A STUDY OF THE PERCEIVED LEADERSHIP ORIENTATIONS OF SELECTED LEADERS AND MEMBERS OF THE CORPS OF CADETS AT TEXAS A&M UNIVERSITY THROUGH APPLICATION OF THE COMPETING VALUES FRAMEWORK

A Dissertation

by

EDWARD SCOTT BLACKWELL

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2004

Major Subject: Educational Administration

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Approved as to style and content by:

D. Stanley Carpenter (Chair of Committee)	
Richard Cummins (Member)	Jan Winniford (Member)
Kelli Peck-Parrott (Member)	Jim Scheurich (Head of Department)

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ABSTRACT

A Study of the Perceived Leadership Orientations of Selected Leaders

and Members of the Corps of Cadets at Texas A&M University

Through Application of the Competing Values Framework. (August 2004)

Edward Scott Blackwell, B.A., DePauw University;

M.S., Texas A&M University

Chair of Advisory Committee: Dr. D. Stanley Carpenter

The purpose of this study was to examine the perceived leadership orientations of leaders and general members affiliated with the Corps of Cadets at Texas A&M University, assess the validity and reliability for the Competing Values Instrument for the cadet population, and identify differences in leadership orientations of leaders and members of a student organization. The survey instrument used was an adaptation of Quinn's 1988 Competing Values Instrument. The two-part 32-item instrument was theoretically based on Quinn and Rohrbaugh's (1981, 1983) Competing Values Framework of managerial-leadership. The instrument divided the items into eight groups of leadership role orientations: Innovator, Broker, Producer, Director, Coordinator, Monitor, Facilitator, and Mentor.

The instrument was administered to 520 cadets enrolled in 28 randomly selected Reserve Officers' Training Corps (ROTC) and School of Military Science (SOMS) courses at Texas A&M University. Responses were compared using various background information and environmental factors. Responses were also examined to establish validity and reliability for the instrument when used with college student members of

this student organization. Factor analysis procedures resulted in slight alteration of items within specific factors.

Results supported the idea that perceived leadership orientations are associated with academic classification, Corps classification, gender, age, leadership experience prior to college, involvement in college leadership experiences other than the Corps of Cadets, contract status, level of leadership position in the student organization, and military service affiliation. The contributions the student organization made to the development of leadership were assessed, and a better understanding of leaders' and members' perceptions of their leadership tendencies and practices was obtained.

Survey instrument data indicated the Corps of Cadets was effective in enhancing students' perceptions of their leadership orientations. Recognizable differences were found to have existed in relationship to the complexity and nature of the leadership position. The higher the level of leadership position held by members of the Corps of Cadets, the more frequent those members' practice of leadership and management behaviors became. Military cadets were also more likely to practice leadership and management behaviors more frequently than non-military cadets. The study provided evidence that the Corps of Cadets has some effect on leadership development.

DEDICATION

To my loving wife Cindy, who has always supported me,

to our sons Ethan and Stuart, in whom we hope we

have instilled an appreciation for learning and education,

to Texas A&M University, always our first home,

and to the retired United States military servicemen and women,

Texas A&M University administrators, staff and faculty,

and the active-duty United States military officers,

who share their time and talents with the Corps of Cadets.

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Thank you, General John Van Alstyne, for your leadership of the Corps of Cadets and for supporting my research efforts. Thank you, Judy York, Joyce Nelson and Bill Ashworth, for your support and encouragement.

Thank you, Jeff and Sarah Blackwell, for a lifetime of love. Thank you, Damon and Sue Southard, Sarah and Steve Stirn, Anne and Ken Johnson, Paul and Ronda Stewart, Chet and Kathryn Robinson, David and Valerie Woodcock, Bill Bassler, and Phi Delta Theta Fraternity. Thank you, Katherine Lawrence and Robert Quinn, for giving me permission to use the Competing Values Instrument.

Thank you, Cindy, Ethan, and Stuart Blackwell for your love and the happiness you bring me. Cindy, we did it!

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CHAPTER I

INTRODUCTION

Since the founding in 1876 of the Agricultural and Mechanical College of Texas, now Texas A&M University, the Corps of Cadets has been an integral and highly visible part of the institution. Originally a mandatory military component of student life, the Corps of Cadets remains one of Texas A&M University's largest student organizations but comprises a cadet population which is a relatively small fraction of the total undergraduate student population. At the start of the Fall 2001 semester 2,035 cadets of a total undergraduate student enrollment of 36,495 students participated in the Corps of Cadets (Office of the Commandant, 2001; Texas Higher Education Coordinating Board, 2003).

Texas A&M University's roots, however, are interwoven with the Corps of Cadets, one of the oldest American college military-oriented programs. The full-time Corps of Cadets, made voluntary at Texas A&M University in 1965, continues to play a role in many aspects of student life. A longtime top producer of officers commissioned for military service, the distinction is unique as Texas A&M University serves the state and nation as a civilian institution. The Corps of Cadets, as a college student organization, has as its primary mission the development of leadership among its membership (Adams, 2001).

The style and format for this dissertation will follow that of the *Journal of College Student Development*.

Administrators and faculty are challenged by questions regarding student organizations' support of the learning missions of American colleges and universities. Astin (1977, 1993) found that after students enter college they undergo changes in intellectual skills, political identification, values, attitudes, behaviors, personality characteristics, and self-concept. Many of these changes "appear to be primarily attributable to the college experience" (Astin, 1993, p. 397). One way to measure the impact of college on students is through examination of the co-curricular activities in which students involve themselves after they arrive at college (Astin, 1977; Kuh, 1993). Specific student organizations may hold clues regarding the issue of college student organizational impact while at the same time uncovering evidence of demonstrated learning outcomes related to leadership.

Kuh (1993) conducted research on student learning and personal development outcomes associated with college students' experiences outside the classroom. The impact of students' "involvement in clubs and organizations" was a specific consideration of the study (p. 278). Most frequently mentioned of the outcome categories was "social competence" which included learning and development activities such as "working with others, teamwork, leadership, dealing with others, assertiveness, flexibility, public speaking, communication, and patience" (p. 285).

Quinn and Rohrbaugh (1983) stated that overwhelming disagreement existed among organizational theorists about the defining characteristics of effective organizations. More recently, Chambers (1992) cited a noticeably limited amount of literature on evaluation standards for college leadership development programs. While

much valuable literature exists on the topic of the beneficial impact of college on students (Pascarella & Terenzini, 1991), the apparent absence of evidence of specific development in the leadership qualities of college students suggests that this is an area with opportunities for further study. Whetten and Cameron (2002) stated that Robert Quinn's competing values framework is a popular contemporary leadership model and can be used to interpret both leadership and management skills. The competing values framework is an overarching and integrated model of four uniquely different styles or approaches to information-processing present in all organizations. Those four styles are the following models: Rational Goal, Open Systems, Human Relations, and Internal Process (Quinn, 1988). The competing values framework is best understood by examining eight separate leadership role orientations of a managerial leadership model. Those eight leadership orientations are the following roles: Director, Producer, Broker, Innovator, Mentor, Group Facilitator, Monitor, and Coordinator.

Schroeder (1998) suggested that higher education look to the armed services as an exemplar of a values-based, teamwork focused, accountability-centered leadership development program to which people commit themselves in the service of society. Reserve Officers' Training Corps (ROTC) programs, despite pervasive concerns in the higher education community about the questionable academic or co-curricular nature of military preparation on campuses, low levels of academic credibility of ROTC faculty, and anxiety related to the safety of student participants, should be considered as deserving of support in higher education (Goldberg, 1985; Malpass, 1985; Neiberg, 2000; Shelton, 1985; Smith, 1985). Evaluating the learning outcomes of a student

leadership organization of a military nature presented the researcher with an opportunity to examine a uniquely American student organization.

Purpose of the Study

The purpose of this study is to examine the perceived leadership orientations of student leaders and general members affiliated with the Corps of Cadets at Texas A&M University. This research will facilitate better understanding of student leaders' and members' perceptions of their tendencies and practices associated with leadership in the Corps of Cadets and assess the contributions the student organization makes to the development of leadership skills. This research will provide answers to the following questions: Is the Corps of Cadets effective in enhancing students' perceptions of their leadership styles? After evaluation of self-assessment data from leaders and members, do recognizable differences exist in relation to the complexity or nature of the leadership position? Is there a recognizable pattern of the leadership orientations of student organization leaders and members according to the level of position or year in college? Which orientations were favored and which were avoided by members of the student organization? Presently, no formal method of leadership development assessment and evaluation is occurring for the Corps of Cadets at Texas A&M University. This study sought to address this deficiency and provide a framework for future research.

Research Questions

Four research questions will be addressed in this study:

1. Is the competing values instrument valid and reliable for use with members of the Corps of Cadets?

2. What leadership behaviors are perceived to be most frequently used by leaders and members of the Corps of Cadets? What leadership behaviors are perceived to be most infrequently used by leaders and members of the Corps of Cadets?

3. What leadership behaviors do leaders and members of the Corps of Cadets think should be used most frequently by a leader in the Corps? What leadership behaviors do leaders and members of the Corps of Cadets think should be most infrequently used by a leader in the Corps?

4. Does perceived leadership orientation differ among cadets based on academic classification, gender, race/ethnicity, age, major field of study, leadership experience prior to TAMU, other current TAMU leadership experience, contract status, the level of Corps leadership position—major position, minor position, no position—or service affiliation? How are cadets' leadership orientation perceptions associated with academic classification, gender, race/ethnicity, age, major field of study, leadership experience prior to TAMU, other current TAMU leadership experience, contract status, the level of Corps leadership position—major position, minor position, no position—and service affiliation?

Operational Definitions

The following definitions will be pertinent to this study:

Assessment: The collection and measurement of data (Brungardt & Crawford, 1996).

Broker Role: Leadership role orientation concerned with interfacing with people external to the organization and resource acquisition; an example of a leadership practice (Quinn, 1988).

Contract Cadets: Cadets having accepted military contracts; ROTC cadets; military cadets; cadets who intend to be commissioned into a branch of the Armed Services upon graduation.

Coordinator Role: Leadership role orientation concerned with sustaining organizational structure and operational continuity; an example of a management practice (Quinn, 1988).

Corps of Cadets (Corps): A full-time, voluntary leadership program for students at Texas A&M University comprised of both Contract cadets and Drill and Ceremony cadets.

Director Role: Leadership role orientation concerned with problem, role, and task definition, instruction delivery, and expectation clarification; an example of a management practice (Quinn, 1988).

Drill and Ceremony (D&C) Cadets: Cadets who have not accepted military contracts; non-military cadets; cadets who will not be commissioned upon graduation.

Evaluation: The judgment of the data gathered in assessment (Brungardt & Crawford, 1996).

General Members: Cadets not in formal positions of leadership within the Corps.

Group Facilitator (Facilitator) Role: Leadership role orientation concerned with encouraging teamwork, synchronizing group problem-solving, and managing conflict; an example of a leadership practice (Quinn, 1988).

Human Relations Model: Approach to leadership characterized by concern for the human systems in the organization and comprised of the Mentor and Group

Facilitator roles of the competing values framework (Quinn, 1988).

Innovator Role: Leadership role orientation concerned with being a visionary and embracer of change; an example of a leadership practice (Quinn, 1988).

Internal Process Model: Approach to leadership characterized by concern for the management and communication in the organization and comprised of the Monitor and Coordinator roles of the competing values framework (Quinn, 1988).

Leadership Development: Individual scores on eight leadership role orientations of the Competing Values Framework Instrument; the expansion of a person's capacity to be effective in leadership roles and processes (Van Velsor, McCauley, & Moxley, 1998).

Leadership Roles and Processes: Functions, activities, or personal orientations that enable groups of people to work together in productive and meaningful ways (Van Velsor et al., 1998).

Major Leaders: Cadets in one of the following five formal positions of leadership within the Corps of Cadets: Commander, Corps Staff Member, Drum Major, Executive Officer, and First Sergeant.

Mentor Role: Leadership role orientation concerned with developing people through care and empathy; an example of a leadership practice (Quinn, 1988).

Minor Leaders: Cadets in a formal position of leadership within the Corps of Cadets not classified as a major leadership position.

Monitor Role: Leadership role orientation concerned with rule compliance and progress

toward organizational goals; an example of a management practice (Quinn, 1988).

Open Systems Model: Approach to leadership characterized by concern for responding to outside changes and comprised of the Broker and Innovator roles of the competing values framework (Quinn, 1988).

Producer Role: Leadership role orientation concerned with attentiveness to tasks, others' acceptance of responsibility, and the completion of assignments; an example of a management practice (Quinn, 1988).

Rational Goal Model: Approach to leadership characterized by concern for planning and goal setting and comprised of the Director and Producer roles of the competing values framework (Quinn, 1988).

Reserve Officers' Training Corps (ROTC) Classes: Mandatory military coursework in Aero-Space Science (AERS/Air Force), Military Science (MLSC/Army), or Naval Science (NVSC/Navy and Marine Corps) completed by all sophomore and freshman cadets as well as junior and senior military cadets; courses in which the curriculum is established by the U. S. Department of Defense and presented by active-duty members of the U. S. Armed Services.

School of Military Science (SOMS) Classes: Mandatory coursework for junior and senior D&C cadets; elective coursework for Contract Cadets; courses in which the curriculum is established by Texas A&M University faculty and presented by civilian faculty or retired members of the U. S. Armed Services.

Texas A&M University (TAMU): Founded in 1876, TAMU is classified by the

Carnegie Foundation for the Advancement of Teaching as a Doctoral/Research-Extensive public university with 102 baccalaureate, 149 masters, and 85 doctoral degree programs. TAMU is the land-grant institution of Texas. The institution is one of only six institutions recognized by the U. S. Department of Defense as a senior military college.

Significance of the Study

This study attempted to identify, assess, and profile the learning outcomes of participation as leaders and members in a college student organization. Information from the data collection and analysis assisted in obtaining a better understanding of the impact of the student organization on the student participants. The information will also be useful in order to facilitate program guidance, decision-making, and data collection in order to help direct the future of the student organization as a successful leadership program (Brungardt & Crawford, 1996). Brungardt and Crawford (1996) developed and administered self-reporting instruments to college student participants in order to assess the learning outcomes of leadership curriculum and instruction at a public university. Chambers (1994) contended that "evaluation of college student leadership programs can assist in both their improvement and their longevity" (p. 234).

Leadership development among college students will be better appreciated and further advanced through the identification of the orientations of leadership participants according to their perspectives about current operating levels. Measurement of student leaders' perceptions of their leadership roles, as organized by the competing values model, will also promote additional recognition of the impact of involvement and its

effects on leadership learning outcomes. This research will contribute further to the body of knowledge regarding the effect of the college experience on students.

Studying the impact of developmental experiences like the Corps of Cadets will facilitate clearer comprehension of organizational members' development as a result of the experiences while assisting in the fine-tuning of this leadership program (Van Velsor, 1998). As college leadership programs and activities continue to be assessed and evaluated, their worth, utility, and the general attributes of the student populations under study become paramount to the researcher as he or she seeks to "ground programs in the needs of students while working within the constraints of academe" (Brungardt & Crawford, 1996, p. 37).

Similarly, after using a variety of instruments to evaluate and assess the leadership studies academic program at a university, Brungardt and Crawford (1996) were able to "gauge (college student) interest and the long term applicability of the theories and behaviors students learned or want to learn (in a leadership studies program)" (p. 39). The researchers reported that the assessment and evaluation process provided them with valuable information which enabled them to "continuously alter" their students' "learning environment" (p. 39). Assessment and evaluation in this study of the Corps of Cadets at Texas A&M University was undertaken in the spirit of ongoing improvement.

What leadership behaviors are perceived to be in frequent use by leaders and members of the Corps of Cadets? What leadership behaviors do they think should be used? Is leadership or management the more dominant orientation of members and

leaders of the Corps of Cadets? Do cadets differ in leadership orientation according to academic classification, Corps classification, gender, race/ethnicity, age, academic field of study, prior leadership experience, other college leadership experience, contract status, service affiliation, or level of leadership position? These questions may elicit answers which provide leadership educators, student affairs administrators, and faculty with information to better understand the culture of leadership within the Corps of Cadets. Through a better understanding of student leaders' and members' perceptions of their tendencies and practices associated with the student organization, the contributions the student organization makes to the development of leadership skills will be assessed. The process of seeking to better understand leadership among a student organization population through research study demonstrates commitment to assessing the promise of college student leadership development implied by many institutions of higher education today (Boatman, 1999).

Plan of the Study

Adhering to a Texas A&M University Institutional Review Board Protocol approved prior to the start of the academic semester, the researcher limited the duration of data collection to the first five weeks of the academic semester. The researcher identified ROTC and SOMS classes, chose a random sampling of the population under study, completed instrument pilot testing, and administered the survey instrument to 520 student members of the Corps of Cadets enrolled in 28 different ROTC and SOMS classes at Texas A&M University.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Given the espoused value of leadership development in the Corps of Cadets, a college student organization at Texas A&M University, an overview of related literature is offered here to briefly explore the historical context of leadership, the progression and development of the study of leadership, the study of leadership specific to college students, and college student leadership development.

Leadership and Higher Education From Antiquity to the Twentieth Century

Leadership has been the subject of study for as long as human society has been in existence (Bass, 1990). The earliest history of the development of education is replete with references to preparation of citizens, selection of political leaders, and production of future heads of state (Gwynne-Thomas, 1981; Lucas, 1994). Early education was synonymous with the development of leaders. For Plato, the foundational purpose of study was "to produce enlightened rulers and political advisors" (Lucas, 1994, p. 15). He was an early advocate of a comprehensive system of education from which sophisticated, skilled and knowledgeable leaders would emerge. State attention to a life-long curriculum, Plato believed, would promote the development of virtuous children, create young men of character, advance men's physical and military prowess, cultivate future citizens who would one day help guide the state, instill knowledge of philosophy in a few, and transform the most promising and competent into state rulers and

philosopher kings (Gwynne-Thomas, 1981). This, the earliest leadership development, was truly a multi-disciplinary approach to leadership.

The notion that the value of education lay in the production of knowledgeable citizens and adept leaders would remain a popular sentiment during much of the antiquity period. Cicero observed that the Romans were "brought up that they may one day be able to be of service to the fatherland, and one must accordingly instruct them in the customs of the state" (Lucas, 1994, p. 23). Still later, the Renaissance humanists sought "to produce leaders for their own time in the mold of the orators, rhetoricians, and statesmen of ancient Rome" (Lucas, 1994, p. 77). The Renaissance worldview supported a return to the Roman ideal of producing intellectually and socially skilled leaders as educated gentlemen-courtiers. The educated gentlemen would be positively contributing, ready members of society, conscious of the need for relentless attention to civic virtue (Lucas, 1994). This centuries-old idea in the value of higher education lying in the production of leaders and citizens traveled westward over the Atlantic well beyond Europe.

The cultivation of citizen-leaders continued to be synonymous with higher education as was demonstrated during the beginning of American higher education's development in the form of the colonial college. "The colonial college as an institutional type thus emphasized character as much as it did learning, piety as well as erudition, and civic virtue over private advantage" (Lucas, 1994, p. 112). But it was during the last quarter of the nineteenth century when American institutions of higher education began to incorporate the theme of social service into the purpose and function of colleges and

universities (Lucas, 1994). Higher education began to be viewed as responsible to society as a problem-solving agent and provider of public service. The mid-twentieth century saw modern era discourse among members of the American higher education community about the meaning of general education. A Harvard University faculty committee convened to explore the topic determined—as documented in a report entitled *General Education in a Free Society* or, as more commonly termed, The Harvard Redbook—that education served a preparatory role for a person's personal life existence as well as that person's existence as a citizen and member of the larger society (Lucas, 1994).

The inception of ROTC programs on American civilian (non-military) college and university campuses beginning in 1916 grew out of a charge for leadership and was tied to federal legislation. The Morrill Land-Grant College Act of 1862 served as the origin of the drive for college and university campus-based military leadership programs (Herren & Edwards, 2002; Malpass, 1985; Neiberg, 2000). After the initial attempt to pass the legislation failed, the Morrill Bill was revised with the addition that "military tactics" be taught at "all land-grant institutions" (Herren & Edwards, p. 93, 2002). The motivation for inclusion of military training, during the era of the Civil War, included eventual integration of civilian military officers with officers trained at the academies, increased and improved leadership experience for civilian military men, and a hopeful end to officer shortage (Herren & Edwards, 2002; Neiberg, 2000).

It was the passage of the National Defense Act of 1916 that inaugurated the partnerships between institutions of higher education and the American military. The act

made ROTC compulsory for each student's first two years at a land grant college or university, created a leadership development opportunity for the students who participated, and provided legitimacy to the military by allying itself with higher education. Following World War II, a widespread sense of nationalism and renewed respect for the military resulted in the perception that the military was an important and noble profession. While leadership development within the ROTC training programs of the pre-war day emphasized military training, the new post-war emphasis evolved into a focus on management, leadership of groups and understanding group dynamics, instead of solely learning military skills (Neiberg, 2000).

Development of the Study of Leadership

Bass (1990) noted that attempts to comprehend the actions and behaviors of leaders have been undertaken for as long as people have followed others. For the purposes of this study, the early twentieth century will serve as a general beginning point in time for examination of how leadership has been studied. It is through the concentration of attention on the historical progression of the academic study of leadership that better understanding of the topic in the modern, present-day era is achieved. Until World War II, research attention to the issue of "leadership emergence" and "leadership effectiveness" was focused on consideration of the internal state of leaders (Chemers, 1995, p. 83). An underlying theme of research on leadership during the first half of the twentieth century was that a leader "occupies a position of responsibility" in a group (Stogdill, 1948, p. 64).

The qualities possessed by leaders were increasingly met with intrigue and curiosity during a period in time in which countries not previously involved in world affairs were coming into power on the world stage. Also during this time, discoveries were being made at the hands of men perceived to be of greatness and worthy of celebration. Thus there was significant interest in the characteristics of leaders as perceived by rank-and-file people. Data-collection procedures included simple observation of two or more children, boys' gang members, students, workers, teachers, or business executives involved in structured activities. Research methodologies also included inquiring of people to name their preferences for leaders and subsequently describe them, with special attention to the personal characteristics of those named, as well as asking people to simply list the traits imperative to leadership (Stogdill, 1948).

Standardized testing, a popular research method in use at this time, was also employed by those who sought information and support for a trait theory of leadership. Such tests were in the form of intelligence and personality tests (Chemers, 1995). Attempts were made to understand leadership by concentrating on leaders' traits. Individual studies examined, among other characteristics, such aspects as age, height, weight, physical build, appearance (attractiveness), speech fluency, voice tone, intelligence, scholastic record, self-confidence, and socio-economic status in attempts to better understand leadership by focusing on leaders' traits. After chronicling and reviewing the leadership studies from the first half of the twentieth century, which concentrated on attempts to determine leaders' characteristics and the attributes associated with leadership, Stogdill (1948) determined that limited uniformity and an

absence of any pattern of characteristics resulted from the trait study efforts. “The findings suggest that leadership is not a matter of passive status, or of the mere possession of some combination of traits” (Stogdill, 1948, p. 66). While Stogdill’s study in 1948 discounted the belief that leadership depended upon the possession of specific personal characteristics, he suggested that increased attention to behavioral patterns was needed to better understand leadership and its complexities.

Chemers (1995) contended that a second historically recognizable time period in which study of leaders and leadership transpired occurred between World War II and the mid to late 1960s. Since trait research had resulted in general disappointment at the absence of a definitive list of traits crucial to effective leadership, a new research focus was needed. That focus moved from research for support of trait theory to examination of leader behavior (Chemers, 1995), style (Northouse, 2001), and attitude (Hersey, Blanchard, & Johnson, 2001). While the trait approach was used to determine how leaders and non-leaders differed in terms of personal characteristics, the behavioral approach found researchers considering “what leaders do and how they act” and thereby “expanded the study of leadership to include the actions of leaders toward subordinates” (Northouse, 2001, p. 35). Thus, research interest lay in what leaders did and how they behaved.

