

GENDER IN COMMUNITY COLLEGE ADMINISTRATION

By

TINA BARREIRO O'DANIELS

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

2009

© 2009 Tina Barreiro O'Daniels

To my husband Dennis, and children Jacob and Nicholas

## ACKNOWLEDGEMENTS

If it was not for the endless support of my family, I would not be in the position to be earning a doctorate degree from the University of Florida. I wish to acknowledge my parents, husband, and brother who have whole-heartedly supported all of my educational endeavors. Over these years, their combined encouragement and support has allowed me to maintain my momentum and sustain my sanity.

I also wish to acknowledge my dissertation chair, Dr. Dale F. Campbell, for his inexorable tutelage throughout my doctoral program. Special thanks go to each of my committee members for not only serving on my committee, but for their sincere support, guidance, and learning opportunities. I thank David S. Honeyman for sharing his critical thinking method to make me in fact “suppose.” I thank Lynn H. Leverty for sharing her petite poetic “punch.” And I thank Bernard E. Olliver for his directions and suggestions.

Many thanks to each of the awe-inspiring colleagues of my doctoral cohorts. Thanks for the engaging discussions and teaching me the meaning of “agree to disagree.” Special acknowledgements go to Dr. Conferlete C. Carney, my first “Gator Classmate,” for his sincere guidance and mentorship, and Dr. Matthew J. Basham, for his pitiless edits and statistical directions. We truly have been “stretched,” by the best of the best of the best.

Finally, I would like to acknowledge Nick M. Billiris, Marion M. Barrett, and Eva Hefner for selecting me for my first position of a twenty-plus-year career in higher education. Thanks you for sharing with me your unconditional passion, commitment, and vision to “do what is in the best interest of our students.”

## TABLE OF CONTENTS

	<u>page</u>
ACKNOWLEDGEMENTS .....	4
LIST OF TABLES .....	8
LIST OF FIGURES .....	9
ABSTRACT .....	10
CHAPTER	
1 INTRODUCTION .....	11
Statement of Problem .....	13
Purpose of Study .....	14
Research Questions .....	14
Research Hypotheses .....	15
Definition of Terms .....	15
Significance of the Study .....	15
Limitations of the Study .....	16
2 LITERATURE REVIEW .....	17
Changing Demographics .....	17
Leadership .....	18
Leadership Traits, Characteristics and Competencies .....	19
Leadership Development Initiatives .....	21
Gender-Leadership Research .....	22
Conclusion .....	25
3 RESEARCH METHODOLOGY .....	31
Purpose of Study .....	31
Research Questions .....	31
Research Hypotheses .....	31
Population .....	32
Research Design .....	33
Research Instrument .....	33
Instrument Validity and Reliability .....	35
Data Collection .....	35
Data Analysis .....	35

4	RESULTS .....	39
	Aggregate Data-Descriptive Statistics .....	39
	Research Hypothesis One .....	40
	Research Hypothesis Two .....	40
5	CONCLUSION.....	73
	Findings .....	96
	Implications for Higher Education .....	97
	DiscussionImplications for Higher Education.....	98
	For Future Research.....	99
	Conclusion .....	:
	APPENDIX: THE SCALE DESCRIPTIONS .....	82
	The “Thought” Cluster .....	82
	Inventive Dimension .....	82
	Abstract Dimension .....	83
	Strategic Dimension .....	83
	Insightful Dimension .....	83
	Practically-Minded Dimension.....	84
	Learning Oriented Dimension .....	84
	Analytical Dimension .....	84
	Factual Dimension.....	85
	Rational Dimension .....	85
	Purposeful Dimension .....	85
	Directing Dimension .....	86
	Empowering Dimension.....	86
	Convincing Dimension.....	87
	Challenging Dimension .....	87
	Articulate Dimension.....	87
	Self-Promoting Dimension.....	88
	Interactive Dimension .....	88
	Engaging Dimension .....	88
	The “Adaptability” Cluster .....	89
	Involving Dimension .....	89
	Attentive Dimension.....	89
	Accepting Dimension .....	90
	Resolving Dimension .....	90
	Self-Assured Dimension.....	90
	Composed Dimension .....	90
	Receptive Dimension.....	91
	Positive Dimension.....	91
	Change Oriented Dimension .....	91
	The “Delivery” Cluster .....	92

Organized Dimension.....	92
Principled Dimension.....	92
Activity-Oriented Dimension.....	92
Dynamic Dimension.....	93
Striving Dimension.....	93
Enterprising Dimension.....	93
Meticulous Dimension.....	94
Reliable Dimension.....	94
Compliant Dimension.....	94
REFERENCE LIST.....	98
BIOGRAPHICAL SKETCH.....	102

## LIST OF TABLES

<u>Table</u>	<u>page</u>
3-1 Reliability summary for the Saville Consulting WAVE©. Alternate form normative, ipsative, and combined (N = 153). Normative test-retest reliability on invited access (N = 112).....	38
4-1 Leadership characteristics mean and Std. deviation for population, males and females ...	42
4-2 Leadership competencies mean and Std. deviation for population, males and females.....	43
4-3 Pearson correlations for the population (N = 177) for leadership characteristics WAVE© 36 dimensions .....	44
4-4 Pearson correlations for the population (N = 177) for leadership competencies WAVE© 12 divisions .....	50
4-5 Pearson correlations for the population (N = 81) for leadership characteristics for males WAVE© 36 dimensions .....	53
4-6 Pearson correlations for the population (N = 81) for leadership competencies for males WAVE© 12 divisions .....	61
4-7 Pearson correlations for the population (N = 96) for leadership characteristics for females WAVE© 36 dimensions .....	62
4-8 Pearson correlations for the population (N = 96) for leadership competencies for females WAVE© 12 divisions.....	70



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

GENDER IN COMMUNITY COLLEGE ADMINISTRATION

By

Tina Barreiro O'Daniels

August 2009

Chair: Dale F. Campbell

Major: Higher Education Administration

During the waves of turnover and attrition caused by the retirements of the baby boomers, this study of gender differences and relational leadership traits, characteristics, and competencies has contributed to the understanding of leadership selection and development. Identification of gender differences between male and female community college administrators can be used to support institutional leadership selection and development initiatives. The results of this study have confirmed the findings from other disciplines and extended the research into education and found there to be very few leadership trait differences between the genders. When leadership traits were analyzed for correlations, however, males were found to be more creative with innovation and evaluating problems. Females were found to be more principled and striving. Both genders were found to be more strategic. Implications for this study and directions for future research are also discussed.

## CHAPTER 1 INTRODUCTION

For quite some time companies such as Levi Strauss, Kodak, Zenith, Firestone, Timex, Nestle, U.S. Steel, Polaroid, Sears, and IBM were known leaders in their respective industries, but not so any more (Deutschman, 2007). Even though these companies had foreseen the eminent mass turnovers, to secure their futures they planned modest leadership development initiatives. The lack of foresight on leadership development contributed, in part, to their decline (Deutschman, 2007). When these phenomena were investigated more thoroughly the underlying leadership problems were found to stem from the exodus and attrition of employees caused by retiring baby boomers. In turn, this has brought the discussion of leadership development to the top of the strategic agenda of many industries.

Our nation's businesses, industries, schools, and the professions need to prepare themselves to be equipped to face the challenges and changes of the future by developing leaders who successfully transform their organizations into "value enterprises" (Gardner, H., 2006, p. 1). Gardner states, this new style of leadership will encourage individuals to become skilled at learning how to develop more carefully leaders equipped with the cognitive abilities that will command a premium" (Gardner, H., 2006, p. 2). Furthermore, he added, if "we are going to thrive in the world during the eras to come . . . leadership needs to 'cultivate the minds' of their organization" (Gardner, H., 2006, p. 4). Collectively, by honing specific leadership skills, these new leaders should be more successful in the new era and climate of business (Zook, 2007). Identification and development of the appropriate leadership traits, characteristics, and competencies are therefore essential in order for an organization to be successful.

The turnover and attrition of administrative leadership is not exclusive to education but to all sectors of industry in the United States (Lavigna & Hays, 2004). Higher education has also

studied the possible effects of the retirements of the baby boomer generation administrators as well. America's community colleges are facing the "most significant transition of leadership" in its history (Boggs, 2003, p. 15). Some of the reports supporting this statement included, *A Nation at Risk: The Imperative for Education Reform*, "Wingspread Report; *Tough Times or Tough Choices*, *America's Perfect Storm: Three Forces Changing Our Nation's Future*; *The Coming Tsunami: Leadership Challenges for Community Colleges*; and *Winning: The Skills Race and Strengthening America's Middle Class*. As predicted by researchers, 75% of the baby boomer community college administrators are in the process of retiring before the year 2011 (Boggs, 2004; Boggs, 2002, Campbell & Associates, 2002; Campbell & Leverty, 1997). Competent and talented employees will be needed to lead the 21<sup>st</sup> century through this turnover and the mandates calling for higher standards of accountability (Boggs, 2002). Leadership development initiatives are critical tools for breaking traditions and for facing the challenges of the future.

The future economic position of our country depends on investing in tomorrow's leaders. As affirmed by Benjamin Franklin, "An investment in knowledge, pays the best interest" (Brainy Media, 2009). The ability of our nation to "educate and train engaging, existing, entrepreneurial, and transitional workers is critical for America, its communities, and its business to stay globally competitive" (Zeiss, 2005, p. 17). In summary, these reports predict and support the need for American higher education to reform and unify their missions. The data support the need for higher education to strategically focus limited resources to actively and adequately sustain the workforce requirements of our country.

For many years researchers have also investigated a more narrowly focused issue within leadership development---is gender a variable when examining the differences and if

relationships exist between the leadership traits, characteristics, and competencies between males and females in higher education?

The gender issue has been researched using a variety of perspectives. One perspective uses instruments created, in part for broader use in the hiring and leadership development processes to determine best-fit, and person-environment-fit (Bain & Mabey, 1999). In some instances researchers have found using assessments for prescreening applicants for best-fit has reduced turnover and attrition rates by 60 % or more (Krell, 2005). Utilizing assessments support the process of identifying if relationships exist within leadership traits and if differences exist between males and females. Such data can be used to support the needed direction of leadership selection and development initiatives.

### **Statement of Problem**

Hockaday and Hunter (2003) emphasize that effective leadership is displayed when “the concern is the people, not the buildings and not the programs... leaders lead people.” The role of community colleges preparing tomorrow’s workforce becomes an even more critical issue as the required skill level for employment increases. The Bureau of Labor Statistics (2000) documents that the percentage of workers needing “some postsecondary training will increase from 56 % in 1995 to 76 % by 2115” (Boggs, 2003, p. 17).

Community colleges play an important role in our society (Vaughn, 2000). Their historical contributions have supported the economic development of their local community (Yeager, 2006). To continue meeting their mission and to support the federal mandates of accountability, community colleges will need to develop successful leadership initiatives in order to wisely choose and develop their next generation of leaders (Lapovsky, 2006; Zeiss, 2005). If community colleges are going to uphold their inherited tradition of being responsive to the learning needs of their communities, they need to ensure that their new generation of leaders is

the best possible fit for the mission, culture, and programmatic goals of the institution (Hockaday & Hunter, 2003; Lapovsky, 2006).

With baby boomer retirements, the nation's 2009 presidential inauguration, recession challenges, decreasing resources, and the population of community college students becoming increasingly female-dominated, the question that has to be asked is, who is going to lead our institutions into the future? What personality traits, characteristics, and competencies exist in current community administration? Knowing this, can we make predictions based upon current data of the skills needed for future leadership development? For many years research has pointed towards the imaginary barrier of glass ceilings for females in administration. The problem for this study is to determine if there are significant differences between males and females with respect to the leadership traits, characteristics, and competencies.

### **Purpose of Study**

The purpose of this study was to examine the relationships of leadership traits between male and female community college administrators, as suggested by the literature. If significant leadership trait differences exist between the genders, then can the research be used to support leadership selection and development initiatives? If so, then how can this research be applied to leadership development efforts during the cycle of turnover and attrition caused by the retirements of the baby boomers? Based on leadership characteristics and competencies, can it be determined as to which climates, cultures, or environments are better suited for males or females, and when and why? How can this research be used to strengthen an institution's selection, leadership development, and succession planning processes?

### **Research Questions**

1. What is the relationship of leadership traits between male and female community college administrators in their leadership characteristics?

2. What is the relationship of leadership traits between male and female community college administrators in their leadership competencies?

### **Research Hypotheses**

- **H<sub>1</sub>:** There are no differences between male and female community college administrators in their leadership characteristics and competencies.
- **H<sub>2</sub>:** There are no relationships within male and female community college administrators in their leadership characteristics and competencies.

### **Definition of Terms**

COMMUNITY COLLEGE	refers to “a regionally accredited institution of higher education that offers the associate degree as its highest degree” (Vaughn, 2000, p. 2).
LEADERSHIP TRAIT	refers to the global results from the instrument as presented in the Personal Report of the WAVE© Instrument. The instrument has two sections---leadership characteristics and leadership competencies.
LEADERSHIP CHARACTERISTIC	refers to the 36 dimension items in the Psychometric Profile section of the Personal Report of the WAVE© Instrument.
LEADERSHIP COMPETENCY	refers to the 12 sections in the Competency Potential segment of the Personal Report of the WAVE© Instrument.
WAVE©	refers to instrument used for this research and based upon four-clusters, twelve-sections, and 36-dimensions within the 108-facets. See Appendix for scale descriptions.

### **Significance of the Study**

The findings of this study will support the critical selection and development of future leaders who are needed to handle the complex environments of the 21<sup>st</sup> Century (Boggs, 2003). More than 1,500 studies on a variety of industries have already been conducted on the critical issue of leadership turnover and attrition (Barrick & Zimmerman, 2005). This study will support the literature findings that in addition to business and industry, community colleges are also encouraged to prioritize and engage their leadership development activities in order to keep up with their mission’s promises to their community.

While there have already been many studies on this general topic, this study, of gender differences and relational leadership traits, characteristics, and competencies will contribute to the understanding of leadership selection and development. This study was built upon the gender leadership trait research of Desjardins and Kachik. The analysis of this research will provide a foundation for further gender and leadership studies. Identification of gender differences between male and female community college administrators can be used to support institutional leadership selection and development initiatives as part of their professional development.

### **Limitations of the Study**

The research from this study will only be applicable to community college administration engaging in leadership development efforts. It will not be applicable to leadership development initiatives in higher education, universities, nor K-12 administration. Furthermore, the results of this study cannot be generalized outside the United States or across other industry sectors.

The population of this study is ( $N = 177$ ) community college administrators, therefore the results may not be universally applicable. The cell sizes are slightly disproportionate. The population includes ( $N = 81$ ) males and ( $N = 96$ ) females. A  $p = 0.5$  significance level was used in the statistical procedures.

## CHAPTER 2 LITERATURE REVIEW

Mass retirements are requiring American community college leaders to become more cognizant to the importance of leadership development. If community colleges plan to maintain their charge of being responsive to the learning needs of their communities, they need to ensure that their new generations of leaders are prepared to lead the mission, culture, and the programmatic goals of the institution. In this chapter a review of the relevant literature on the changing demographics of community colleges, leadership characteristics, and gender issues in leadership are discussed.

### **Changing Demographics**

The changing populations in America are being reflected in the community college student population. With more families needing two incomes to stay economically and fiscally sound, or more families having only one head of household, presently more females have been entering higher education than at anytime in history. Females now comprise more than 57 % of the undergraduates attending college (Pollitt, 2006). This identified gender gap is even wider at the associate degree and certificate levels (Kleinfeld, 2006). The increased number of females attending community colleges and the “many community needs [being] voiced by women” (Desjardins, 1994, p. 147) are reasons for institutional administrators to look more closely at gender composition of their administrative team.

As more female voices are being heard on campuses and in surrounding communities, this shift has not yet been reflected in the administrative community college ranks. In 1981, of the more than 1,200 community colleges, there were only 50 female presidents, provosts, and campus directors (Desjardins, 1994, p. 147). In 1992, the number had increased to 179 administrators (Desjardins, 1994, p. 147), representing only 14.5 % of administrative positions.

Weisman and Vaughn's 2002 survey found that in the past 10 years, female presidential appointments increased from 11 to 28 % (Boggs, 2003, p. 15). This number continued to grow over the past decade. In 2003, AACC reported that 85 (45 %) of the 189 newly appointed presidents were female (Boggs, 2003, p.16). Unfortunately these numbers, during the wave of turnover and attrition, would start to decline. As of January 2009, the American Association of Community Colleges' (AACC) website reports that of the 1,096 chief executive officers or presidential members, there are 718 (72 %) males and 278 (28 %) females (AACC, 2009). With more than 57% of the student body being female and 28% of the leaders being female the literature thus shows a gap between the student composition and the community college employee composition. With the current turnover and attrition rates of baby boomers approaching 80 %, and the combined declining numbers of female leaders, now, more than ever, it is an opportune time to re-examine a multitude of leadership-related issues for community college administrators, including leadership and gender issues.

### **Leadership**

Academicians and researchers in a variety of disciplines have argued whether leadership is a natural talent or whether it is something that can be learned or developed. The "naturalists" believe leadership is something that is inherited and, thus, is not something that can be learned. (Macleod, C. J., 2007). If the naturalist theories are correct, then there are literally thousands or hundreds of thousands of people in leadership programs wasting their money. Still other researchers tend to believe leadership is learnable. The need for leadership development dates back to the beginning of history.

Leadership greatness is not pre-packed in humans. . . . In some individuals leadership gifts are well hidden until mature years; and even in the case of early bloomers, what shows itself early may offer no more than hints of what will emerge later. . . that all talents develop over many years through a series of interplays of "native gifts on the one hand and

opportunities and challenges on the other.” As a result leadership development “calls for repeated assessment and repeated opportunity for training” (Gardner, J., 1990, p. 171).

