what's an open-access institution to do? Leadership programs just might be the answer. *Black Issues in Higher Education*, 14, 28–31.
- Balkis, M., & Isiker, G. B. (2005). The relationship between thinking styles and personality types. *Social Behavior and Personality: an international journal*, 33, 283–94.
- Bardaglio, P. W. (2005). Sustainability thinking and entrepreneurship: A case study. *Peer Review*, 7(3), 18–20.
- Barnett, R. (2005). Convergence in higher education: The strange case of “entrepreneurialism.” *Higher Education Management and Policy*, 17(3), 43–58.
- Basham, M. J. (2007). *Cognitive application 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., Campbell, D. F., & Garcia, E. (2010). Stop the presses! Using the journalism field as a case study to help community college administrators today. *Community College Journal of Research and Practice*, 34(1–2), 175–79. doi: 10.1080/10668920903385947
- Basham, M. J., Campbell, D. F., & Mendoza, P. (2008, November). Critical issues facing America's community colleges: A summary of the Community College Futures Assembly 2008. *Community College Journal of Research and Practice*, 32(11), 857–870.
- Basham, M., J., & Mathur, R. P. (2010). Dynamic leadership development in community college administration: theories, applications, and implications. *New Directions for Community Colleges*, 149, 25–32. doi: 10.1002/cc.392
- Basham, M. J., Stader, D. L., & Bishop, H. N. (2009, March). 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.
- Bernard, L. C., Walsh, R. P., & Mills, M. (2005). Ask once, may tell: Comparative validity of self-rating and objective measurement of the “Big Five” personality factors. *Counseling and Clinical Psychology Journal*, 2(1), 40–57.

- Berry, L. H., Hammons, J. O., & Denny, G. S. (2001). Faculty retirement turnover in community colleges: A real or imagined problem? *Community College Journal of Research and Practice*, 25(2), 123–136.
- Bisbee, D. C. (2007). Looking for leaders: Current practices in leadership identification in higher education. *Planning and Changing*, 38(1–2), 77–88.
- Boeree, C. G. (2006). *Personality theories*. Retrieved October 30, 2009, from <http://www.ship.edu/%7Ecgboree/jung.html>
- Boggs, G. R. (2004). Community colleges in a perfect storm. *Change*, 36(6), 6–11.
- Bos, J. (2007, November 19). Top trends in training and leadership development. Retrieved November 3, 2009, from <http://www.workforce.com>
- Breneman, D. W. (2005). Entrepreneurship in higher education. *New Directions for Higher Education*, 129, 3–9. doi: 10.1002/he.168
- Brown, L., Martinez, M. C., & Daniel, D. (2002). Community college leadership preparation: Changing needs, current perceptions, and recommendations. *Community College Review*, 30(1), 45–73.
- Campbell, D. F. (2006). The new leadership gap: Shortages in administrative positions. *Community College Journal*, 76(4), 10–14.
- Campbell, D. F. (2009). Your next leader: Piecing together the executive search process. *Community College Journal*, 79(6), 34–35.
- Campbell, D. F., Syraj, S., & Morris, P. A. (2010). Minding the gap: Filling a void in community college leadership development. *New Directions for Community Colleges*, 149, 33–39. doi: 10.1002/cc.393
- Center for Creative Leadership. (2008). Driving performance: Why leadership development matters in difficult times. Retrieved October 6, 2009, from <http://www.ccl.org>
- Cooper, C. D., Scandura, T. A., & Schriesheim, C. A. (2005). Looking forward but learning from our past: Potential challenges to developing authentic leadership theory and authentic leaders. *The Leadership Quarterly*, 16(3), 475–493. doi: 10.1016/j.leaqua.2005.03.008
- Crossan, F. (2003). Research philosophy: Towards an understanding. *Nurse Researcher*, 11(1), 46–55.
- De Fruyt, F., De Clercq, B. J., Miller, J., Rolland, J-P., Jung, S-C., Taris, R., Furnham, A., & Van Hiel, A. (2009). Assessing personality at risk in personnel selection and development. *European Journal of Personality*, 23(1), 51–69. doi: 10.1002/per.703