Attempts to understand the phenomenon of leadership in terms of leader behaviors included the development of a leadership orientation model and data collection procedures such as the administration of questionnaires completed by subordinates about their leaders, observations of groups of boys exposed to autocratic,

democratic, and laissez-faire leadership patterns, and interviews (Chemers, 1995; Northouse, 2001). Studies during this time also examined how people acted when leading groups and organizations and the impact of leaders' behaviors on the performance of small groups (Bass, 1990; Northouse, 2001). Independent groups of researchers believed that two general kinds of behaviors comprised the work leaders did. "Initiating structure" or "production orientation" illustrated task-focused behaviors, and "consideration" or "employee orientation" represented relationship-centered behaviors (Bass, 1990; Northouse, 2001). In essence, the behavior approach studies described leadership style in terms of the two separate dimensions of tasks and behaviors.

The researchers who utilized the behavioral approach to research and inquiry into leadership were searching for a "universal theory of leadership that would explain leadership in every situation" and an approach to leadership which would result in favorable outcomes (Northouse, 2001, p. 38). They determined that different situations demanded different leader behaviors and approaches to leadership. While research at this time is considered to have advanced the study of leaders and leadership, the behavioral approach was criticized for failing to uncover a leadership style applicable and generalizable to a wide variety of situations and circumstances. "No dominant style appears. Instead, various combinations are evident" (Hersey et al., 2001, pp. 94-95). Continued research efforts to identify the best leadership style, attitude, or behavior proved to be inconclusive (Chemers, 1995; Hersey et al.; Northouse, 2001).

A third historical time period commonly used to characterize leadership research, according to Chemers (1995) is known as the contingency approach. Contingency

"suggests that a leader's effectiveness depends on how well the leader's style fits the context" of the situation (Northouse, 2001, p. 75). Hersey et al. (2001) and Northouse (2001) interpreted the leadership research at this time to be situational in approach. Regardless, this variety of leadership research began in the mid to late 1960s and continues to the current day. Most of the contemporary leadership theories undertaken during this time concentrated attention to the idea that followers and group members have specific and integral roles in the leadership process.

Research on leadership during the contingency or situational approach time period typically resulted in development of models which served as frameworks to better understand the phenomenon of leadership. Many leadership research undertakings took new dimensions and situational variables into account for the first time. One such collection of research sought to determine how the situational factors of relationship between the leader and members, structure level of tasks, and positional power affected leadership decision-making choice (Ayman, Chemers, & Fielder in Vecchio, 1997; Chemers, 1995; Hersey et al., 2001; Northouse, 2001).

Other research considered the "relationship of leadership decision-making style to group performance and morale" (Chemers, 1995, p. 88). Follower participation in decision making also entered into the contingency oriented leadership theories of the time. Subordinate motivation and satisfaction were other situational variables which were taken into account and were discovered to be affected by specific leader behaviors (Chemers, 1995). During this period of leadership model conception, attention to follower readiness—ability, level of confidence, and degree of willingness—was first

considered to be a factor which impacted leadership (Northouse, 2001). That particular model, situational leadership, proved to be widely popular in management and leadership training programs as it served as a traditional model straightforward in design and applicable to a variety of situations (Bass, 1990; Hersey et al., 2001; Northouse, 2001).

Leadership study during this time further advanced the field of leadership research and supported the idea that the situational perspective was critical to better understand leadership. One leadership approach is never appropriate for all situations. Different situations call for new considerations and different styles of leadership used. Despite this, critics contended that limited research had been used to support the "theoretical underpinnings" upon which most of the contingency and situational models stood (Northouse, 2001, p. 73). The role of leader-consistency also factored into critics' skepticism about many of the models developed during the situational and contingency approach time period. Critics questioned the models' effectiveness in truly facilitating a better understanding of leadership (Bass, 1990; Hersey et al., 2001).

Study of Leadership Among College Students

Leadership among college students was a specific area of research inquiry and focus as demonstrated by early attempts to understand leadership in the particular context of higher education. Three studies and their findings from the first half of the twentieth century are briefly explored followed by other more contemporary research studies on the topic of college student leadership.

McCuen (1929) studied 58 student organizational presidents at Stanford University to determine if intelligence affected college students' decision making regarding choice of leader. Previous leadership studies undertaken by other researchers had found intelligence to be a fundamental quality of leadership. McCuen (1929) selected leaders from a university student organization listing and categorized them into five different groups. Those five groups included: male and female living units, male eating clubs, professional organizations, social organizations (male, female, and coeducational), and male athletic organizations. The researcher compared scores from an intelligence examination, which had been administered to all freshman students, to determine if a relationship existed between leader intelligence and average intelligence for the group to which the leader belonged. McCuen (1929) discovered that male groups tended to select leaders whose intelligence was above the organizations' intelligence average more so than did women. This suggested that male students considered intellectual traits in leader choice to a greater extent than did female students (McCuen, 1929).

Spaulding (1934) asked 250 students at Long Beach Junior College to identify student leaders at the institution and found that 16 leaders were named most often. These student leaders were observed as they discharged their responsibilities on campus, institutional faculty members were interviewed about their judgments of the student leaders, and the student leaders themselves were interviewed by the researcher in order for Spaulding to profile college student leaders. Through observations and interviews, five types or classes of student leaders were discovered in an effort to examine the

"causes of leadership" and understand "the evolution of each of the leaders" (Spaulding, 1934, p. 164). Characteristics and likely motivation were defined for the Social Climber, the Intellectual Success, the Good-Fellow, the Big Athlete, and the Athletic-Activity Type (Spaulding, 1934).

Zeleny (1939) examined the characteristics of leaders in two separate college student discussion groups. Twenty-one college students were organized into individual discussion groups consisting of five or six students. Students in each group rated the leadership ability of each other student in the group. Zeleny found that leaders in college student discussion groups were more likely to be intelligent, participatory in extracurricular activities, initiators of discussion in the group, and more likable than non-leaders. On another occasion involving 35 college students placed in small 5 or 6 person discussion groups, the researcher used outside observers to record each student's frequency of participation. Again, Zeleny (1939) identified frequency of participation as a characteristic of college student discussion group leaders.

Early studies of leadership among college students focused on uncovering and understanding traits of leaders, an approach consistent with research efforts of that particular time period. Later more recent studies concentrated on situational and contingency approaches to leadership and employed more sophisticated methodologies while placing greater attention on the specifics of the context of leadership among college students.

After using longitudinal data to examine the effects of leadership development programs on students at ten institutions which received money from the Kellogg

Foundation for the development of leadership programs, Cress, Astin, Zimmerman-Oster, and Burkhardt (2001) found that the leadership programs directly impacted the student participants. The researchers considered database information from the Cooperative Institutional Research Program as well as follow-up survey results and determined that students who participated in leadership programs were more likely than non-participants to show significant gains during the four-year traditional college enrollment time period. These gains included the development of civic responsibility, multicultural awareness, and community orientation. Additionally, students who participated in leadership programs showed increases in leadership skill development, the ability to understand leadership theories, and encourage leadership in others. This study focused on analyzing the outcome differences between participants and non-participants in college leadership programs. The degree or level of involvement for the sample student respondents was not known.

Kezar and Moriarty (2000) also used data from the Cooperative Institutional Research Program to examine the relationship between different collegiate involvement opportunities and the development of leadership among college students. The researchers concentrated their study on extracurricular predictors of leadership ability and learned which factors impacted self-perception of leadership ability. As past studies on leadership development among college students had focused on Caucasian males, Kezar and Moriarty (2000) concentrated their study on comparisons between African American and Caucasian male and female students. They learned that collegiate positional leadership opportunities, such as being elected to serve as a student

organizational officer, was “more important to the development of leadership among Caucasian men” than the other three groups of college students under study (Kezar & Moriarty, 2000, p. 61). Involvement opportunities of a more non-positional nature, such as those provided by enrolling in a leadership education class, socializing with a different ethnic group, and participating in intramural sports were closely associated with leadership development for both groups of women. The authors recommended that a variety of programs and approaches to leadership development be found so that male and female students representing racially diverse populations could benefit (Kezar & Moriarty, 2000).

Wielkiewicz (2000) approached the study of leadership development among college students by examining students’ tendencies to think hierarchically and systemically about leadership and organizational adaptability. The researcher developed a survey instrument to measure “attitudes and beliefs regarding the nature of leadership” to reveal what respondents “think about leadership processes and how they expect leaders to function” (Wielkiewicz, 2000, p. 337). The instrument, while developed with college students in mind, measured opinion and expectations of leaders in general. Another student leadership measurement effort was undertaken by Buckner and Williams (1995). The researchers used Robert Quinn’s Competing Values Framework Instrument (Quinn, 1988) to examine leader effectiveness among upper-level student organization officers.

Pike and Askew (1990) examined the relationship between membership in a fraternity or sorority and college involvement. The researchers considered database

information compiled on nearly 15,000 students at a major public research institution in the Southeast and determined that membership in this type of student organization resulted in positive outcomes for the student participants. After examining the long-term effects of holding leadership positions as college students, Schuh and Laverty (1983) found in another study that such participation positively influenced former student leaders' satisfaction with non-family friendships, contributed to civic organizational involvement, and significantly affected leadership skills such as communication, decision-making, assertiveness, planning, organizing, self-awareness, budgeting, and supervising. The researchers learned that these particular leadership skills were impacted but life activities were not. Rice and Darke (2000) determined that involvement in college student organizations, when combined with high school leadership experiences, positively affected retention and was a predictor of success in college. Paterson (2000) approached examination of student organizational development by devising an instrument for use in diagnosing a student organization's functioning level based on consideration of twenty-eight variables the researcher found to be paramount to optimal student organization operation. The instrument included leadership variables as two of the measurement items.

Posner and Brodsky (1992) studied the leadership tendencies of one national fraternity's chapter presidents by administering a modified version of the Leadership Practices Inventory to executive members and presidents. Executive officers' perceptions of the practices of their fraternity presidents, as well as the fraternity presidents' perceptions of their own leadership performance, were the focus of this research.

Adams and Keim (2000) examined the leadership practices and leader effectiveness of fraternity and sorority presidents through survey of executive officers, general members (those not in positions of leadership), and the presidents themselves using a student version of the Leadership Practices Inventory. General members' and executive officers' perceptions of their leaders' practices and effectiveness were included. In this study only the self-perceptions of the top leadership in the student organizations were examined. The researchers discovered gender differences in the study and determined that different leadership training emphases may be advantageous to these two student organization communities.

In studying leadership among college students, Adams and Keim (2000), Posner and Brodsky (1992), and Wielkiewicz (2000) failed to examine general members' perceptions of their own leadership behaviors. Instead, these studies focused on perceptions of how the president performed as the chief leader of the organization. None of the research endeavors examined all leaders'—nor general members'—self-assessment of their own leadership behavior and practices within the student organizations under study. Previous research seems to have been focused primarily on presidents' self-perceptions (about their leadership) and peers' perceptions (about the presidents' leadership) and not the self-perceptions of general members and members in lower or minor positions of leadership. This neglect is significant today because all leadership within the student organization is important. Leadership is no longer demonstrated in one direction by a single person but multi-directionally among all members within an organization (Allen, 1990; Drath & Palus, 1994).

Buckner and Williams (1995) and Chambers (1992) recommended that future research on student leadership include the dimension of whether or not the leaders think they themselves should function in the roles surveyed. Cress et al. (2001) suggested future researchers "identify the motivation for engagement in leadership education and training" (p. 24). Schuh and Laverty (1983) recommended that researchers consider the degree or level of leadership involvement in future studies on the impact of student leadership. Specific inquiry into the leadership experiences of women should be included in future study (Cress et al.) as should examination of the impact of leadership experiences on minority group members (Schuh & Laverty, 1983).

After examining the role of environmental factors and their effects on the development of leadership among managers in education and business, Vardiman (2001) developed a list of factors and personality traits necessary for the support of leadership development as well as aspects which negatively affect leadership development. He suggested that future research on the topic of leadership development investigate the existence of any relationship between maturity (experience) and leadership development. Posner and Brodsky (1992) encouraged future research on the topic of leadership to include data received from rank-and-file members in addition to those in formal positions of leadership within an organization. While it is encouraging that Cress et al. (2001) found leadership programs to directly impact student development, they noted a wide range of leadership education and training among the study participants and suggested that future study of a specific leadership program at a single institution would be beneficial to further examination of the effects of leadership.

College Student Leadership

The Council for the Advancement of Standards in Higher Education (CAS) included leadership programming as one of the 24 functional areas agreed upon by members of leading higher education professional associations and national counseling and educational associations. Executive staff members of the professional consortium agreed in 1996 that college student leadership programming was important enough to warrant inclusion in a compilation of guidelines and standards for professional practice (Miller, 1997). Several colleges and universities include leadership development in institutional mission statements as a professed value and consider leadership role preparation to be a primary function of higher education (Boatman, 1999; Miller, 1997; Mouritsen & Quick, 1989). Many others are uncomfortable teaching leadership, avoid it, or refuse to treat leadership as an academic discipline (Burns, 1995; Cronin, 1995; Green, 1992). While disagreement on the topic exists, leadership is becoming a public service need for which colleges and universities must respond.

Cress et al. (2001) recognized the existence of a paradox in that contemporary society increasingly compels institutions of higher education to equip students with skills for tackling life's problems. Yet colleges and universities are largely inattentive to this need for leadership development as many offer only minimal, limited, or no leadership development programs of study and activities. Nevertheless, student affairs professionals will be expected to anticipate the leadership needs of society, develop campus leadership programs, and prepare graduates for the practice of leadership (Rogers, 1996).

Many colleges and universities already encourage leadership development in existing programs and activities. For much of the time that scientific research has been conducted in the field of leadership research, controversies have emerged regarding the existence of a single, best way to lead regardless of the circumstances, culture, and situation surrounding the organization. Such sentiments are responsible for what Chemers (1995) stated was the field's "appearance of chaotic disarray" (p. 96). Lack of a best practice approach to leadership may be interpreted as a dire need for the legitimization of leadership and its development. Spitzberg (1995) commented on the question of how to evaluate the quality of leadership by stating that existing literature had proven to be unhelpful since it concentrated on common traits of leaders and not on the nature of leadership.

Spitzberg (1995) stated that the need exists for development of "detailed strategies for evaluating leadership according to standards that are set in the context of a particular organization and a society at a specific historical moment" (Spitzberg, 1995, p. 36). The challenge, applied to the environment of college student leadership, has become a question of whether the leadership learning outcomes of participation—as leaders and members—in student organizations can be measured. Anecdotally, many suspect that leadership development results from student involvement in the programs and activities deliberately and purposefully established on American college and university campuses. Fuzziness and ambiguity are associated with attempts to understand leadership in general, and leadership among college students is no different.

Brungardt (1996) made some welcome distinctions between the components of leadership development. This definitional insight is helpful in arriving at a better understanding of leadership while supporting the belief that involvement and participation in a college student organization is connected to leadership development.

Leadership development has distinct features which should be commonly agreed upon and incorporated into discussions among those in the higher education community concerned with developing leadership among college students. Leadership development is best described as continuous, life-long learning involving both experiences and the accumulation of knowledge contributing to personal growth and improvement (Brungardt, 1996). These experiences which develop leadership are both "formal and structured" as well as "informal and unstructured" (Brungardt, 1996, p. 83). The range of examples includes "childhood development, education, and adult life experiences" to participation in formal "programming designs to enhance leadership capabilities" (p. 83). Leadership development in this sense is both on-going and a process. There is no end, state, or final stage of growth that demonstrates complete leadership acumen. In this sense, college participation and student organizational involvement are aspects of and contribute to life-long leadership development.

A narrower feature of leadership development is leadership education (Brungardt, 1996). Here the distinction is "learning activities and educational environments intended to enhance and foster leadership abilities" (p. 83). With this description in mind, examples of leadership education include enrollment in a semester-long, co-curricular course on leadership, participation in the activities of a student

organization, or contribution to a two-day conference as a presenter. Participation in a four-year comprehensive academic leadership program is another example of leadership education and, like the other examples, is a component of leadership development. With this in mind, college student organizations are recognized as facilitating leadership development since many activities and programs coordinated by these organizations are leadership education examples.

A narrower differentiation still is that offered by leadership training (Brungardt, 1996). Leadership training "usually refers to learning activities for a specific leadership role or job" (p. 84). Examples include a single-day seminar on mediation, bi-monthly instruction on college campus fund-raising, or guidance in the use of vote-counting equipment for the upcoming campus election. Leadership training activities are an element of leadership education. Again, college student organizations fit this distinction well.

Conceptualizing leadership development in terms of three separate leadership distinctions helps create an understanding of how the activities, programs, and events coordinated by leaders and members of college student organizations correspond to the leadership development process. College student organizational undertakings are clear examples of leadership education and leadership training. The organizations' activities, programs, and events are vital to the process of leadership development. This leadership education and training is practical and necessary for college students' development while on campus and after graduation. Involvement and participation in college student

organizations, as one example of leadership education, offer a pragmatic approach to learning.

Watt (1995) reviewed the literature on the topic of leadership behaviors and contended that the literature supported the necessity for leadership education at the undergraduate student level in order to ready students to become positively contributing members of society in the twentieth century. Preparation for eventual success in American society was justification for concentrated study of leadership in an interdisciplinary college learning environment. Such attention to leadership best culminated in a semester-long college course. The interdisciplinary courses included structured learning exercises such as role plays and community observation activities and organized discussions about such topics as ethics, team-building, uses of power, success in a multicultural organization, communication, time and stress management, self-assessment, and self-esteem. Leadership education academic programs strengthen students' potential for success after college (Watt, 1995).

Cronin (1995) maintained that directly teaching college students to be leaders was not possible. Wren (1994) posited that college students could and should be prepared "for the practice of leadership" (p. 74). Providing students exposure to leadership through discussions on leadership styles, skills, strategies, theories, and application to practical examples was beneficial now, as students learn to make better sense of the activities and programs in which they participate through student organization involvement, and later in their professional lives. This exposure, oftentimes in the setting of classrooms, residence halls, fraternity and sorority houses, student

government chambers, and various campus buildings, frequently accompanies involvement in college student leadership activities, programs, and organizations. “The paradoxes and contradictions and ironies of leadership, while at times puzzling, are central to appreciating the diversity and dilemmas of problem-solving and getting organizations and nations to function” (Cronin, 1995, p. 30).

Komives, Lucas, and McMahon (1998) associated college student leadership with the challenging and at times difficult task of interacting with multiple communities and their members within the highly diverse college community. The student leader, they contended, encounters constant pressures from peers to consider various perspectives on issues and questions of the day. Erratic and impulsive behaviors and actions by peers and members of the very student organizations they lead at times distract the attention of the leader as he or she works toward the achievement of common goals and overall success in the campus environment. Student leaders’ ability to understand themselves in the social context must be learned and is a primary component of leadership for college students. Self-awareness is essential to contemporary college student leadership (Komives et al., 1998).

Donnithrone (1993) commented about his own four-year West Point Military Academy experience—comprised of both academic and co-curricular involvement—by describing it as “a four year preamble to a forty year (professional) career” (p. 167). College students’ experiences outside the classroom will not teach students everything they need to know in life to be successful, but the experience gives students a strong “basis for a life-time of growth” (p. 168). In the macro picture of students’ potentially

long spans of life, involvement in student organization activities and programs is a relatively short introduction to leadership development. Yet these programs and activities are considered to be examples of leadership education and leadership training. They are interventions in life-long leadership development.

Healy (1996) connected college student leadership to the importance of the development of campus community. A campus' ability to facilitate community-building is a valuable and meaningful contribution as community is a desired attribute of a campus environment (McDonald, 2002). Campus community becomes an institutional characteristic and aspect of a college or university's identity, in essence a kind of institutional school spirit. Healy (1996) examined community in the context of American higher education by first defining it and tracing its contemporary meaning and significance with historical legislation.

Leadership, Healy (1996) contended, plays an integral role in the formation of community on campus as well as the development of community in environments external to the college or university campus. The social nature of community, where "members must live and think in relationship with each other," is comprised of interactions among the members (Healy, 1996, p. 49). College student leadership activities and programs may be interpreted as important opportunities for "providing a laboratory for effective citizenship and leadership in order to develop skills, values, and attitudes students need to enter the workforce and become members of other communities" (Healy, 1996, p. 49). College student leadership helps foster community-

building within the college or university campus and in the environments in which students find themselves after graduation.

Healy (1996) suggested that attention be directed toward students in group settings such as classrooms, athletics, intramurals, student organizations, residence halls, fraternities and sororities, and student employment locations for lessons in community-building. “These subgroups can form the nucleus of the community experience on the campus and provide the connection to and socialization for the larger institutional community at the same time” (Healy, 1996, p. 55).

Campus community-building helps counter the isolation some groups of students, primarily minority group members, experience in American higher education. Two pieces of federal legislation unintentionally helped foster the isolation minority group members sometimes experience on campus (Healy, 1996). With the enactment in 1944 of the Serviceman’s Readjustment Act, commonly called the G.I. Bill, and the Higher Education Act in 1965, “students who previously were not expected to attend college or university” arrived on campus unprepared “for the (academic and social) experience” (Healy, 1996, p. 50). Many of these same students were unsuccessful in spite of initial assumptions by the institutions that they would use existing academic resources and be successful. Resentment grew among those who had been historically kept out of higher education and only recently permitted access to the ivy-covered institutions of higher education (Healy, 1996). Community-building seeks to undo and “reverse the adverse effects of isolation for individuals and groups on campus” (Healy, 1996, p. 51).

What is the best way to evaluate leadership development? If an ideal leadership performance level for college student organizations is determined and an assessment effort is planned, it would be possible to learn if variance exists between the ideal and the current leadership capacity. This difference between the ideal leadership level, perhaps based on position requirements or commonly held expectations, and current performance of an organization's leadership signifies the existence of a gap. Assessment data could measure this gap and help researchers understand and clarify what needs to be learned, improved, or changed about the organization (Van Velsor, 1998). In the same way, assessing and understanding the leadership learning outcomes facilitates and inspires improvement while empirically suggesting how disagreement and performance shortcomings may be lessened.

Boatman (1999) suggested that a college or university consider embarking on a comprehensive process she called the "leadership audit" in order to "identify all of the experiences by which students may develop leadership abilities" at the institution (p. 326). This accounting, when undertaken by the entire campus community, facilitates understanding about leadership while at the same time demonstrates an institution's commitment to assessing the impact of the institution's mission as it relates to college student leadership development.

After examining leadership educators' perceptions about the importance of assessment of leadership development, Chambers (1994) reiterated the confusion with and the necessity for evaluation of college student leadership. "The nature of both leadership and college student development complicates the issues of evaluating

programs because individual development occurs over a period of time and is influenced by various factors" (Chambers, 1994, p. 226). Additionally, the difficulty of isolating "the change, growth, or development derived from a given leadership development effort" adds great complexity to the assessment task (Chambers, 1994, p. 226). Nevertheless, Chambers noted the existence of strong rationale which supports the importance of developing approaches for evaluating college student leadership in programs and activities. Pressures to examine and document outcomes, increasing emphasis on accountability, calls for evidence of program effectiveness, and the need for program planning all lend themselves to justification for evaluation of college student leadership (Chambers, 1994).