Individuals can learn skills and acquire leadership knowledge (AACC, 2005; Collins, 2001; Gardner, J., 1990). Moreover, researchers agree that natural leadership aptitude and experience can be enhanced and supported with theoretical and practical information (AACC, 2005). In this section the relevant literature on leadership traits and leadership development will be presented.

### **Leadership Traits, Characteristics and Competencies**

There has been a variety of research conducted on leadership traits, characteristics, and competencies in both the corporate and community college realms. To support the identified national priority to develop future institutional leaders, the American Association of Community College (AACC) Board identified community college leadership competencies (AACC, 2005). AACC identified five essential leadership characteristics for today’s community college administrators: (1) understanding and implementing the community college mission; (2) effective advocacy; (3) administrative skills; (4) community and economic development; (5) personal, interpersonal, and transformational skills (AACC, 2005). The competencies identify the top five leadership traits to assist in selecting the best-fit administrators. In this section we will examine the leadership characteristics in the corporate realm identified by Drucker, Goleman, and Collins.

The AACC leadership competencies closely echo the findings of research of corporate leadership researchers, such as Drucker. For example, the five emerging “requirements for effective leadership” in the corporate realm identified were: (1) to think globally, (2) to appreciate cultural diversity, (3) to develop technical savvy, (4) to build partnerships and alliances, and (5) to share leadership (Executive Challenges, 2004). “Tomorrow’s leaders will need to become adept at all five” (p. 37). Furthermore, Drucker (2006) identified eight

characteristics of effective and competent leaders: (1) They asked, “What needs to be done?”; (2) They asked, “What is right for the enterprise?”; (3) They developed action plans.; (4) “They took responsibility for the decisions.”; (5) “They took responsibility for communicating.”; (6) “They were focused on opportunities rather than problems.”; (7) “They ran productive meetings.”; and (8) “They thought and said “we” rather than “I.” (Drucker, 2006, p. xi). Drucker’s views on effective leadership have been discussed and explored by Goleman who differentiates effective leadership from emotional intelligence.

Similarly, Goleman added that truly effective leaders are distinguished by a high degree of emotional intelligence (2001). He said the chief components of emotional intelligence are self-awareness, self-regulation, motivation, empathy, and social skill. In contrast, Goleman defined “ideal leaders” as those with the emphasized traits such as “intelligence, toughness, determination, and vision” (Goleman, 2001). Even though analytical and technical skills are essential for success, the research in general indicates that emotional intelligence may be the key attribute for distinguishing “outstanding” leaders from “average” leaders.

There are other researchers who have broader views on leadership characteristics. In *Good to Great* (2001) Collins identified the keys to leadership of successful companies. He said, (1) the leaders will display a “paradoxical blend of personal humility and professional will,” (Collins, 2001, p.13), (2) leaders of good to great companies will also have no ego or self-interest because their ambition is first for the institution, and (3) great companies are led by great leaders who pick the right people for the “bus.” These are the three keys for successful companies. However, Collins adds a caveat, “do whatever you can to get the right people on the bus, the wrong people off the bus, and the right people into the right seats” (Collins, 2005, p. 14). Collins adds, “people are not your most important asset. The *right* people are. . . .” (Collins, 2005, p. 51).

The “right people” depends on “character traits and innate capabilities than with specific knowledge, background, or skills (Collins, 2005, p. 64). In brief, the success or failure of an organization is, in part, based upon the leadership traits of their leaders and how leadership selects and develops employees.

Once the right people have been identified, the next step is to develop their leadership traits to aid in retention. Developing the right people with the pride that they own “it” will positively permeate the entire institution (Rickover, 1982). Such values would include hard work, attention to detail, personal responsibility, and determination (Rickover, 1982). In short, in the research discussed, some commonalities exist for the leadership traits in which effective leaders will need in the future. In this section the literature has shown effective or ideal leaders to be humble, have little or no ego, and are driven hard workers. Additional leadership traits that have been identified include detail-oriented, good communicators, good at interpersonal relationships, visionary, culturally diverse, technically savvy, good decision makers, analytical, motivated, and empathetic.

### **Leadership Development Initiatives**

Over the past 15 years, research of the baby boomer turnover has been a focus of the leadership development discussion (Campbell, 2006). The projection is the need for all industry sectors to prepare the future leaders of their organizations. Eighty million boomers are expected to retire over the next 25 years (Sacks, 2006). Various businesses, industry, and educational institutions have implemented leadership development initiatives and strategies to prepare for the impending impact of retirements.

Traditionally, business and industry have been more proactive in utilizing and providing a variety of venues to create leadership opportunities for their employees. “Executive coaching and mentoring programs have been around for along time, and for good reason: They work!” (Zeiss,

2005, p. 158). The team coaching model is also a leadership development strategy used to form teams after corporate mergers (Ross, 2005.)

Like industry, community colleges are preparing their leaders through training programs, simulations, internships, and mentorships (Boggs, 2003, p. 20). To support this talent identification in community colleges efforts began to develop future leaders by creating resources, forums, assemblies, and doctoral programs (Campbell & Associates, 2002). The next section discusses the gender differences in leadership characteristics.

### **Gender-Leadership Research**

More definitive aspects of leadership encompass gender differences in leadership practitioners. The literature generally agrees that gender differences do exist between males and females, particularly in thinking styles (Balkis & Isiker, 2005), learning differences (Baxter Magolda), moral orientation, and voice (Desjardin). In this section the literature is reviewed specifically on the differences in leadership traits between males and females.

Males and females, as described in literature, possess different thinking styles, as defined by Sternberg, “involves the representation and processing of information in the mind” (1995). “Sternberg (1992) defines thinking style as a preferred way of thinking” (Balkis & Isiker, 2005, p. 285). Building upon Sternberg’s and Holland’s studies, Balkis & Isiker’s research supports “thinking styles acquire a different character according to gender and fields of study” (2005, p. 291). Males tend to use a judicial and an external thinking style and females tend to use executive thinking styles (Balkis & Isiker, 2005, p. 292).

Learning differences also exist between males and females. Baxter Magolda has been conducting research in the area of learning differences between the genders for more than 16 years. It is hypothesized that her findings can be extended into the selection and development processes of community college administrators. Baxter Magolda formed an epistemological

reflection model based on the cognitive development theories of Perry, Kohlberg, Gilligan, and Belenky (Severiens, Dam, & Nijenhuis, 1998). Baxter Magolda's model of the five knowledge assumptions---four stages of knowing and two patterns of reasoning---encompass the majority of her leadership-gender research. Baxter Magolda identified a gender distinction between the learning connection and autonomy/separation within the patterns of reasoning (Severiens, Dam & Nijenhuis, 1998).

Within each stage of knowledge development Baxter Magolda found two patterns of reasoning emerge when her findings were framed within the five assumptions of knowledge. These patterns of reasoning identified and supported that gender-related learning differences do exist between males and females. The two patterns of reasoning also identified a gender distinction between connection and autonomy/separation.

Baxter Magolda found females more often than males tended to be more relational learners and males more often tended to be individualistic learners. Female patterns for learning tended to be more focused on the perspectives of others. In contrast, the male patterns for learning tended to be focused on their own perspectives (Severiens et al., 1998, Theories on gender and cognitive development section, ¶ 4).

Similarly to Baxter Magolda's work, Desjardins) 1994 research focuses on determining the leadership styles and competencies of community college presidents. Desjardinu "determined the competencies" of 72 community college presidents representing an equal number of males and females. Desjardinu identified the competences that are gender-related regarding their moral orientation or the way they "view their world around the manner in which they respond to moral dilemmas" (Desjardins, 1994, p. 148). Desjardinu identifies in Figure 2-1 (Desjardins, 1994, p. 153) the leadership and gender issues in community colleges.

An extension of Desjardins) work in community colleges is Kachik's 2003 research study which consisted of participants from both "managerial personnel from public community colleges and business world" (Kachik 2003, p. 62). Kachik's 2003 Study – *21<sup>st</sup> Century Educational Leadership Profiles* utilized the Occupational Personality Questionnaire (OPQ©). OPQ© is the second generation of the now WAVE©. To identify interactions, six significant pair-wise combinations, MANOVA, were conducted.

Kachik's study included 294 community college administrators consisting of 141 (48%) females and 153 (52%) males. The private sector managers consisted of 296 with 142 (48%) females and 154 (52%) males. Kachik's findings included that when leadership traits were combined a majority of the OPQ© 31 characteristics did show gender-related differences (Kachik, 2003). Kachik's six pair-wise combinations included (1) community college female administrators compared to community college male administrators; (2) community college female administrators compared to female corporate managers; (3) community college female administrators compared to male corporate managers; (4) community college male administrators compared to female corporate managers; (5) community college male administrators compared to male corporate managers; and (6) female corporate managers compared to male corporate managers (Kachik, 2003, p. 103). For each pair-wise combination see Figure 2-2 for a summary of the characteristics Kachik found with the highest and lowest significance ( $p < 0.0083$ ).

Gilligan's research on morality orientation in leadership found that the majority of males tend to have a justice/rights orientation whereas the majority of females tend to have a care/connected orientation (Desjardins, 1994). Male moral orientation tendencies include fairness reasoning, objectivity, universality and values autonomy, and reciprocity.

Reciprocity—a trading of favors and support that maintains the larger system and provides a place to function with safety, power, and autonomy—is a major method of interaction. This support that occurs between males has its own value systems, often separated from issues of competency, and sometimes even from ethics. This had led to numerous misunderstandings between women and men (Hoffman and Julius, 1994, p. 148).

Gilligan’s research concurs with Goldberg’s research that females tend to be included in the care/connected moral orientation. Care/connected moral orientation includes attachment, care and concern for the needs of others. However, Gilligan’s research articulated the addition of “voice” to the care/connected moral orientation (Desjardins, 1994). Voice is “another tongue speaking out of the life within this life, giving an additional dimension, additional knowledge” (Desjardins, 1994, p. 161). “The moral injunction here is to be concerned with the needs of others and step forward to provide care” (Hoffman and Julius, 1994, p.148).

Desjardins’ research accentuates the importance of the need to understand each moral orientation and that these perspectives are essential in studying leadership. These orientations are “gender-related but not gender-specific” (Desjardins, 1994, p. 149). Males and females fall into each orientation however the majority is gender-related. “It is important for females and also for males to understand that caring and connection do not imply an image of self-sacrificing femininity that invites inequity, but rather an (feminine) image of strength” (Desjardins, 1994, 160). Desjardins identifies in her 1994 study specific leadership modes. Figure 2-3 (Desjardins, 1994, 153) provides a summary of Desjardins) findings.

### **Conclusion**

Men are no longer the majority gender attending college. In 2004, the U.S. Department of Education’s National Center for Education Statistics reported that women students and graduates are now the representative majority (Manzo, 2004). “Long gone are the days when males were the only hunters and warriors and females were honored for being secluded” (Desjardins, 194, p. 147). The belief/theory that a growing population of females attending community college and

subsequently entering the nation's workforce has created a heightened awareness supports the need to understand the existence of gender differences. Over the past thirty years, there has been much discussion concerning leadership differences between males and females. If gender differences do exist, then the question is which leadership characteristics and competencies are essential and need to be developed to support the leadership of our nation's future workforce needs?

Leaders of business, industry, and institutions need to understand that gender learning, knowing, and moral orientation differences do exist between males and females. An understanding of gender differences is critical to the success of organizational leadership development initiatives. Community college practitioners must also therefore understand that gender learning differences do exist and further understanding is critical to develop their future leaders.

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

Figure 2-1. Summary of Desjardins leadership competencies. Source: Leadership and gender issues in the community college, (Desjardins 1994, p.153).

Significant pair-wise combinations-MANOVA

---

(p<0.0083)

n=294 community college administrators

n=141 females

n=153 males

n=296 private sector managers

n=142 females

n=154 males

---

Community college female administrators compared to community college male administrators

n=141

Highest significance

practical

competitiveness

n=153

Lowest significance

behavioral

Community college female administrators compared to female corporate managers

n=141

Highest significance

controlling

independent

democratic

caring

behavioral

change-oriented

innovative

forward planning

critical active

competitive

achieving

n=142

Lowest significance

corporate

practical

traditional

Community college female administrators compared to male corporate managers

n=141

Highest significance

controlling

independent

democratic

caring

behavioral

change-oriented

innovative

forward planning

critical

active

competitive

achieving

n=154

Lowest significance

practical

traditional

worrying

competitive

Figure 2-2. Kachick's 2003 Study – 21<sup>st</sup> Century Educational Leadership Profiles utilized the Occupational Personality Questionnaire (OPQ©). Source: Cynthia Kachick, 2003, p. 63, 64.

Community college male administrators compared to female corporate managers

n=153

Highest significance  
persuasive  
controlling  
independent  
modest  
democratic  
data rational  
change-oriented  
conceptual  
innovative  
forward planning  
relaxed  
tough-minded  
critical  
active  
competitive  
achieving  
decisive

n=142

Lowest significance  
affiliate  
traditional  
worrying

Community college male administrators compared to male corporate managers

n=153

Highest significance  
independent  
modest  
democratic  
caring  
change-oriented  
forward planning  
relaxed  
critical  
achieving  
social desirability

n=154

Lowest significance  
traditional  
worrying

Female corporate managers compared to male corporate managers.

n=141

Highest significance  
caring

n=154

Lowest significance  
persuasive  
data rational  
active  
competitive  
decisive

---

Figure 2-2. Continued

---

*n = 72 Community College Presidents*

Males

Females

Highest Percentage

Justice/Rights

50%

Care/Connected

66%

Lowest Percentage

Care/connected

28%

Justice/Rights

17%

---

Figure 2-3. Summary of Desjardins leadership modes. Source: Leadership and Gender Issues in the Community College, (Desjardins, 1994, p.150).

## CHAPTER 3 RESEARCH METHODOLOGY

This chapter presents the research methodology that was used in this study. In this chapter, the population, research design, research instrument, data collection, and data analysis methods are outlined.

### **Purpose of Study**

The purpose of this study was to examine the relationships of leadership traits between male and female community college administrators, as suggested by the literature. If significant leadership trait differences exist between the genders, then can the research be used to support leadership selection and development initiatives? If so, then how can this research be applied to leadership development efforts during the wave of turnover and attrition caused by the retirements of the baby boomers? Based on leadership characteristics and competencies, can it be determined which climates, cultures, or environments are better suited for males or females, and when and why? How can this research be used to strengthen an institution's selection, leadership development, and succession planning processes?

### **Research Questions**

1. What is the relationship of leadership traits between male and female community college administrators in their leadership characteristics?
2. What is the relationship of leadership traits between male and female community college administrators in their leadership competencies?

### **Research Hypotheses**

- **H<sub>1</sub>:** There are no differences between male and female community college administrators in their leadership characteristics and competencies.
- **H<sub>2</sub>:** There are no relationships within male and female community college administrators in their leadership characteristics and competencies.

## Population

The data used for this research were pre-collected, i.e. it was post-hoc data. The population includes community college administrators, including presidents, senior leadership, and other administrative personnel. The data collected were the results of a project to develop a United States norming database of community college administrators. Fifteen community colleges in twelve states were invited to participate to take the WAVE© assessment. Several community colleges and affiliate councils of the American Associate of Community Colleges (AACC) were also invited to participate. The population participants were treated in accordance with the ethical standards of the American Psychological Association. The participants were also assured that the data would be kept anonymous.

The final population ( $N = 177$ ) includes data from five community colleges in Arizona, Indiana, Iowa, Ohio, and North Carolina including Ivy Technical, Guilford Technical, Central Arizona, and Southern Iowa. Also included in the final population are data from five AACC affiliate councils including the American Association for Women in Community Colleges (AAWCC), National Council on Black American Affairs (NCBAA), National Community College Hispanic Council (NCCHC), Community College Business Officers (CCBO), National Council for Continuing Education and Training (NCCET), and the American Associate of Collegiate Registrars and Admissions Officers (AACROA). The final population also includes male ( $N = 81$ ) and female ( $N = 96$ ) administrators.

Respondents answered the online WAVE© personality assessment between August and December 2006 and were provided the results electronically in the WAVE© Personal Report. Collective group reports were provided to each institution or affiliate council during 2006-2007.

## **Research Design**

The design utilized previously collected data from a one-time administered personality assessment. The theoretical perspective supporting the methodology is Positivism grounded in the epistemology of Objectivism (Creswell, 2008; Dooley, 2001; Behar-Hornstein, 2007). The dependent variables, leadership characteristics, and leadership competencies are ordinal and categorical. The independent variable, gender, is nominal and categorical (Cronk, 2006).

## **Research Instrument**

The WAVE© personality assessment was the instrument used for this research. The instrument was developed by Peter Saville of Saville Consulting, Ltd. utilizing more than 30 years of research and development in industrial-organizational psychology assessments. The WAVE© instrument is proprietary and protected under copyright laws, both within the United States and internationally. The assessment cannot be presented in its entirety in this paper. The theoretical constructs and reporting mechanisms, however, can be presented.

From a broader perspective, the WAVE© is the latest design of the newest generation of behavioral questionnaires. The WAVE© is:

an integrated suite of assessment tools offering sophisticated individual and corporate diagnostics that allows you to get “high definition” quality, spot talent and potential more accurately, uncover leadership and team development competencies, identify fresh insights in coaching feedback, enhance retention by assessing person-job and culture fit, and do all of this quickly while reducing the risk of candidate cheating (Saville, 2006).

The WAVE© is an assessment and not a test (Kreiger, 2008). There are no right or wrong answers (Kreiger, 2008). The structure of the WAVE© (see Figure 3-1) uses a nine-point Likert-type normative scale items to measure 108-facets in the areas of personality, motivation, competency, and culture. The WAVE© is based upon four-clusters, twelve-sections, and 36-dimensions within the 108- facets. Each of these constructs are identified in a reference table

(Figure 3-1). Each facet is presented two or three times throughout the assessment to allow for the identification of self-reporting bias and acquiescence bias.