- Doane, D. J., & Pusser, B. (2005, Spring). Entrepreneurial organization at the academic core: The case of summer sessions. *New Directions for Higher Education*, 129, 43–54. doi: 10.1002/he.171
- Duree, C. (2008). *Iowa State study of community college presidents finds national shortage on horizon*. Retrieved September 18, 2009, from <http://www.news.iastate.edu/news/2008/jul/ccleadership.shtml>
- Eysenck, H. J. (1990). Biological dimensions of personality. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 244–276). New York, NY: Guilford.
- Flannigan, S. L., Greene, T. G., & Jones, B. R. (2006). Setting the stage for action: Entrepreneurship at work. In J. E. Roueche & B. R. Jones (Eds.), *The entrepreneurial community college* (pp. 1–12). Washington, DC: Community College Press.
- Friedel, J. N. (2008). The effect of the community college workforce development mission on governance. *New Directions for Community Colleges*, 141, 45–55. doi: 10.1002/cc.314
- 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(3), 233–250. doi: 10.1080/10668920590901176
- Gardner, H. (2006). *Five minds for the future*. Boston, MA: Harvard Business School Press.
- Garza Mitchell, R. L., & Eddy, P. L. (2008). In the middle: Career pathways of midlevel community college leaders. *Community College Journal of Research and Practice*, 32(10), 793–811. doi: 10.1080/10668920802325739
- Harris, A. (2009). Leadership succession. *School Leadership & Management*, 29(5), 421–423. doi: 10.1080/13632430903152245
- Hendricks, J. W. & Payne, S. C. (2007). Beyond the Big Five: Leader goal orientation as a predictor of leadership effectiveness. *Human Performance*, 20, 317–343.
- Hull, J. R., & Keim, M. C. (2007). Nature and status of community college leadership development programs. *Community College Journal of Research and Practice*, 31(9), 689–702. doi: 10.1080/10668920600851621
- Jacobs, J., & Dougherty, K. J. (2006). The uncertain future of the community college workforce development mission. *New Directions for Community Colleges*, 136, 53–62. doi: 10.1002/cc.259
- 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
- Kornør, H., & Nordvik, H. (2004). Personality traits in leadership behavior. *Scandinavian Journal of Psychology*, 45(1), 49–54. doi: 10.1111/j.1467-9450.2004.00377.x

- London, M. (2008). Leadership and advocacy: Dual roles for corporate social responsibility and social entrepreneurship. *Organizational Dynamics*, 37(4), 313–326
doi: 10.1016/j.orgdyn.2008.07.003
- Lussier, R. N., & Achua, C. F. (2010). *Leadership: Theory, application, skill development* (4th ed.). Mason, OH: Cengage.
- Leubsdorf, B. (2006). Boomers' retirement may create talent squeeze. *The Chronicle of Higher Education*, 53(2), A51.
- Malm, J. R. (2008). Six community college presidents: Organizational pressures, change processes and approaches to leadership. *Community College Journal of Research and Practice*, 32(8), 614–628. doi: 10.1080/10668920802103813
- McRae, R. R., & Costa, P. T. (1989). Reinterpreting the Myers-Briggs Type Indicator from the perspective of the Five-Factor Model of personality. *Journal of Personality*, 57(1), 17–40.
- McNair, D. E. (2010). Preparing community college leaders: The AACCC core competencies for effective leadership and doctoral education. *Community College Journal of Research and Practice*, 34(1–2), 199–217. doi: 10.1080/10668920903388206
- McNair, D. E., Duree, C. A., & Ebbers, L. (2011). If I knew then what I know now: Using the leadership competencies developed by the American Association of Community Colleges to prepare community college presidents. *Community College Review*, 39(1), 3–25.
doi: 10.1177/0091552110394831
- McPhail, C. J., Robinson, M., & Scott, H. (2008). The cohort leadership development model: Student perspectives. *Community College Journal of Research and Practice*, 32(4 & 6), 362–374. doi: 10.1080/10668920201884539
- Murphy, N. (2005, November 18). Psychometrics: Making waves. *IRS Employment Review*, 835, 44–48.
- Basham, M. J. (2007). *Cognitive application of personality testing: Measuring entrepreneurialism in America's community colleges* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3299337)
- O'Daniels, T. B. (2009). *Gender in community college administration*. (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3355975)
- Ones, D. S., Viswesvaran, C., & Dilchert, S. (2005). Personality at work: Raising awareness and correcting misconceptions. *Human Performance*, 18(4), 389–404.
- Pace, A. (2010, February). Developing the leaders of tomorrow today. *Training and Development*, 64(2), 18.