Competing schools of thought regarding the question of whether leadership can or cannot be taught and learned demonstrate the existence of longstanding controversy surrounding the topic of leadership. An early approach to the study of leadership focused on the belief that successful leaders must possess specific traits. The idea that leaders possess fixed personality traits may be criticized as compromising the value of leadership development (Northouse, 1997). Subsequent study of behavioral, situational, and contingency contexts of leadership demonstrated the belief that factors other than traits were believed to be relevant to the study of leadership.

Missing from many of the instruments of inquiry previously used to assess leadership among college students was the component of personal leadership orientation. Self-knowledge of one's personal strengths and shortcomings is necessary for the development of interpersonal skills essential to the development of leadership and

foundational to the successful discharge of leadership (Bossidy & Charan, 2002; Chambers, 1994; Komives et al., 1998; Whetten & Cameron, 2002). The inter-relatedness of leadership and management is exemplified in the inability to possess one without the other. One is not synonymous with the other. Each is distinctive, and both are critically important to any organization (Kotter, 1999; Quinn, 1988; Whetten & Cameron, 2002).

Komives et al. (1998) explored college student leadership by characterizing college student organizations as "self organizing systems" (p. 58). Komives et al. (1998) depicted "self-organizing systems" as "collections of people whose behaviors are constantly shaped by the surrounding environment and by the actions of those around them" (p. 58). With this in mind, the student organization under study may be thought of as an example of a self-organizing group.

The use of Bandura's (1977) social learning theory connects well to the notion of a self-organizing system comprised of college students offered by Komives et al. (1998) and supports the researcher's interest in gaining a better understanding of college student leadership perceptions of leaders (positional) and members (non-positional leaders) and the educational value of leadership development efforts in a college student organization. Bandura (1977) contended that observers in organized group learning environments, "by attending to the pattern of successes and failures of others," have an opportunity to "give their undivided attention to discovering the correct solutions" and may learn at a rate faster than the performers themselves (p. 122). Applying this philosophy to college student leadership helped to offer philosophical justification for

the researcher's interest in and consideration of whether or not observers of leadership (general members) within college student leadership organizations, programs, and activities perceive leadership orientations differently than those leaders in specific leadership positions (leaders).

As stated previously, society places increasing importance on the development of leaders to solve problems. With colleges and universities responding to requests for increasing numbers of graduates prepared for the practice of leadership, it would appear to be equally important to understand the leadership culture of college student organizations in place on college and university campuses to facilitate learning and develop their student members. Research on college student leadership is important if student affairs administrators, faculty, staff, alumni, parents, and students themselves are to continue to advocate leadership development as a real learning outcome of student organization involvement and participation.

Given the ambiguity and confusion which has surrounded the topic of leadership, research efforts undertaken to better understand leadership are increasingly important. Since leadership is no longer solely the responsibility of a single person or group of people within an organization, examination of the perceived leadership orientations of student leaders and general members belonging to one particular college student organization is needed.

CHAPTER III

METHODOLOGY

Survey research methodology was used in the selection of the sample, the administration of the instrument, the collection of data, the analysis of the data, and the reporting of data for this study. This chapter will describe the research population, the history of the instrument, instrumentation development and administration, sample population, and the procedures used to analyze the data gathered.

Population

The population for this study was formal leaders and members in the Corps of Cadets at Texas A&M University during the Spring 2004 semester. Members of the Corps, numbering 1,726 on January 26, 2004, were students at Texas A&M University (Office of the Commandant, 2004). On January 26, 2004, there were 1,776 students registered for 87 ROTC and SOMS classes at Texas A&M University (Table 1). The counts on this specific day were used as January 26, 2004 coincided with the start of the first full week of classes for the spring semester. Class registration typically closes by this date. The 50 student difference between the Office of the Commandant total and the ROTC and SOMS total was due to non-cadet course elective student enrollments. For the purpose of this research study, the 1,776 class registration total will be used as the population size. The Office of the Commandant total did not include accurate military service subgroup totals.

Each cadet must register for one School of Military Science (SOMS) or Reserve Officers' Training Corps (ROTC) course each semester, and cadets are randomly

TABLE 1.

Comparison of Population and Sample

	Senior	Junior	Sophomore	Freshman
Population *				
Air Force ROTC	65	62	158	149
Army ROTC	81	72	175	190
Navy ROTC	25	39	121	128
SOMS	232	279		
Sample				
Air Force ROTC	14	27	60	52
Army ROTC **	9	25	39	20
Navy ROTC	11	30	36	29
SOMS	86	70		

* According to ROTC and SOMS class registrant totals on January 26, 2004.
** Alternative data collection procedure was used.

assigned to classes depending on their Corps status (years in the Corps) and contract status. A military cadet is randomly assigned to a class within his or her respective ROTC department (ie. Air Force, Army, or Navy) with respect to Corps status. A D&C cadet is randomly assigned to a SOMS class according to his or her status in the Corps.

A stratified random sample of 28 ROTC and SOMS classes was drawn to select participants for the study (Table 2). The sample was stratified by Corps classification (senior, junior, sophomore, and freshman), service affiliation (Air Force, Army, and

TABLE 2.

Number of ROTC and SOMS Class Sections Randomly Chosen

	Senior	**Junior**	**Sophomore**	**Freshman**
Air Force ROTC classes	1	1	3	2
Army ROTC classes	1	1	3	3
Navy ROTC classes	1	2	1	1
SOMS classes	4	4		

Navy), and contract status (Drill & Ceremony and military). Due to the varying sizes of the subgroup populations, samples were drawn with proportional representations based on the estimated percentage of subjects in each population.

The instrument was administered to cadets who attended class on the day the researcher administered the survey instrument to a particular class section.

Procedure

ROTC and SOMS classes were identified using the Texas A&M University Office of Admissions and Records on-line schedule of course listing on January 26, 2004 (*http://courses.tamu.edu/viewdepartments.aspx?term=A&year=2004*). Classes were identified after the first week of classes in order to have accurate and current listing, as some classes were cancelled due to low enrollment and semester course registration was still in progress prior to this time. In the case of low cadet enrollment in a particular class section, the class section was cancelled and students initially registered for such a class section were reassigned to another which fit in his or her academic

schedule. Attempts were made to approximate average class size for each subgroup prior to selection (Table 3).

An information sheet explaining the nature of the research study, consent, and assurance of anonymity accompanied each survey instrument as did detailed instructions for completing the instrument. Presumed consent for participation was obtained through completion of the survey instrument and its return to the researcher. Respondents were asked to read the information sheet prior to completing the survey and were reminded by the survey administrator that their participation was voluntary. The administration of the survey instrument occurred during SOMS 380 classes (for junior D&C cadets), SOMS 481 classes (for senior D&C cadets), and ROTC classes (all freshman and sophomore cadets and all Contract cadets). The survey instrument was designed to give the researcher information about cadets' performance in competing managerial-leadership orientations of the following roles: Broker, Innovator, Director, Producer, Coordinator, Monitor, Group Facilitator, and Mentor. Data were compared within the same population.

A total of 520 surveys were administered. The researcher established a decision rule to judge whether a survey was usable. The decision rule was that a survey had to be at least fifty percent complete, meaning that at least half of the survey items had written responses, and the respondent had to be a current member of the Corps of Cadets. With the decision rule in effect, twelve of the surveys were determined to be unusable: five surveys were incomplete; seven surveys had been completed by persons who were not members of the Corps of Cadets. A total of 508 surveys were deemed usable by the

TABLE 3.

Number of ROTC and SOMS Class Sections Offered During the Spring 2004 Semester and Average Class Section Size

	Senior	**Junior**	**Sophomore**	**Freshman**
Air Force ROTC classes	3	3	8	8
Average class section size	*21*	*20*	*19*	*18*
Army ROTC classes	4	4	8	12
Average class section size	*20*	*18*	*21*	*15*
Navy ROTC classes	2	3	4	4
Average class section size	*12*	*13*	*30*	*32*
SOMS classes	10	14		
Average class section size	*23*	*19*		

researcher.

Instrumentation

The researcher selected the extended version of the Competing Values Instrument: Managerial Leadership (Quinn, 1988) for adaptation and use in a study of the perceived leadership orientations of selected college student leaders and members belonging to a student organization. The original version of the instrument, based on the competing values theoretical framework, was created as an instrument to better understand eight different information-processing orientations applied to the phenomenon of managerial leadership. Both a peer-report version as well as a self-assessment version were initially devised and later modified (Quinn, 1988). Understanding how the instrument itself was developed would be incomplete without an

overview of the development of the framework on which the instrument was based. The competing values framework was grounded in organizational effectiveness literature.

Campbell (1977), after exhaustive examination of the organizational effectiveness literature, created a list of criteria which had been used to measure effectiveness in the past. He identified 30 "variables that have been proposed seriously as indices of organizational effectiveness" (p. 36). Those criteria are presented in Table 4. Quinn and Rohrbaugh (1981) considered Campbell's criteria in an exploratory study and research approach to the unsettled and enigmatic issue of organizational effectiveness. It was the findings of this particular research study which supported the competing values framework and led to the eventual development of the Competing Values Instrument.

Quinn and Rohrbaugh (1981) did not base their study, as others had before them, on the issue of the characteristics which comprised effective organizations. Instead, focus was placed on the question, "How do individual theorists and researchers actually think about the construct of effectiveness?" (Quinn & Rohrbaugh, 1981, p. 126). The researchers addressed the problem through the use of a seven-member panel of organizational effectiveness experts. Panelists were asked to reduce and organize the criteria list created by Campbell (1977) through the application of four decision rules. Panelists were directed to eliminate a criterion measure if it was "not at the organizational level of analysis, not a singular index but a composite of several criteria, not a construct but a particular operationalization, or not a criterion of organizational performance" (Quinn & Rohrbaugh, 1981, p. 126-127). Criteria were eliminated if at

TABLE 4.

Campbell's 30 Organizational Effectiveness Criteria (1977)

Organizational Effectiveness Criteria	
Overall Effectiveness	Planning and Goal Setting
Productivity	Goal Consensus
Efficiency	Internalization of Organizational Goals
Profit	Role and Norm Congruence
Quality	Managerial Interpersonal Skills
Accidents	Managerial Task Skills
Growth	Information Management and Communication
Absenteeism	Readiness
Turnover	Utilization of Environment
Job Satisfaction	Evaluations by External Entities
Motivation	Stability
Morale	Value of Human Resources
Control	Participation and Shared Influence
Conflict/Cohesion	Training and Development Emphasis
Flexibility/Adaptation	Achievement Emphasis

least six of the seven panelists were in agreement that an item did not meet a decision rule. Of the initial 30 criteria, 13 were eliminated through this process (Quinn & Rohrbaugh, 1981).

During the second stage of Quinn and Rohrbaugh's exploratory study, the panelists were asked to evaluate the "similarity between every possible pairing" of the 17 remaining criteria "through a systematic sequence of comparison judgments made on a rating scale of 1 (very dissimilar) to 7 (very similar)" (Quinn & Rohrbaugh, 1981, p. 127). The panelists' paired comparison ratings, or "similarities judgments," were then "subjected to multidimensional scaling in order to identify dimensions of organizational

effectiveness that underlay the comparison ratings provided by the participants" (Quinn & Rohrbaugh, 1981, p. 127).

With the paired comparison ratings algorithmically analyzed, Quinn and Rohrbaugh were able to identify three dimensions "by which the individual judgments of relative similarity or dissimilarity were made" (Quinn & Rohrbaugh, 1981, p. 129). A three-dimensional representation of 16 effectiveness criteria resulted (one criterion was found to be an isolate in the three-dimensional space). The first dimension, as represented by a horizontal axis, was interpreted by the researchers as reflecting a people-oriented or organization-oriented organizational focus. The second dimension, as represented by a vertical axis, was interpreted as reflecting a flexible or stable organizational structure. The third dimension was interpreted as reflecting an organizational emphasis on processes (means) or outcomes (ends) (Quinn & Rohrbaugh, 1981). Multidimensional scaling enabled the researchers to spatially locate effectiveness criteria, identify three value dimensions by which to arrange the effectiveness criteria, and define the four models of the competing values framework (Quinn & Rohrbaugh, 1981). A pictorial representation of the criteria arranged in relation to the three dimensions appears in Figure 1.

After a four-year program of research, Yukl (1981) identified 19 categories of leader behavior. Those behaviors are presented in Table 5. Quinn incorporated these categories of leader behavior into the eight leadership orientations of the competing values framework (Denison, Hooijberg, & Quinn, 1995). The Rational Goal Model, the Open Systems Model, the Human Relations Model, and the Internal Process Model were

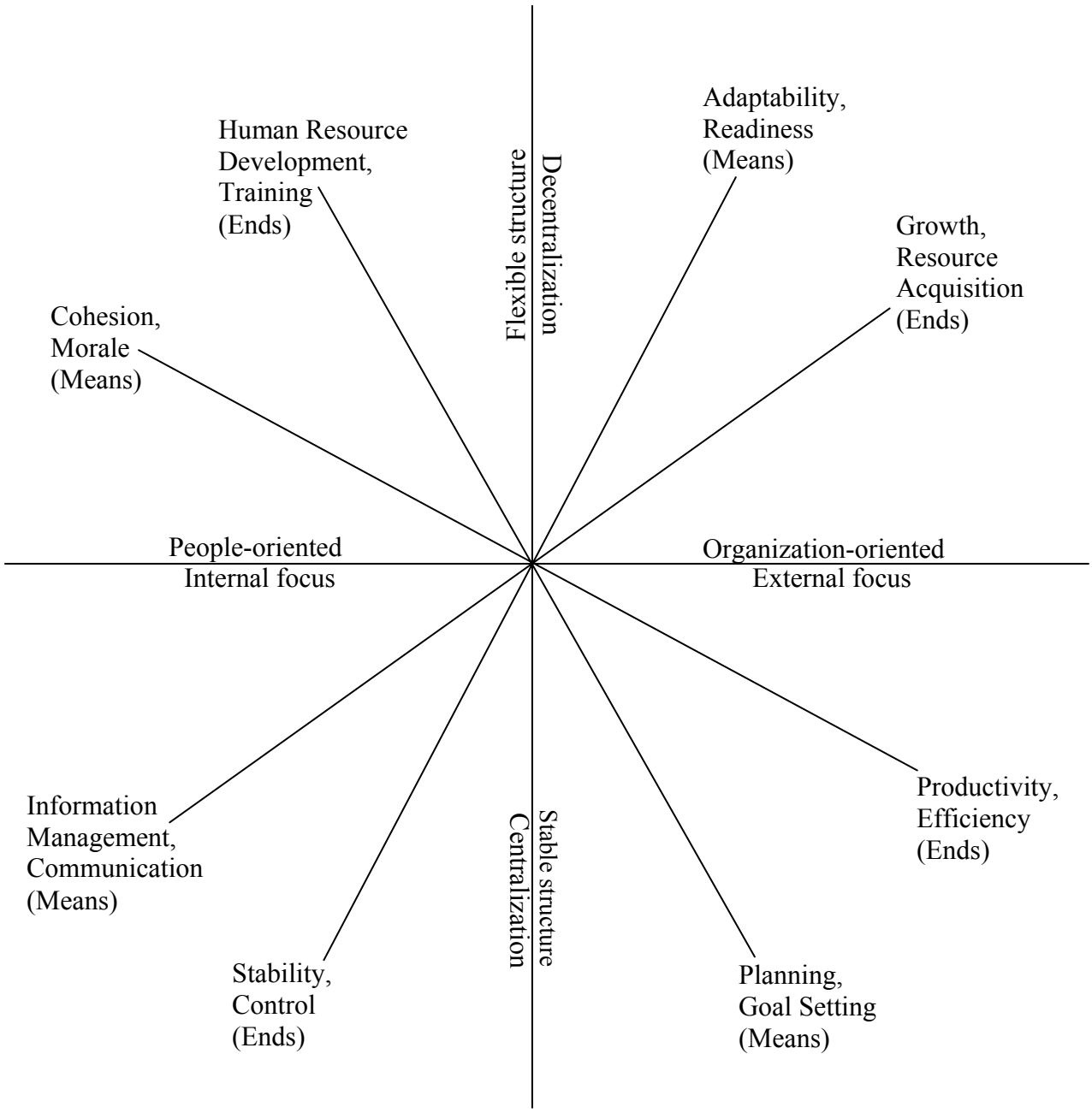

FIGURE 1. Early Diagrammatic Representation of Effectiveness Criteria and Arrangement of the Competing Values Framework

Adapted from Quinn (1988, 1994), Quinn and Rohrbaugh (1981, 1983), and Quinn, Faerman, Thompson, and McGrath (1990).

TABLE 5.

Yukl's 19 Leader Behaviors (1984)

Leader Behaviors	
Performance Emphasis	Information Dissemination
Consideration	Problem Solving
Inspiration	Planning
Praise Recognition	Coordinating
Structuring Reward Contingencies	Work Facilitation
Decision Participation	Representation
Autonomy-Delegation	Interaction Facilitation
Role Clarification	Conflict Management
Goal Setting	Criticism-Discipline
Training-Coaching	

comprised of paired leadership orientations within the competing values framework. When juxtaposed vertical and horizontal axes create the four models, the framework's models are arranged to illustrate the conflicting or competing values of organizational life (Quinn, 1988). The competing values framework depicted as a four-quadrant model comprised of eight managerial-leadership orientations appears in Figure 2.

Thompson, McGrath, and Whorton (1981) contended that the competing values framework, and the four leadership models arranged within the framework, served important diagnostic roles for educators, researchers, and working professionals. The competing values framework was heralded as something of a breakthrough in organizational development theory as it was comprehensive in nature, objective, understandable, non-prescriptive, and integrative (Quinn, 1988; Quinn & McGrath, 1982; Quinn & Rohrbaugh, 1981; Thompson, McGrath, & Whorton, 1981).

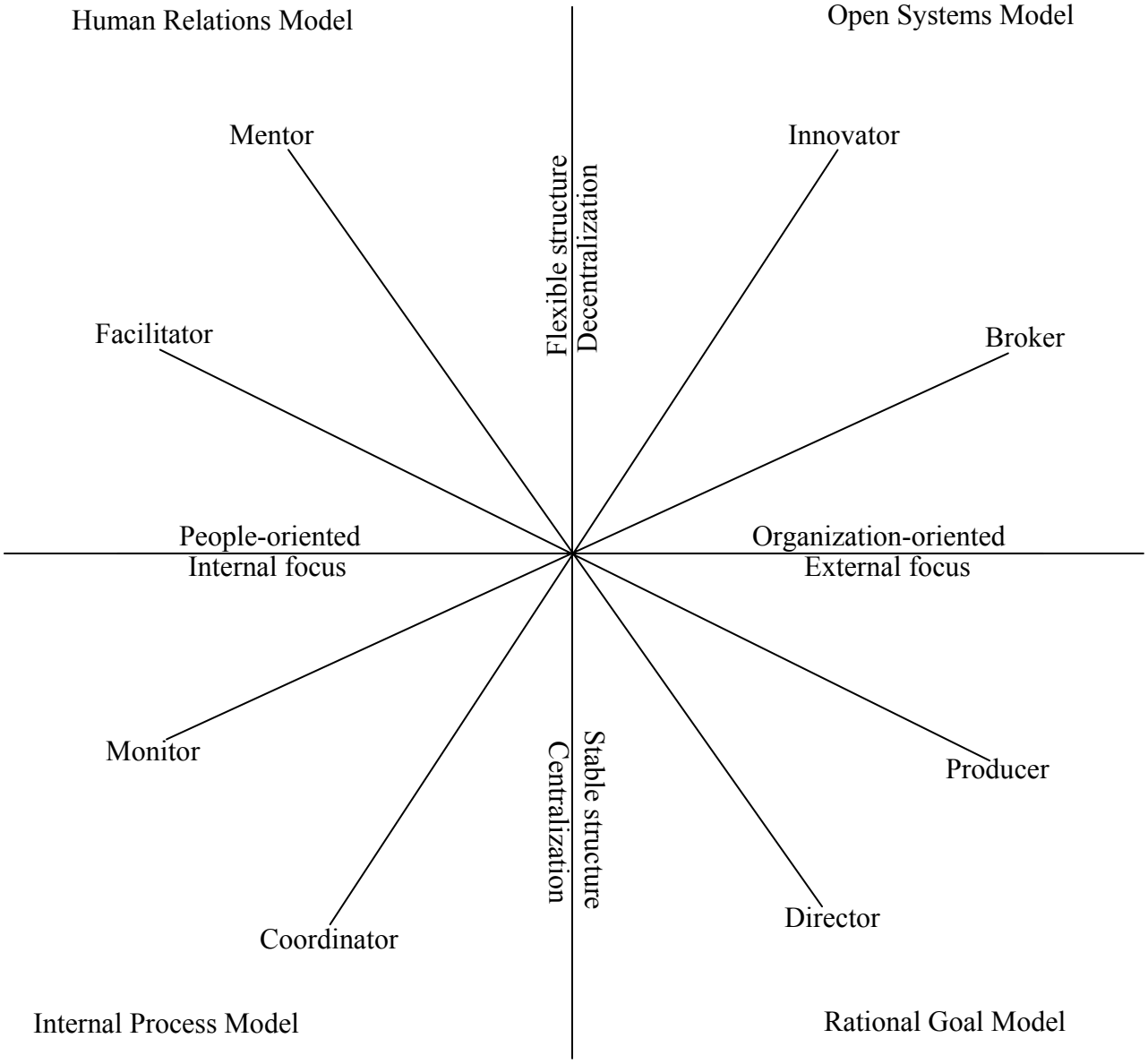

FIGURE 2. The Competing Values Framework: Eight Managerial/Leadership Orientations within a Four-Quadrant Model

Adapted from Quinn (1988, 1994), Quinn and Rohrbaugh (1981, 1983), and Quinn, Faerman, Thompson, and McGrath (1990).

Quinn and Rohrbaugh's exploratory study was replicated with a larger and more diverse group of experts (Quinn & Rohrbaugh, 1983). Forty-five authors whose work had been recently published in *The Administrative Science Quarterly* made judgments about the similarities among the pairings of the 17 criteria used in the 1981 exploratory study. Multidimensional scaling again suggested another model with three axes. The same three dimensions appeared as before and the 17 criteria showed only slight alteration in their spatial position. The replicated study provided evidence that "organizational researchers share an implicit theoretical framework," and the competing values framework offered a "simplified presentation of the relationship between the three value sets and the effectiveness criteria" (Quinn & Rohrbaugh, 1983, p. 369).

Quinn reviewed the social science literature in an attempt to expand understanding of the eight leadership orientations uncovered in the 1981 exploratory and 1983 replication studies. After the review, Quinn (1984) redeveloped the competing values framework by incorporating leadership traits, behaviors, and influence patterns commonly found in the related literature on organizational theory, organizational analysis, and leadership theory into the initial framework. Quinn re-introduced the competing values framework with new attention to leadership traits and behaviors found in the literature and also unveiled a separate version focused on leadership influence patterns (Quinn, 1984).

The re-introduced framework, closely resembling the original framework, contained three models renamed according to the leadership skills and behaviors "most representative" in each quadrant (1984, p. 19-22). Boundary-Spanning Skills replaced

the Open Systems Model, Directing Skills replaced the Rational Goal Model, and Coordinating Skills replaced the Internal Process Model. The Human Relations Model was altered only slightly to Human Relations Skills. In this version he also introduced four new paradigms. Those new paradigms were Democratic Leadership, Combative Leadership, Authoritarian Leadership, and Synergistic Leadership. Quinn (1984) also interwove into the framework eight defined leadership styles influenced by paired leadership orientations (roles) of the initial competing values framework. These eight separately defined leadership styles were: Responsive, Open Style; Inventive, Risk-Taking Style; Dynamic, Competitive Style; Directive, Goal-Oriented Style; Structured, Formal Style; Conservative, Cautious Style; Cooperative, Team-Oriented Style; and Concerned, Supportive Style (Quinn, 1984).