On average, the assessment takes about 35 minutes to complete. Throughout the assessment the candidate is forced to rank their choices from the highest to the lowest, provided the responses are too similar to the previous asked six items. To achieve ranking for the six items, the prompts request the candidate to rank which items are “most like them” and which items are “least like them.”

The responses are then weighted and compared to the normative database before being converted into a standardized ten, or STEN, score. STEN scores allow for the ordinal data to be interpreted utilizing the standardized bell curve scoring system where 68 % of the scores of the candidates fall within one standard deviation of the mean ( $M = 5.0$ ) (Kreiger, 2008). Any scores falling within the 1-2 or 9-10 range will be at least three standard deviations away from the mean. The results are tabulated and presented to the candidate in the WAVE© Personal Report (Kreiger, 2008).

The items in the Personal Report are divided into 12 competencies and 36 characteristics. The 12 competency items are vision, judgment, evaluation, leadership, directing, empowering, support, resilience, flexibility, structure, drive, and implementation. The 36 characteristic items are inventive, abstract, strategic, insightful, practically-minded, learning-oriented, analytical, factual, rational, purposeful, directing, empowering, convincing, challenging, articulate, self-promoting, interactive, engaging, involving, attentive, accepting, resolving, self-assured, composed, receptive, positive, change-oriented, organized, principled, activity-oriented, dynamic, striving, enterprising, meticulous, reliable, and compliant (Saville & Holdsworth, 1996).

## **Instrument Validity and Reliability**

The validity and reliability of the WAVE© has been substantiated in previous studies and correlated against other personality tests. The Saville WAVE© personality assessment has “been correlated against the 16PF©, the Myers Briggs Type Indicator©, the Gordon Personal Profile©, and the DISC©” (Basham, 2007). According to Saville, the results of the construct validation studies support that the WAVE© is a valid instrument and that it measures what it intends to measure (Saville, 2006.)

The WAVE© utilizes a Test-Rest procedure which produced a mean reliability of 0.79, with a corresponding minimum reliability of 0.71 and maximum reliability of 0.91. (Berry, 2008). The data in (Table 3-1) shows the reliability summary for the Saville Consulting WAVE©. The reliability results were based on a sample size of 112 and included a one month retest period. The Alternative Form, Ipsative, and Combined results were based on a sample size of 1153 (Saville, 2005).

## **Data Collection**

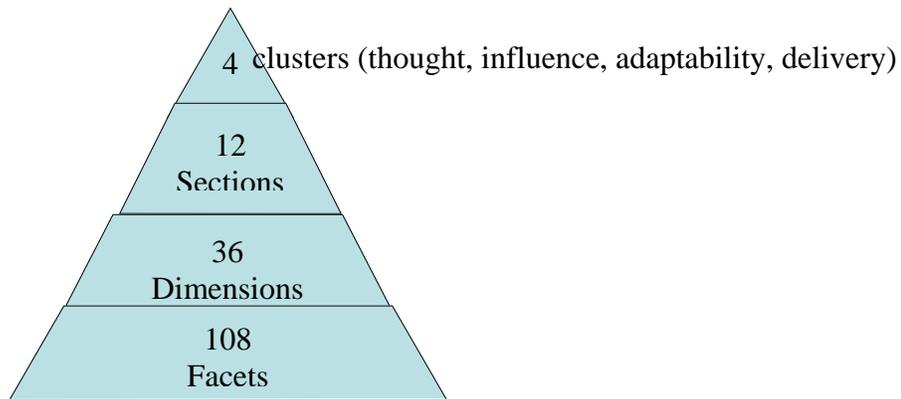
This study utilized pre-collected data by Saville Consulting, Ltd. In the interest of social science research, the purpose of collecting was to create a United States norming database for senior executives and managers.

## **Data Analysis**

Analysis of the data began by examining for any anomalies, skewness, or outliers. Since none existed, descriptive statistics and frequencies, including means, standard deviations, and skew were examined.

The first hypothesis examined if differences between male and female community college administrators exist with respect to their leadership characteristics and competencies. The WAVE© Psychometric Profile data was tested using T-tests.

The second hypothesis examined if relationships within male and female community college administrators exist with respect to their leadership characteristic and competencies. Bivariate Pearson's correlation coefficients were also calculated for the (N = 177) population, the sample of (N = 81) male administrators, and the sample of (N = 96) female administrators. The ordinal data of leadership characteristics served as the dependent variable. The nominal data of gender served as an independent variable. The significance level was set at  $\alpha = 0.05$ .



4 *Clusters* yields 12 sections:

*Thought* (vision, judgment, evaluation)

*Influence* (leadership, impact, communication)

*Adaptability* (support, resilience, flexibility)

*Delivery* (structure, drive, implementation)

Figure 3-1. Theoretical structure of the WAVE©.

Table 3-1. Reliability summary for the Saville Consulting WAVE. Alternate form normative, ipsative, and combined (N = 153). Normative test-retest reliability on invited access (N = 112)

Profession Styles Dimension	Alternate Form Normative	Alternate Form Ipsative	Alternate Form Combined	Test-Rest Normative
Inventive	0.91	0.87	0.91	0.88
Abstract	0.85	0.77	0.83	0.76
Strategic	0.84	0.79	0.84	0.73
Insightful	0.82	0.72	0.79	0.76
Pragmatic	0.85	0.83	0.86	0.81
Learning-oriented	0.86	0.84	0.87	0.78
Analytical	0.85	0.79	0.84	0.73
Factual	0.79	0.79	0.81	0.77
Rational	0.91	0.88	0.92	0.82
Purposeful	0.87	0.80	0.87	0.71
Directing	0.89	0.84	0.89	0.83
Empowering	0.90	0.85	0.89	0.80
Convincing	0.85	0.78	0.84	0.74
Challenging	0.86	0.81	0.86	0.86
Articulate	0.91	0.86	0.91	0.86
Self-promoting	0.89	0.84	0.89	0.80
Interactive	0.90	0.85	0.90	0.89
Engaging	0.87	0.83	0.87	0.79
Involving	0.79	0.81	0.81	0.74
Attentive	0.83	0.85	0.86	0.71
Accepting	0.78	0.82	0.81	0.75
Resolving	0.88	0.84	0.88	0.80
Self-assured	0.86	0.78	0.85	0.76
Composed	0.90	0.84	0.89	0.72
Receptive	0.81	0.73	0.78	0.80
Positive	0.85	0.81	0.85	0.82
Change-oriented	0.85	0.82	0.86	0.76
Organized	0.86	0.88	0.88	0.77
Principled	0.81	0.77	0.81	0.80
Activity-oriented	0.90	0.86	0.89	0.78
Dynamic	0.87	0.81	0.87	0.78
Striving	0.86	0.79	0.85	0.80
Enterprising	0.93	0.89	0.93	0.91
Meticulous	0.87	0.87	0.89	0.80
Reliable	0.89	0.89	0.91	0.83
Compliant	0.89	0.90	0.91	0.83

Source: Saville Consulting, Ltd (2006)

## CHAPTER 4 RESULTS

The results of the data analysis are presented in this chapter. The descriptive statistics, t-tests, correlations, and regression results for both hypotheses are presented. For statistical analysis, the researcher used the statistical package for the social sciences SPSS. The findings, discussion, implications for practitioners, and suggestions for future research conclusions are presented in chapter 5.

### **Aggregate Data-Descriptive Statistics**

For the population and sample groups the means and standard deviation are presented in Table 4-1. In this section the data for the aggregate population ( $N = 177$ ), for the female community college administrators sample ( $N = 96$ ), and for the male community college administrators sample ( $N = 81$ ) is presented.

The data for the aggregate population ( $N = 177$ ) appears to be distributed normally with no large deviations (see Table 4-1). The three highest mean scores of leadership traits for the population were strategic ( $M = 7.54$ ), principled ( $M = 7.12$ ), and creating innovation ( $M = 7.07$ ). The three lowest mean scores of leadership traits for the population were self-promoting ( $M = 4.61$ ), engaging ( $M = 4.95$ ), and challenging ( $M = 4.97$ ).

The data for the female community college administrators sample ( $N = 96$ ) appears to be distributed normally with no large deviations (see Table 4-1). The three highest mean scores of leadership traits for female community college administrators sample were strategic ( $M = 7.36$ ), principled ( $M = 7.12$ ), and striving ( $M = 7.00$ ). The three lowest mean scores of leadership traits for the females were self-promoting ( $M = 4.53$ ), challenging ( $M = 4.79$ ), and engaging ( $M = 5.04$ ).

The data for the male community college administrators sample ( $N = 81$ ) appears to be distributed normally with no large deviations (see Table 4-2). The three highest mean scores of leadership traits for male community college administrators sample were strategic ( $M = 7.74$ ), creating innovation ( $M = 7.43$ ), and evaluating problems ( $M = 7.26$ ). The three lowest mean scores of leadership traits for male community college administrators sample were self-promoting ( $M = 4.70$ ), engaging ( $M = 4.84$ ), and challenging ( $M = 5.19$ ).

### **Research Hypothesis One**

Hypothesis one examined the differences in leadership characteristics and competencies between female and male community college administrators. This hypothesis was analyzed using T-tests.

The T-test results (see Table 4-1) show that males are significantly higher than females on rational ( $t(175) = 2.14, p > 0.03$ ), inventive ( $t(175) = 2.04, p > 0.04$ ), and enterprising ( $t(175) = 1.97, p > 0.05$ ). Females were not statistically significantly higher than males on any leadership characteristics.

T-test results (see Table 4-2) show that males are significantly higher than females on creating innovation ( $t(175) = 2.65, p > 0.01$ ) and evaluating problems ( $t(175) = 1.99, p > 0.05$ ). Females were not statistically significantly higher than males on any leadership competency.

### **Research Hypothesis Two**

Hypothesis two examined the relationship of leadership characteristics and competencies between female and male community college administrators. This hypothesis was a using bivariate correlations using Pearson Chi-Square.

Pearson correlation coefficients were calculated for the aggregate data (see Tables 4-3 and 4-4), males (see Tables 4-5 and 4-6) and females (see Tables 4-7 and 4-8). No strong positive correlations were found in the aggregate population or females. However, strong positive

correlations were found for males between providing leadership and achieving success ( $r(177) = 0.68, p < 0.000$ ), presenting information and adjusting to change ( $r(177) = 0.65, p < 0.000$ ), presenting information and creating innovation ( $r(177) = 0.61, p < 0.000$ ), and providing leadership and presenting information ( $r(177) = 0.61, p < 0.000$ ).

The Pearson correlation coefficients were calculated for the aggregate data (see Table 4-3). Strong positive correlations were found between attentive and inventive ( $r(177) = 0.64, p < 0.000$ ) and reliable and organized ( $r(177) = 0.62, p < 0.000$ ). A strong positive strong correlation indicates that a significant linear relationship exists between two variables (Cronk, 2006). Next, the Pearson correlation coefficients were calculated for the males (see Table 4-5). Strong positive correlations were found between engaging and interactive ( $r(177) = 0.63, p < 0.000$ ) and enterprising and striving ( $r(177) = 0.62, p < 0.000$ ). Pearson correlation coefficients for the females (see Table 4-7) showed strong positive correlations between reliable and organized ( $r(177) = 0.69, p < 0.000$ ), attentive and inventive ( $r(177) = 0.65, p < 0.000$ ), and inventive and strategic ( $r(177) = 0.64, p < 0.000$ ).

Table 4-1. Leadership characteristics mean and Std. deviation for population, males and females

	Population ( <i>N</i> = 177)		Males ( <i>N</i> = 81)		Females ( <i>N</i> = 96)		two-tailed t-test <sup>1</sup> males-females	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Inventive	6.36	1.81	6.65	1.92	6.10	1.68	2.04	0.04#
Abstract	6.37	1.81	6.64	1.75	6.14	1.83	1.87	0.06
Strategic	7.54	1.77	7.74	1.76	7.36	1.75	1.42	0.16
Insightful	6.86	1.58	6.80	1.66	6.92	1.51	-0.48	0.63
Practically- Minded	5.76	1.94	5.62	1.98	5.88	1.92	-0.88	0.38
Learning- Oriented	6.11	1.75	5.88	1.74	6.30	1.74	-1.62	0.11
Analytical	6.73	2.02	6.88	1.91	6.60	2.11	0.89	0.37
Factual	6.33	1.95	6.91	2.15	6.45	1.76	-0.89	0.37
Rational	5.92	2.10	6.28	1.98	5.61	2.16	2.14	0.03#
Purposeful	6.25	1.87	6.42	1.80	6.10	1.92	1.12	0.26
Directing	6.76	1.62	6.67	1.67	6.84	1.58	-0.72	0.47
Empowering	6.42	1.72	6.40	1.66	6.45	1.77	-0.20	0.84
Convincing	5.53	1.77	5.78	1.86	5.31	1.68	1.75	0.08
Challenging	4.97	1.80	5.19	1.66	4.79	1.91	1.45	0.15
Articulate	6.33	1.82	6.38	1.72	6.29	1.90	0.33	0.74
Self- Promoting	4.61	1.83	4.70	1.89	4.53	1.79	0.62	0.53
Interactive	5.45	1.80	5.38	1.85	5.51	1.77	-0.47	0.64
Engaging	4.95	1.88	4.84	1.86	5.04	1.90	-0.71	0.48
Involving	5.67	2.32	5.72	2.38	5.64	2.27	0.23	0.82
Attentive	5.34	1.95	5.28	1.89	5.40	2.01	-0.38	0.71
Accepting	5.92	1.77	5.93	1.93	5.92	1.63	0.04	0.97
Resolving	5.47	1.67	5.47	1.73	5.47	1.63	0.00	0.99
Self-Assured	6.49	1.55	6.40	1.62	6.56	1.50	-0.71	0.48
Composed	5.87	1.79	5.69	1.85	6.02	1.73	-1.22	0.22
Receptive	5.76	1.95	5.58	1.97	5.91	1.94	-1.11	0.27
Positive	6.03	1.83	5.88	1.91	6.16	1.76	-1.02	0.31
Change Oriented	6.31	1.74	6.41	1.76	6.22	1.74	0.72	0.48
Organized	6.45	1.83	6.38	1.81	6.50	1.86	-0.42	0.67
Principled	7.12	1.47	7.12	1.55	7.12	1.45	-0.01	0.99
Activity Oriented	5.95	1.75	5.70	1.70	6.17	1.78	-1.76	0.08
Dynamic	6.90	1.92	6.88	1.88	6.93	1.95	-0.17	0.86
Striving	6.99	1.73	6.98	1.86	7.00	1.62	-0.09	0.93
Enterprising	5.54	1.86	5.84	1.95	5.28	1.76	1.97	0.05#
Meticulous	5.85	1.90	5.69	2.00	5.99	1.82	-1.04	0.30
Reliable	5.82	1.90	5.88	1.82	5.77	1.97	0.37	0.71
Compliant	5.50	1.86	5.26	1.74	5.70	1.94	-1.57	0.12

<sup>1</sup>equal variances assumed, *d.f.*=177

Table 4-2. Leadership competencies means and Std. deviations for population, males and females

	Population ( <i>N</i> = 177)		Males ( <i>N</i> = 81)		Females ( <i>N</i> = 96)		two-tailed t-test <sup>1</sup> males-females	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Achieve Success	6.82	1.72	6.98	1.67	6.69	1.76	1.11	0.27
Adjust to Change	6.80	1.74	6.80	1.77	6.80	1.73	0.00	0.99
Communicate Creating Innovation	5.39	1.92	5.35	2.01	5.43	1.85	-0.28	0.78
Evaluate Problems	7.07	1.68	7.43	1.64	6.77	1.66	2.66	0.01\$
Executing Assignments	6.95	1.92	7.26	1.76	6.69	2.00	1.99	0.05#
Make Judgments	5.79	1.87	5.62	1.83	5.93	1.89	-1.10	0.27
Presenting Information	6.81	1.79	6.81	1.80	6.80	1.80	0.05	0.96
Projecting Confidence	6.37	1.53	6.52	1.54	6.24	1.52	1.21	0.23
Providing Leadership	6.50	1.72	6.57	1.75	6.45	1.70	0.46	0.64
Support	6.87	1.69	6.93	1.86	6.82	1.55	0.40	0.69
Structuring Tasks	5.91	2.00	6.10	1.93	5.75	2.06	1.16	0.25
	6.84	1.85	6.84	1.79	6.84	1.91	-0.02	0.99

<sup>1</sup>equal variances assumed, *df.*=177

Table 4-3. Pearson correlations for the population ( $N = 177$ ) for leadership characteristics WAVE© 36 dimensions