- Patton, M. (2004, January 20). Initiative seeks to inform and prepare new leaders. *Community College Times*, p. 18. Retrieved October 5, 2009, from <http://www.ccleadership.org/>
- Peterman, D. S. (2002, July). Is there a crisis in leadership in the community college? *Community College Journal of Research and Practice*, 26(6), 541–547.
- Riggs, J. (2009). Leadership, change and the future of community colleges. *Academic Leadership Journal*, 7(1). Retrieved September 18, 2009, from http://www.academicleadership.org/emprical_research/581.html
- Risacher, J. (2004). The extent to which four-year college presidents who previously served as senior student affairs officers report having the characteristics of effective presidents. *NASPA Journal*, 41(3), 436–451.
- Romano, R. M., Townsend, B., & Mamiseishvili, K. (2009). Leaders in the making: Profile and perceptions of students in community college doctoral programs. *Community College Journal of Research and Practice*, 33(3–4), 309–320. doi: 10.1080/10668920802580499
- Romero, M. (2004). Who will lead our community colleges? *Change*, 36(6), 30–34.
- Salopek, J. J. (2006). Leadership for a new age. *Training and Development*, 60(6), 22–23.
- Sato, T. (2005). The Eysenck Personality Questionnaire brief version: Factor structure and reliability. *The Journal of Psychology*, 139(6), 545–552.
- Saville, P., MacIver, R., & Kurz, R. (2009). Saville Consulting Wave Professional Styles handbook. Retrieved November 1, 2009, from <http://www.savilleconsulting.com>
- Shults, C. (2001). *The critical impact of impending retirements of community college leadership*. Washington, DC: Community College Press.
- Smith, A. B., & Stewart, G. A. (1999). A statewide survey of new department chairs: Their experiences and needs in learning their roles. *New Directions for Community Colleges*, 105, 29–36. doi: 10.1002/cc.10504
- Smith, D., & Adams, J. (2008). Academics or executives? Continuity and change in the roles of pro-vice-chancellors. *Higher Education Quarterly*, 62(4), 340–357. doi: 10.1111/j.1468-2273.2008.00403.x
- Srivastava, S. (2009). *Measuring the Big Five personality factors*. Retrieved October 30, 2009, from <http://www.uoregon.edu/~sanjay/bigfive.html>
- 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. doi: 10.1080/10668920600932876

- Strang, S. E., & Kuhnert, K. W. (2009). Personality and leadership developmental levels as predictors of leader performance. *The Leadership Quarterly*, *20*, 421–433. doi: 10.1016/j.leaqua.2009.03.009
- Vaughan, G. B. (2000). *The community college story*. Washington, DC: Community College Press.
- Weisman, L. M., & Vaughan, G. B. (2006). *The community college presidency: 2006*. Washington, DC: Community College Press. Retrieved September 18, 2009, from <http://www.acc.nche.edu/aaccbriefs>
- Whitsett, G. (2007). Perceptions of leadership styles of department chairs. *College Student Journal*, *41*(2), 274–286.
- Williamson, K. (2006). Research in constructivist frameworks using ethnographic techniques. *Library Trends*, *55*(1), 83–101.
- Won, H. (2006). Links between personalities and leadership perceptions in problem-solving groups. *The Social Science Journal*, *43*(4), 659–672. doi: 10.1016/j.soscij.2006.08.017
- Yielder, J., & Codling, A. (2004). Management and leadership in the contemporary university. *Journal of Higher Education Policy and Management*, *26*(3), 315–328.
- Zaharia, S., & Gibert, E. (2005). The entrepreneurial university in the knowledge society. *Higher Education in Europe*, *30*(1), 31–40.
- Zhang, L-F., & Huang, J. (2001). Thinking styles and the five-factor model of personality. *European Journal of Personality*, *15*(6), 465–476. doi: 10.1002/per.429
- Zhao, H., Seibert, S. E., & Hills, G. E. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology*, *90*(6), 1265–1272.

BIOGRAPHICAL SKETCH

Barbara Yankowy received her associate's degree from Florida State College at Jacksonville. She continued her education at the University of North Florida where she earned a bachelor's degree in psychology and a master's degree in health science education. During her college career, Yankowy was employed at Florida State College at Jacksonville, where she has supported the community college mission for the past fifteen years. She earned her doctorate in higher education administration from the University of Florida in 2011.