Finally, Quinn (1984) incorporated leadership influence patterns (power) into still another version of the competing values framework. This separate version of the framework complemented the re-introduced framework in design and directly corresponded to each of the four quadrants. This Competing Values Framework of Influence Patterns and Change Strategies version suggested four different kinds of power typically exerted by leaders in each of the four models. These re-named quadrant-models were: Reward Power, Legitimate Power, Expert Power, and Relational Power (Quinn, 1984).

An early version of the instrument was used by Quinn, Faerman, and Dixit (as cited in Quinn, 1988) to study 295 part-time graduate students, who studied business administration or public administration at ten different universities, and their perceptions

of managers' leadership behaviors. The peer-report instrument used in the study, called the Competing Values Leadership Instrument (Quinn, 1988), was developed to measure management behaviors using two question-items for each of the eight roles of the completing values framework. The survey instrument asked respondents to describe the frequency the manager "they knew best" engaged in the management behaviors (as cited in Quinn, 1988, p. 91). Quinn noted that this early version of the competing values instrument had both high test validity and high test reliability. The initial instrument had two versions—a 16-item peer-report instrument as well as a 16-item self-assessment instrument. The instrument was further expanded into a 32-item peer-report instrument (Quinn, 1988).

The 32-item peer-report instrument was called the extended version of the Competing Values Instrument: Managerial Leadership and contained two phases of inquiry. On a seven-point Likert-type scale, respondents were first asked to respond to statements which addressed the frequency with which an associate (peer, supervisor, or subordinate) engaged in specific behaviors at the present time. A second phase of the survey asked respondents to react to the same set of statements in terms of the frequency with which that (same) associate should engage in certain behaviors. Study participants responded to statements which addressed the different information-processing orientations of Quinn's managerial-leadership framework. This version was developed to assess perceptions of managerial-leadership skills by peers, supervisors, and subordinates (Quinn, 1988).

Quinn (1988) established validity and reliability for the extended version of the Competing Value Instrument: Managerial Leadership after using the instrument in an analysis of subordinates in the utilities industry. Data were analyzed using factor analysis procedures. Quinn found that the analysis produced eight factors. Each of the eight factors described a leadership orientation or information-processing approach previously theorized and researched by Quinn (Quinn & McGrath, 1982; Quinn & Rohrbaugh, 1981; Quinn & Rohrbaugh, 1983; Thompson, McGrath, & Whorton, 1981). The Competing Values Instrument: Managerial Leadership contains 32 items divided into eight groups or leadership orientations. Those eight leadership orientations are: Innovator, Broker, Producer, Director, Coordinator, Monitor, Group Facilitator, and Mentor.

Both the Competing Values Instrument and the Competing Values Framework, on which the instrument is based, convey a strong sense of history. The framework may be interpreted as being nearly one hundred years in the making as each leadership model of the larger integrated framework relates very well to a quarter century of activity in American life (Quinn, Faerman, Thompson, & McGrath, 1990). The first quarter-century of the twentieth century was characterized as prosperous during a time of invention and innovation. Industrial leaders enjoyed cheap immigrant labor, witnessed great urban growth, and placed considerable merit on the efficiency of work. The Rational Goal Model emerged as a management model with a focus on profit and achievement and an emphasis on clarity of direction and action taken (Quinn et al., 1990). An approach to leadership as a director and producer was believed to be optimal during this time.

Also during this period of time in twentieth century American life, the Internal Process Model emerged as a useful leadership style with a focus on constant performance measurement and the evaluation of those measures. Policies and procedures as means to control were the emphasis within a culture dominated by hierarchy. Routinization was believed to facilitate stability, and stability was understood to demonstrate effectiveness (Quinn et al., 1990). An approach to leadership as a monitor and coordinator was believed to work well.

The second quarter-century of American life was characterized as a time of economic and global uncertainty. The Human Relations Model emerged as a perspective to leadership at a time marked by the rise of unionism and a new focus on people. Relationship-building among all members of the organization and an emphasis on teamwork were characteristic at this time in American life (Quinn et al., 1990). An approach to leadership as mentor and group facilitator was believed to be best.

The years immediately following the halfway point of the twentieth century coincided with ever-increasing technological advancements being made. Women were new professionals in fields of work once dominated by men. The Open Systems Model emerged as a style of leadership during this time. Adaptive organizations responsive to change, in possession of a common vision, and able to solicit external support proved to be the most effective (Quinn et al., 1990). An approach to leadership as innovator and broker was believed to be the most advantageous.

Each model connects very well to specific time periods in American management history. A strong historical foundation defines the four leadership models of the

competing values framework and instrument. It is during the last quarter of the twentieth century that Quinn et al. (1990) maintain leaders must utilize all eight approaches to leadership in order to be successful. Increasing complexities associated with leadership and management demand that leaders understand and appreciate all four models and eight leadership orientations. No one model or orientation is sufficient.

Using the 16-item peer-report version of the Competing Values Instrument, Denison et al. (1995) recorded evidence of instrument reliability in a study of subordinates' and supervisors' perceptions of the leadership role behavior of 176 executive managers from 84 different public utility companies. Reliability ranged from .61 to .87 (Denison et al.).

After years of use in the research literature and increasing notoriety as an established theory, diagnostic mechanism, and an increasingly popular means to understand organizational phenomena, the competing values framework has recently been used in the context of organizational culture. The four models of the competing values framework have been assigned labels which describe characteristics of organizational culture. These labels are Market, Adhocracy, Clan, and Hierarchy and rename the following quadrants respectively: Rational Goal, Open Systems, Human Relations, and Internal Process (Cameron & Quinn, 1999). The labels "were derived from the scholarly literature that explains how, over time, different organizational values have been associated with different forms of organizations" (Cameron & Quinn, 1999, p. 32). Through this renaming, the competing values framework has been applied to the concept of organizational culture.

Using a 24-item version of Quinn's (1988) Competing Values Instrument, Hooijberg & Choi (2000) recorded evidence of construct validity and instrument reliability in a study of 252 managers from 132 different public utility companies. Factor analysis procedures produced six factors, and reliability ranged from .63 to .83. The researchers suggested that "future research should develop more reliable and valid measures of all the (competing values framework) roles" (Hooijberg & Choi, 2000, p. 359).

After the extended version of the Competing Values Instrument: Managerial Leadership was selected, refinement of the instrument needed to be made for the instrument to be used as a self-report instrument to interpret management and leadership behaviors among college student members of a student organization. Precautions were taken to ensure validity and reliability of the survey instrument.

Test validity was examined through pilot testing of the instrument prior to administration to the sample population. Evidence of validity also included the use of a panel of leadership experts to consider the instrument's transition from a peer-report instrument to a self-report instrument. Pilot testing also helped ensure clarity of respondent instructions, instrument item word choice, and understanding by a group similar to the sample population. From this information a final instrument which assesses leadership orientation was created. Resulting data from the instrument were statistically examined for reliability. The following steps were undertaken to assure validity and reliability of the instrument.

Step 1

As discussed in the review of literature, student leaders' and members' self-rating of their own leadership orientation was missing from college student leadership research studies of the past. The researcher found Quinn's (1988) extended version of the Competing Values Instrument: Managerial Leadership to be unique in that leadership traits were not the central aspect. Instead, the nature of leadership and the interrelatedness of eight separate orientations based on the competing values framework (Quinn & Rohrbaugh, 1981, 1983) and theory were particularly specific and significant characteristics of the instrument. Since the survey instrument was a peer-report instrument, the researcher rephrased each question, altered the format, and authored specific instructions which directed the survey respondent to each of the four survey sections. Quinn's (1988) original Competing Values Instrument: Managerial Leadership survey instrument used a seven-point Likert-type scale. The researcher wished to force respondent choice and, therefore, removed the "occasionally" choice (4th option) from the scale. A six-point scale was used in the survey instrument. A demographic information section was also added to the survey instrument in order to compare respondent background information and answer the research questions which sought differences and associations in responses based on the background information.

Step 2

After the researcher modified the competing values instrument for use as a self-report instrument, the instrument was analyzed by a seven-member panel of leadership experts. The instrument was submitted to a panel of leadership experts. At the

researcher's request, the members of the panel analyzed the phrasing of the items to ensure that a sufficient transition was made from the original peer-report version to the self-report version intended for use in the present study. The members of the panel were also directed to compare the new format and rephrasing with the original instrument. The researcher believed this was a necessary step to validate any changes so that each item in the new version of the instrument maintained the original meaning. The panelists were all current university faculty members, in possession of a Ph.D., who taught in either an educational administration (higher education) or agriculture education (leadership education) department.

Step 3

Quinn's competing values instrument was developed for business leaders and not for college students. For this reason, further evidence of validity for the new adaptation of the instrument was determined to be necessary. Additional evidence of validity was established through pilot studying the researcher's instrument with a small sample of 12 cadets. The researcher conducted the pilot study before rolling out the larger study, to make certain the wording of the questions was appropriate to the population under study and to enrich the use of the survey instrument. The students selected for the pilot study were enrolled in a SOMS class. The pilot study group provided comments which concerned the survey instrument in regard to word choice, appropriate phrasing, clarity of section directions, and final comment section. Through pilot studying the instrument with this group of cadets, it was determined that the instrument would take 15 to 20 minutes to complete.

Step 4

Also added to the survey instrument was a final section for an open-ended response. One question asked for the inclusion of any comments the respondent cadet had about the culture of leadership within the student organization. The purpose of this final question was to uncover possible insights to college student leadership not accounted for in the survey's preceding sections of closed-form responses as well as to further connect the information to Quinn's competing values framework. The pilot study comments solicited were examined as to relevance to leadership in the context of Quinn's competing values framework, college students, and the college student organization under study. The researcher hoped to learn which orientations were favored and which were avoided by members of the student organization.

Administration of the Instrument

Support for the research study was granted by the Commandant of the Corps of Cadets at Texas A&M University as well as the AERS, MLSC, and NVSC Department Heads at Texas A&M University. For the purpose of this study, a cluster sample population was randomly selected from naturally occurring groups in the form of SOMS 380 classes, SOMS 481 classes, and ROTC classes. The cluster sampling was stratified by Corps classification, contract status, and service affiliation. Table 1 compares members of the population under study and the sample selected. As stated previously, the population for this study was determined to be 1,776. The 520 students randomly sampled more than satisfied the sample size determined through the formula developed

by Krejcie and Morgan (1970) for estimating the sample size needed relative to a population of known size. The formula follows.

$S = X^2 NP(1-P) / d^2(N-1) + X^2 P(1-P)$, where

S is the required sample size

X^2 is the table value of chi-square for one degree of freedom relative to the desired level of confidence (usually 3.841 for the .95 confidence level)

N is the population size

P is the population proportion (usually assumed to be .50 since this yields the maximum sample size)

d is the degree of accuracy reflected by the amount of error that can be tolerated in the fluctuation of a sample proportion (.05) (Krejcie & Morgan, 1970, p. 607).

Where $N = 1776$, the corresponding sample size was determined to be 316. The S according to the total number of ROTC and SOMS course registrants ($N = 1776$) was 316.

After the researcher began to administer the survey, he was denied access to the eight MLSC class sections initially selected. An alternative data collection method was utilized in order to administer the survey instrument to Army cadets. While the collection method for Army cadets differed from the classroom environment in which D&C cadets, Air Force cadets, and Navy cadets completed the survey, the researcher recreated the survey collection procedure in a controlled campus location other than the classroom itself. Cadet survey responses were examined using t-tests to determine if

differences existed according to the two data collection methods. T-tests showed no significant differences in any of the eight factors of the instrument. An information sheet very similar to the original was utilized, and cadets were reminded that their participation in the research study was voluntary. A total of 94 Army cadets agreed to participate in the study and completed the survey instrument.

The survey instrument was administered to cadets, over the course of five weeks early in the spring semester, with an information sheet explaining the study and the anonymous nature of the survey instrument and the data collection process. A total of 520 surveys were received. Of the 520 surveys returned, 12 could not be used. Seven respondents enrolled in the ROTC courses as an elective and were not members of the Corps of Cadets at Texas A&M University. Five respondents completed less than fifty percent of the survey. A total of 520 surveys were administered to and returned from a total ROTC and SOMS sample population of 606. This was a response rate of 85.80%.

Description of Respondents

Table 6 shows the distribution of the respondents according to the demographic information solicited. Survey administration resulted in the following respondent number in each category: 120 seniors, 152 juniors, 135 sophomores, and 101 freshmen. Academic classification resulted in the following response number in each category: 138 seniors, 135 juniors, 141 sophomores, and 94 freshmen. College was tabulated with the following response numbers in each category: 87 Agriculture and Life Sciences, 25 Architecture, 40 Business, 27 Education, 142 Engineering, 19 Geosciences, 118 Liberal Arts, 21 Science, and 12 Veterinary Medicine. Major course of study found 254

TABLE 6.

Description of Respondents to Cadet Survey

	Frequency Reported	Percent*
Corps Classification		
Senior	120	23.62%
Junior	152	29.92%
Sophomore	135	26.57%
Freshman	101	19.88%
Academic Classification		
Senior	138	27.17%
Junior	135	26.57%
Sophomore	141	27.76%
Freshman	94	18.50%
College **		
Agriculture and Life Sciences	87	17.72%
Architecture	25	5.09%
Business	40	8.15%
Education	27	5.50%
Engineering	142	28.92%
Geosciences	19	3.87%
Liberal Arts	118	24.03%
Science	21	4.28%
Veterinary Medicine	12	2.44%
Major Course of Study **		
Hard science	254	52.37%
Soft science	231	47.63%
Gender **		
Female	43	8.48%
Male	464	91.52%
Age **		
17 to 19 years	138	28.22%
20 to 22 years	338	69.12%
23 years and older	13	2.66%

TABLE 6. *continued*

	Frequency Reported	Percent*
Ethnicity **		
American/ Indian	4	.79%
Asian or Pacific Islander	17	3.37%
Black/African American, Non-Hispanic	8	1.58%
Hispanic or Latino/a	45	8.91%
White, Non-Hispanic	422	83.56%
Other	9	1.78%
Contract Status		
Drill & Ceremony (non-contract)	392	77.17%
Military (contract)	116	22.83%
Service Affiliation or Military Contract **		
Air Force	170	38.99%
Army	137	31.42%
Navy/Marine	129	29.59%
Current Position of Leadership within Corps		
No position	132	25.98%
Minor position	336	66.14%
Major position	40	7.87%
Leadership Experience(s) Prior to College		
None	13	2.56%
1-3 activities/organizations	354	69.69%
4+ activities/organizations	141	27.76%
Other Current Leadership Experience(s)		
None	89	17.52%
1-3 activities/organizations	359	70.66%
4+ activities/organizations	60	11.81%

* Percentages represent a valid percentage of the reported frequency.
** Missing data due to incomplete responses in demographic section of survey.

respondents with majors in the hard sciences (earth sciences and math) and 231 with majors in the soft sciences (social sciences and humanities). Male respondents numbered 464. Female respondents numbered 43. Age was measured in terms of three categories of age span: 17-19 years, 20-22 years, and 23 years and older. Using this explanation, 138 of the respondents were 17-19 years of age while 338 were 20-22 years of age and 13 were 23 years or older.

Ethnicity was asked with the following response number in each category: 4 American Indian, 17 Asian or Pacific Islander, 8 Black/African American, Non-Hispanic, 45 Hispanic or Latino/a, 422 Non-Hispanic White, and 9 characterized as Other. D&C cadets numbered 392. Military cadets numbered 116. Of the 116 military cadets, 41 were Air Force, 34 were Army, and 41 were Navy. Of the 392 D&C cadets, 129 responded as Air Force, 103 responded as Army, 88 responded as Navy, and 72 did not list service affiliation. As to the level of involvement for the respondents, cadets were asked about their current position within the Corps of Cadets. Current position was measured in terms of three categories: no position, minor position, and major position. Four retired servicemen and current Corps of Cadets administrators assisted with advice regarding which positions constituted major positions of leadership and which positions constituted minor positions of leadership. The researcher then recorded the following response number in each category: 132 in no position, 336 in a minor position, and 40 in a major position.

The final two areas used in comparing the respondents dealt with leadership experiences other than the Corps of Cadets. Cadets were asked about their leadership

experiences before coming to college. Prior leadership was measured in terms of three categories: no experiences, 1-3 experiences, and 4 or more experiences. The researcher then recorded the following response number in each category: 13 had no prior leadership experiences, 354 had 1-3 experiences, and 141 had four or more experiences. Other leadership experience while attending college was measured similarly. The following response number in each category found 89 having had no other leadership experiences at Texas A&M University other than the Corps of Cadets, 359 with 1-3 other leadership experiences at Texas A&M University other than the Corps of Cadets, and 60 with four or more other leadership experiences at Texas A&M University other than the Corps of Cadets.

Data Analysis

The SPSS for Windows-Version 11.0 (2001) computer program was utilized during all statistical analysis procedures. Factor analysis was used to analyze the results from the survey instrument and reestablish the eight factors to be used to represent the relationships among the sets of questions pertaining to leadership orientation. Factor analysis loading procedure data were compared to findings recorded by Quinn (1988). Of the 32 self-perception formatted questions, two were loaded into different factors from Quinn's original instrument based on findings from the factor analysis loading procedure data. Factor analysis procedure was also conducted for the orientation belief formatted set of questions. Cronbach's alpha coefficients were used to establish the reliabilities of the two sets of eight factors and were compared to Quinn's instrument where reliability ranged from .72 to .90.

Comparison of the demographic data (academic classification, college and major field of study, gender, age, ethnicity, contract status, service affiliation, current Corps leadership position, leadership experience prior to college, and other current leadership experience) for each factor was based on mean scores either through the use of t-tests or analysis of variance procedures. An alpha level of .05 was used to establish significance. The Tukey t-test for multiple comparisons was used to establish where differences occurred in the groups. Analysis and interpretation of the data followed the principles prescribed in *Educational Research: An Introduction* (Gall, Borg, & Gall, 1996).

CHAPTER IV

ANALYSIS AND RESULTS

This chapter will present the results from the Competing Values Instrument survey used with members of the Corps of Cadets. As discussed in the preceding chapter, the researcher transitioned the survey instrument into an introspective, self-reporting format to identify leadership orientations and perceptions of behaviors among members and leaders of the Corps of Cadets, a student organization at Texas A&M University. Another section of questions in the survey instrument addressed cadet beliefs about the leadership behaviors one should perform in the respondent's respective position of leadership and membership. The final section of the survey instrument contained one open-ended question which asked respondents to share comments about the culture of leadership within the student organization. Demographic and background information was gathered to serve as a basis for comparison and to answer the research questions presented in Chapter I.

The four research questions, which focused the study, were as follows:

1. Is the competing values instrument valid and reliable for use with members of the Corps of Cadets?

2. What leadership behaviors are perceived to be most frequently used by leaders and members of the Corps of Cadets? What leadership behaviors are perceived to be infrequently used by leaders and members of the Corps of Cadets? How do leaders and members perceive their performance of leadership roles?

3. What leadership behaviors do leaders and members of the Corps of Cadets think should be most frequently used by a leader in the Corps? What leadership behaviors do leaders and members of the Corps of Cadets think should be infrequently used by a leader in the Corps?

4. Does perceived leadership orientation differ among cadets based on academic classification, Corps classification, gender, race/ethnicity, age, academic field of study, leadership experience prior to college, other current Texas A&M University leadership experience, contract status, the level of Corps leadership position—major position, minor position, no position—or service affiliation? How are cadets' leadership orientation perceptions associated with academic classification, Corps classification, gender, race/ethnicity, age, academic field of study, leadership experience prior to college, other current Texas A&M University leadership experience, contract status, the level of Corps leadership position—major position, minor position, no position—and service affiliation?

The organization of this chapter is based upon the findings, which addressed the four research questions.

Research Question 1

Is the competing values instrument valid and reliable for use with members of the Corps of Cadets?

As stated earlier, the original researcher, Quinn (1988), developed the extended version of the Competing Values Instrument: Managerial Leadership after extensive examination of criteria used to evaluate organizational and managerial performance. The

original instrument was developed for use with business mangers and professionals under the assumption that these professionals employed a variety of behavioral practices during the discharge of managerial-leadership responsibilities. Filling multiple roles is necessary for the successful discharge of leadership. The more developed and varied one's leadership and management competencies, the greater the likelihood of effectiveness within an organization (Whetten & Cameron, 2002). Leaders must develop an ability to use several seemingly contradictory methods simultaneously (Quinn, 1988). Adaptation of the original instrument was conducted by Buckner and Williams (1995) for use in a study of college student organization leaders, with scant attention paid to the validity of the instrument.

Procedures were carried out in the present study to ensure that evidence of validity and reliability of the survey instrument was established for use with college student members of this student organization. As discussed in Chapter III, content and construct validity were evaluated through the use of a panel of leadership experts who examined the survey instrument with wording alterations, directions to the respondent, and new self-report format. The experts compared the survey instrument to the original developed by Quinn (1988) in order that the intended meaning and arrangement of the items were maintained with statements perceived to be understood by college students. A second check for validity included administration of the survey instrument in a pilot study of cadets who examined the instrument for clarity in item-interpretation and directions.

After the data were received and responses entered into a personal computer, statistical examinations of the data began. While the survey instrument items were altered only slightly in wording, the question was asked whether the items would still load into the factors specified by Quinn (1988). The researcher assumed that the survey items would load into eight factors as indicated by Quinn. The researcher's assumption proved to be incorrect. Table 7 shows the factor loadings for survey part two responses following both the scree test and Varimax rotation procedures but under the assumption that survey items were loaded identically into the factors as indicated by Quinn and specified as such prior to the computer analysis.

Two survey items loaded under different factors when conducted without prior designation. Survey item number 24, "I encourage subordinates to share ideas in my group," previously designated to Factor 7, Facilitator leadership orientation, went from a loading value of .17 to one of .60 under Factor 8, Mentor leadership orientation. Likewise, survey item number 31, "I build teamwork among my group members," also previously designated to Factor 7, Facilitator leadership orientation, went from a loading value of .14 to one of .55 under Factor 5, Coordinator management orientation. The independent Varimax factor analysis procedure resulted in loading value of a .20 to .77 range. This factor analysis model accounted for 66.15% of the variance in determining the leadership orientations of members and leaders of the Corps of Cadets.

Table 8 outlines the factor loadings after each survey item was placed upon the factor determined by the Varimax rotation procedure and without prior designation. Both Survey item 24, "I encourage subordinates to share ideas in my group," and survey item

TABLE 7.

Varimax Loadings for Each Self-Perception Survey Item with Quinn's Designation

Item Number	Factor 1	2	3	4	5	6	7	8
1	.77							
10	.61							
22	.72							
25	.42							
3		.32						
13		.69						
18		.73						
27		.44						
5			.56					
15			.76					
23			.66					
30			.54					
7				.53				
12				.53				
19				.73				
26				.40				
2					.20			
9					.48			
21					.31			
28					.58			
4						.73		
14						.75		
17						.69		
32						.73		
6							.39	
11							.63	
24							.17	
31							.14	
8								.77
16								.77
20								.36
29								.76

TABLE 8.