	In	ab	st	in	pm	lo	an	fac	rat	pur	dir	emp
Inventive	1.00											
Abstract	0.32*	1.00										
Strategic	0.59*	0.36*	1.00									
Insightful	0.33*	0.22*	0.34*	1.00								
Practically Minded	-0.27*	-0.10	-0.29*	0.13	1.00							
Learning Oriented	0.13	0.45*	0.21*	0.22*	-0.14	1.00						
Analytical	0.23\$	0.43*	0.22*	0.39*	0.18\$	0.34*	1.00					
Factual	-0.01	0.36*	0.13	0.23*	0.13	0.32*	0.45*	1.00				
Rational	-0.05	0.26*	-0.05	0.16#	0.35*	0.15	0.42*	0.27*	1.00			
Purposeful	0.25*	-0.01	0.23*	0.31*	0.06	0.07	0.13	-0.02	0.15	1.00		
Directing	0.30*	-0.03	0.35*	0.21\$	0.07	0.08	0.19*	0.03	-0.01	0.49*	1.00	
Empowering	0.20\$	0.02	0.44*	0.07	-0.22*	0.11	-0.04	-0.05	-0.24*	0.05	0.36*	1.00
Convincing	0.18*	0.04	0.25*	0.23*	0.05	0.00	0.20\$	0.05	0.02	0.42*	0.36*	0.10
Challenging	0.09	0.12	0.03	0.16\$	-0.01	0.10	0.23*	0.12	-0.01	0.29*	0.07	-0.06
Articulate	0.09	-0.07	0.19\$	-0.02	0.03	0.03	0.03	0.07	-0.09	0.05	0.32*	0.36*
Self-Promoting	0.19*	-0.14	0.04	0.01	-0.11	-0.09	-0.17#	-0.20*	-0.23*	0.07	0.18#	0.10
Interactive	0.15#	-0.15#	0.14	-0.01	-0.03	0.01	-0.09	-0.16#	-0.38*	0.07	0.20\$	0.27*
Engaging	-0.05	-0.34*	0.06	-0.08	0.08	-0.14	-0.11	-0.16#	-0.27*	-0.07	0.22\$	0.28*
Involving	-0.06	0.22*	0.20*	-0.04	-0.19\$	0.12	0.06	0.13	-0.04	-0.27*	-0.05	0.33*
Attentive	-0.01	0.20*	0.20*	-0.09	-0.15#	0.15	0.01	0.11	-0.13	-0.28*	-0.01	0.40*
Accepting	-0.12	0.00	0.02	-0.21*	-0.01	0.02	-0.16#	-0.02	-0.11	-0.27*	-0.06	0.23*
Resolving	-0.04	0.11	0.15	0.05	-0.08	0.15#	0.13	0.16#	-0.10	0.06	0.04	0.19*
Self-Assured	0.10	-0.15	0.11	0.06	0.13	0.01	-0.12	-0.07	-0.05	0.24*	0.22*	0.08
Composed	0.10	-0.13	0.24*	0.11	-0.01	0.08	0.03	0.02	0.02	0.31*	0.28*	0.24*
Receptive	0.03	0.28*	0.08	0.02	-0.03	0.11	0.03	0.06	0.00	-0.27*	-0.03	0.01
Positive	0.08	-0.19\$	0.10	-0.19*	-0.14	0.04	-0.14	-0.16#	-0.26*	-0.10	0.06	0.19\$

Table 4-3. Continued

	In	ab	st	in	pm	lo	an	fac	rat	pur	dir	emp
Change Oriented	0.30*	0.20*	0.38*	0.21*	-0.19\$	0.25*	0.29*	0.08	0.09	0.18#	0.15	0.11
Organized	-0.12	0.09	0.09	-0.03	0.23*	-0.01	0.15\$	0.19\$	0.29*	0.11	0.15	-0.11
Principled	-0.20*	-0.01	-0.01	0.02	0.16#	0.11	0.12	0.13	0.26*	0.06	0.10	0.01
Activity-Oriented	0.08	-0.04	0.03	0.27*	0.26*	0.21*	0.27*	0.04	0.14	0.37*	0.27*	-0.07
Dynamic	0.37*	-0.15#	0.30*	0.30*	-0.03	-0.06	0.17#	0.01	-0.21\$	0.45*	0.45*	0.18#
Striving	0.22*	-0.16#	0.15#	0.17#	0.08	-0.02	0.18#	-0.06	-0.03	0.36*	0.47*	0.11
Enterprising	0.24*	-0.21\$	0.24*	0.14	-0.01	-0.17#	0.03	-0.25*	-0.23*	0.31*	0.34*	0.12
Meticulous	-0.28*	0.06	-0.15#	0.05	0.38*	0.04	0.24*	0.22*	0.42*	-0.03	0.05	-0.24*
Reliable	-0.26*	-0.19\$	-0.16#	-0.09	0.33*	-0.08	0.06	0.06	0.35*	0.03	0.06	-0.20\$
Compliant	-0.46*	-0.02	-0.42*	-0.03	0.47*	-0.07	0.00	0.14	0.32*	-0.11	-0.26*	-0.32*

Table 4-3. Continued

	conv	chal	art	Self	inter	eng	inv	atten	acce	res	sa	comp
Inventive												
Abstract												
Strategic												
Insightful												
Practically Minded												
Learning Oriented												
Analytical												
Factual												
Rational												
Purposeful												
Directing												
Empowering												
Convincing	1.00											
Challenging	0.53*	1.00										
Articulate	0.22*	-0.05	1.00									
Self-Promoting	0.39*	0.27*	0.22*	1.00								
Interactive	0.21*	0.17#	0.44*	0.43*	1.00							
Engaging	0.06	-0.17#	0.51*	0.17#	0.52*	1.00						
Involving	-0.19\$	-0.07	0.10	-0.13	-0.05	0.09	1.00					
Attentive	-0.18#	-0.08	0.24*	-0.02	0.19\$	0.26*	0.64*	1.00				
Accepting	-0.24*	-0.21*	0.14	-0.02	0.11	0.26*	0.48*	0.55*	1.00			
Resolving	0.11	0.05	0.26*	-0.15#	0.14	0.21*	0.24*	0.27*	0.21*	1.00		
Self-Assured	0.15#	0.00	0.19\$	0.15#	0.23*	0.24*	-0.15#	-0.02	0.17#	0.12	1.00	
Composed	0.15	0.00	0.38*	-0.02	0.17#	0.17#	-0.09	-0.02	0.03	0.24*	0.13	1.00
Receptive	-0.13	0.11	0.06	0.14	-0.06	0.00	0.30*	0.24*	0.05	0.00	-0.07	-0.12
Positive	-0.25*	-0.24*	0.20\$	0.14	0.34*	0.36*	0.00	0.17#	0.35*	0.14	0.35*	0.23*

Table 4-3. Continued

	conv	chal	art	Self	inter	eng	inv	atten	acce	res	sa	comp
Change Oriented	-0.10	-0.04	-0.04	0.22*	-0.01	-0.06	0.11	0.04	0.01	0.05	-0.03	0.37*
Organized	0.05	-0.16#	0.00	-0.32*	-0.30*	-0.03	-0.08	-0.25*	-0.10	0.01	-0.13	0.07
Principled	-0.06	-0.07	0.02	-0.28*	-0.17#	0.06	0.05	-0.01	0.13	0.12	0.06	0.15#
Activity-Oriented	0.04	0.07	-0.04	-0.07	0.07	0.02	-0.19\$	-0.25*	-0.23*	-0.06	0.04	0.30*
Dynamic	0.28*	0.15#	0.29*	0.30*	0.40*	0.20*	-0.32*	-0.25*	-0.28*	-0.01	0.27*	0.28*
Striving	0.25*	0.15#	0.12	0.18\$	0.20*	0.24*	-0.13	-0.15#	-0.13	-0.11	0.21*	0.28*
Enterprising	0.44*	0.17#	0.23*	0.44*	0.35*	0.30*	-0.16#	-0.12	-0.12	-0.10	0.23*	0.14
Meticulous	-0.01	-0.02	-0.11	-0.27*	-0.33*	-0.05	-0.05	-0.20\$	-0.04	0.00	-0.01	-0.08
Reliable	-0.09	-0.20\$	-0.12	-0.27*	-0.24*	-0.02	-0.07	-0.23*	0.04	0.00	-0.04	0.09
Compliant	-0.07	0.07	-0.20\$	-0.18#	-0.24*	-0.18#	-0.06	-0.15#	-0.04	-0.10	-0.13	-0.14

Table 4-3. Continued

	rec	pos	co	org	prin	ao	Dyn	Str	Ent	Met	Rel	Comp
Inventive												
Abstract												
Strategic												
Insightful												
Practically Minded												
Learning Oriented												
Analytical												
Factual												
Rational												
Purposeful												
Directing												
Empowering												
Convincing												
Challenging												
Articulate												
Self-Promoting												
Interactive												
Engaging												
Involving												
Attentive												
Accepting												
Resolving												
Self-Assured												
Composed												
Receptive	1.00											
Positive	0.07	1.00										

Table 4-3. Continued

	rec	pos	co	org	prin	ao	Dyn	Str	Ent	Met	Rel	Comp
Change Oriented	-0.01	0.27*	1.00									
Organized	-0.11	-0.19	-0.09	1.00								
Principled	-0.11	0.03	0.12	0.43*	1.00							
Activity-Oriented	-0.08	0.02	0.21*	0.21*	0.06	1.00						
Dynamic	-0.14	0.21*	0.21*	-0.06	-0.12	0.35*	1.00					
Striving	0.01	0.15#	0.17#	0.11	0.18#	0.37*	0.47*	1.00				
Enterprising	-0.03	0.05	-0.06	-0.09	-0.08	0.12	0.41*	0.52*	1.00			
Meticulous	0.10	-0.21*	-0.22*	0.52*	0.35*	0.23*	-0.16#	0.17#	-0.14	1.00		
Reliable	-0.15#	-0.02	-0.06	0.62*	0.49*	0.18#	-0.10	0.15	-0.07	0.56*	1.00	
Compliant	0.18#	-0.21*	-0.40*	0.33*	0.18#	0.07	-0.40*	-0.11	-0.26*	0.56*	0.41*	1.00

Table 4-4. Continued

	Self	inter	eng	inv	atten	acce	res	sa	comp	rec	pos
Self-Promoting	1.00										
Interactive	0.43*	1.00									
Engaging	0.17#	0.52*	1.00								
Involving	-0.13	-0.05	0.09	1.00							
Attentive	-0.02	0.19\$	0.26*	0.64*	1.00						
Accepting	-0.02	0.11	0.26*	0.48*	0.55*	1.00					
Resolving	-0.15#	0.14	0.21*	0.24*	0.27*	0.21*	1.00				
Self-Assured	0.15#	0.23*	0.24*	-0.15#	-0.02	0.17#	0.12	1.00			
Composed	-0.02	0.17#	0.17#	-0.09	-0.02	0.03	0.24*	0.13	1.00		
Receptive	0.14	-0.06	0.00	0.30*	0.24*	0.05	0.00	-0.07	-0.12	1.00	
Positive	0.14	0.34*	0.36*	0.00	0.17#	0.35*	0.14	0.35*	0.23*	0.07	1.00
Change-Oriented	-0.22*	-0.01	-0.06	0.11	0.04	0.01	0.05	-0.03	0.37*	-0.01	0.27*
Organized	-0.32*	-0.30*	-0.03	-0.08	-0.25*	-0.10	0.01	-0.13	0.07	-0.11	-0.19
Principled	-0.28*	-0.17#	0.06	0.05	-0.01	0.13	0.12	0.06	0.15#	-0.11	0.03
Activity-Oriented	-0.07	0.07	0.02	-0.19\$	-0.25*	-0.23*	-0.06	0.04	0.30*	-0.08	0.02
Dynamic	0.30*	0.40*	0.20*	-0.32*	-0.25*	-0.28*	-0.01	0.27*	0.28*	-0.14	0.21*
Striving	0.18\$	0.20*	0.24*	-0.13	-0.15#	-0.13	-0.11	0.21*	0.28*	0.01	0.15#
Enterprising	0.44*	0.35*	0.30*	-0.16#	-0.12	-0.12	-0.10	0.23*	0.14	-0.03	0.05
Meticulous	-0.27*	-0.33*	-0.05	-0.05	-0.20\$	-0.04	0.00	-0.01	-0.08	0.10	-0.21*
Reliable	-0.27*	-0.24*	-0.02	-0.07	-0.23*	0.04	0.00	-0.04	0.09	-0.15#	-0.02
Compliant	-0.18#	-0.24*	-0.18#	-0.06	-0.15#	-0.04	-0.10	-0.13	-0.14	0.18#	-0.21*

Table 4-4. Continued

	co	org	prin	ao	Dyn	Str	Ent	Met	Rel	Comp
Self-Promoting										
Interactive										
Engaging										
Involving										
Attentive										
Accepting										
Resolving										
Self-Assured										
Composed										
Receptive										
Positive										
Change-Oriented	1.00									
Organized	-0.09	1.00								
Principled	0.12	0.43*	1.00							
Activity-Oriented	0.21*	0.21*	0.06	1.00						
Dynamic	0.21*	-0.06	-0.12	0.35*	1.00					
Striving	0.17#	0.11	0.18#	0.37*	0.47*	1.00				
Enterprising	-0.06	-0.09	-0.08	0.12	0.41*	0.52*	1.00			
Meticulous	-0.22*	0.52*	0.35*	0.23*	-0.16#	0.17#	-0.14	1.00		
Reliable	-0.06	0.62*	0.49*	0.18#	-0.10	0.15	-0.07	0.56*	1.00	
Compliant	-0.40*	0.33*	0.18#	0.07	-0.40*	-0.11	-0.26*	0.56*	0.41*	1.00

\* two-tailed sig. at  $p < 0.000$  \$ two-tailed sig. at  $p < 0.01$  # two-tailed sig. at  $p < 0.05$

**Very Strong** 0.80-1.00    **Strong** 0.60-0.79    Moderate 0.40-0.59    Weak 0.20-0.39    Very Weak 0.00-0.19  
(Salkind, 2009)

Table 4-4. Pearson correlations for the population ( $N = 177$ ) for leadership competencies WAVE© 12 divisions

	AS	AC	CO	CRI	EP	EA	MJ	PI	PC	PL	PS	ST
Achieve Success	1.00											
Adjust to Change	0.45*	1.00										
Communicate	0.49*	0.52*	1.00									
Creating Innovation	0.40*	0.46*	0.12	1.00								
Evaluate Problems	0.19\$	0.16#	-0.11	0.50*	1.00							
Executing Assignments	-0.15	-0.32*	-0.37*	-0.10	0.29*	1.00						
Make Judgments	0.38*	0.17#	0.04	0.38*	0.49*	0.14	1.00					
Presenting Information	0.57*	0.42*	0.54*	0.42*	0.34*	-0.15	0.33*	1.00				
Projecting Confidence	0.42*	0.55*	0.37*	0.27*	0.22*	-0.07	0.32*	0.53*	1.00			
Providing Leadership	0.55*	0.47*	0.45*	0.31*	0.08	-0.21*	0.34*	0.57*	0.48*	1.00		
Providing Support	-0.02	0.41*	0.32*	0.15#	0.04	-0.09	-0.07	0.19\$	0.31*	0.11	1.00	
Structuring Tasks	0.16#	0.20*	0.07	0.13	0.16#	0.35*	0.23*	0.08	0.20*	0.49*	0.11	1.00

\* two-tailed sig. at  $p < 0.000$  \$ two-tailed sig. at  $p < 0.01$  # two-tailed sig. at  $p < 0.05$

**Very Strong** 0.80-1.00    **Strong** 0.60-0.79    Moderate 0.40-0.59    Weak 0.20-0.39    Very Weak 0.00-0.19  
(Salkind, 2009)

Table 4-5. Pearson correlations for the population ( $N = 81$ ) for leadership characteristics for males WAVE© 36 dimensions

	In	ab	st	in	pm	lo	an	fac	rat	pur	dir	emp
Inventive	1.00											
Abstract	0.32*	1.00										
Strategic	0.53*	0.33*	1.00									
Insightful	0.26\$	0.17	0.35*	1.00								
Practically-Minded	-0.18	-0.04	-0.13	0.29\$	1.00							
Learning-Oriented	0.09	0.48*	0.18	0.14	0.01	1.00						
Analytical	0.16	0.51*	0.21	0.32*	0.27\$	0.42*	1.00					
Factual	-0.01	0.46*	0.14	0.22#	0.13	0.32*	0.44*	1.00				
Rational	-0.11	0.30\$	-0.03	0.23#	0.42*	0.16	0.34*	0.34*	1.00			
Purposeful	0.19	-0.12	0.29\$	0.23	0.18	-0.08	-0.10	-0.12	0.17	1.00		
Directing	0.25#	-0.01	0.39*	0.20	0.26#	0.08	0.16	0.06	0.03	0.54*	1.00	
Empowering	0.09	-0.04	0.43*	0.05	0.01	0.09	-0.07	-0.06	-0.29\$	0.17	0.47*	1.00
Convincing	0.17	-0.03	0.33*	0.38*	0.06	0.01	0.19	0.04	0.07	0.42*	0.43*	0.14
Challenging	0.15	0.09	-0.05	0.21	0.16	0.10	0.37*	0.16	0.19	0.13	0.10	-0.13
Articulate	0.06	-0.03	0.21	-0.04	0.08	0.09	-0.03	0.08	-0.17	0.16	0.33*	0.40*
Self-Promoting	0.19	-0.14	-0.04	0.08	-0.08	-0.05	-0.13	-0.11	-0.13	0.14	0.11	0.09
Interactive	0.16	-0.14	0.12	-0.01	0.09	0.03	-0.04	-0.20	-0.30	0.12	0.27\$	0.32*
Engaging	0.11	-0.24#	0.19	-0.04	0.17	-0.04	-0.06	-0.14	-0.28\$	0.06	0.33*	0.47*
Involving	-0.12	0.30\$	0.14	-0.01	-0.02	0.10	0.12	0.18	-0.07	-0.25#	-0.13	0.20
Attentive	-0.09	0.22#	0.11	-0.13	0.07	0.15	0.02	0.17	-0.06	-0.21	0.03	0.25#
Accepting	-0.24#	0.00	-0.05	-0.16	0.06	0.05	-0.12	0.02	-0.07	0.18	-0.10	0.17
Resolving	-0.05	0.22#	0.27#	0.08	-0.12	0.12	0.20	0.22#	-0.06	-0.05	0.08	0.18
Self-Assured	0.19	-0.18	0.16	0.13	0.23#	-0.02	-0.15	-0.06	-0.07	0.25#	0.36*	0.20
Composed	-0.04	-0.18	0.25#	0.02	0.12	-0.07	-0.16	-0.05	0.10	0.40*	0.20	0.22
Receptive	0.09	0.36*	0.03	0.09	-0.02	0.25#	0.12	0.23#	0.09	-0.15	-0.02	-0.05

Table 4-5. Continued

	In	ab	st	in	pm	lo	an	fac	rat	pur	dir	emp
Positive	0.14	-0.06	0.15	-0.20	-0.15	0.13	-0.17	-0.19	-0.26#	-0.03	-0.02	0.25#
Change-Oriented	0.22#	0.16	0.31*	0.11	-0.09	0.20	0.15	0.04	0.15	0.14	0.02	-0.03
Organized	-0.21	0.10	0.16	0.03	0.15	0.08	0.24#	0.19	0.23#	0.18	0.16	0.03
Principled	-0.24#	0.11	0.00	0.08	0.25#	0.08	0.23#	0.20	0.33*	0.08	0.13	0.16
Activity-Oriented	0.15	0.01	0.10	0.24#	0.37*	0.10	0.24#	-0.02	0.15	0.36*	0.25#	0.02
Dynamic	0.34*	-0.25#	0.27*	0.18	0.00	-0.13	-0.05	-0.15	-0.33*	0.43*	0.45*	0.30\$
Striving	0.22#	-0.13	0.20	0.19	0.19	-0.07	0.15	-0.11	-0.13	0.34*	0.47*	0.34*
Enterprising	0.16	-0.27#	0.22#	0.15	-0.01	-0.28#	-0.05	-0.32*	-0.29\$	0.35*	0.40*	0.23#
Meticulous	-0.21	0.19	-0.03	0.22#	0.38*	0.14	0.42*	0.26#	0.34*	-0.01	0.14	-0.09
Reliable	-0.33*	-0.15	-0.15	0.07	0.33*	-0.09	0.09	-0.01	0.31\$	0.14	0.04	-0.12
Compliant	-0.36*	0.04	-0.27#	0.18	0.46*	0.07	0.13	0.22#	0.38*	-0.02	-0.12	-0.15

Table 4-5. Continued

	conv	chal	art	Self	inter	eng	inv	atten	acce	res	sa	comp
Inventive												
Abstract												
Strategic												
Insightful												
Practically-Minded												
Learning-Oriented												
Analytical												
Factual												
Rational												
Purposeful												
Directing												
Empowering												
Convincing	1.00											
Challenging	0.48*	1.00										
Articulate	0.30\$	0.07	1.00									
Self-Promoting	0.41*	0.35*	0.16	1.00								
Interactive	0.26#	0.23#	0.51*	0.49*	1.00							
Engaging	0.22#	-0.04	0.49*	0.11	0.63*	1.00						
Involving	-0.24#	-0.15	0.08	-0.16	-0.07	0.16	1.00					
Attentive	-0.27\$	-0.23#	0.22#	-0.06	0.09	0.30\$	0.63*	1.00				
Accepting	-0.29\$	-0.32*	0.09	-0.16	0.08	0.32*	0.52*	0.52*	1.00			
Resolving	0.06	0.00	0.27\$	-0.18	0.02	0.28\$	0.31\$	0.21	0.20	1.00		
Self-Assured	0.25#	0.03	0.28\$	0.18	0.35*	0.38*	-0.26#	-0.09	0.12	0.05	1.00	
Composed	0.23#	0.02	0.31\$	-0.12	0.09	0.17	-0.13	-0.12	-0.07	0.29\$	0.11	1.00
Receptive	-0.14	0.28\$	0.04	0.12	0.01	-0.07	0.31*	0.25#	0.04	0.15	-0.01	-0.16

Table 4-5. Continued

	conv	chal	art	Self	inter	eng	inv	atten	acce	res	sa	comp
Positive	-0.24#	-0.21	0.10	0.00	0.34*	0.28\$	0.02	0.20	0.41*	0.23#	0.30\$	0.13
Change-Oriented	-0.14	-0.01	-0.08	-0.31\$	-0.06	-0.11	0.09	-0.05	-0.02	0.02	-0.17	0.29#
Organized	0.16	-0.01	0.04	-0.39*	-0.25#	-0.04	0.00	-0.10	-0.03	0.23#	-0.07	0.14
Principled	0.06	-0.01	0.06	-0.40*	-0.18	0.08	0.07	-0.07	0.18	0.19	0.05	0.12
Activity-Oriented	0.07	0.25#	-0.16	-0.06	0.10	-0.01	-0.19	-0.21	-0.25#	-0.11	0.04	0.15
Dynamic	0.38*	0.26#	0.36*	0.37*	0.46*	0.27\$	-0.35*	-0.26#	-0.32*	-0.03	0.41*	0.17
Striving	0.38*	0.27#	0.11	0.23#	0.32*	0.26#	-0.04	-0.01	-0.12	-0.10	0.30\$	0.11
Enterprising	0.52*	0.24#	0.18	0.43*	0.38*	0.32*	-0.05	-0.04	-0.12	-0.02	0.31\$	0.01
Meticulous	0.13	0.16	-0.15	-0.29\$	-0.25#	-0.03	0.04	-0.11	0.06	0.25#	-0.02	-0.02
Reliable	-0.02	-0.10	-0.14	-0.38*	-0.33*	-0.11	-0.07	-0.17	0.12	0.20	0.06	0.09
Compliant	-0.03	0.15	-0.18	-0.08	-0.18	-0.17	0.09	-0.02	0.10	-0.01	-0.14	-0.01

Table 4-5. Continued

	rec	pos	co	org	prin	ao	Dyn	Str	Ent	Met	Rel	Comp
Inventive												
Abstract												
Strategic												
Insightful												
Practically-Minded												
Learning-Oriented												
Analytical												
Factual												
Rational												
Purposeful												
Directing												
Empowering												
Convincing												
Challenging												
Articulate												
Self-Promoting												
Interactive												
Engaging												
Involving												
Attentive												
Accepting												
Resolving												
Self-Assured												
Composed												
Receptive	1.00											

Table 4-5. Continued

	rec	pos	co	org	prin	ao	Dyn	Str	Ent	Met	Rel	Comp
Positive	0.10	1.00										
Change-Oriented	-0.01	0.26#	1.00									
Organized	-0.17	-0.17	-0.07	1.00								
Principled	-0.14	0.01	0.07	0.52*	1.00							
Activity-Oriented	0.09	-0.13	0.10	0.23#	-0.05	1.00						
Dynamic	-0.04	0.13	0.05	-0.13	-0.25#	0.26#	1.00					
Striving	0.07	0.10	-0.01	0.05	0.10	0.30\$	0.47*	1.00				
Enterprising	-0.12	-0.08	-0.25#	-0.08	-0.08	0.11	0.43*	0.62*	1.00			
Meticulous	0.04	-0.20	-0.16	0.55*	0.42*	0.32*	-0.16	0.14	-0.12	1.00		
Reliable	-0.14	-0.04	-0.06	0.53*	0.54*	0.12	-0.23#	-0.02	-0.06	0.56*	1.00	
Compliant	0.18	-0.15	-0.32*	0.27\$	0.35*	0.19	-0.38*	-0.04	-0.18	0.55*	0.47*	1.00

Table 4-5. Continued

	Self	inter	eng	inv	atten	acce	res	sa	comp	rec	pos
Self-Promoting	1.00										
Interactive	0.49*	1.00									
Engaging	0.11	0.63*	1.00								
Involving	-0.16	-0.07	0.16	1.00							
Attentive	-0.06	0.09	0.30\$	0.63*	1.00						
Accepting	-0.16	0.08	0.32*	0.52*	0.52*	1.00					
Resolving	-0.18	0.02	0.28\$	0.31\$	0.21	0.20	1.00				
Self-Assured	0.18	0.35*	0.38*	-0.26#	-0.09	0.12	0.05	1.00			
Composed	-0.12	0.09	0.17	-0.13	-0.12	-0.07	0.29\$	0.11	1.00		
Receptive	0.12	0.01	-0.07	0.31*	0.25#	0.04	0.15	-0.01	-0.16	1.00	
Positive	0.00	0.34*	0.28\$	0.02	0.20	0.41*	0.23#	0.30\$	0.13	0.10	1.00
Change-Oriented	-0.31\$	-0.06	-0.11	0.09	-0.05	-0.02	0.02	-0.17	0.29#	-0.01	0.26#
Organized	-0.39*	-0.25#	-0.04	0.00	-0.10	-0.03	0.23#	-0.07	0.14	-0.17	-0.17
Principled	-0.40*	-0.18	0.08	0.07	-0.07	0.18	0.19	0.05	0.12	-0.14	0.01
Activity-Oriented	-0.06	0.10	-0.01	-0.19	-0.21	-0.25#	-0.11	0.04	0.15	0.09	-0.13
Dynamic	0.37*	0.46*	0.27\$	-0.35*	-0.26#	-0.32*	-0.03	0.41*	0.17	-0.04	0.13
Striving	0.23#	0.32*	0.26#	-0.04	-0.01	-0.12	-0.10	0.30\$	0.11	0.07	0.10
Enterprising	0.43*	0.38*	0.32*	-0.05	-0.04	-0.12	-0.02	0.31\$	0.01	-0.12	-0.08
Meticulous	-0.29\$	-0.25#	-0.03	0.04	-0.11	0.06	0.25#	-0.02	-0.02	0.04	-0.20
Reliable	-0.38*	-0.33*	-0.11	-0.07	-0.17	0.12	0.20	0.06	0.09	-0.14	-0.04
Compliant	-0.08	-0.18	-0.17	0.09	-0.02	0.10	-0.01	-0.14	-0.01	0.18	-0.15

Table 4-5. Continued

	co	org	prin	ao	Dyn	Str	Ent	Met	Rel	Comp
Self-Promoting										
Interactive										
Engaging										
Involving										
Attentive										
Accepting										
Resolving										
Self-Assured										
Composed										
Receptive										
Positive										
Change-Oriented	1.00									
Organized	-0.07	1.00								
Principled	0.07	0.52*	1.00							
Activity-Oriented	0.10	0.23#	-0.05	1.00						
Dynamic	0.05	-0.13	-0.25#	0.26#	1.00					
Striving	-0.01	0.05	0.10	0.30\$	0.47*	1.00				
Enterprising	-0.25#	-0.08	-0.08	0.11	0.43*	0.62*	1.00			
Meticulous	-0.16	0.55*	0.42*	0.32*	-0.16	0.14	-0.12	1.00		
Reliable	-0.06	0.53*	0.54*	0.12	-0.23#	-0.02	-0.06	0.56*	1.00	
Compliant	-0.32*	0.27\$	0.35*	0.19	-0.38*	-0.04	-0.18	0.55*	0.47*	1.00

\* two-tailed sig. at  $p < 0.000$  \$ two-tailed sig. at  $p < 0.01$  # two-tailed sig. at  $p < 0.05$

**Very Strong** 0.80-1.00    **Strong** 0.60-0.79    Moderate 0.40-0.59    Weak 0.20-0.39    Very Weak 0.00-0.19  
(Salkind, 2009)

Table 4-6. Pearson correlations for the population ( $N = 81$ ) for leadership competencies for males WAVE© 12 divisions

	AS	AC	CO	CRI	EP	EA	MJ	PI	PC	PL	PS	ST
Achieve Success	1.00											
Adjust to Change	0.41*	1.00										
Communicate	0.52*	0.49*	1.00									
Creating Innovation	0.29\$	0.43*	0.07	1.00								
Evaluate Problems	0.00	0.17	-0.14	0.50*	1.00							
Executing Assignments	-0.16	-0.23#	-0.39*	-0.07	0.35*	1.00						
Make Judgments	0.35*	0.20	0.12	0.37*	0.49*	0.18	1.00					
Presenting Information	0.65*	0.42*	0.61*	0.38*	0.28\$	-0.04	0.38*	1.00				
Projecting Confidence	0.39*	0.55*	0.35*	0.22#	0.27\$	0.12	0.29\$	0.58*	1.00			
Providing Leadership	0.68*	0.50*	0.58*	0.31\$	0.12	-0.13	0.48*	0.61*	0.50	1.00		
Providing Support	0.10	0.44*	0.33*	0.13	0.08	0.00	0.04	0.21	0.28\$	0.15	1.00	
Structuring Tasks	0.23#	0.21	0.13	0.14	0.28\$	0.44*	0.35*	0.18	0.33*	0.52*	0.20	1.00

\* two-tailed sig. at  $p < 0.000$  \$ two-tailed sig. at  $p < 0.01$  # two-tailed sig. at  $p < 0.05$

**Very Strong** 0.80-1.00      **Strong** 0.60-0.79      Moderate 0.40-0.59      Weak 0.20-0.39      Very Weak 0.00-0.19  
(Salkind, 2009)

Table 4-7. Pearson correlations for the population ( $N = 96$ ) for leadership characteristics for females WAVE© 36 dimensions

	In	ab	st	in	pm	lo	an	fac	rat	pur	dir	emp
Inventive	1.00											
Abstract	0.28\$	1.00										
Strategic	0.64*	0.36*	1.00									
Insightful	0.42*	0.28\$	0.33*	1.00								
Practically-Minded	-0.34*	-0.13	-0.41*	-0.02	1.00							
Learning-Oriented	0.20	0.47*	0.27\$	0.29*	-0.28\$	1.00						
Analytical	0.27\$	0.37*	0.22\$	0.47*	0.12	0.31*	1.00					
Factual	0.02	0.31*	0.13	0.23\$	0.11	0.31*	0.49*	1.00				
Rational	-0.05	0.21#	-0.11	0.12	0.32*	0.17	0.47*	0.26\$	1.00			
Purposeful	0.29\$	0.05	0.17	0.39*	-0.03	0.20#	0.29*	0.08	0.11	1.00		
Directing	0.38*	-0.03	0.33*	0.22\$	-0.11	0.06	0.23#	0.00	-0.02	0.46*	1.00	
Empowering	0.31*	0.06	0.45*	0.09	-0.41*	0.12	-0.01	-0.05	-0.20	-0.03	0.28*	1.00
Convincing	0.16	0.07	0.15	0.10	0.06	0.02	0.20	0.08	-0.06	0.41*	0.32*	0.08
Challenging	0.01	0.11	0.06	0.14	-0.13	0.13	0.12	0.10	-0.18	0.38*	0.07	-0.02
Articulate	0.10	0.11	0.17	-0.01	-0.01	0.00	0.07	0.06	-0.03	-0.02	0.32*	0.33*
Self-Promoting	0.19	-0.15	0.11	-0.07	-0.14	-0.11	-0.21#	-0.30*	-0.33*	0.01	0.26\$	0.13
Interactive	0.16	-0.15	0.18	0.00	-0.15	0.00	-0.13	-0.12	-0.45*	0.03	0.12	0.22\$
Engaging	0.03	-0.41*	-0.03	-0.12	0.00	-0.23#	-0.14	-0.18	-0.25\$	-0.17	0.12	0.12
Involving	-0.02	0.16	0.26\$	-0.06	0.34*	0.14	0.00	0.08	-0.03	-0.29*	0.03	0.43*
Attentive	0.07	0.19	0.29\$	-0.06	-0.33*	0.14	0.00	0.04	-0.18	-0.32*	-0.05	0.52*
Accepting	0.01	0.00	0.02	-0.28\$	-0.09	0.00	-0.20	-0.06	-0.16	-0.35*	-0.03	0.30*
Resolving	-0.05	0.02	0.04	0.02	-0.04	0.19	0.09	0.11	-0.14	0.16	0.01	0.21#
Self-Assured	0.03	-0.11	0.07	0.00	0.03	0.02	-0.10	-0.08	-0.02	0.25\$	0.07	-0.02
Composed	0.27\$	-0.06	0.26\$	0.21#	-0.13	0.20#	0.20#	0.08	-0.01	0.25\$	0.34	0.26\$
Receptive	0.00	0.25\$	0.15	-0.06	-0.05	-0.03	-0.03	-0.12	0.04	-0.35*	-0.05	0.06

Table 4-7. Continued

	In	ab	st	in	pm	lo	an	fac	rat	pur	dir	emp
Positive	0.04	-0.29\$	0.07	-0.18	-0.14	-0.06	0.11	-0.15	0.25	-0.15	0.14	0.14
Change-Oriented	0.37*	0.23#	0.44*	0.32	-0.27\$	0.32*	0.40*	0.13	0.03	0.20#	0.27\$	0.23#
Organized	-0.02	-0.04	0.03	0.08	0.30*	-0.08	0.09	0.20	0.34*	0.06	0.13	-0.22#
Principled	-0.16	-0.14	-0.03	-0.03	0.08	0.13	0.03	0.06	0.21#	0.05	0.08	-0.11
Activity-Oriented	0.07	-0.05	-0.01	0.29*	0.16	0.27\$	0.31*	0.09	0.17	0.40*	0.28\$	-0.14
Dynamic	0.40*	-0.07	-0.33*	0.42*	-0.05	0.00	0.33*	0.16	-0.12	0.47*	0.44*	0.08
Striving	0.22#	-0.19	0.11	0.15	-0.03	0.03	0.21#	0.11	0.06	0.39*	0.47*	-0.09
Enterprising	0.28*	-0.20	0.24#	0.14	0.01	-0.04	0.07	-0.15	-0.23#	0.25\$	0.31*	0.04
Meticulous	-0.33*	-0.03	-0.24#	-0.12	0.38*	-0.07	0.11	0.16	0.53*	-0.03	-0.05	-0.39*
Reliable	-0.22#	-0.22#	-0.18	-0.23#	0.33*	-0.06	0.05	0.14	0.39*	-0.06	0.08	-0.26\$
Compliant	-0.54*	-0.04	-0.52*	-0.22#	0.48*	-0.21#	0.07	0.05	0.32*	-0.16	-0.38*	-0.45*