Independent Varimax Loadings for Each Self-Perception Survey Item

Item Number	Factor 1	2	3	4	5	6	7	8
1	.77							
10	.61							
22	.72							
25	.42							
3		.32						
13		.69						
18		.73						
27		.44						
5			.56					
15			.76					
23			.66					
30			.54					
7				.53				
12				.53				
19				.73				
26				.40				
2					.20			
9					.48			
21					.31			
28					.58			
31					.55*			
4						.73		
14						.75		
17						.69		
32						.73		
6							.39	
11							.63	
8								.77
16								.77
20								.36
29								.76
24								.60*

*Indicates survey item under different factor

31, “I build teamwork among my group members,” were originally placed under Factor 7, Facilitator leadership orientation. Item number 24 loaded higher under Factor 8, Mentor leadership orientation, following the independent Varimax loading procedure. Item number 31 loaded higher under Factor 5, Coordinator management orientation, following the independent Varimax loading procedure. This was probably due to differences in interpretation of “subordinates” and “my group members.” Factor 7, Facilitator leadership orientation, was considered to describe behaviors focused on building agreement and facilitating interaction among group members (Quinn, 1988). Survey item 24 loaded higher on Factor 8, Mentor leadership orientation, which describes behaviors focused on communicating support and demonstrating consideration to group members. Survey item 31 loaded higher on Factor 5, Coordinator management orientation, which describes behaviors focused on protecting stability and preserving structure for group members.

Survey item 24, “I encourage subordinates to share ideas in the group,” seemed to speak directly to Factor 7, Facilitator leadership orientation, and was a likely survey item to remain in the factor. However, if the behavior was interpreted as one performed privately or one-on-one with a subordinate of lower rank, the activity can become a behavior one might expect in a caring mentor relationship. Item 31, “I build teamwork among my group members,” also seemed to directly address the concepts of group agreement and interaction. Cadets may have interpreted such an activity directed toward “my group members” as a group activity emphasizing constancy and impersonal interaction with others. This interpretive speculation explained survey item 24’s higher

loading under the Mentor leadership orientation factor and survey item 31's higher loading under the Coordinator management orientation.

The independent factor loading procedure produced an uneven arrangement in the number of survey items included in each of the eight factors. Quinn's instrument distributed the 32 survey items evenly over eight factors. Factor 1, Innovator leadership orientation, maintained four survey items; Factor 2, Broker leadership orientation maintained four survey items; Factor 3, Producer management orientation maintained four survey items; Factor 4, Director management orientation maintained four survey items; Factor 5, Coordinator management orientation contained five survey items; Factor 6, Monitor management orientation maintained four survey items; Factor 7, Facilitator leadership orientation contained two survey items; and Factor 8, Mentor leadership orientation contained five items.

Next, the factor analysis procedure was conducted for the responses from part three of the survey instrument which emphasized orientation beliefs. Table 9 shows the factor loadings for survey part three responses following both the scree test and Varimax rotation procedures but under the assumption that survey items were loaded into eight factors specified prior to the computer analysis.

One survey item loaded under a different factor when conducted without prior designation. Survey item number 56, "A leader in my position should encourage subordinates to share ideas in the group," previously designated to Factor 7, Facilitator leadership orientation, went from a loading of .19 to one of .55 under Factor 8, Mentor leadership orientation. The independent Varimax factor analysis procedure resulted in

TABLE 9.

Varimax Loadings for Each Orientation Belief Survey Item with Quinn's Designation

Item Number	Factor 1	2	3	4	5	6	7	8
33	.56							
42	.70							
54	.68							
57	.59							
35		.58						
45		.74						
50		.70						
59		.63						
37			.58					
47			.64					
55			.81					
62			.69					
39				.51				
44				.59				
51				.68				
58				.76				
34					.31			
41					.38			
53					.77			
60					.71			
36						.79		
46						.82		
49						.81		
64						.79		
38							.62	
43							.58	
56							.19	
63							.26	
40								.82
48								.82
52								.72
61								.82

loading value of a .26 to .82 range. This factor analysis model accounted for 71.51% of the variance in determining the leadership orientations members and leaders of the Corps of Cadets believed should exist.

Table 10 outlines the factor loadings after each orientation belief survey item was placed upon the factor determined by the Varimax rotation procedure and without prior designation. Survey item 56, "A leader in my position should encourage subordinates to share ideas in the group," was originally placed under Factor 7, Facilitator leadership orientation but loaded higher under Factor 8, Mentor leadership orientation, following independent Varimax loading procedures. As was previously stated, this was probably due to differences in interpretation of "subordinates." Factor 7, Facilitator leadership orientation, was considered to describe behaviors focused on building agreement and facilitating interaction among group members (Quinn, 1988). The survey item loaded higher on Factor 8, Mentor leadership orientation, which described behaviors focused on communicating support and demonstrating consideration to group members.

Survey item 56, "A leader in my position should encourage subordinates to share ideas in the group, seemed to speak directly to Factor 7, Facilitator leadership orientation, just as the self-perception version of the orientation belief statement did. If the statement of belief was interpreted as one thought to be performed privately or one-on-one with a subordinate of lower rank, the activity can be thought of as a behavior one might expect in a mentor relationship characterized as caring. This interpretive speculation explained the survey item's higher loading under the Mentor leadership orientation factor.

TABLE 10.

Independent Varimax Loadings for Each Orientation Belief Survey Item

Item Number	Factor 1	2	3	4	5	6	7	8
33	.56							
42	.70							
54	.68							
57	.59							
35		.58						
45		.74						
50		.70						
59		.63						
37			.58					
47			.64					
55			.81					
62			.69					
39				.51				
44				.59				
51				.68				
58				.76				
34					.31			
41					.38			
53					.77			
60					.71			
36						.79		
46						.82		
49						.81		
64						.79		
38							.62	
43							.58	
63							.26	
40								.82
48								.82
52								.72
61								.82
56								.55*

*Indicates survey item under different factor

The independent factor loading procedure produced an uneven arrangement in the number of part three survey items in each of the eight factors. Factor 1, Innovator leadership orientation, maintained four survey items; Factor 2, Broker leadership orientation maintained four survey items; Factor 3, Producer management orientation maintained four survey items; Factor 4, Director management orientation maintained four survey items; Factor 5, Coordinator management orientation maintained four survey items; Factor 6, Monitor management orientation maintained four survey items; Factor 7, Facilitator leadership orientation contained three survey items; and Factor 8, Mentor leadership orientation contained five items.

The reliability for each of the two sets of factors was examined using the SPSS for Windows-Version 11.0 (2001) computer program and Cronbach's alpha coefficients. Estimates of the reliabilities for the eight factors, in the two separate sets of questions, used with leadership and members of the Corps of Cadets are presented in Table 11. The reliabilities of Quinn's (1988) original instrument ranged from .72 to .90 using coefficient alpha scores. When Denison et al. (1995) applied the instrument to managers in the public utilities industry, their competing values instrument had an alpha reliability range of .61 to .87. With members of the Corps of Cadets, reliability was shown to be within the coefficient alpha range of .71 to .82 on the set of self-perception formatted questions. With the orientation beliefs set of questions the instrument ranged from .76 to .90 using alpha scores. Considering both sections of items as the complete survey instrument, the reliability range for the survey instrument was .71 to .90. The modified version of the Competing Values Instrument measured within a sufficiently

TABLE 11.

Cronbach's Alpha Coefficients for Reliability

Factor	Description	Coefficient
1	Innovator self-perceptions	.76
2	Coordinator self-perceptions	.71
3	Broker self-perceptions	.77
4	Monitor self-perceptions	.81
5	Producer self-perceptions	.82
6	Facilitator self-perceptions	.73
7	Director self-perceptions	.79
8	Mentor self-perceptions	.81
1	Innovator beliefs	.83
2	Coordinator beliefs	.76
3	Broker beliefs	.82
4	Monitor beliefs	.90
5	Producer beliefs	.85
6	Facilitator beliefs	.79
7	Director beliefs	.84
8	Mentor beliefs	.86

reliable range (Gall et al., 1996). The Competing Values Instrument, as modified for use with the sample population of this research study, appeared to be valid and reliable for studying cadets' perceived leadership orientations.

Research Question 2

What leadership behaviors are perceived to be most frequently used by leaders and members of the Corps of Cadets? What leadership behaviors are perceived to be infrequently used by leaders and members of the Corps of Cadets?

Frequently Practiced Cadet Behaviors

The frequency with which leaders and members engaged in leadership behaviors was first considered after examination of the responses to the 32 items contained in the self-perception section (part two) of the survey instrument. Respondents rated themselves on the survey items using a Likert-type scale where 1 meant "Almost never," 2 meant "Very seldom," 3 meant "Seldom," 4 meant "Frequently," 5 meant "Very frequently," and 6 meant "Almost always." Table 12 lists in descending order (highest to lowest rated items) the survey instrument item means for the section of questions that addressed several behaviors in which leaders and members of the college student organization under study might engage. Respondents were directed to indicate the frequency with which they used each behavior as a member and leader within the Corps of Cadets. Table 12 is arranged according to the mean of the total sample population for each individual survey item and includes the means according to the current level of involvement (position of leadership) for respondents.

TABLE 12.

Comparison of Survey Instrument Item Means (Perceptions of One's Own Behaviors)

Item Number	Item	Total		Major Position		Minor Position		No Position		Factor
		M	SD	M	SD	M	SD	M	SD	
21	I keep track of what goes on in my group.	4.64	1.04	4.85	.95	4.73	.99	4.34	1.15	Coordinator
8	I listen to the personal problems of subordinates.	4.58	1.39	4.80	1.20	4.77	1.19	4.02	1.75	Mentor
23	I push the group to meet objectives.	4.58	1.06	4.60	1.01	4.65	1.04	4.41	1.13	Producer
29	I show concern for the needs of subordinates.	4.56	1.18	4.90	.87	4.72	.96	4.05	1.57	Mentor
25	I search for innovations and potential improvements.	4.50	.97	4.68	.80	4.56	.92	4.30	1.10	Innovator
26	I clarify priorities and direction.	4.47	1.00	4.67	.83	4.51	.95	4.30	1.17	Director
16	I show empathy and concern in dealing with subordinates.	4.47	1.33	4.85	1.00	4.63	1.14	3.94	1.69	Mentor
5	I focus on "results" in my group.	4.46	1.10	4.65	.95	4.55	1.06	4.17	1.19	Producer
31	I build teamwork among my group members.	4.42	1.08	4.55	.88	4.44	1.05	4.32	1.20	Facilitator

TABLE 12. *continued*

Item Number	Item	Total M	Total SD	Major Position M	Major Position SD	Minor Position M	Minor Position SD	No Position M	No Position SD	Factor
7	I define areas of responsibility for subordinates.	4.40	1.36	4.93	.89	4.68	1.11	3.50	1.65	Director
12	I make sure everyone knows where my group is going.	4.39	1.12	4.60	.98	4.43	1.07	4.24	1.27	Director
19	I set clear objectives for my group.	4.39	1.16	4.78	.89	4.46	1.10	4.10	1.31	Director
11	I encourage participative decision-making in my group.	4.36	1.10	4.43	.98	4.37	1.04	4.33	1.26	Facilitator
15	I see that my group delivers on stated goals.	4.34	1.10	4.55	.85	4.44	1.04	4.02	1.22	Producer
30	I emphasize my group's achievement of stated purposes.	4.33	1.06	4.58	.98	4.40	.99	4.08	1.20	Producer
22	I solve problems in creative and clever ways.	4.32	.97	4.47	.82	4.41	.92	4.03	1.07	Innovator
28	I bring a sense of order to my group.	4.30	1.06	4.83	.78	4.38	.99	3.96	1.21	Coordinator

TABLE 12. *continued*

Item Number	Item	Total		Major Position		Minor Position		No Position		Factor
		M	SD	M	SD	M	SD	M	SD	
9	I minimize disruptions to the accomplishment of task.	4.28	.99	4.40	.93	4.29	.97	4.20	1.05	Coordinator
20	I treat every individual in a sensitive and caring way.	4.26	1.20	4.43	1.22	4.23	1.19	4.29	1.25	Mentor
24	I encourage subordinates to share ideas in my group.	4.23	1.22	4.75	.84	4.30	1.11	3.88	1.49	Facilitator
3	I exert upward influence in the organization.	4.15	1.14	4.65	1.03	4.25	1.07	3.77	1.26	Broker
18	I get access to people at higher levels.	4.14	1.33	4.85	1.03	4.18	1.24	3.81	1.52	Broker
2	I protect continuity in day-to-day operations.	4.10	1.02	4.60	.90	4.16	.95	3.79	1.14	Coordinator
10	I experiment with new concepts and procedures.	4.10	1.04	4.20	.65	4.16	1.01	3.89	1.19	Innovator
6	I facilitate consensus building in my group.	4.06	1.05	4.18	.87	4.08	1.03	3.98	1.16	Facilitator
1	I come up with inventive ideas.	4.05	.96	4.22	.73	4.13	.93	3.80	1.05	Innovator

TABLE 12. *continued*

Item Number	Item	Total		Major Position		Minor Position		No Position		Factor
		M	SD	M	SD	M	SD	M	SD	
32	I analyze written plans and schedules.	3.90	1.40	4.25	1.15	3.87	1.36	3.84	1.56	Monitor
27	I persuasively sell new ideas to higher-ups.	3.87	1.25	4.13	1.29	3.99	1.12	3.47	1.44	Broker
13	I influence decisions made at higher levels.	3.84	1.38	4.30	1.04	4.03	1.23	3.20	1.61	Broker
4	I carefully review detailed reports.	3.62	1.36	4.20	1.09	3.63	1.29	3.44	1.55	Monitor
17	I work with technical information.	3.46	1.42	4.00	1.45	3.47	1.35	3.27	1.56	Monitor
14	I compare records and reports to detect discrepancies.	3.34	1.41	3.58	1.30	3.43	1.34	3.06	1.57	Monitor

An important observation made by this comparison was that the top ten survey items listed as the most frequently performed or practiced leadership behaviors fell into six of the eight factors or leadership orientations. Those leadership orientations were: Coordinator, Mentor, Producer, Innovator, Director, and Facilitator. This revealed a wide range (variety) of managerial-leadership behavior characteristics perceived to be practiced among the members and leaders of the student organization. In was interesting to note that included in these categories of leadership behaviors most frequently practiced by cadets were several orientations which, according to Quinn (1988), were contradictory to one another. The Coordinator orientation described practices that focused on people and the maintenance of a controlled structure and was oppositional to the Innovator orientation, which described practices that focused on the organization and the maintenance of a flexible organizational structure. The Mentor leadership orientation appeared most often (three times) in the group of ten most frequently practiced leadership behaviors among the entire sample and described practices that focused on people and a flexible organizational structure. Oppositional to the Mentor orientation was the Director orientation (appeared twice in the list) which described behaviors that focused on the organization and a centralized organizational structure. The Producer orientation (appeared twice in the list) described behaviors that focused on the organization and a controlled organizational structure and was oppositional to the Facilitator orientation that described practices focused on people and the maintenance of a flexible organizational structure (Quinn, 1988). The item means listed in the behaviors cadets perceived to be most frequently used ranged from 4.64 to 4.40.

Examination of the top ten survey items listed as the most frequently performed leadership behaviors according to leaders (minor and major) and general members (non-positional leaders) gave the researcher additional insight into the frequency of particular leadership behaviors according to the three levels of involvement within the student organization.

Most Frequently Practiced Behaviors of Major Leaders

For cadets in major positions of leadership (Commanders, Corps Staff Members, Executive Officers, First Sergeants, and Drum Majors) the top ten survey items listed as the most frequently performed leadership behaviors fell into six of the eight orientation categories. Those orientations were: Director, Mentor, Coordinator, Broker, Facilitator, and Innovator. This reflected a variety of behaviors practiced by the executive leaders of the student organization. The Mentor leadership orientation appeared most often (three times) in the group of ten most frequently practiced leadership behaviors among the major leaders. Again, the Mentor orientation represented behaviors focused on people and support of a flexible structure. Additional classifications of orientations most frequently practiced by major leaders included the orientations of Director (appeared two times within the list of top ten) and the contradictory orientation of Mentor already mentioned, Coordinator (appeared twice) and Innovator, Broker, and Facilitator. The Director orientation represented behaviors focused on the organization and the maintenance of control. The Coordinator orientation represented actions concentrated on people and the maintenance of control. The Innovator orientation described actions focused on the organization and the support of a decentralized structure. The Broker

orientation described behaviors that focused on the organization and a flexible structure. The Facilitator orientation described behaviors that focused on people and a flexible structure. The item means listed in the behaviors major leaders perceived to be most frequently used ranged from 4.93 to 4.68.

Most Frequently Practiced Behaviors of Minor Leaders

The top ten survey items listed as the most frequently practiced leadership behaviors for minor leaders (Assistant Squad Leaders, Major Unit Staff Members, Minor Unit Staff Members, Platoon or Flight Leaders, Platoon or Flight Sergeants, Sergeant Majors, Squad Leaders, Unit Chains, and Others) of the Corps of Cadets fell into five of the eight leadership orientations. Those leadership orientations were: Mentor, Coordinator, Director, Producer and Innovator. Once again, contradictory pairs of leadership orientations were represented. The Mentor and Director orientations each appeared most often (three times) in the group of ten most frequently practiced leadership behaviors among the minor leaders. As stated previously the two orientations were contradictory to each other (Quinn, 1988). The Mentor orientation described behaviors that focus on people and a flexible structure, while the Director orientation described behaviors that focus on the organization and a controlled structure. The Producer orientation appeared twice among the top leadership behaviors most frequently practiced among minor leaders of the student organization. The Producer orientation represented actions that concentrated on the organization and the support of a controlled organizational structure. The Coordinator orientation and its contradictory Innovator orientation were each represented once among the most frequent behaviors. The

Coordinator orientation described behaviors focused on people and the maintenance of a centralized structure, and the Innovator orientation represented actions focused on the organization and maintenance of a decentralized structure. The item means listed in the behaviors minor leaders perceived to be most frequently used ranged from 4.77 to 4.46.

Most Frequently Practiced Behaviors of General Members

For general member cadets, those who held no formal position of leadership, the top ten survey items listed as the most frequently practiced leadership behaviors fell into six of the eight factors or leadership orientations. Again, this reflected a wide range and variety of leadership behaviors in use. It is interesting to note that this variety was in use by cadets involved at the lowest level of participation. An equally interesting observation was that the six orientations included three pairs of contradictory leadership roles. The top ten items fell into the following leadership orientations: Producer, Coordinator, Facilitator, Innovator, Director, and Mentor. The Producer orientation appeared twice in the list of survey items, and the contradictory role of Facilitator was represented twice. The Producer orientation described behaviors externally focused and actions that supported control, and the Facilitator orientation described behaviors internally focused and actions that supported flexibility. The Coordinator orientation appeared twice, and the contradictory role of Innovator appeared once. The Coordinator orientation represented behaviors concentrated on people and actions supporting control, and the Innovator orientation described behaviors concentrated on the organization and actions supporting a flexible organizational structure. The Director orientation also appeared twice, and the contradictory orientation of Mentor appeared once (Quinn, 1988). The

Director orientation described behaviors focused on the organization and the maintenance of control, and the Mentor orientation described behaviors focused on people and the maintenance of a flexible organization structure. The item means listed in the behaviors general members perceived to be most frequently used ranged from 4.41 to 4.17.

Summary of the Most Frequently Practiced Cadet Behaviors

In examining the most frequently used behaviors by cadets, items represented a variety of managerial-leadership behavior characteristics in use among members and leaders of the Corps of Cadets. Major and minor leaders used behaviors characterized as comprising the Mentor orientation more frequently than general members (non-positional leaders). The Mentor orientation represents actions focused on people and support for flexibility and change. Examples of Mentor behaviors both major and minor leaders used in high frequency included: "Listening to the personal problems of subordinates" (item 8), "Showing concern for the needs of subordinates" (item 29), and "Showing empathy and concern in dealing with subordinates" (item 16).

Minor leaders and general members used behaviors characterized as comprising the Producer orientation more frequently than major leaders. The Producer orientation characterized behaviors that concentrated on the organization and the maintenance of a centralized structure. Examples of Producer behaviors minor leaders and general members used frequently included: "Pushing the group to meet objectives" (item 23) and "Focusing on results in my group" (item 5). It is interesting to note that no behavior categorized as a Producer orientation was used in high frequency by major leaders, as

represented by the top ten survey items listed as the most frequently performed or practiced leadership behaviors.

Behaviors characterized as comprising the Director orientation were more frequently used by all three levels of involvement than any other category of leadership behavior. The Director orientation described behaviors focused on the organization and competition and support the maintenance of a centralized structure resistant to change (Quinn, 1988). Examples of Director orientation behaviors used in high frequency by both major and minor leaders included: "Defining areas of responsibility for subordinates" (item 7) and "Setting clear objectives for my group" (item 19). An example of a Director orientation behavior used in high frequency by minor leaders and general members was: "Clarifying priorities and direction" (item 26).

All three groups used the same Innovator orientation behavior with high frequency. Again, the Innovator orientation represented behaviors that focused on the organization and the maintenance of a decentralized structure welcoming of change. Major and minor leaders and general members all "Search for innovations and potential improvements" (item 25) in high frequency. All three groups also used the identical behavior categorized as the Coordinator orientation. The Coordinator orientation described actions that concentrated on people, cooperation, team-orientation and supported the maintenance of a centralized structure unwelcoming of change (Quinn, 1988). Leaders and members all perceived the behavior of "Keeping track of what goes on in my group" (item 21) to be practiced in high frequency.

One final set of insights regarding the leadership behaviors cadets frequency practiced involved two orientations that only rarely entered the lists of top behaviors: the Broker and Facilitator orientations. The Broker orientation represented behaviors that focused on the organization and supported the maintenance of a flexible structure welcoming of change. Only among major leaders did a behavior characterized as the Broker orientation enter a top ten list. The example of the sole Broker orientation behavior used in high frequency by major leaders was: "Getting access to people at higher levels" (item 18). Different Facilitator behaviors were practiced in high frequency by major leaders and general members. The Facilitator orientation described actions concentrated on people and supported the maintenance of a flexible structure. The example of the Facilitator orientation behavior used in high frequency by major leaders was: "Encouraging subordinates to share ideas in my group" (item 24). The two examples of the Facilitator orientation behaviors used in high frequency by general members were: "Encouraging participative decision-making in my group" (item 11) and "Building teamwork among my group members" (item 31). No Facilitator behaviors were practiced in high frequency by cadets in minor positions of leadership. Behaviors associated with the Monitor orientation, which described actions focused on people and the maintenance of a controlled and stable structure (Quinn, 1988), never entered the frequency lists of the three groups of cadets.

Infrequently Practiced Cadet Behaviors

The infrequency with which leaders and members engaged in leadership behaviors was considered next by examining the responses to the same 32 items

examined previously for frequency. The responses of the entire sample population were examined initially, followed by consideration based on the three levels of involvement within the student organization. The ten survey items listed as the most infrequently performed behaviors supported a narrow range of managerial-leadership behavioral characteristics perceived to be practiced less often by leaders and members of the Corps of Cadets.

The ten survey items listed as the most infrequently performed leadership behaviors of the entire sample (those leadership behaviors used most seldom) fell into five of the eight factors or orientations. Those orientations were: Monitor, Broker, Innovator, Facilitator, and Coordinator. It is interesting to note that all four survey items categorized as practices that entailed the Monitor orientation were also perceived to be the most infrequently used behaviors among cadets. Again, the Monitor orientation described behaviors that focused internally on people and the maintenance of a centralized and controlled structure. As was the case with the most frequently used leadership behaviors, contradictory pairs of leadership orientations constituted the most infrequently used behaviors. The Broker orientation, contradictory to the Monitor orientation, appeared twice on the list of the most infrequently practiced behaviors and described actions focused on the organization and a decentralized structure welcoming of change (Quinn, 1988). Also represented among the survey items most infrequently used was the Innovator orientation (appeared twice), which described behaviors focused on the organization and support of a flexible structure, and its contradictory orientation of Coordinator (appeared once), which represented actions concentrated on people and

the maintenance of control. The Facilitator orientation (appeared once) described actions focused on people and a decentralized structure (Quinn, 1988). The item means listed in the behaviors cadets perceived to be most infrequently used ranged from 4.10 to 3.34.