Table 4-7. Continued

	conv	chal	art	Self	inter	eng	inv	atten	acce	res	sa	comp
Inventive												
Abstract												
Strategic												
Insightful												
Practically-Minded												
Learning-Oriented												
Analytical												
Factual												
Rational												
Purposeful												
Directing												
Empowering												
Convincing	1.00											
Challenging	0.56*	1.00										
Articulate	0.16	-0.13	1.00									
Self-Promoting	0.36*	0.20	0.27\$	1.00								
Interactive	0.18	0.13	0.39*	0.39*	1.00							
Engaging	-0.07	-0.27\$	0.53*	0.23#	0.41*	1.00						
Involving	-0.15	-0.01	0.11	-0.10	-0.03	0.03	1.00					
Attentive	-0.09	0.03	0.26\$	0.02	0.26\$	0.23#	0.65*	1.00				
Accepting	-0.19	-0.13	0.19	0.13	0.14	0.20#	0.43*	0.59*	1.00			
Resolving	0.15	0.09	0.24#	-0.12	0.26\$	0.16	0.17	0.31*	0.23#	1.00		
Self-Assured	0.06	-0.02	0.12	0.12	0.11	0.12	-0.04	0.03	0.22#	0.18	1.00	
Composed	0.09	0.00	0.45*	0.08	0.23#	0.17	-0.05	0.06	0.13	0.19	0.15	1.00
Receptive	-0.09	0.00	0.09	0.18	-0.12	0.06	0.30*	0.22#	0.07	-0.14	-0.13	-0.11

Table 4-7. Continued

	conv	chal	art	Self	inter	eng	inv	atten	acce	res	sa	comp
Positive	-0.24#	-0.26\$	0.28\$	0.28\$	0.33*	0.43*	-0.02	0.14	0.28*	0.05	0.38*	0.32*
Change-Oriented	-0.07	-0.07	-0.02	-0.14	0.04	-0.02	0.13	0.11	0.04	0.07	0.10	0.46*
Organized	-0.05	-0.26\$	-0.03	-0.25\$	-0.32*	-0.09	-0.14	-0.37*	-0.17	-0.18	-0.20	0.00
Principled	-0.18	-0.11	-0.01	-0.16	-0.17	0.04	0.04	-0.08	0.07	0.05	0.06	0.18
Activity-Oriented	0.05	-0.03	0.05	-0.07	0.04	0.03	-0.18	-0.30*	-0.22#	-0.02	0.03	0.41*
Dynamic	0.20	0.08	0.24#	0.25\$	0.35*	0.15	-0.29*	-0.25\$	-0.26\$	0.00	0.14	0.38*
Striving	0.13	0.05	0.14	0.15	0.09	0.22#	-0.24#	-0.28\$	-0.14	-0.13	0.13	0.45*
Enterprising	0.33*	0.09	0.28\$	0.45*	0.34*	0.31*	-0.27\$	-0.19	-0.12	-0.18	0.17	0.30*
Meticulous	-0.14	-0.15	-0.08	-0.25\$	-0.42*	-0.08	-0.13	-0.29\$	-0.14	-0.24#	-0.02	-0.15
Reliable	-0.16	-0.27\$	-0.10	-0.19	-0.17	0.05	-0.08	-0.28\$	-0.03	-0.16	-0.12	0.10
Compliant	-0.08	0.05	-0.21#	-0.25#	-0.31*	-0.20	-0.17	-0.25\$	-0.17	-0.17	-0.14	-0.27\$

Table 4-7. Continued

	rec	pos	co	org	prin	ao	Dyn	Str	Ent	Met	Rel	Comp
Inventive												
Abstract												
Strategic												
Insightful												
Practically-Minded												
Learning-Oriented												
Analytical												
Factual												
Rational												
Purposeful												
Directing												
Empowering												
Convincing												
Challenging												
Articulate												
Self-Promoting												
Interactive												
Engaging												
Involving												
Attentive												
Accepting												
Resolving												
Self-Assured												
Composed												
Receptive	1.00											

Table 4-7. Continued

	rec	pos	co	org	prin	ao	Dyn	Str	Ent	Met	Rel	Comp
Positive	0.03	1.00										
Change-Oriented	0.01	0.30*	1.00									
Organized	-0.06	0.21#	-0.10	1.00								
Principled	-0.09	0.05	0.17	0.36*	1.00							
Activity-Oriented	-0.24#	0.13	0.33*	0.19	0.16	1.00						
Dynamic	-0.22#	0.28\$	0.34*	-0.01	-0.01	0.42*	1.00					
Striving	-0.06	0.21#	0.34*	0.17	0.26\$	0.45*	0.47*	1.00				
Enterprising	0.08	0.21#	0.11	-0.09	-0.09	0.18	0.41*	0.43*	1.00			
Meticulous	0.15	-0.23#	-0.26\$	0.50*	0.28\$	0.13	-0.16	0.21#	-0.13	1.00		
Reliable	-0.16	0.01	-0.06	0.69*	0.45*	0.23#	-0.01	0.30*	-0.09	0.57*	1.00	
Compliant	0.17	-0.28#	-0.46*	0.37*	0.06	-0.04	-0.41*	-0.18	-0.29*	0.57*	0.37*	1.00

Table 4-7. Continued

	Self	inter	eng	inv	atten	acce	res	sa	comp	rec	pos
Self-Promoting	1.00										
Interactive	0.39*	1.00									
Engaging	0.23#	0.41*	1.00								
Involving	-0.10	-0.03	0.03	1.00							
Attentive	0.02	0.26\$	0.23#	0.65*	1.00						
Accepting	0.13	0.14	0.20#	0.43*	0.59*	1.00					
Resolving	-0.12	0.26\$	0.16	0.17	0.31*	0.23#	1.00				
Self-Assured	0.12	0.11	0.12	-0.04	0.03	0.22#	0.18	1.00			
Composed	0.08	0.23#	0.17	-0.05	0.06	0.13	0.19	0.15	1.00		
Receptive	0.18	-0.12	0.06	0.30*	0.22#	0.07	-0.14	-0.13	-0.11	1.00	
Positive	0.28\$	0.33*	0.43*	-0.02	0.14	0.28*	0.05	0.38*	0.32*	0.03	1.00
Change-Oriented	-0.14	0.04	-0.02	0.13	0.11	0.04	0.07	0.10	0.46*	0.01	0.30*
Organized	-0.25\$	-0.32*	-0.09	-0.14	-0.37*	-0.17	-0.18	-0.20	0.00	-0.06	0.21#
Principled	-0.16	-0.17	0.04	0.04	-0.08	0.07	0.05	0.06	0.18	-0.09	0.05
Activity-Oriented	-0.07	0.04	0.03	-0.18	-0.30*	-0.22#	-0.02	0.03	0.41*	-0.24#	0.13
Dynamic	0.25\$	0.35*	0.15	-0.29*	-0.25\$	-0.26\$	0.00	0.14	0.38*	-0.22#	0.28\$
Striving	0.15	0.09	0.22#	-0.24#	-0.28\$	-0.14	-0.13	0.13	0.45*	-0.06	0.21#
Enterprising	0.45*	0.34*	0.31*	-0.27\$	-0.19	-0.12	-0.18	0.17	0.30*	0.08	0.21#
Meticulous	-0.25\$	-0.42*	-0.08	-0.13	-0.29\$	-0.14	-0.24#	-0.02	-0.15	0.15	-0.23#
Reliable	-0.19	-0.17	0.05	-0.08	-0.28\$	-0.03	-0.16	-0.12	0.10	-0.16	0.01
Compliant	-0.25#	-0.31*	-0.20	-0.17	-0.25\$	-0.17	-0.17	-0.14	-0.27\$	0.17	-0.28#

Table 4-7. Continued

	co	org	prin	ao	Dyn	Str	Ent	Met	Rel	Comp
Self-Promoting										
Interactive										
Engaging										
Involving										
Attentive										
Accepting										
Resolving										
Self-Assured										
Composed										
Receptive										
Positive										
Change-Oriented	1.00									
Organized	-0.10	1.00								
Principled	0.17	0.36*	1.00							
Activity-Oriented	0.33*	0.19	0.16	1.00						
Dynamic	0.34*	-0.01	-0.01	0.42*	1.00					
Striving	0.34*	0.17	0.26\$	0.45*	0.47*	1.00				
Enterprising	0.11	-0.09	-0.09	0.18	0.41*	0.43*	1.00			
Meticulous	-0.26\$	0.50*	0.28\$	0.13	-0.16	0.21#	-0.13	1.00		
Reliable	-0.06	0.69*	0.45*	0.23#	-0.01	0.30*	-0.09	0.57*	1.00	
Compliant	-0.46*	0.37*	0.06	-0.04	-0.41*	-0.18	-0.29*	0.57*	0.37*	1.00

\* two-tailed sig. at  $p < 0.000$  \$ two-tailed sig. at  $p < 0.01$  # two-tailed sig. at  $p < 0.05$

**Very Strong** 0.80-1.00    **Strong** 0.60-0.79    Moderate 0.40-0.59    Weak 0.20-0.39    Very Weak 0.00-0.19  
(Salkind, 2009)

Table 4-8. Pearson correlations for the population ( $N = 96$ ) for leadership competencies for females WAVE 12 dimensions

	AS	AC	CO	CRI	EP	EA	MJ	PI	PC	PL	PS	ST
Achieve Success	1.00											
Adjust to Change	0.49*	1.00										
Communicate	0.47*	0.55*	1.00									
Creating Innovation	0.47*	0.50*	0.17	1.00								
Evaluate Problems	0.31*	0.15	-0.08	0.48*	1.00							
Executing Assignments	-0.12	-0.40*	-0.36*	-0.10	0.28\$	1.00						
Make Judgments	0.41*	0.14	-0.04	0.39*	0.50*	0.10	1.00					
Presenting Information	0.51*	0.41*	0.48*	0.44*	0.37*	-0.22#	0.29#	1.00				
Projecting Confidence	0.44*	0.54*	0.40*	0.31*	0.18	-0.23#	0.33#	0.50*	1.00			
Providing Leadership	0.43*	0.45*	0.31*	0.31*	0.03	-0.29*	0.19	0.52*	0.46*	1.00		
Providing Support	-0.12	0.40*	0.33*	0.14	-0.01	-0.15	-0.16	0.15	0.34*	0.06	1.00	
Structuring Tasks	0.10	0.20	0.02	0.13	-0.08	0.28*	0.13	-0.01	0.10	0.46*	0.05	1.00

\* two-tailed sig. at  $p < 0.000$  \$ two-tailed sig. at  $p < 0.01$  # two-tailed sig. at  $p < 0.05$

**Very Strong** 0.80-1.00    **Strong** 0.60-0.79    Moderate 0.40-0.59    Weak 0.20-0.39    Very Weak 0.00-0.19  
(Salkind, 2009)

Aggregate data-descriptive statistics summary

---

Population (N = 177)

Highest mean scores

strategic (M = 7.54)  
 principled (M = 7.12)  
 creating innovation (M = 7.07)

Lowest mean scores

self-promoting (M = 4.61)  
 engaging (M = 4.95)  
 challenging (M = 4.97)

Males  
 (N=96)

Females  
 (N=81)

Highest mean scores

strategic (M = 7.74)  
 creating innovation (M = 7.43)  
 evaluating problems (M = 7.26)

strategic (M = 7.36)  
 principled (M = 7.12)  
 striving (M = 7.0)

Lowest mean scores

self-promoting (M = 4.70)  
 engaging (M = 4.84)  
 challenging (M = 5.19)

self-promoting (M = 4.53)  
 challenging (M = 4.79)  
 engaging (M = 5.04)

Research hypothesis one data summary – leadership characteristics

---

Procedure

Characteristics =found to have strong positive correlations

t-test

( $t(175) = 2.14, p > 0.03$ ),  
 ( $t(175) = 2.04, p > 0.04$ )  
 ( $t(175) = 1.97, p > 0.05$ ).

Males

rational  
 inventive  
 enterprising

Females (None found to be statistically significant)

Pearson correlation coefficient

( $r(177) = 0.64, p < 0.000$ )  
 ( $r(177) = 0.62, p < 0.000$ )

Population  
 attentive & inventive  
 reliable & organized

Males      Females

( $r(177) = 0.63, p < 0.000$ )  
 ( $r(177) = 0.62, p < 0.000$ ).

engaging & interactive  
 enterprising & striving

( $r(177) = 0.69, p < 0.000$ ),  
 ( $r(177) = 0.65, p < 0.000$ ),  
 ( $r(177) = 0.64, p < 0.000$ ).

reliable & organized  
 attentive & inventive  
 inventive & strategic

---

Figure 4-1. Barreiro O’Daniels’ 2009 Study – *Gender in Community College Administration* utilized the WAVE©.

Research hypothesis two data summary – leadership competencies

Procedure	Characteristics found to have strong positive correlations	
t-test	Males	Females (None found to be statistically significant.)
$(t(175) = 2.65, p > 0.01)$	creating innovation	
$(t(175) = 1.99, p > 0.05)$	evaluating problems	
Pearson correlation coefficient		
No strong positive correlations were found in the aggregate population or females.		
Males		
$(r(177) = 0.68, p < 0.000)$	providing leadership & achieving success	
$(r(177) = 0.65, p < 0.000)$	presenting information & adjusting to change	
$(r(177) = 0.61, p < 0.000)$	presenting information & creating innovation	
$(r(177) = 0.61, p < 0.000)$	providing leadership & presenting information	
Simple linear regression		
$(F(12, 164) = 1.58, p < 0.10)$ with an $R^2$ of 0.10		Not significant - gender cannot be used to predict leadership characteristics.

Figure 4-1. Continued

## CHAPTER 5 CONCLUSION

With the current state of our nation's economy in the midst of a recession forcing budget cuts at all levels of business, industry, and institutions, it is time to reaffirm our understanding of gender literature, to review our application of gender literature and to determine if gender-specific differences still exist. By understanding where the differences between the genders exist, if any, can help to strengthen the level of understanding of the human capital within the organization.

If gender-specific differences are still found, as hypothesized, then this knowledge and understanding will significantly aid leaders in creating more efficiently run organizations. "The bottom line: organizations with the best human capital practices provide returns to shareholders that are three times greater than those of companies with weak human capital practices" (Bassie & McMurrer, 2006). Furthermore, if gender-specific differences still exist then cooperation and understanding between the genders is vital in helping organizations in working through the political changes, funding deficits, and continuing recession. Desjardins emphasized a society pretending that gender differences do not exist it hurts both males and females. . . moreover, "we are still a distance from truly understanding each other and from treating women equally in many areas, including education" (Desjardins, 1994 p. 147). As the literature has shown, there are some skills and talents more prevalent for male administrators and others that are more prevalent for female administrators (Desjardins, 1994; Sternberg, 1992; Balkis & Isiker, 2005; Severiens, Dam, & Nijenhuis, 1998; Kachik, 2003). Thus, the first step in creating stronger and more efficient organizations is by understanding the human capital aspect hinges upon an understanding of first whether gender differences still exist.

During the wave of turnover and attrition, selecting the right person to match the desired outcomes is important in human capital development. This study builds upon earlier works to investigate the relationship between the leadership traits, competencies, and the characteristics between male and female and community college administrators in order to help practitioners in both the hiring practices and professional development practices. In this chapter the general findings, discussion, implications for higher education, future research suggestions, and conclusions will be presented.

### **Findings**

In a break from the traditional literature there seems to be very few gender-specific differences in leadership characteristics and traits in community college administrators from the sample population. This is not to say there were not any differences, but there were only a few differences with males scoring significantly higher than females on a couple and vice versa. Those findings will be discussed in this section.

In this study the data has shown males to be similar to women on being strategic (see Figure 5-1). Males were found to rate higher for creating innovation and evaluating problems than females. This does support the literature of Desjardinu and others. This does not follow Kachik's study showing behavioral as being the lowest characteristics of significance. Males and females both rated very high on being strategic.

Females, on the other hand, were found in this study to rate higher than males on being principled and striving (see Figure 5-1). These two findings did follow the literature (Kachik, 2003; Desjardins, 1994). This may be a result of the changes going on in today's community college environments where the administrators have more responsibilities and fewer resources with which to work. The data also shows that females also tend to be better at being change agents whereas males do not (Kachik, 2003; Desjardins, 1994).

These findings tend to fall in line somewhat with Desjardins) work, but also tend to differ from the work of Kachik. As Desjardinu found, females were found to not be as likely to rate themselves as being self-promoting (Desjardinu, 1994). This may be something akin to community college administrators, since the overall population slightly tended to be less than the population (See Table 5-1). There may also be some causal inferences, since the studies conducted by Desjardinu, Kachik, and this study occurred over the past twenty-five years. Since Desjardinu and Kachik studied populations that were different (Kachik, 2003; Desjardinu, 1994), perhaps a longitudinal study could more adequately address causal inferences.

From a broader perspective since there were so few differences noted between males and females the data from the study suggests there really is no overall difference between males and females.

### **Implications for Higher Education**

The findings of this study will support the critical selection and development of future leaders who are needed to handle the complex environments of the 21<sup>st</sup> Century (Boggs, 2003). More than 1,500 studies on a variety of industries have already been conducted on the critical issue of leadership turnover and attrition (Barrick & Zimmerman, 2005). This study will support the literature findings that in addition to business and industry, community colleges are also encouraged to prioritize and engage their leadership development activities in order to keep up with the promises of their mission to their community.

This data can be used to implement, tailor, or modify lifelong learning programs in community colleges, workforce development, or corporate training branches. During the hiring process searches can use this data to help better establish interview questions or even to use assessments in the hiring process. Future studies could establish the average or benchmark

leadership characteristics and traits that tend to be able to predict success. Success would need to be determined in further studies.

Building upon the gender leadership trait research of Desjardinu (Desjardinu, 1994) and Kachik (2003) this study of gender differences and relational leadership traits, characteristics, and competencies will contribute to the understanding of leadership selection and development. The analysis of this research will provide a foundation for further gender and leadership studies. Identification of gender differences between male and female community college administrators can be used to support institutional leadership selection and development initiatives.

### **Discussion**

In the study of leadership the importance of gaining an awareness and understanding of gender cannot be overstated (Desjardinu, 1994). The results of this study, which built upon the foundations set by earlier researchers, can be used by practitioners to better help select and develop talent, in a talent-thin market, in their community college. In “Men are from Mars, Women are from Venus” Gray (1992) supports the need to expand our understanding of gender differences in order to support communicative and cooperative exchanges of males and females. Both genders need to better understand the “differences [between]...our relationships” (Desjardinu, 1994, p. 161). The WAVE© assessment can assist the genders to better know themselves and know each other. The WAVE© results of individuals can be used to support the leadership development of any organization.

As Collins (2005) stated, “—do whatever you can to get the right people on the bus, the wrong people off the bus, and the right people into the right seats.” (Collins, 2005, p. 14). Whether your “bus” represents our earth, our nation, our state, our institution, or our service community, individuals who are willing to become lifelong learners will become those right people on the bus. It is up to each bus leader to develop the traits, characteristics, and

competencies of their constituents to ensure that they are in the right seat (Collins, 2005).

Leaders of today need to take responsibility for selecting and developing the leaders of tomorrow.

What corporate America can learn from this study is that individuals are only going to seek advice if they know how to ask and where to find it to help in their current responsibilities and to aid in their career development. If our nation is going to prosper during its new presidential changes and challenges, current leaders of all industries need to be equipped with the tools to become lifelong learners. Lifelong learners are leaders our nation needs to pursue for a positive global position. Drucker (2006) reminds us of how individuals are now outliving employing institutions. The average life expectancy of a successful business is 30 years compared to that of the “knowledge worker” which is more than 50 years (Drucker, 2006, p. 20). For the first time in history, knowledge workers are outliving their employing organizations (Drucker, 2006, p. 20). Drucker states, “And this means something totally new and unprecedented: knowledge workers now have to take responsibility for managing themselves” (Drucker, 2006, p. 123).

### **For Future Research**

Future studies and research can replicate this study or extend the research by expanding the sample size and scope of geographical location. The respondents’ demographic data could be expanded to include age, ethnicity, degrees earned, years of service in higher education and industry. Another study could also compare the relationships between the genders and leadership traits between community college administrators and corporate administrators. More refined research could expand the database and narrow down the positions of study to include only community college presidents, deans, vice presidents, or nearly any position in community college administration. It is important to note that this study only assessed leadership traits, characteristics, and competencies. An individual possessing these qualities cannot guarantee

success, irrespective of gender. However, where no measures previously existed, this research is a step in the right direction towards researching as to which traits may tend to predict success, and perhaps being researched from the gender perspective. Finally, future studies could also replicate this study using a variety of different assessment instruments to eliminate any potential instrument bias that may be present.

### **Conclusion**

In this study we found that many of the leadership traits, characteristics, and competencies are shared by both males and females. John Ryan, President and CEO for the Center of Creative Leadership, advocates that during these times of crisis all organizations need to invest in leadership development activities (Ryan, 2009). Leaders need to be prepared to lead. Institutions of higher education need to provide leadership development opportunities to their leaders so that they can effectively lead their community college.

Turnover and attrition are major issues for all industries; however, in this study the findings show that males and females possess slightly different leadership characteristics and competencies. The purpose of this study was to examine the relationships of leadership traits between male and female community college administrators. Based on the results of this study and in the existing literature, there are very few leadership trait differences found between the genders. However, the correlations found significance when leadership traits were analyzed. Males were found to be more creative with innovation and evaluating problems. Females were found to be more principled and striving. Both genders were found to be more strategic.

This research can be used to support leadership selection and development initiatives during the wave of turnover and attrition caused by the retirements of the baby boomers. This research supports the use of the WAVE© assessment to better determine which climates, cultures, or environments are better suited for the right individual. The results support that this

WAVE© data can be used to strengthen the selection, leadership development, and succession planning processes of an institution.

Turnover and attrition have been major issues for all industries. With the current state of our nation's economy in the midst of a recession forcing budget cuts at all levels of business, industry, and institutions, it is time to reaffirm our understanding of gender literature, to review our application of gender literature and to determine if gender-specific differences still exist. During the waves of turnover and attrition caused by the retirements of the baby boomers, this study of gender differences and relational leadership traits, characteristics, and competencies has contributed to the understanding of leadership selection and development. By understanding where the differences between the genders exist, if any, can help to strengthen the level of understanding of the human capital within the organization. This study found relatively few differences, if any, still exist between the genders. The findings showed that males and females possessed slightly different leadership characteristics and competencies. As community college administrators proceed through the recession engulfing the entire world, they can rest assure the best man for the position is not necessarily a man, since either should work just fine.

Population (N = 177)

<p>Highest correlation</p> <ul style="list-style-type: none"> <li>strategic</li> <li>principled</li> <li>creating</li> <li>innovation</li> </ul>	<p>Lowest correlation</p> <ul style="list-style-type: none"> <li>self-promoting</li> <li>engaging</li> <li>challenging</li> </ul>
--	---

Males  
(N=96)

Females  
(N=81)

Highest correlation

- strategic
- creating innovation
- evaluating problems

strategic  
principled  
striving

Lowest correlation

- self-promoting
- engaging
- challenging

self-promoting  
challenging  
engaging

Figure 5-1. Barreiro O’Daniels (2009) WAVE© Study

Table 5-1. Three-way comparison of significant leadership traits.

Desjardinu (1994)		Kachik (2003)		Barreiro O’Daniels (2009)	
(N = 72 community college presidents)		(N = 294 community college administrators)		(N = 177 community college administrators)	
Males	Females	Males	Females	Males	Females
(N = 36)	(N = 36)	(N = 153)	(N = 141)	(N = 96)	(N = 81)
Highest percentage		Lowest significance	Highest significance	Highest correlation	Highest correlation
Justice/Rights 50%	Care/Connected 66%	behavioral	practical competitiveness	strategic creating innovation evaluating problems	strategic principled striving
Lowest percentage				Lowest correlation self-promoting	Lowest correlation self promoting
Care/	Justice/Rights				

Table 5-1. Continued

---

Connected		engaging	challenging
28%	17%	challenging	engaging

---

## APPENDIX THE SCALE DESCRIPTIONS

Recall from Figure 3-1 the WAVE is composed of four clusters: thought, influence, adaptability, and delivery. Each of these clusters is divided into three sections, three dimensions per section, and three facets per dimension yielding a total of 12 sections, 36 dimensions and 108 facets.

### **The “Thought” Cluster**

The thought cluster (see Figure A-1) is composed of vision, judgment, and evaluation sections and inventive, abstract, strategic, insightful, practically minded, learning oriented, analytical, factual, and rational dimensions.

#### **Inventive Dimension**

The inventive dimension is composed of the creative, original, and radical facets. Less than 40% of the benchmark group scored highly 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, 2006). If someone scores high on the inventive dimension they are very likely also to score high on being strategic ( $r = 0.49$ ), abstract ( $r = 0.44$ ), and insightful ( $r = 0.41$ ) dimensions and are likely to score low on being compliant ( $r = -0.50$ ). If someone scores in the moderate range on the inventive dimension they are very likely to also 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 ( $r = 0.30$ ) dimensions.

### **Abstract Dimension**

The abstract dimension is composed of the conceptual, theoretical, and learning by thinking facets. About half of the benchmark group scored highly 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, 2006). If someone scores high on the abstract dimension they are very likely to score highly 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 highly 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, 2006). If someone scores high on the strategic dimension they are very likely to score highly on being inventive ( $r = 0.49$ ), insightful ( $r = 0.44$ ), dynamic ( $r = 0.41$ ), striving ( $r = 0.41$ ), and empowering ( $r = 0.40$ ) and are likely to be low on compliant ( $r = -0.38$ ).

### **Insightful Dimension**

The insightful dimension is composed of the discerning, seeking improvement, and intuitive facets. More than half of the benchmark group scored highly 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, 2006). If someone scores high on the insightful dimension they are very likely to score highly on strategic ( $r = 0.44$ ) and inventive ( $r = 0.41$ ).

### **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 highly 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, 2006). There are no correlations with other dimensions.

### **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 highly 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, 2006). If someone scores high on the learning oriented dimension they are very likely to score highly on being abstract ( $r = 0.51$ ). “Younger people tend to report higher scores” (Saville, 2006) on being learning oriented (SD diff 0.36).

### **Analytical Dimension**

The analytical dimension is composed of problem solving, analyzing information, and probing facets. More than half of the benchmark group scored highly 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, 2006). If someone scores high

on the analytical dimension they are very likely to score highly 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 highly 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, 2006). There are no correlations with 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 highly 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, 2006). If someone scores high on the rational dimension they are very likely to score highly on being analytical ( $r = 0.50$ ). “Males report higher scores than females ( $SD\ diff = 0.58$ )” (Saville, 2006).

### **The “Influence” Cluster**

The influence cluster (see Figure A-2) is composed of leadership, impact, and communication sections and purposeful, directing, empowering, convincing, challenging, articulate, self promoting, interactive, and engaging dimensions.

### **Purposeful Dimension**

The purposeful dimension is composed of decisive, making decisions, and definite facets. More than half of the benchmark group scored highly 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, 2006). If someone scores high on the purposeful dimension they are very likely to score highly 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 compliant ( $r = -0.40$ ). “Males (SD diff = 0.47) and older people (SD diff = 0.31) report higher scores” (Saville, 2006).

### **Directing Dimension**

The directing dimension is composed of leadership oriented, control seeking, and coordinating people facets. About half of the benchmark group scored highly 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 control of things; enjoy, and believe they are good at, coordinating people” (Saville, 2006). If someone scores high on the directing dimension they are very likely to score highly on being empowering ( $r = 0.55$ ), purposeful ( $r = 0.50$ ), dynamic ( $r = 0.47$ ), convincing ( $r = 0.42$ ), and enterprising ( $r = 0.40$ ), but moderately likely to score low on being compliant ( $r = -0.31$ ).

### **Empowering Dimension**

The empowering dimension is composed of motivating others, inspiring, and encouraging facets. Less than half of the benchmark group scored highly 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, 2006). If someone scores high on the empowering dimension they are very likely to score highly on being directing ( $r = 0.55$ ) and strategic ( $r = 0.40$ ), likely to score low on being compliant ( $r = -0.30$ ).

### **Convincing Dimension**

The convincing dimension is composed of persuasive, negotiative, and asserting views facets. About half of the benchmark group scored highly 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, 2006). If someone scores high on the convincing dimension they are very likely to score highly on challenging ( $r = 0.55$ ), enterprising ( $r = 0.47$ ), purposeful ( $r = 0.45$ ), and directing ( $r = 0.42$ ), but are moderately likely to score low on being compliant ( $r = -0.30$ ). “Males report higher scores (SD diff = 0.39)” (Saville, 2006).

### **Challenging Dimension**

The challenging dimension is composed of challenging ideas, prepared to disagree, and argumentative facets. About half of the benchmark group scored highly 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, 2006). If someone scores high on the challenging dimension they are moderately likely to score low on being compliant ( $r = -0.31$ ).

### **Articulate Dimension**

The articulate dimension is composed of giving presentations, eloquent, and socially confident facets. More than half of the benchmark group scored highly 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, 2006). There are no correlations with other dimensions.

### **Self-Promoting Dimension**

The self-promoting dimension is composed of immodest, attention seeking, and praise seeking facets. About half of the benchmark group scored highly 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, 2006). If someone scores high on the self-promoting dimension they are very likely to score highly on being interactive ( $r = 0.43$ ). Overall there “is a low average self-rating on self-promoting. This indicates that in general this is not seen as a particularly desirable characteristic” (Saville, 2006).

### **Interactive Dimension**

The interactive dimension is composed of networking, talkative, and lively facets. More than half of the benchmark group scored highly 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, 2006). If someone scores high on the interactive dimension they are very likely to score highly 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 highly 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 strong first impression”

(Saville, 2006). If someone scores high on the engaging dimension they are very likely to score highly on interactive ( $r = 0.58$ ).

### **The “Adaptability” Cluster**

The adaptability cluster (see Figure A-3) is composed of support, resilience, and flexibility sections and involving, attentive, accepting, resolving, self assured, composed, receptive, positive, and change oriented dimensions.

#### **Involving Dimension**

The involving dimension is composed of team oriented, democratic, and decision sharing facets. More than half of the benchmark group scored highly 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, 2006). If someone scores high on the involving dimension they are very likely to score highly on accepting ( $r = 0.53$ ) and attentive ( $r = 0.51$ ), but moderately likely to score low on being purposeful ( $r = -0.30$ ).

#### **Attentive Dimension**

The attentive dimension is composed of empathic, listening, and psychologically-minded facets. About half of the benchmark group scored highly 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, 2006). If someone scores high on the attentive dimension they are very likely to score highly on being accepting ( $r = 0.53$ ), involving ( $r = 0.51$ ), and resolving ( $r = 0.46$ ). “Females report higher scores than males ( $SD\ diff = 0.45$ )” (Saville, 2006).

### **Accepting Dimension**

The accepting dimension is composed of trusting, tolerant, and considerate facets. About half of the benchmark group scored highly 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, 2006). If someone scores high on the accepting dimension they are very likely to score highly on being involving ( $r = 0.53$ ) and attentive ( $r = 0.52$ ).

### **Resolving Dimension**

The resolving dimension is composed of conflict resolution, handling angry people, and handling upset people facets. About half of the benchmark group scored highly 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, 2006). If someone scores high on the resolving dimension they are very likely to score highly on being attentive ( $r = 0.46$ ).

### **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 highly 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 control of their own future” (Saville, 2006). There are no correlations with other dimensions.

### **Composed Dimension**

The composed dimension is composed of calm, poised, and copes with pressure facets. About half of the benchmark group scored highly 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, 2006). If someone scores high on the composed dimension they are very likely to score highly on being change oriented ( $r = 0.43$ ) and moderately likely to score low on being compliant ( $r = -0.39$ ). “Males report higher scores than females (SD diff 0.34)” (Saville, 2006).

### **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 highly 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, 2006). There are no correlations with other dimensions. “Younger people report higher scores (SD diff 0.32)” (Saville, 2006).

### **Positive Dimension**

The positive dimension is composed of optimistic, cheerful, and buoyant facets. About half of the benchmark group scored highly in the positive dimension making this a “common” attribute. High scorers “are optimistic; are very cheerful; recover quickly from setbacks” (Saville, 2006). There are no correlations with 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 highly 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, 2006). If someone scores high on the change oriented dimension they are very likely to score highly on being composed ( $r = 0.43$ ).

## **The “Delivery” Cluster**

The delivery cluster (see Figure A-4) is composed of structure, drive and implementation sections and organized, principled, activity oriented, dynamic, striving, enterprising, meticulous, reliable, and compliant dimensions.

### **Organized Dimension**

The organized dimension is composed of self organized, planning, and prioritizing facets. Less than half of the benchmark group scored highly 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, 2006). If someone scores high on the organized dimension they are very likely to score highly on being reliable ( $r = 0.60$ ), meticulous ( $r = 0.50$ ), and compliant ( $r = 0.42$ ).

### **Principled Dimension**

The principled dimension is composed of proper, discreet, and honoring commitments facets. About half of the benchmark group scored highly 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, 2006). There are no correlations with other dimensions. “There is a high average self-rating on principled. This indicates people generally consider this as a highly desirable characteristic” (Saville, 2006).

### **Activity-Oriented Dimension**

The activity oriented dimension is composed of quick working, busy, and multi-tasking facets. About half of the benchmark group scored highly 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, 2006). There are no correlations with other dimensions.

“Females report higher scores than males (SD diff = 0.51)” (Saville, 2006).

### **Dynamic Dimension**

The dynamic dimension is composed of energetic, initiating, and action oriented facets. More than half of the benchmark group scored highly 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, 2006). If someone scores high on the dynamic dimension they are very likely to score highly on being directing ( $r = 0.47$ ), purposeful ( $r = 0.45$ ), striving ( $r = 0.42$ ), enterprising ( $r = 0.42$ ), and strategic ( $r = 0.41$ ), but moderately likely to be low on compliant ( $r = -0.37$ ).

### **Striving Dimension**

The striving dimension is composed of ambitious, results driven, and persevering facets. More than half of the benchmark group scored highly 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, 2006). If someone scores high on the striving dimension they are very likely to score highly on being enterprising ( $r = 0.53$ ), dynamic ( $r = 0.42$ ), and strategic ( $r = 0.41$ ). “Males report higher scores (SD diff = 0.39)” (Saville, 2006).

### **Enterprising Dimension**

The enterprising oriented dimension is composed of competitive facets. About half of the benchmark group scored highly 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, 2006). If someone scores high on the enterprising dimension they are very likely to score highly on striving ( $r = 0.53$ ), convincing ( $r = 0.47$ ), dynamic ( $r = 0.42$ ), and directing ( $r = 0.40$ ), and moderately likely to score low on compliant ( $r = -0.30$ ).

“Males score more highly than females (SD diff = 0.70)” (Saville, 2006).

### **Meticulous Dimension**

The meticulous dimension is composed of quality oriented, thorough, and detailed facets. Less than half of the benchmark group scored highly 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, 2006). If someone scores high on the meticulous dimension they are very likely to score highly on being organized ( $r = 0.50$ ), reliable ( $r = 0.48$ ), and compliant ( $r = 0.42$ ).

### **Reliable Dimension**

The reliable dimension is composed of meeting deadlines, finishing tasks, and punctual facets. About half of the benchmark group scored highly 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, 2006). If someone scores high on the reliable dimension they are very likely to score highly on being organized ( $r = 0.60$ ), meticulous ( $r = 0.48$ ), and compliant ( $r = 0.47$ ).

### **Compliant Dimension**

The compliant dimension is composed of rule bound, following procedures, and risk averse facets. Less than half of the benchmark group scored highly 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, 2006). If someone scores high on the compliant dimension they are very likely to score highly on being reliable ( $r = 0.43$ ), organized ( $r = 0.42$ ), and meticulous ( $r = 0.42$ ) and 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 ( $r = -0.30$ ). “Females report higher scores than males (SD diff = 0.40)” (Saville, 2006).