Infrequently Practiced Behaviors of Major Leaders

For cadets in major positions of leadership, the survey items listed as the most infrequently performed leadership behaviors fell into orientation categories identical to those discovered in the entire sample. Those orientations were: Monitor, Broker, Innovator, Facilitator, and Coordinator. The item means listed in the behaviors major leaders perceived to be most infrequently used ranged from 4.40 to 3.58.

Infrequently Practiced Behaviors of Minor Leaders

For cadets in minor positions of leadership, the survey items listed as the most infrequently performed leadership behaviors were identical to the orientation categories that represented the most infrequently used leadership behaviors by the entire sample and the major leaders of the Corps of Cadets. Those orientations were: Monitor, Broker, Innovator, Facilitator, and Coordinator. The item means listed in the behaviors minor leaders perceived to be most infrequently used ranged from 4.16 to 3.43.

Infrequently Practiced Behaviors of General Members

For general members of the Corps of Cadets, the survey items listed as the most infrequently practiced leadership behaviors fell into orientation categories very similar to the other groups based on level of involvement and participation in the student organization. The Monitor orientation appeared three times in the list of ten most infrequently used behaviors, but it was the Broker orientation which appeared most often

(four times) as an infrequently used leadership action among general members of the Corps. The Director orientation appeared once in the form of a survey item that measured as one of the most infrequently used leadership behaviors, as did the Coordinator and Innovator orientations. The item means listed in the behaviors general members perceived to be most infrequently used ranged from 3.81 to 3.06.

Summary of Infrequently Practiced Cadet Behaviors

In examining the most infrequently used behavior by cadets, survey items represented a narrow assortment of managerial-leadership behavior characteristics practiced by leaders and members of the Corps of Cadets less often than other behaviors. Behaviors characterized as comprising the Monitor orientation were used most infrequently by cadets belonging to all three levels of involvement and participation. Again, the Monitor orientation described behaviors focused on people and the maintenance of a stable or controlled structure (Quinn, 1988). Three of the four survey items, which measured the Monitor orientation, were the most infrequently used behaviors as represented by the listing of instrument item means. Examples of Monitor orientation behaviors leaders and members practiced least often among all the behaviors included: “Working with technical information” (item 17) and “Carefully reviewing detailed reports” (item 4). One particular behavior, as evidenced by the survey item means for major leaders, minor leaders, and general members (3.58, 3.43, and 3.06 respectively), was noticeably perceived to be practiced least often among all the behaviors. Cadets practiced “Comparing records and reports to detect discrepancies” (item 14) more infrequently than any other behavior. Major and minor leaders also

engaged in the Monitor orientation behavior practice of "Analyzing written plans and schedules" (item 32) on an infrequent basis. Equally interesting were the findings related to the behavior orientation that was contradictory to the Monitor orientation, the Broker orientation.

Agreement was discovered among leaders and general members about their perceptions of the infrequency in which they used actions characterized as Broker orientation behaviors. Again, the Broker orientation described behaviors concentrated on the organization and supported a decentralized structure welcoming of change. Examples of Broker behaviors leaders and members used in low frequency included: "Persuasively selling new ideas to higher-ups" (item 27) and "Influencing decisions made at higher levels" (item 13). It was the general member group of cadets that appeared to have practiced the Broker orientation behaviors least often. This was evidenced in the survey item means for the Broker orientation behaviors. Those means were 3.20 for item 13 (previously listed), 3.47 for item 27 (previously listed), 3.81 for the behavior "Getting access to people at higher levels" (item 18), and 3.77 for the behavior "Exerting upward influence in the organization" (item 3).

One final and important observation made after examining the most infrequently practiced leadership behaviors involved the general member cadets, or those who were not involved in formal positions of leadership within the Corps of Cadets. This group by far had the largest number of survey items, which represented a variety of orientation behaviors, perceived to be seldom practiced. Of the 32 survey items that measured managerial-leadership behaviors, general member cadets indicated that 16 of the items

were “Seldom” used. As previously stated, all four Monitor and all four Broker orientation behaviors were avoided by general member cadets, as evidenced by survey item means. Two behaviors categorized as Facilitator, Innovator, and Coordinator orientations were also infrequently used by general members. One behavior from the Mentor orientation and one from the Director orientation were also seldom used by cadets of this particular involvement and participation level. Unfortunately, general members perceived a wide range of managerial-leadership behaviors to be infrequently used.

Research Question 3

What leadership behaviors do leaders and members of the Corps of Cadets think should be used most frequently by a leader in the Corps? What leadership behaviors do leaders and members of the Corps of Cadets think should be used less often by a leader in the Corps?

Buckner and Williams (1995) and Chambers (1992) encouraged the use of a specific consideration regarding the structuring of leadership surveys for use in future studies of leadership development among college students. They suggested that researchers ask college students to respond to specific leadership behaviors according to the degree of importance the leaders and members of the student organization placed on the respective behaviors. This structural consideration was incorporated into part three of the survey instrument to help assess how leaders and members of the Corps of Cadets viewed the practice of leadership behaviors. This would, in turn, help clarify the extent to which cadets perceived any need for change in their behaviors. Additionally, the

leadership demands of the three levels of involvement and participation in the Corps of Cadets, as perceived by the cadets themselves, were identified. Finally, the researcher compared the findings regarding which behaviors cadets thought should be frequently practiced with their perceptions of the frequencies of their own current leadership behaviors to determine where, if any, disparity existed between self-ratings of leadership behaviors and general beliefs. Comparison between these two sections of question items reflected the researcher's belief that cadets may have perceived the existence of personal shortcomings regarding their current leadership behavioral operation level.

Frequency of Beliefs Among Cadets

The frequency with which cadets believed a leader should engage in leadership behaviors was first considered after examination of the responses to the second set of 32 items contained in the beliefs section (part three) of the survey instrument. Respondents rated their beliefs (about the frequency with which behaviors should be used by leaders) on the survey items using a Likert-type scale where 1 meant "Almost never," 2 meant "Very seldom," 3 meant "Seldom," 4 meant "Frequently," 5 meant "Very frequently," and 6 meant "Almost always." Table 13 lists in descending order (highest to lowest) the survey instrument item means for the section of questions that addressed several behaviors in which cadets believed the leaders of the student organization should engage. Respondents were directed to indicate their beliefs about the frequency with which a leader should practice each behavior. Table 13 is arranged according to the means for each individual survey item, according to the total sample population, and

TABLE 13.

Comparison of Survey Instrument Item Means (Beliefs About What One Should Do)

Item Number	Item	Total		Major Position		Minor Position		No Position		Factor
		M	SD	M	SD	M	SD	M	SD	
53	A leader in my position should keep track of what goes on in the group.	5.17	.93	5.13	.79	5.24	.84	5.00	1.14	Coordinator
55	A leader in my position should push the group to meet objectives.	5.13	.95	5.20	.97	5.16	.89	5.05	1.09	Producer
63	A leader in my position should build teamwork among group members.	5.10	.94	5.20	.85	5.07	.92	5.14	1.00	Facilitator
44	A leader in my position should make sure everyone knows where the group is going.	5.09	.97	5.32	.86	5.13	.90	4.90	1.14	Director
58	A leader in my position should clarify priorities and direction.	5.07	.96	5.10	.87	5.12	.91	4.95	1.09	Director
47	A leader in my position should see that the group delivers on stated goals.	5.05	.99	5.15	.86	5.09	.93	4.89	1.14	Producer
51	A leader in my position should set clear objectives for the group.	5.04	1.04	5.25	.90	5.11	.95	4.81	1.23	Director
60	A leader in my position should bring a sense of order to the group.	5.03	1.00	5.23	.80	5.08	.95	4.83	1.16	Coordinator

TABLE 13. *continued*

Item Number	Item	Total		Major Position		Minor Position		No Position		Factor
		M	SD	M	SD	M	SD	M	SD	
62	A leader in my position should emphasize the group's achievement of stated purposes.	4.99	.98	5.18	.93	5.04	.91	4.80	1.13	Producer
39	A leader in my position should define areas of responsibility for subordinates.	4.94	1.16	5.07	1.02	5.10	.98	4.49	1.48	Director
41	A leader in my position should minimize disruptions to the accomplishment of tasks.	4.93	1.01	5.13	.82	4.93	1.00	4.86	1.07	Coordinator
57	A leader in my position should search for innovations and potential improvements.	4.84	.99	4.93	.76	4.90	.92	4.63	1.17	Innovator
37	A leader in my position should focus on "results" in the group.	4.80	1.07	4.87	.94	4.83	1.07	4.72	1.10	Producer
61	A leader in my position should show concern for the needs of subordinates.	4.80	1.19	4.90	1.03	4.88	1.08	4.55	1.46	Mentor
40	A leader in my position should listen to the personal problems of subordinates.	4.75	1.26	4.95	1.09	4.85	1.19	4.43	1.44	Mentor
54	A leader in my position should solve problems in creative and clever ways.	4.74	.93	4.90	.67	4.76	.90	4.64	1.06	Innovator

TABLE 13. *continued*

Item Number	Item	Total		Major Position		Minor Position		No Position		Factor
		M	SD	M	SD	M	SD	M	SD	
48	A leader in my position should show empathy and concern in dealing with subordinates.	4.73	1.21	5.07	.97	4.76	1.16	4.53	1.37	Mentor
56	A leader in my position should encourage subordinates to share ideas in the group.	4.70	1.16	5.07	.86	4.70	1.10	4.59	1.35	Facilitator
52	A leader in my position should treat every individual in a sensitive and caring way.	4.69	1.17	4.85	1.08	4.65	1.22	4.76	1.07	Mentor
35	A leader in my position should exert upward influence in the organization.	4.69	1.13	5.08	.89	4.67	1.06	4.61	1.32	Broker
34	A leader in my position should protect continuity in day-to-day operations.	4.62	1.04	4.95	.93	4.60	1.01	4.58	1.13	Coordinator
50	A leader in my position should get access to people at higher levels.	4.61	1.14	5.10	1.13	4.58	1.08	4.54	1.26	Broker
43	A leader in my position should encourage participative decision-making in the group.	4.60	1.09	4.83	.90	4.58	1.05	4.59	1.24	Facilitator
33	A leader in my position should come up with inventive ideas.	4.55	1.01	4.83	.78	4.57	.91	4.42	1.25	Innovator

TABLE 13. *continued*

Item Number	Item	Total		Major Position		Minor Position		No Position		Factor
		M	SD	M	SD	M	SD	M	SD	
42	A leader in my position should experiment with new concepts and procedures.	4.51	1.05	4.63	.90	4.53	1.03	4.44	1.16	Innovator
38	A leader in my position should facilitate consensus building in the group.	4.51	1.07	4.57	.93	4.47	1.05	4.59	1.15	Facilitator
59	A leader in my position should persuasively sell new ideas to higher-ups.	4.44	1.16	4.95	.99	4.47	1.07	4.21	1.39	Broker
45	A leader in my position should influence decisions made at higher levels.	4.41	1.25	4.93	1.10	4.45	1.14	4.16	1.49	Broker
64	A leader in my position should analyze written plans and schedules.	4.36	1.40	4.78	1.25	4.26	1.39	4.51	1.44	Monitor
36	A leader in my position should carefully review detailed reports.	4.30	1.40	4.73	1.04	4.24	1.37	4.34	1.54	Monitor
46	A leader in my position should compare records and reports to detect discrepancies.	4.18	1.41	4.43	1.39	4.18	1.35	4.11	1.56	Monitor
49	A leader in my position should work with technical information.	3.79	1.41	3.88	1.56	3.80	1.37	3.75	1.49	Monitor

included the means according to level of involvement (position of leadership) currently practiced by respondents.

An important observation made by this comparison is that the top ten survey items cadets listed as important behaviors for leaders to practice and perform in the Corps of Cadets fell into only four of the eight leadership orientations. Those leadership orientations were: Coordinator, Producer, Facilitator, and Director. This revealed a rather narrow range of leadership behavior characteristics perceived to be needed by leaders and members in the student organization under study. The behaviors themselves demonstrated that a perceived tendency to favor management practices (belief that management practices should dominate) at the expense of leadership practices occurred and supported cadets' perceived beliefs in the need for a management-dominated culture of leadership within the Corps of Cadets. Equally interesting was that two of these leadership orientations accounted for most (7 of 10) of the top behaviors perceived to be most needed by leaders in the student organization. The Coordinator orientation appeared twice in the group of ten behaviors cadets believed should be in practice by cadets and described actions that focused on people within the organization and the maintenance of a controlled organizational structure. The Facilitator orientation appeared once in the group of ten behaviors and described behavior that focused on people within the organization and a flexible organizational structure welcoming of change. It was the Director orientation that appeared most often (four times) in the group of ten leadership behaviors perceived by the entire sample to be most in need of practice by student leaders in the Corps of Cadets and was characterized by the delivery of

directions and the use of power in providing structure to the organization (Quinn, 1988). The Producer orientation appeared almost as often (three times) in the group of top leadership behaviors perceived to be needed most and was characterized by initiating action and motivating others to be task-oriented. Together the Director and Producer orientations described actions that focused energies external to the organization, were competitive in nature, and supported a centralized, stable, and controlled organizational structure (Quinn, 1988). The item means listed in the behaviors cadets perceived should be practiced in most frequency ranged from 5.17 to 4.94.

Examination of the top ten survey items listed as needing to be most frequently performed by leaders and members in the student organization, according to the three levels of involvement and participation, gave the researcher valuable insights into what behaviors cadets believed should be demonstrated by student leaders in the Corps of Cadets.

Frequency of Beliefs Among Major Leaders

For cadets in major positions of leadership (Commanders, Corps Staff Members, Executive Officers, First Sergeants, and Drum Majors) the top ten survey items listed as needing to be practiced most by leaders in the Corps of Cadets fell into the same top four leadership orientations as the entire sample. Those leadership orientations were: Director, Coordinator, Producer, and Facilitator. Again, this revealed a rather narrow range of leadership behavior characteristics perceived to be needed by the top leaders of the student organization. So important did major leaders perceive the Director and Producer leadership orientations to be that they ranked six of the top ten behaviors

necessary for use by leaders as those very behaviors. The item means listed in the behaviors major leaders perceived should be practiced most frequently ranged from 5.32 to 5.10.

Frequency of Beliefs Among Minor Leaders

The top ten survey items listed as most needing to be in practice for minor leaders (Assistant Squad Leaders, Major Unit Staff Members, Minor Unit Staff Members, Platoon or Flight Leaders, Platoon or Flight Sergeants, Sergeant Majors, Squad Leaders, Unit Chains, and Others) of the Corps of Cadets again fell into the four leadership orientations highly ranked by the major leaders. These leadership orientations were: Coordinator, Producer, Director, and Facilitator. The minor leaders shared the perceptions of the major leader about behaviors characterized as Producer and Director leadership orientations needing to be practiced most often by leaders in the Corps of Cadets. The item means listed in the behaviors minor leaders perceived should be practiced in most frequency ranged from 5.24 to 5.04.

Frequency of Beliefs Among General Members

For general members in no formal position of leadership, the top ten survey items listed as the leadership behaviors most needed by cadets resembled those behaviors perceived to be of importance to leaders of the Corps of Cadets but with a few small differences. The cadets involved at the lowest level of participation in the student organization listed behaviors that fell into five of the eight leadership orientations as needing to be practiced most often. Those orientations were: Facilitator, Producer, Coordinator, Director, and Mentor. A Facilitator orientation behavior was the top ranked

item, and described behavior focused on people within the organization and support of a flexible organizational structure open to change. A Mentor orientation behavior was among the top survey items and also described a focus on people and support of a loose organizational structure. Together these orientation behaviors characterized actions undertaken to build a caring, empathic organization that promoted teamwork and was cooperative in nature (Quinn, 1988). As was the case with the major and minor leaders, the Producer and Director orientation behaviors accounted for at least half of the top survey items ranked by general members. The Coordinator orientation was also represented as a category of behaviors that general members thought should be used often by cadets. The item means listed in the behaviors general member cadets perceived should be practiced most often ranged from 5.14 to 4.76.

Summary of Cadet Beliefs

In examining the leadership behaviors cadets thought should be used most frequently, again items represented a narrow range of behaviors perceived to be needed and practiced by leaders and members in the Corps of Cadets. Leaders and general members believed that behaviors characterized as Coordinator orientation behaviors should be practiced often by cadets. The Coordinator orientation described actions that focused energies internal to the organization, were cooperative in nature, and supported a centralized, stable, and controlled organizational structure (Quinn, 1988). Examples of Coordinator behaviors leaders and general members thought should be used often by cadets included: “Keeping track of what goes on in the group” (item 53) and “Bringing a sense of order to the group” (item 60). Major leaders and general members also ranked

one additional Coordinator orientation behavior highly as a behavior in which cadets should engage often. That behavior was: “Minimizing disruptions to the accomplishment of tasks” (item 41).

All three groups of leaders and members highly ranked a Facilitator orientation behavior as needing to be among cadets’ repertoire of leadership behaviors. The Facilitator orientation described behaviors that focused on the facilitation of interaction among members of the organization, maintained a flexible and decentralized structure welcoming of change, and were cooperative in nature (Quinn, 1988). That behavior was: “Building teamwork among group members” (item 63). While it was interesting to note that cadets in the lowest level of involvement and participation in the Corps of Cadets believed that this particular behavior needed to be practiced most often in the student organization, factor analysis procedures recorded a low item loading as a Facilitator item. The self-perception format of the same statement also recorded a low loading as a Facilitator (leadership) item but a higher loading as a Coordinator (management) item. This supported cadets’ belief that behaviors focused on maintaining structure and control should be among those practiced most frequently.

Only the general member cadets ranked a behavior categorized as a Mentor orientation behavior among the top items in need of frequent practice among cadets. The Mentor orientation described behaviors that focused on demonstrating consideration and caring to members of the organization and supported a flexible organizational structure welcoming of change (Quinn, 1988). That behavior was: “Treating every individual in a sensitive and caring way” (item 52).

All three groups of leaders and members ranked highly the same three of four Producer orientation behavior items as needing to be performed often by cadets. The Producer orientation behaviors described actions that concentrated on the work of the organization, directed attention to the environment external to the organization, and supported a centralized organizational structure hesitant to change (Quinn, 1988). Examples of Producer behaviors leaders and members perceived to be needed most often by cadets included: "Pushing the group to meet objectives" (item 55), "Seeing that the group delivers on stated goals" (item 47), and "Emphasizing the group's achievement of stated purposes" (item 62).

As was the case with the Producer orientation behaviors perceived to be in need of frequent use by leaders and members of the Corps of Cadets, the Director orientation behaviors were ranked highly by all three groups of cadets. The Director orientation behaviors described actions focused on providing structure to the organization through planning and goal setting and the maintenance of a centralized organizational structure (Quinn, 1988). All three groups of cadets ranked the same two of four survey items, which measured Director orientation behaviors, as among those actions thought needed to be practiced most often. Those behaviors included: "Clarifying priorities and direction" (item 58) and "Setting clear objectives for the group" (item 51). Major and minor leaders also ranked the Director orientation of "Making sure everyone knows where the group is going" (item 44) as a behavior that should be practiced often by leaders in the student organization. It was interesting that the minor leaders of the Corps of Cadets ranked all four Director orientation behaviors as actions that should be used

often by leaders in the Corps. In addition to the items already mentioned, "Defining areas of responsibility for subordinates" (item 39) was perceived to be a behavior that minor leaders thought should be used often. Again, these findings supported the idea that management practices were believed by cadets to be needed most with less perceived need for leadership behaviors.

Infrequency of Cadet Beliefs

Equally important to the question of which behaviors cadets think should be practiced most often by the leaders and members of the student organization was consideration of which behaviors cadets perceived should be used less often than other behaviors and, perhaps, even avoided. The researcher hoped this information would provide additional insights about how cadets perceived the practice of leadership behaviors in the Corps of Cadets. The behaviors cadets believed should be used least frequently were considered through examination of the responses to the same 32 items contained in the third part of the survey instrument previously examined. Once again, the responses of the entire sample population were examined, followed by consideration based on the three levels of involvement within the student organization.

The ten survey items listed as those the entire sample thought should be used less frequently than other behaviors often fell into four of the eight orientations. Those orientations were: Monitor, Broker, Facilitator, and Innovator. Of the ten survey items listed by the entire sample as needing to be practiced less often by cadets, the Monitor orientation behavior accounted for the bottom four. Clearly, cadets thought that practices that encompassed the Monitor orientation should be practiced less often than other

behaviors. The Monitor orientation described actions that focused on people within the organization and supported a centralized and controlled organizational structure (Quinn, 1988). The Broker orientation, oppositional to the Monitor orientation (Quinn, 1988), appeared twice among the behaviors cadets believed should be practiced less often and described actions focused on resource acquisition, the organization and its external environments, and the maintenance of a flexible organizational structure accepting of change (Quinn, 1988). The Facilitator and Innovator orientations were also represented in the listing of behaviors believed important but in need of practice less frequently than other leadership behaviors. The item means listed in the behaviors cadets believed should be practiced in less frequency than other behaviors ranged from 4.60 to 3.79.

Infrequency of Beliefs Among Major Leaders

For cadets in major positions of leadership, the survey items that represented the behaviors believed to be needed least fell into five of the eight orientation categories. Those orientations were: Monitor, Facilitator, Innovator, Mentor, and Producer. As with the entire sample, major leaders thought that practices that encompassed the Monitor orientation should be practiced less often than other behaviors. The Facilitator and Innovator orientations were each represented once in the listing of behaviors major leaders perceived to be needed in less frequency. The contradictory pair of Mentor and Producer orientation behaviors entered the listing once. The item means listed in the behaviors major leaders believed should be practiced with less frequency than other behaviors ranged from 4.87 to 3.88.

Infrequency of Beliefs Among Minor Leaders

For cadets in minor positions of leadership the survey items representing the behaviors believed to be needed less frequently than others fell into the orientation categories identical to those discovered in the entire sample. The orientations were: Monitor, Broker, Facilitator, and Innovator. Again, of the ten survey items listed by minor leaders as needing to be practiced more infrequently than others, the Monitor orientation behaviors accounted for the bottom four. An additional Broker orientation entered the listing since it shared the same mean score as the other tenth survey item minor leaders believed needed to be practiced less often than other behaviors. The item means listed in the behaviors minor leaders believed should be practiced with less frequency than other behaviors ranged from 4.58 to 3.80.

Infrequency of Beliefs Among General Members

For general members of the Corps of Cadets, the survey items listed as those behaviors members believed should be practiced in less frequency than other behaviors fell into five of the eight orientations. They were: Monitor, Director, Broker, Innovator, and Mentor. As with the other groups of cadets, survey items that represented behaviors categorized as Monitor orientation behaviors dominated the listing. Again, the Monitor orientation described behaviors undertaken as information collection efforts, focused on people within the organization, and maintained a centralized and controlled organizational structure (Quinn, 1988). Two behaviors characterized as Broker orientation behaviors were represented in the list of actions general members believed should be used less often. Two Director orientation behaviors were among those actions

general members believed should be practiced less frequently than other behaviors. Only cadets in the lowest level of involvement included actions characterized as Director orientation behaviors among the list of those needing to be practiced less often than other behaviors. The Mentor orientation appeared once in the survey listing, and the Innovator orientation appeared twice. The item means listed in the behaviors general members believed should be practiced in less frequency than other behaviors ranged from 4.49 to 3.75.

Summary of Infrequent Cadet Beliefs

In examining the behaviors cadets thought should be used less often than other behaviors, the survey items again represented a small group of behaviors cadets thought others in the student organization should practice less frequently. Behaviors characterized as Monitor orientation actions were overwhelmingly ranked highest as behaviors cadets thought should be practiced least often. Monitor orientation behaviors described efforts focused on information collection, management, interpretation, and communication (Quinn, 1988).

Cadets, regardless of the level of involvement and participation in the Corps of Cadets, believed that three of the four Monitor orientation behaviors should be used least often among all the behaviors listed as survey items. Examples of Monitor orientation survey items that received low rankings by leader and members alike included: “A leader in my position should compare records and reports to detect discrepancies” (item 46) and “A leader in my position should carefully review detailed reports” (item 36). One particular Monitor orientation survey item, as evidenced by the means for major

leaders, minor leaders and general leaders (3.88, 3.80, and 3.75 respectively), was perceived to be best avoided. That survey item was: “A leader in my position should work with technical information” (item 49). Monitor orientation behaviors were perceived by leaders and members to be the behaviors that should be practiced most infrequently.

While no other ranking in any other orientation behavior category received a ranking lower than those discovered among the Monitor behavior items, there were other categories of behavior items that were consistently ranked as needing to be practiced less frequently than other behaviors. One example was the Broker orientation behavior items. Minor leaders and general members believed that two of the four survey items that measured the Broker orientation should be used less frequently than other behaviors. Examples of these Broker orientation behaviors were: “A leader in my position should influence decisions made at higher levels” (item 45) and “A leader in my position should persuasively sell new ideas to higher-ups” (item 59). It was interesting that major leaders did not believe any Broker orientation behaviors should be in practice less frequently than other behaviors.

Agreement was discovered among major and minor leaders about their perceptions of the infrequency in which they should use actions characterized as Facilitator orientation behaviors. The facilitator orientation described behaviors concentrated on facilitating interaction among those who were a part of the organization and the maintenance of a flexible and decentralized organizational structure open to change (Quinn, 1988). Examples of Facilitator behaviors major and minor leaders

believed should be used less frequently than other behaviors included: “A leader in my position should facilitate consensus building in the group” (item 38) and “A leader in my position should encourage participative decision-making in the group” (item 43).

Agreement was also discovered among leaders and general members about their perceptions of the infrequency in which they should use behaviors characterized as Innovator orientations. The Innovator orientation described behaviors that focused on envisioning change, taking risks, and supporting a flexible organizational structure welcoming of change (Quinn, 1988). Examples of Innovator behaviors leaders and members believed should be used less often than other behaviors included: “A leader in my position should experiment with new concepts and procedures” (item 42) and “A leader in my position should come up with inventive ideas” (item 33).

One final and important observation made after examining the behaviors cadets believed should be used less frequently than other behaviors involved the overwhelming number of behaviors generally of a leadership nature consistently perceived by cadets, regardless of current involvement and participation level, as best practiced less frequently than the behaviors of a management nature. There appeared to be a generally perceived belief among cadets that leadership and membership needs in the student organization demanded management skills and behaviors more than leadership skills and behaviors.

Cadets appeared to have been less critical of and more optimistic about behaviors they thought should be practiced by leaders and members of the Corps of Cadets. In all but two cases, the survey item means of the behaviors cadets believed “should” be

practiced (part three of the survey) were higher than the survey item means of the self-perceived behaviors (part two of the survey). The generally higher mean scores for the individual part three survey items suggested cadets' optimism about their perceptions regarding the need for the practice of leadership behaviors in the student organization. Also, fewer part three survey items received mean scores interpreted as in need of "Seldom" (Likert-scale response of 3) use than the part two survey items practiced by cadets. Again, this is interpreted as evidence of the existence of cadets' optimism toward leadership behaviors needing to be performed by the leaders and members of the Corps of Cadets.

Disparities Between Self-Perceptions and Beliefs About Behaviors

Finally, differences between cadets' beliefs about the behaviors in which they thought cadets should engage (part three survey items) and cadets' self-perceptions of their current performance of those same managerial-leadership behaviors (part two survey items) were examined through the analysis of variance (ANOVA) procedure in order to determine if significant differences existed among the categories of leadership behaviors. F-scores were used to determine if differences in orientation behavior disparities existed between cadets based on the level of involvement and leadership in which they were engaged. Table 14 lists the findings using the analysis of variance procedure. Five factors were determined to each have a significant difference for leadership level. Those five factors were: Coordinator, Broker, Monitor, Facilitator, and Mentor.

TABLE 14.

Comparison of Leadership Orientation Mean Disparities Between Part Three and Part Two Paired Survey Items Based Upon Leadership Involvement Level

Factor	Source of Variance	SS	df	MS	F	P
Innovator	Between Groups	1.97	2	.98	1.99	.14
	Within Groups	249.26	504	.50		
Coordinator	Between Groups	4.07	2	2.03	4.41	.01*
	Within Groups	232.32	504	.46		
Broker	Between Groups	13.67	2	6.83	8.94	.01*
	Within Groups	385.13	504	.76		
Monitor	Between Groups	7.01	2	3.51	3.88	.02*
	Within Groups	455.67	504	.90		
Producer	Between Groups	2.77	2	1.38	2.33	.10
	Within Groups	300.06	504	.60		
Facilitator	Between Groups	3.26	2	1.63	3.02	.05*
	Within Groups	271.57	504	.54		
Director	Between Groups	3.45	2	1.72	2.58	.08
	Within Groups	336.71	503	.67		
Mentor	Between Groups	9.18	2	4.59	6.18	.01*
	Within Group	374.06	503	.74		

*Indicates significance at the .05 level.

The Coordinator disparity was determined to have a significant difference at the leadership level. When comparing the mean disparity, the Coordinator factor had a significant F-value. For the comparison where a statistically significant difference was found, another procedure was conducted in order to further interpret the results and estimate the magnitude of the difference. The effect size calculation offered an estimate of how much association there was between an independent variable and a dependent variable (Tabachnick & Fidell, 2001). The larger a positive effect size, the more powerful the difference (Gall et al., 1996). Cohen (1988) stated that effect sizes above .15 indicated a large association or difference. Despite reaching statistical significance, the actual difference in means between the groups was small. The effect size, calculated using eta squared (η^2), was .02. Thus, the magnitude of the differences in the means was small. Additional analysis was conducted to determine between which groups the significant differences occurred. Post hoc testing was performed to determine where the significant differences occurred. The Tukey t test for multiple comparisons was used to determine which groups' means differed significantly from each other (Gall et al., 1996). Table 15 lists the findings using the Tukey t test. Using this procedure, it was determined that general member cadets (M=.75) showed a significantly higher disparity mean value for Coordinator orientation behavior items than did minor leaders (M=.57) or major leaders (M=.44). Level of leadership had a small effect on Coordinator orientation behaviors.

The Broker disparity was determined to have a significant difference at the leadership level. When comparing the mean disparity, the Broker factor had a significant

TABLE 15.

Tukey HSD Leadership Orientation Mean Disparity Comparison
Based Upon Leadership Involvement Level

Factor	General Members (N=132)		Minor Leaders (N=335)		Major Leaders (N=40)		Comparison Scores	
	M	SD	M	SD	M	SD	F	P
Coordinator disparity	$.75_{ab}$	.79	$.57_{a}$	.64	$.44_{b}$	.58	4.41	.01
Broker disparity	$.81_{a}$	1.07	$.43_{a}$	.78	.53	.95	8.94	.01
Monitor disparity	$.78_{a}$	1.16	$.52_{a}$	.87	.44	.78	3.88	.02
Facilitator disparity	$.59_{a}$	.88	$.41_{a}$	.68	.44	.66	3.02	.05
Mentor disparity	$.50_{a}$	1.07	$.20_{a}$	.77	.20	.86	6.18	.01

Note. Means in the same row that share subscripts differ at $p<.05$ in the Tukey honestly significant difference comparison.

F-value. Further analysis was conducted to estimate the magnitude of the difference. Despite reaching statistical significance, the effect size was .03. Thus, the magnitude of the differences in the means was small. Post hoc testing determined that general member cadets (M=.81) showed a significantly higher disparity mean value for Broker orientation behavior items than did minor leaders (M=.43). Level of leadership had a small effect on Broker orientation behaviors.

The Monitor disparity was determined to have a significant difference at the leadership level. When comparing the mean disparity, the Monitor factor had a significant F-value. The effect size was .02. Post hoc testing determined that general member cadets (M=.78) showed a significantly higher disparity mean value for Monitor orientation behavior items than did minor leaders (M=.52). Level of leadership had a small effect on Monitor orientation behaviors.

The Facilitator disparity was determined to have a significant difference at the leadership level. When comparing the mean disparity, the Facilitator factor had a significant F-value. The effect size was .01. Post hoc testing determined that general member cadets (M=.59) showed a significantly higher disparity mean value for Facilitator orientation behavior items than did minor leaders (M=.41). Level of leadership had a small effect on Facilitator orientation behaviors.

The Mentor disparity was determined to have a significant difference at the leadership level. When comparing the mean disparity, the Mentor factor had a significant F-value. The effect size was .02. Post hoc testing determined that general member cadets (M=.50) showed a significantly higher disparity mean value for Mentor

orientation behavior items than did minor leaders (M=.20). Level of leadership had a small effect on Mentor orientation behaviors.

Table 16 lists in descending order the mean leadership orientation disparities between part three survey items ("A leader in my position should use this behavior") and part two paired survey items ("I use this behavior") according to the three levels of involvement in the Corps of Cadets. The mean disparities were compared to determine where the greatest disparities existed among the categories of behaviors for cadets in each of the three levels of involvement in the Corps of Cadets. For general members of the Corps of Cadets, the greatest disparity among the paired survey items existed in the Broker orientation leadership behavior categories. The Broker orientation described behaviors focused on the acquisition of resources, the environment external to the organization, and the maintenance of a decentralized organizational structure responsive to change (Quinn, 1988). For minor leaders of the Corps of Cadets, the greatest disparity among the paired survey items existed in the Director orientation leadership behavior categories. The Director orientation described behaviors focused on the delivery of directions, the environment external to the organization, and the maintenance of a centralized organizational structure resistant to change (Quinn, 1988). For major leaders of the Corps of Cadets, as was the case with non-positional general members, the greatest disparity among the paired survey items existed in the Broker orientation leadership behavior categories.

TABLE 16.

Comparison of Leadership Orientation Mean Disparities
Between Part Three and Part Two Paired-Questions
According to Leadership Involvement Level

General Members		**Minor Leaders**		**Major Leaders**	
Broker	.81	Director	.60	Broker	.53
Monitor	.78	Coordinator	.57	Producer	.51
Coordinator	.75	Monitor	.52	Monitor	.44
Director	.74	Producer	.52	Facilitator	.44
Producer	.69	Broker	.43	Director	.44
Facilitator	.59	Facilitator	.41	Coordinator	.44
Innovator	.52	Innovator	.38	Innovator	.43
Mentor	.50	Mentor	.20	Mentor	.20

Research Question 4

Does perceived leadership orientation differ among cadets based on academic classification, Corps classification, gender, race/ethnicity, age, academic field of study, leadership experience prior to TAMU, other current TAMU leadership experience, contract status, the level of Corps leadership position (major position, minor position, no position), or service affiliation?

The Competing Values Instrument divided the survey items into eight groups or leadership orientations, as described in Chapter III: Innovator, Broker, Producer, Director, Coordinator, Monitor, Group Facilitator, and Mentor. The factor analysis procedure was used to load the survey items into the appropriate factors. Further analysis using t-tests and analysis of variance (ANOVA) procedures compared responses according to the background characteristics of the respondents.

Academic Classification

Is there a difference in perceived leadership orientation for cadets according to academic classification? The ANOVA procedure compared responses from cadets based upon academic classification. The results from examining the data based on academic classification are illustrated in Table 17. When examining the responses of cadets in regards to academic classification, ANOVA procedures showed significant differences in five of the eight leadership orientation behaviors of the Competing Values Instrument. These differences occurred in the Coordinator, Broker, Producer, Director, and Mentor orientations. Further analysis was performed in the orientations where significant differences were found to reveal between which groups the differences occurred. Table 18 lists the findings using the Tukey t test.

When comparing academic classification of cadets, the Coordinator management orientation had a significant F-value. Post hoc testing revealed that freshmen and juniors differed significantly in terms of their Coordinator orientation behaviors. Academic freshmen rated survey items in the Coordinator orientation category to be in less frequent use than did academic juniors (academic freshman M=4.17; academic junior M=4.50). This factor described behaviors focused on maintaining structure in the organization. Despite reaching statistical significance, the actual difference in means between academic freshmen and academic juniors was small. The effect size was .02. Thus, the magnitude of the differences in the means was small. Academic classification had a small effect on Coordinator orientation behaviors.

TABLE 17.

Comparison of Academic Freshmen, Sophomores, Juniors, and Seniors

Factor	Source of Variance	SS	df	MS	F	P
Innovator	Between Groups	4.14	3	1.38	2.47	.06
	Within Groups	281.83	504	.56		
Coordinator	Between Groups	6.55	3	2.18	3.90	.01*
	Within Groups	282.05	504	.56		
Broker	Between Groups	31.65	3	10.55	11.70	.01*
	Within Groups	454.45	504	.90		
Monitor	Between Groups	7.81	3	2.60	2.10	.10
	Within Groups	623.84	504	1.24		
Producer	Between Groups	7.37	3	2.46	3.31	.02*
	Within Groups	373.78	504	.74		
Facilitator	Between Groups	5.26	3	1.75	2.55	.06
	Within Groups	346.77	504	.69		
Director	Between Groups	13.03	3	4.34	5.34	.01*
	Within Groups	410.10	504	.81		
Mentor	Between Groups	43.36	3	14.45	15.08	.01*
	Within Groups	482.98	504	.96		

*Indicates significance at the .05 level.

TABLE 18.

Tukey HSD Leadership Orientation Mean Comparison
Based Upon Academic Classification

Factor	Freshmen (N=94)		Sophomores (N=141)		Juniors (N=135)		Seniors (N=138)		Comparison Scores	
	M	SD	M	SD	M	SD	M	SD	F	P
Coordinator	4.17_{a}	.79	4.30	.78	4.50_{a}	.73	4.30	.70	3.90	.01
Broker	3.55_{abc}	1.14	3.98_{ad}	.98	4.31_{bd}	.90	4.02_{c}	.83	11.70	.01
Producer	4.27	.87	4.52	.94	4.56	.81	4.32	.81	3.31	.02
Director	4.10_{ab}	1.06	4.51_{a}	.96	4.55_{b}	.79	4.40	.82	5.34	.01
Mentor	3.96_{abc}	1.33	4.33_{ade}	1.04	4.75_{bd}	.78	4.68_{ce}	.79	15.08	.01

Note. Means in the same row that share subscripts differ at $p<.05$ in the Tukey honestly significant difference comparison.

When comparing academic classification of cadets, the Broker leadership orientation had a significant F-value. Post hoc testing determined that academic freshmen differed significantly from academic sophomores, juniors, and seniors in terms of their Broker orientation behaviors. Academic freshmen rated survey items in the Broker orientation category to be in less frequent use than did cadets in the other academic groups (academic freshmen M=3.55; academic sophomores M=3.98; academic juniors M=4.31; and academic seniors M=4.02). Academic sophomores and academic juniors also differed significantly on Broker orientation behaviors. Academic juniors rated survey items in the Broker orientation to be in more frequent use than did academic sophomores. This factor described behaviors focused on acquiring resources and creative problem solving. Eta squared was calculated to be .07. Academic classification had a small effect on Broker orientation behaviors.

When comparing academic classification of cadets, the Producer management orientation had a significant F-value. This factor described behaviors focused on initiating action among and motivating other members of the organization. Post hoc testing determined that no significant differences occurred for Producer orientation behaviors among cadets based on academic classification.

When comparing academic classification of cadets, the Director management orientation had a significant F-value. Post hoc testing determined that academic freshmen differed significantly from academic sophomores and juniors, in terms of their Director orientation behaviors. Academic freshmen rated survey items in the Director orientation category to be in less frequent use than did academic sophomore and junior

cadets (academic freshmen M=4.10; academic sophomores M=4.51; and academic juniors M=4.55). This factor described behaviors focused on providing structure in the organization. Eta squared was calculated to be .03. Academic classification had a small effect on Director orientation behaviors.

When comparing academic classification of cadets, the Mentor leadership orientation had a significant F-value. Post hoc testing determined that academic freshmen differed significantly from academic sophomores, juniors, and seniors in terms of their Mentor orientation behaviors. Academic freshmen rated survey items in the Mentor orientation category to be in less frequent use than did academic sophomore, junior, and senior cadets (academic freshmen M=3.96; academic sophomores M=4.33; academic juniors M=4.75; and academic seniors M=4.68). Academic sophomores also differed significantly from academic juniors and seniors on Mentor orientation behaviors. This factor described behaviors focused on demonstrating consideration and support to members of the organization. Eta squared was calculated to be .03. Academic classification had a small effect on Mentor orientation behaviors.

Corps Classification

Is there a difference in perceived leadership orientation for cadets based on Corps classification? Comparative responses of cadets based upon Corps classification was also examined for differences in perceived leadership orientation. The ANOVA procedure compared responses from cadets based on Corps classification. Corps classification was not synonymous with academic classification since some cadets did not complete enough coursework sufficient to advance in academic standing but did

progress to the next "year" (first year, second year, third year, fourth year) in the Corps of Cadets. The results from examining the data based on Corps classification are illustrated in Table 19. When examining the responses of cadets in regards to Corps classification, ANOVA procedures showed significant differences in six of the eight leadership orientation behaviors of the Competing Values Instrument. These differences occurred in the Innovator, Coordinator, Broker, Producer, Director, and Mentor orientations. Further analysis was performed in the orientations where significant differences were found to reveal between which groups the differences occurred. Table 20 lists the findings using the Tukey t test.

When comparing Corps classification of cadets, the Innovator leadership orientation had a significant F-value. Post hoc testing revealed that freshman cadets differed significantly from junior cadets in terms of their Innovator orientation behaviors. Freshman cadets rated survey items in the Innovator orientation category to be in less frequent use than did junior cadets (freshman cadets M=4.06; junior cadets M=4.34). This factor described behaviors focused on creativity and envisioning change within the organization. Despite reaching statistical significance, the actual difference in means between freshman and junior cadets was small. The effect size was .02. Corps classification had a small effect on Innovator orientation behaviors.

When comparing Corps classification of cadets, the Coordinator management orientation had a significant F-value. Post hoc testing revealed that freshman and junior cadets differed significantly in terms of their Coordinator orientation behaviors.

TABLE 19.

Comparison of Freshman, Sophomore, Junior, and Senior Cadets

Factor	Source of Variance	SS	df	MS	F	P
Innovator	Between Groups	5.16	3	1.72	3.09	.03*
	Within Groups	280.81	504	.56		
Coordinator	Between Groups	5.83	3	1.94	3.46	.02*
	Within Groups	282.78	504	.56		
Broker	Between Groups	31.55	3	10.52	11.66	.01*
	Within Groups	454.55	504	.90		
Monitor	Between Groups	7.14	3	2.38	1.92	.13
	Within Groups	624.51	504	1.24		
Producer	Between Groups	9.90	3	3.30	4.48	.01*
	Within Groups	371.25	504	.74		
Facilitator	Between Groups	4.56	3	1.52	2.20	.09
	Within Groups	347.48	504	.69		
Director	Between Groups	17.82	3	5.94	7.39	.01*
	Within Groups	405.30	504	.81		
Mentor	Between Groups	45.99	3	15.33	16.08	.01*
	Within Groups	480.36	504	.95		

*Indicates significance at the .05 level.

TABLE 20.

Tukey HSD Leadership Orientation Mean Comparison
Based Upon Corps Classification

Factor	Freshman (N=101)		Sophomore (N=135)		Junior (N=152)		Senior (N=120)		Comparison Scores	
	M	SD	M	SD	M	SD	M	SD	F	P
Innovator	4.06_{a}	.90	4.28	.75	4.34_{a}	.68	4.23	.68	3.09	.03
Coordinator	4.14_{a}	.90	4.37	.70	4.44_{a}	.69	4.30	.73	3.46	.02
Broker	3.54_{abc}	1.20	4.03_{a}	.92	4.26_{b}	.86	4.01_{c}	.85	11.66	.01
Producer	4.25_{a}	.99	4.57_{ab}	.82	4.53	.82	4.29_{b}	.82	4.48	.01
Director	4.08_{ab}	1.14	4.56_{a}	.89	4.56_{b}	.76	4.34	.84	7.39	.01
Mentor	3.95_{abc}	1.38	4.36_{ad}	.95	4.75_{bd}	.80	4.67_{c}	.78	16.08	.01

Note. Means in the same row that share subscripts differ at $p<.05$ in the Tukey honestly significant difference comparison.

Freshman cadets rated survey items in the Coordinator orientation category to be in less frequent use than did junior cadets (freshman cadets M=4.14; junior cadets M=4.44). This factor described behaviors focused on maintaining structure in the organization. The effect size was .02. Corps classification had a small effect on Coordinator orientation behaviors.

When comparing Corps classification of cadets, the Broker leadership orientation had a significant F-value. Post hoc testing determined that freshman cadets differed significantly from sophomore, junior, and senior cadets in terms of their Broker orientation behaviors. Freshman cadets rated survey items in the Broker orientation category to be in less frequent use than did cadets in other Corps classes (freshman cadets M=3.54; sophomore cadets M=4.03; junior cadets M=4.26; and senior cadets M=4.01). This factor described behaviors focused on acquiring resources and creative problem solving. Despite reaching statistical significance, eta squared was calculated to be .07. Corps classification had a small effect on Broker orientation behaviors.

When comparing Corps classification of cadets, the Producer management orientation had a significant F-value. This factor described behaviors focused on initiating action among and motivating other members of the organization. Post hoc testing determined that freshman cadets differed significantly from sophomore cadets. Freshman cadets rated survey items in the Producer orientation category to be in less frequent use than did sophomore cadets (freshman cadets M=4.25; sophomore cadets M=4.57). Additionally, it was determined that sophomore cadets differed significantly from senior cadets. Sophomore cadets rated survey items in the Producer orientation

category to be in more frequent use than did senior cadets (sophomore cadets M=4.57; senior cadets M=4.29). This factor described behaviors focused on initiating action among and motivating other members of the organization. Eta squared was calculated to be .03. Corps classification had a small effect on Producer orientation behaviors.

When comparing Corps classification of cadets, the Director management orientation had a significant F-value. Post hoc testing determined that freshman cadets differed significantly from sophomore and junior cadets, in terms of their Director orientation behaviors. Freshman cadets rated survey items in the Director orientation category to be in less frequent use than did sophomore and junior cadets (freshman cadets M= 4.08, sophomore cadets M=4.56, and junior cadets M=4.56). This factor described behaviors focused on providing structure in the organization. Eta squared was calculated to be .04. Corps classification had a small effect on Director orientation behaviors.

When comparing Corps classification of cadets, the Mentor leadership orientation had a significant F-value. Post hoc testing determined that freshman cadets differed significantly from sophomore, junior, and senior cadets in terms of their Mentor orientation behaviors. Freshman cadets rated survey items in the Mentor orientation category to be in less frequent use than did sophomore, junior, and senior cadets (freshman cadets M=3.95; sophomore cadets M=4.36; junior cadets M=4.75; and senior cadets M=4.67). Additionally, it was determined that sophomore cadets differed significantly from junior cadets on Mentor orientation behaviors. Sophomore cadets rated survey items in the Mentor orientation category to be in less frequent use than

junior cadets. This factor described behaviors focused on demonstrating consideration and support to members of the organization. Eta squared was calculated to be .09. Corps classification had a small effect on Mentor orientation behaviors.