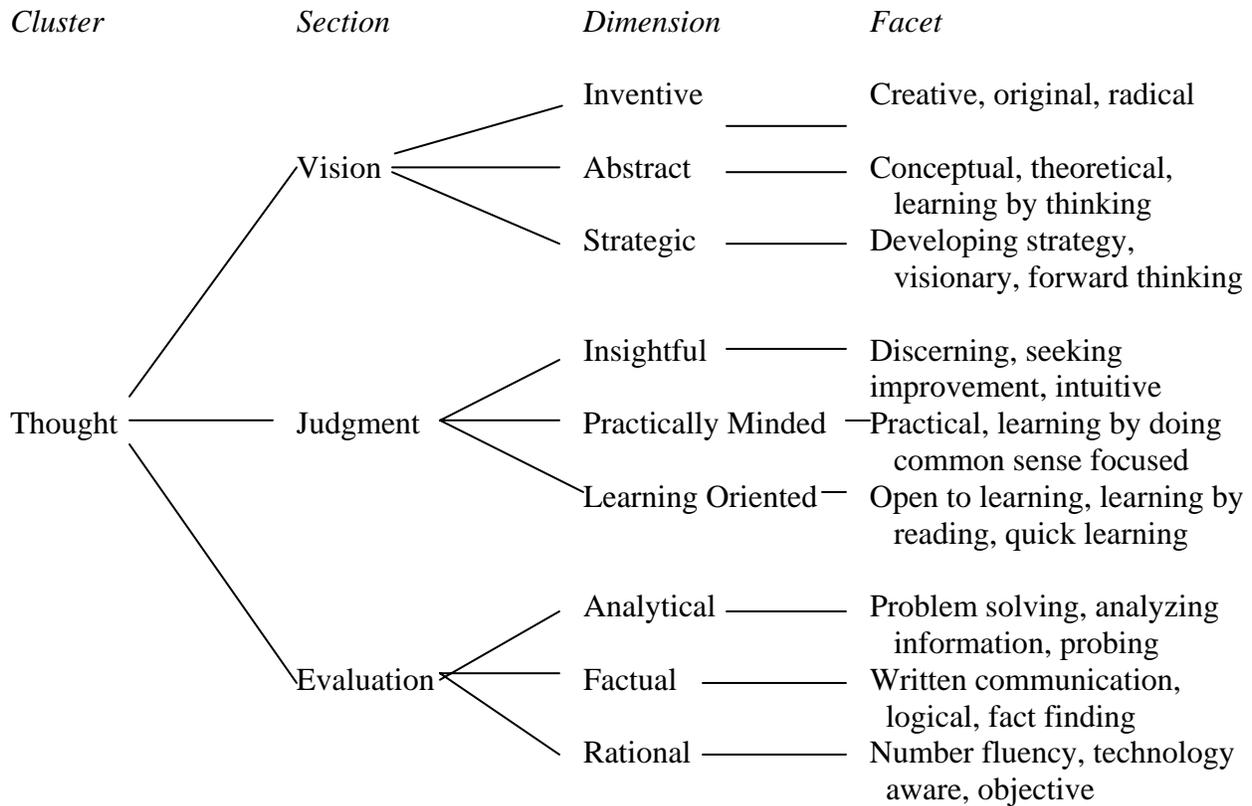


Figure A-1. The thought cluster, sections and dimensions.



Figure A-2. The influence cluster, sections and dimensions.

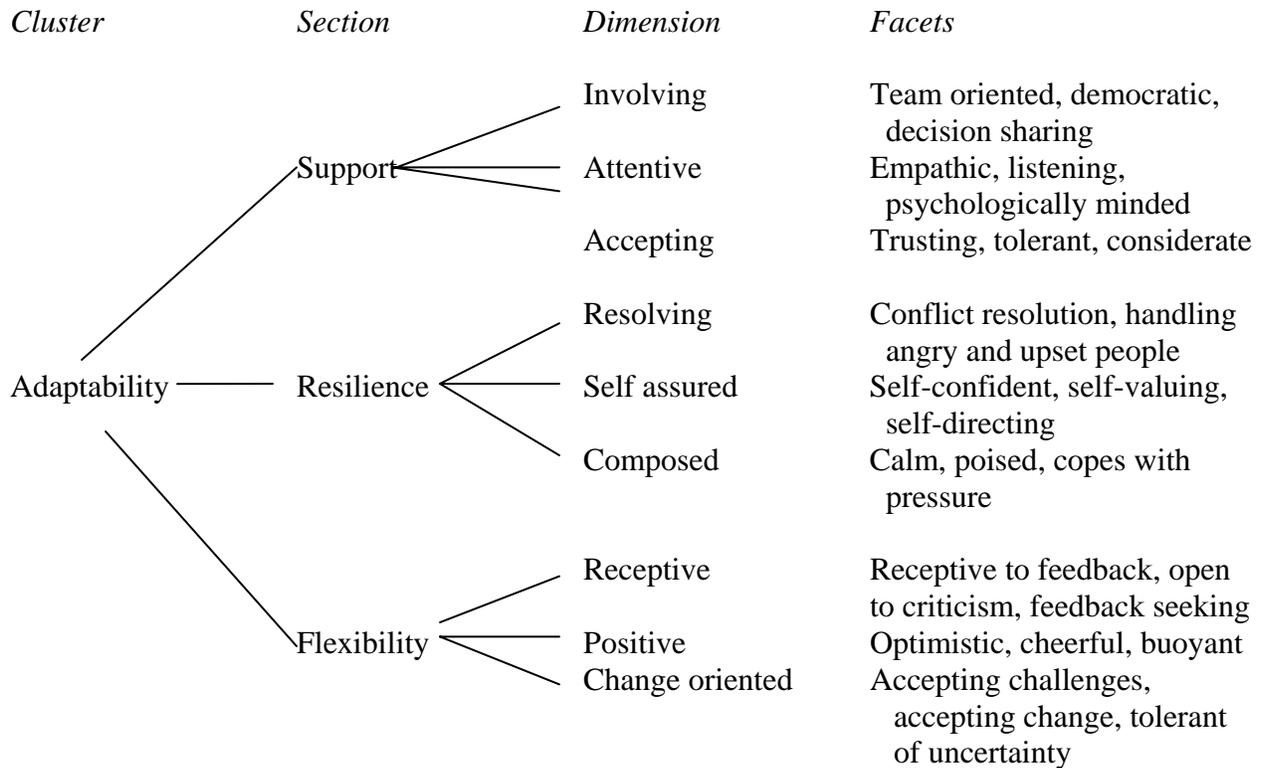


Figure A-3. The adaptability cluster, sections and dimensions.

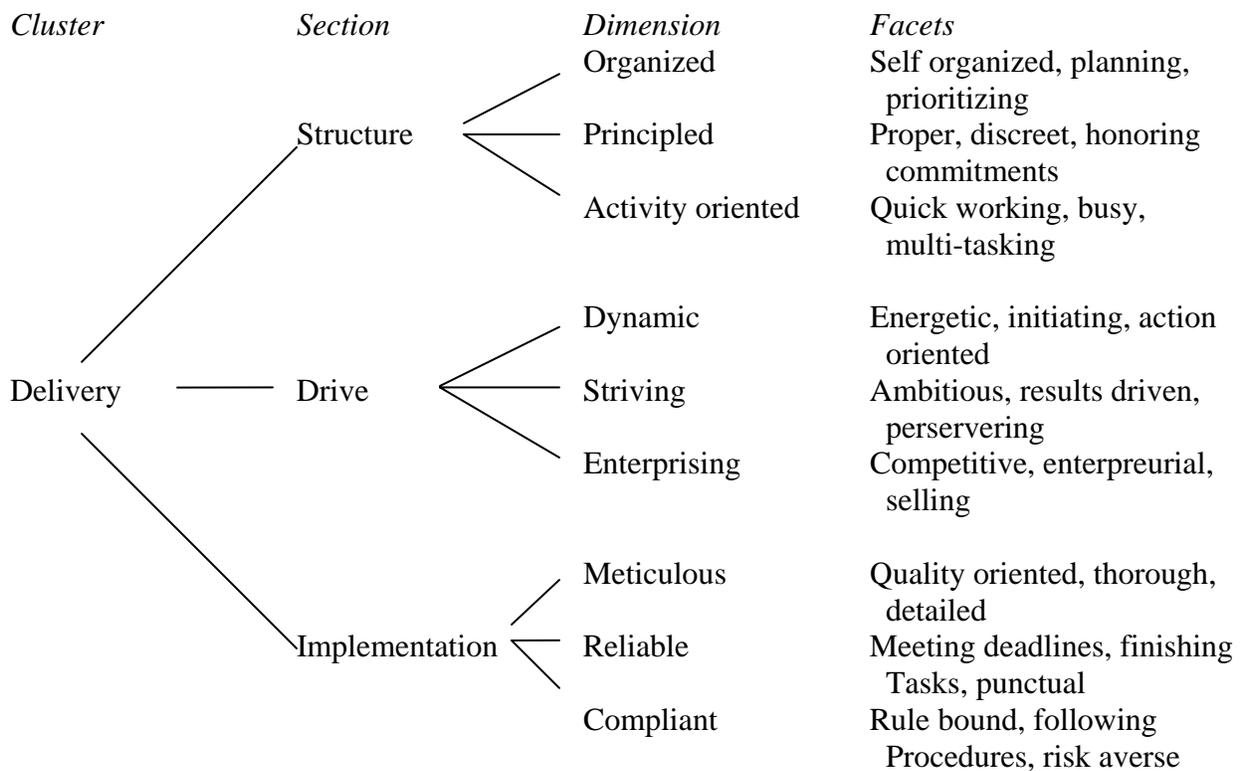


Figure A-4. The delivery cluster, sections and dimensions.

## REFERENCE LIST

- American Association of Community Colleges. (2009, January 17). COE characteristics. Retrieved January 17, 2009 from [http://www3.aacc.nche.edu/projects/VisualMining\\_AACC/FacultyStaff/CEOPage.jsp](http://www3.aacc.nche.edu/projects/VisualMining_AACC/FacultyStaff/CEOPage.jsp).
- Bain, N., & Mabey, B. (1999). *The people advantage: Improving results through better selection and performance*. London: MacMillan Press.
- Balkis, M., & Isiker, G. B. (2005). The relationship between thinking styles and personality types. *Social Behavior and Personality*, 33, 283-294.
- Basham, M. J. (2007). *A cognitive application of personality testing: Measuring entrepreneurialism in America's community colleges* (Doctoral dissertation, University of Florida, 2007). UF Online Dissertations.
- Bassie, L., & McMurrer, D. (Jan. 4, 2009). *Why you should you invest in leadership development during times of crisis*. Quote posted to <http://www.ccl.org/leadership/landing/InvestInLeadership.aspx>
- Barrick, M. R., & Zimmerman, J. L. (2005). Reducing voluntary, avoidable turnover through selection. *Journal of Applied Psychology*, 90, 159-166. Retrieved November 2, 2006 from APA PsychArticles Database.
- Behar-Horenstein, L. (2006, September). *Research Design in Educational Administration*. Lecture. Gainesville, FL.
- Berry, J. W. (2008). *Baseline development to streamline executive selection* (Master's thesis, University of Florida, 2008). UF Online Dissertations.
- Brainy Media (2009). Brainy Quotes. Retrieved June 28, 2009 from [http://www.brainyquote.com/quotes/authors/b/benjamin\\_franklin.html](http://www.brainyquote.com/quotes/authors/b/benjamin_franklin.html)
- Boggs, G. R. (2004). Community colleges in a perfect storm. *Change*, 6-11. Retrieved August 22, 2006 from Academic Search Premier Database.
- Boggs, G. R. (2003). *Leadership context for the twenty-first century. New directions for community colleges*. 123, 15-25. Retrieved October 30, 2008 from EBSCO Publishing.
- Boggs, G. R. (2002). Foreword. In D.F. Campbell and Associates (2002), *The leadership gap: Model strategies for leadership development*. Washington, DC: Community College Press.
- Campbell, D. F. (2006, February-March). The new leadership gap: Shortages in administrative positions. *Community College Journal*, 76, 10-14. Retrieved October 22, 2006 from Academic Search Premier Database.
- Campbell, D. F., & Associates (2002). *The leadership gap: Model strategies for leadership*

- development*. Washington, DC: Community College Press.
- Campbell, D. F., & Leverty, L. H. (1997). Developing and selecting leaders for the 21st Century. *Community College Journal*, 67, 34-36. Retrieved May 22, 2006 from Academic Search Premier Database.
- Collins, J. (2005). *From good to great and the social sector: Why business thinking is not the answer*. New York, NY: Collins Press.
- Creswell, J. W. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River, NJ: Pearson Education.
- Cronk, B. C. (2006). *How to use SPSS®: A step-by-step guide to analysis and interpretation* (4th ed.). Glendale, CA: Pyrczak.
- Desjardins, C. (1994). Leadership and gender issues in the community college. In A. M. Hoffman & D. J. Julius (Eds.), *Managing community and junior colleges: Perspectives for the next century* (147-161). Washington, DC: The College and University Personnel Association.
- Deutschman, A. (2007). *Change or die!* New York: Fast Company.
- Dooley, D. (2001). *Social research methods* (4th ed.). Upper Saddle River, NJ: Prentice Hall.
- Drucker, P. F., & Maciariello, J. A. (2006). *The effective executive in action: A journal for getting the right thing done*. New York: HarperCollins.
- Gardner, H. (2006). *Five minds for the future*. Cambridge, MA: Harvard Business School Press.
- Gardner, J. W. (1990). *On leadership*. New York: Free Press.
- Gray, J. (1992). *Men are from Mars, women are from Venus: A practical guide for improving communication and getting what you want in your relationships*. New York: Harper Collins.
- Goleman, D. (2001). What makes a leader? In *Harvard business review on what makes a leader?* (1-26). Boston, MA. Harvard Business School Publishing
- Hockaday, J., & Hunter, D. (2003, September 12). St. Petersburg College Leadership Seminar.
- Kachik, C. J. (2003). The five-factor model and Holland's theory: Community college and corporate leaders (Doctoral dissertation, University of Florida, 2003). UF Online Dissertations.
- Kleinfeld, J. (2006). University of Alaska gender gaps ranks second in nation; More women seek degrees [Electronic version]. *Diverse: Issues in Higher Education*. 22(24),10.

- Krieger, L. (2008, January). WAVE© assessment interpretation. Training. Jacksonville, FL.
- Krell, E. (2005, November). Personality counts: Personality assessments are being used in new ways through the employee life cycle. *HR Magazine*, 50(11), 46-53. Retrieved February 12, 2007 from InfoTrac OneFile Database.
- Lapovsky, L. (2006, January/February). The best laid succession plans: Most colleges resist the corporate practice of grooming the chief executive's successor. But some are trying. *AGB Trusteeship*, 14(1), 20-24.
- Lavigna, R. J., & Hays, S. W. (2004). Recruitment and selection of public workers: An international compendium of modern trends and practices. *Public Personnel Management*, 33(3), 237-253. Retrieved August 10, 2006 from Business Source Premier Database.
- Macleod, C. J. (2007, October 11). Towards an understanding of cultural integrity for leadership in developing nations: A beginning. ACEL/ASCD Conference October 11, 2007. Sydney, AU
- Manzo, K.K. (2004). Men no longer majority of college students graduates. *Black Issues in Higher Education*. 21(23), 7.
- Pew Research Center. (2008, August 25). *A paradox in public attitudes. Men or women: Who's the better leader?* A Social & Demographic Trends Report.
- Pollitt, K. (2006). Girls against boys[Electronic version]? *Nation*. 282, 10.
- Ross, J. (2005, November). How to be the best coach for your team. *Harvard Management Update*. 1-5.
- Ryan, J. (2009, January 4). *Why you should you invest in leadership development during times of crisis*. A special message from John Ryan president and CEO, Center for Creative Leadership. Audio message posted to <http://www.ccl.org/leadership/landing/InvestInLeadership.aspx>
- Sacks, D. (2006, January/February). Scenes from the ;) culture clash. *Fast Company*, 102, 73-78.
- Salkind, N. J. (2008). *Statistics for people who (think they) hate statistics* (3<sup>rd</sup> ed.). Thousand Oaks, CA: Sage Publications.
- Saville, P. & Holdsworth, R. (2006). Technical Document. Unpublished report.
- Saville, P. (2006, October 19). *An historical perspective of personality testing*. Presentation at the Assessment Information Group Meeting, Jacksonville, Florida.

- Severiens, S., Dam, G. T., & Nijenhuis, E. (1998). Ways of knowing and patterns of reasoning: Women and men in adult secondary education [Electronic version]. *Gender & Education*, 10(3), 327-342.
- Sternberg, R. J. (1995). *In search of the human mind*. Orlando, FL: Harcourt Brace.
- Vaughan, G. B. (2000). *The community college story* (2<sup>nd</sup> ed.). Washington, DC: Community College Press.
- Wingspread Group on Higher Education (1993). *An American imperative: Higher expectations for higher education*. Racine, WI: Johnson Foundation, Inc.
- Yeager, K. (2006). Workforce Development Benchmark Project. Johnson County Community College Center for Business and Technology.
- Zeiss, T. (2005). Get'em while they're hot: How to attract, develop, and retain peak performers in the coming labor shortage. Nashville, TN: Nelson Business.
- Zook, C. (2007). *Unstoppable: Finding hidden assets to renew the core and fuel potential growth*. Cambridge, MA: Harvard Business School Press.

## BIOGRAPHICAL SKETCH

Tina Barreiro O'Daniels received her associate degree from St. Petersburg Junior College in May 1989. She then earned her baccalaureate degree from St. Leo College in January 1992. She continued to attend St. Leo College to earn a Master's Degree in Business Administration in January 1996. While attending college, O'Daniels was employed by a college. For more than 23 years, she has strategically and passionately supported the community college mission. During her tenure at now named, St. Petersburg College, she graduated with her doctorate in Higher Education Administration from the University of Florida in August 2009. She is associate provost at the Tarpon Springs Campus of St. Petersburg College, St. Petersburg, Florida.