Gender

Do cadets differ in leadership orientation perceptions depending on their gender? Comparative responses of cadets based on gender were examined for differences in perceived leadership orientation. Table 21 displays the t-test scores of cadets and compares gender differences. When examining the responses of cadets in regards to gender, t-tests showed significant difference in one of the eight factors of the Competing Values Instrument survey. This difference occurred in the Innovator leadership orientation factor. This particular category of items was intended to measure the extent to which one envisions change and articulates vision. Male cadets rated Innovator orientation behaviors to be in a higher frequency of practice than their female cadet colleagues (male M=4.26; female M=4.01). Male cadets apparently exercised creative behaviors more often than female cadets. While a statistically significant difference was discovered between female and male cadets and their practice of Innovator orientation behaviors, the effect size was calculated to be .01. Gender had a small effect on Innovator orientation behaviors. It was interesting to note that, while not found to be a statistically significantly difference, female cadets perceived their Mentor orientation behaviors to be in more frequent practice than male cadets (female M=4.75; male M=4.44). Mentor behaviors described those actions focused on showing consideration and support for members of the organization.

TABLE 21.

Comparison of Female and Male Cadets

Factor	Female N=43		Male N=464		Comparison Scores	
	M	SD	M	SD	T	P
Innovator	4.01	.78	4.26	.75	2.10	.04*
Coordinator	4.26	.80	4.34	.75	.67	.50
Broker	3.87	.83	4.01	.99	.89	.38
Monitor	3.49	1.13	3.58	1.12	.51	.61
Producer	4.19	.97	4.45	.85	1.93	.06
Facilitator	4.25	.80	4.27	.84	.17	.87
Director	4.26	.91	4.43	.91	1.18	.24
Mentor	4.75	.94	4.44	1.02	-1.90	.06

*Indicates significance at the .05 level.

Race/Ethnicity

Is there a difference in perceived leadership orientation for cadets based on race? Comparative responses of cadets based on race were examined for differences in perceived leadership orientation. Table 22 displays the t-test scores of cadets based on race. Data involving race were initially categorized into eight different classifications on the survey instrument. Those categorized racial groups were: "Alaskan Native," "American Indian," "Asian or Pacific Islander," "Black/African American, Non-Hispanic," "Hispanic or Latino/a," "White Non-Hispanic," and "Other." Four categories of data contained sample sizes smaller than the recommended minimum of 30 (Gall et al., 1996). The researcher collapsed the "American Indian," "Asian or Pacific Islander," "Black/African American, Non-Hispanic," "Hispanic or Latino/a," and "Other" classification groups into a "Non-White Minority" classification ("Alaskan Native" was not represented in the sample) and used a t-test to compare responses from cadets based on race. No significant differences occurred between Non-White minority cadets and White Non-Hispanic cadets when comparing perceived leadership orientation as assessed by the Competing Values Instrument.

Age

Is there a difference in perceived leadership orientation for cadets based on age? Comparative responses of cadets based on age were examined for differences in perceived leadership orientation. Table 23 displays the t-test scores of cadets based on age. Data involving age were initially categorized into three different classifications by the researcher. Those categorized age groups were: "17-19," "20-22," and "23 or older."

TABLE 22.

Comparison of Non-White Minority and White Non-Hispanic Cadets

Factor	Non-White Minority N=83		White Non-Hispanic N=422		Comparison Scores	
	M	SD	M	SD	T	P
Innovator	4.19	.86	4.25	.73	.71	.48
Coordinator	4.20	.83	4.34	.75	1.72	.09
Broker	4.02	1.01	4.00	.97	-.18	.86
Monitor	3.77	1.13	3.55	1.11	-1.65	.10
Producer	4.36	.91	4.44	.86	.77	.44
Facilitator	4.26	.93	4.28	.81	.16	.87
Director	4.32	1.00	4.43	.89	1.06	.29
Mentor	4.44	1.18	4.48	.98	.38	.70

Significance at the .05 level.

TABLE 23.

Comparison of Cadets Based Upon Age

Factor	17-19 Year Olds N=138		20+ Year Olds N=351		Comparison Scores	
	M	SD	M	SD	T	P
Innovator	4.11	.82	4.29	.71	-2.41	.02*
Coordinator	4.21	.82	4.38	.72	-2.25	.03*
Broker	3.70	1.10	4.12	.90	-4.31	.01*
Monitor	3.48	1.20	3.60	1.09	-1.11	.27
Producer	4.36	.92	4.45	.84	-1.07	.29
Facilitator	4.16	.89	4.31	.80	-1.81	.07
Director	4.23	1.08	4.49	.83	-2.83	.01*
Mentor	4.09	1.23	4.62	.88	-5.30	.01*

*Indicates significance at the .05 level.

One category of data contained a sample size smaller than the recommended minimum of 30 suggested by Gall et al. (1996). The researcher collapsed the "20-22" and the "23 or older" classification groups into a "20 or older" classification and used a t-test to compare responses from cadets based on age. After examining the responses of cadets in regards to age, t-tests showed significant differences according to cadet age in five of the eight leadership orientation behaviors of the Competing Values Instrument. These differences occurred in the Innovator, Coordinator, Broker, Director, and Mentor orientations.

Cadets aged 20 years or older perceived their Innovator leadership orientation behaviors to be in more frequent practice than 17 to 19 year old cadets (20+ M=4.29; 17-19 M=4.11). This particular category of items was intended to measure the extent to which one envisioned change, articulated vision, and demonstrated creativity in the organization. Older cadets apparently exercised creative behaviors more often than younger cadets. Eta squared was calculated to be .01. Age had a small effect on Innovator orientation behaviors.

Coordinator management orientation behaviors were perceived to be in more frequent practice by cadets aged 20 years or older than cadets aged 17-19 years (20+ M=4.38; 17-19 M=4.21). This factor described behaviors focused on maintaining structure and stability and enforcing order in the organization. Younger cadets apparently exercised Coordinator role behaviors less often than older cadets. Despite reaching statistical significance, the actual difference in means between cadets aged 20

years or more and cadets aged 17-19 years was small. The effect size was calculated to be .01. Age had a small effect on Coordinator orientation behaviors.

Cadets aged 20 years or older perceived their Broker leadership orientation behaviors to be in more frequent practice than 17 to 19 year old cadets (20+ M=4.12; 17-19 M=3.70). This factor described behaviors focused on acquiring resources and creative problem solving. Eta squared was calculated to be .04. Age had a small effect on Broker orientation behaviors.

Director management orientation behaviors were perceived to be in more frequent practice among cadets aged 20 years or older than by cadets aged 17-19 years (20+ M=4.49; 17-19 M=4.23). This factor described behaviors focused on providing structure in the organization. Eta squared was calculated to be .02. Age had a small effect on Director orientation behaviors.

Cadets aged 20 years or older perceived their Mentor leadership orientation behaviors to be in more frequent practice than 17 to 19 year old cadets (20+ M=4.62; 17-19 M=4.09). This category of behaviors described actions focused on demonstrating consideration and support to members of the organization. Eta squared was calculated to be .06. Age had a small effect on Mentor orientation behaviors.

Academic Field of Study

Is there a difference in perceived leadership orientation for cadets based on academic field of study at Texas A&M University? The ANOVA procedure compared responses from cadets based upon academic field of study. Table 24 shows the F-scores

used to determine if any significant differences existed between cadets according to academic field of study. Data involving academic field of study were initially categorized into nine different classifications on the survey instrument. Those categorized academic fields of study were: "Agriculture and Life Sciences," "Architecture," "Business," "Education," "Engineering," "Geosciences," "Liberal Arts," "Science," and "Veterinary Medicine." Five of the nine categories of data contained sample sizes smaller than the recommended minimum of 30 (Gall et al., 1996). The researcher collapsed the "Architecture," "Education," "Geoscience," "Science," and "Veterinary Medicine" classification groups into other groups and used the ANOVA procedure to compare responses from cadets based on academic field of study. When examining the responses of cadets according to academic field of study, ANOVA procedures showed no significant differences in the leadership orientation behaviors of the Competing Values Instrument.

Leadership Experiences Prior to College

Is there a difference in perceived leadership orientation for cadets based on the number of leadership experiences in which they participated prior to attending Texas A&M University? Comparative responses of cadets based on the frequency of participation in leadership experiences prior to attending college were examined for differences in perceived leadership orientation. Table 25 displays the t-test scores of cadets based on prior leadership experiences.

Data involving prior leadership experiences were initially categorized into three different classifications by the researcher. Those categorized age groups were: "No prior

TABLE 24.

Comparison of Cadets Based Upon Academic Field of Study

Factor	Source of Variance	SS	df	MS	F	P
Innovator	Between Groups	.47	4	.12	.21	.93
	Within Groups	270.59	486	.56		
Coordinator	Between Groups	1.72	4	.43	.75	.56
	Within Groups	279.68	486	.58		
Broker	Between Groups	3.13	4	.78	.82	.51
	Within Groups	464.51	486	.96		
Monitor	Between Groups	4.30	4	1.08	.88	.48
	Within Groups	593.15	486	1.22		
Producer	Between Groups	5.11	4	1.28	1.73	.14
	Within Groups	358.73	486	.74		
Facilitator	Between Groups	4.81	4	1.20	1.75	.14
	Within Groups	335.16	486	.69		
Director	Between Groups	5.36	4	1.34	1.64	.16
	Within Groups	397.37	486	.82		
Mentor	Between Groups	4.86	4	1.21	1.20	.31
	Within Groups	491.54	486	1.01		

Significance at the .05 level.

TABLE 25.

Comparison of Cadets Based Upon Prior Leadership Experience

Factor	3 or Fewer Experiences N=367		4 or More Experiences N=141		Comparison Scores	
	M	SD	M	SD	T	P
Innovator	4.19	.76	4.38	.71	-2.64	.01*
Coordinator	4.29	.78	4.42	.68	-1.74	.08
Broker	3.99	.99	4.02	.96	-.24	.81
Monitor	3.55	1.12	3.66	1.11	-1.04	.30
Producer	4.38	.90	4.56	.77	-2.10	.04*
Facilitator	4.23	.84	4.39	.80	-1.94	.05*
Director	4.36	.94	4.55	.83	-2.15	.03*
Mentor	4.44	1.02	4.53	1.02	-.93	.36

*Indicates significance at the .05 level.

leadership experiences," "1-3 prior leadership experiences," and "4 or more prior leadership experiences." One category of data contained a sample size smaller than the recommended minimum of 30 suggested by Gall et al. (1996). The researcher collapsed the "No prior leadership experiences" and the "1-3 prior leadership experiences" classification groups into a "3 or less prior leadership experiences" classification, retained the "4 or more prior leadership experiences" grouping, and used a t-test to compare responses from cadets based on prior leadership experiences. When examining the responses of cadets in regards to prior leadership experience, the t-test showed significant differences in four of the eight leadership orientation behaviors of the Competing Values Instrument. These differences occurred in the Innovator, Producer, Facilitator, and Director orientations.

Cadets who had participated in four or more leadership experiences prior to college perceived their Innovator leadership orientation behaviors to be in more frequent practice than cadets who participated in three or fewer leadership experiences prior to college (four or more experiences M=4.38; three or fewer experiences M=4.19). This particular category of items was intended to measure the extent to which cadets envisioned change, articulated vision, and demonstrated creativity in the organization. Cadets who were more experienced in leadership prior to college apparently exercised creative behaviors more often than cadets who come to college with less leadership experience prior to college. Eta squared was calculated to be .02. Leadership experience prior to college had a small effect on Innovator orientation behaviors.

Cadets more experienced in leadership program participation prior to college perceived their Producer management orientation behaviors to be in more frequent practice than cadets less experienced in leadership prior to college (four or more experiences M=4.56; three or fewer experiences M=4.38). This particular category of survey items was intended to measure the extent to which cadets initiated action and motivated other members of the organization. Cadets who were more experienced in leadership prior to college apparently motivated other cadets more often than those cadets who came to college with less leadership experience prior to college. Eta squared was calculated to be .01. Leadership experience prior to college had a small effect on Producer orientation behaviors.

Cadets who had participated in four or more leadership experiences prior to college perceived their Facilitator leadership orientation behaviors to be in more frequent practice than cadets who participated in three or fewer leadership experiences prior to college (four or more experiences M=4.39; three or fewer experiences M=4.23). This particular category of items was intended to measure the extent to which cadets facilitated interaction among members of the organization and built consensus within the organization. Cadets who were more experienced in leadership prior to college apparently exercised teamwork behaviors more often than cadets who came to college with less leadership experience prior to college. Eta squared was calculated to be .01. Leadership experience prior to college had a small effect on Facilitator orientation behaviors.

Cadets more experienced in leadership program participation prior to college perceived their Director management orientation behaviors to be in more frequent practice than cadets less experienced in leadership prior to college (four or more experiences M=4.55; three or fewer experiences M=4.36). This factor described behaviors focused on providing structure in the organization. Cadets who were more experienced in leadership prior to college apparently delivered directions to other cadets and used power and influence more frequently than those cadets who came to college with less leadership experience prior to college. Eta squared was calculated to be .01. Leadership experience prior to college had a small effect on Director orientation behaviors.

Other Leadership Experiences at College

Is there a difference in perceived leadership orientation for cadets based upon the number of other leadership experiences, those in addition to the Corps of Cadets, in which cadets participated while attending Texas A&M University? Comparative responses of cadets based upon participation in other leadership experiences at college were examined for differences in perceived leadership orientation. The ANOVA procedure compared responses from cadets based on participation in other leadership experiences while at Texas A&M University. The results from examining the data based on other college leadership experiences are illustrated in Table 26. When examining the responses of cadets in regards to participation in other college leadership experiences, ANOVA procedures showed significant differences in six of the eight leadership orientation behaviors of the Competing Values Instrument. These differences

TABLE 26.

Comparison of Cadets Based Upon Participation in Other College Leadership Experiences

Factor	Source of Variance	SS	df	MS	F	P
Innovator	Between Groups	7.11	2	3.55	6.43	.01*
	Within Groups	278.86	505	.55		
Coordinator	Between Groups	6.85	2	3.42	6.14	.01*
	Within Groups	281.76	505	.56		
Broker	Between Groups	13.91	2	6.96	7.44	.01*
	Within Groups	472.18	505	.94		
Monitor	Between Groups	1.42	2	.71	.57	.57
	Within Groups	630.23	505	1.25		
Producer	Between Groups	5.01	2	2.51	3.37	.04*
	Within Groups	376.14	505	.75		
Facilitator	Between Groups	2.07	2	1.03	1.49	.23
	Within Groups	349.97	505	.69		
Director	Between Groups	6.95	2	3.48	4.22	.02*
	Within Groups	416.17	505	.82		
Mentor	Between Groups	11.48	2	5.74	5.63	.01*
	Within Groups	514.86	505	1.02		

*Denotes significance at the .05 level.

occurred in the Innovator, Coordinator, Broker, Producer, Director, and Mentor orientations. Further analysis was performed in the orientations where significant differences were found to reveal between which groups the differences occurred. Table 27 lists the findings using the Tukey t test.

When comparing cadets based on their level of participation in other college leadership experiences, the Innovator leadership orientation had a significant F-value. Post hoc testing revealed that in terms of their Innovator orientation behaviors, cadets who participated in four or more other college leadership experiences differed significantly from cadets who did not participate in other college leadership experiences. Cadets who participated in four or more other leadership experiences at Texas A&M University rated survey items in the Innovator orientation category to be in more frequent use than did cadets who did not participate in other leadership activities (4+ leadership experiences M=4.50; no leadership experiences M=4.06). A significant difference was also found between cadets who participated in four or more leadership experiences and those who participated in one to three leadership experiences (4+ leadership experiences M=4.50; 1-3 leadership experiences M=4.24). This factor described behaviors focused on creativity and envisioning change within the organization. Those cadets who have participated in four or more other college leadership experiences apparently exercised creative behaviors more often than cadets who participated in fewer leadership experiences and cadets who chose to participate in no other college leadership experiences. The effect size was .03. Participation in other college leadership experiences had a small effect on Innovator orientation behaviors.

TABLE 27.

Tukey HSD Leadership Orientation Mean Comparison
Based Upon Other College Leadership Experience

Factor	None (N=89)		1-3 Experiences (N=359)		4+ Experiences (N=60)		Comparison Scores	
	M	SD	M	SD	M	SD	F	P
Innovator	4.06_{a}	.90	4.24_{b}	.72	4.50_{ab}	.64	6.43	.01
Coordinator	4.13_{ab}	.90	4.34_{a}	.72	4.56_{b}	.65	6.14	.01
Broker	3.74_{a}	.97	4.00_{b}	.99	4.36_{ab}	.84	7.44	.01
Producer	4.25_{a}	.96	4.44	.85	4.62_{a}	.77	3.37	.04
Director	4.21_{a}	1.05	4.43	.90	4.65_{a}	.73	4.22	.02
Mentor	4.20_{ab}	1.22	4.49_{a}	.97	4.76_{b}	.87	5.63	.01

Note. Means in the same row that share subscripts differ at $p<.05$ in the Tukey honestly significant difference comparison.

When comparing cadets based on their level of participation in other college leadership experiences, the Coordinator management orientation had a significant F-value. Post hoc testing revealed that in terms of their Coordinator orientation behaviors, cadets who participated in one to three other college leadership experiences differed significantly from cadet who did not participate in other college leadership experiences. Cadets who participated in one to three other college leadership experiences at Texas A&M University rated survey items in the Coordinator orientation category to be in more frequent use than did cadets who did not participate in other leadership activities (1-3 leadership experiences M=4.34; no leadership experiences M=4.13). In addition, cadets who participated in four or more other college leadership experiences differed significantly from cadets who did not participate in other college leadership experiences. Cadets who participated in four or more other leadership experiences at Texas A&M University rated survey items in the Coordinator orientation category to be in more frequent use than did those cadets who did not participate in other leadership activities (4+ leadership experiences M=4.56; no leadership experiences M=4.13). This factor described behaviors focused on maintaining structure in the organization. Those cadets who have participated in other college leadership experiences apparently maintained order within the organization more often than cadets who participated in fewer leadership experiences. The effect size was .02. Participation in other college leadership experiences had a small effect on Coordinator orientation behaviors.

When comparing cadets based on their level of participation in other college leadership experiences, the Broker leadership orientation had a significant F-value. Post

hoc testing revealed that in terms of their Broker orientation behaviors, cadets who participated in four or more other college leadership experiences differed significantly from cadets who did not participate in other college leadership experiences. Cadets who participated in four or more other college leadership experiences rated survey items in the Broker orientation category to be in more frequent use than did cadets who did not participate in other leadership activities (4+ leadership experiences M=4.36; no leadership experiences M=3.74). A significant difference was also found between cadets who participated in four or more other leadership experiences and those who participated in one to three other leadership experiences (4+ leadership experiences M=4.36; 1-3 leadership experiences M=4.00). This factor described behaviors focused on acquiring resources and creative problem solving. Apparently, cadets who participated in other college leadership experiences creatively problem solved and worked to acquire resources more frequently than cadets who participated in fewer other college leadership experiences. Again, despite reaching statistical significance, the actual difference in means between groups was small. Eta squared was calculated to be .03. Participation in other college leadership experiences had a small effect on Broker orientation behaviors.

When comparing cadets based on their level of participation in other college leadership experiences, the Producer management orientation had a significant F-value. Post hoc testing revealed that in terms of their Producer orientation behaviors, cadets who participated in four or more other leadership experiences differed significantly from cadets who did not participate in other college leadership experiences. Cadets who participated in four or more other college leadership experiences rated survey items in

the Producer orientation category to be in more frequent use than did cadets who did not participate in other leadership activities (4+ leadership experiences M=4.62; no leadership experiences M=4.25). This factor described behaviors focused on initiating action among and motivating other members of the organization. Cadets who participated in more college leadership experiences apparently motivated other cadets more often than cadets who participated in fewer or no other leadership experiences. Eta squared was calculated to be .01. Participation in other college leadership experiences had a small effect on Producer orientation behaviors.

When comparing cadets based on their level of participation in other college leadership experiences, the Director management orientation had a significant F-value. Post hoc testing determined that in terms of their Director orientation behaviors, cadets who cadets who participated in four or more other leadership experiences differed significantly from cadets who did not participate in other college leadership experiences. Cadets who participated in four or more other college leadership experiences rated survey items in the Director orientation category to be in more frequent use than did cadets who did not participate in other leadership activities (4+ leadership experiences M=4.65; no leadership experiences M=4.21). This factor described behaviors focused on providing structure in the organization. Cadets who participated in four or more other college leadership experiences apparently delivered directions to other cadets and used power and influence more frequently than those cadets who chose not in involve themselves in other leadership experiences during college. Eta squared was calculated to

be .02. Participation in other college leadership experiences had a small effect on Director orientation behaviors.

When comparing cadets based on their level of participation in other college leadership experiences, the Mentor leadership orientation had a significant F-value. Post hoc testing determined that in terms of their Mentor orientation behaviors, cadets who participated in one to three other college leadership experiences differed significantly from cadets who did not participate in other college leadership experiences. Cadets who participated in one to three other college leadership experiences rated survey items in the Mentor orientation category to be in more frequent use than did cadets who did not participate in other leadership activities (1-3 leadership experiences M=4.49; no leadership experiences M=4.20). In addition, cadets who participated in four or more other college leadership experiences differed significantly from cadets who did not participate in other college leadership experiences. Cadets who participated in four or more other college leadership experiences rated survey items in the Mentor orientation category to be in more frequent use than did cadets who did not participate in other leadership activities (4+ leadership experiences M=4.76; no leadership experiences M=4.20). This factor described behaviors focused on demonstrating consideration and support to members of the organization. Cadets who participated in more leadership experiences in college apparently demonstrated consideration and support to others in the organization more frequently than those cadets who participated in fewer leadership experiences or chose not to involve themselves in any other college leadership

experiences. Eta squared was calculated to be .02. Participation in other college leadership experiences had a small effect on Mentor orientation behaviors.

Military Contract Status

Is there a difference in perceived leadership orientation for cadets based on contract status? Comparative responses of cadets based on contract status (military or Drill and Ceremony) were examined for differences in perceived leadership orientation. Table 28 displays the t-test scores of cadets based on contract status. When examining the responses of cadets in regards to contract status, t-tests showed significant differences in six of the eight leadership orientation behaviors of the Competing Values Instrument. These differences occurred in the Coordinator, Broker, Producer, Facilitator, Director, and Mentor orientations.

Coordinator management orientation behaviors were perceived to be in more frequent practice by military cadets than D&C cadets (military cadet M=4.54; D&C M=4.27). This factor described behaviors focused on maintaining structure and stability and enforcing order in the organization. Military cadets apparently exercised Coordinator orientation behaviors more frequently than D&C cadets. Despite reaching statistical significance, the actual difference in means between military and D&C cadets was small. The effect size was calculated to be .02. Contract status had a small effect on Coordinator orientation behaviors.

Military cadets perceived their Broker leadership orientation behaviors to be in more frequent practice than D&C cadets (military M=4.32; D&C M=3.90). This factor described behaviors focused on acquiring resources and creative problem solving.

TABLE 28.

Comparison of Cadets Based Upon Contract Status

Factor	D&C (Non-Military) N=392		Contract (Military) N=116		Comparison Scores	
	M	SD	M	SD	T	P
Innovator	4.21	.79	4.35	.59	-1.72	.09
Coordinator	4.27	.79	4.54	.59	-3.43	.01*
Broker	3.90	1.02	4.32	.74	-4.10	.01*
Monitor	3.54	1.16	3.70	.96	-1.32	.19
Producer	4.38	.91	4.58	.71	-2.12	.04*
Facilitator	4.23	.87	4.41	.68	-2.03	.04*
Director	4.36	.96	4.60	.70	-2.53	.01*
Mentor	4.37	1.08	4.80	.69	-4.00	.01*

*Indicates significance at the .05 level.

Military cadets apparently exercised Broker orientation behaviors more frequently than D&C cadets. Eta squared was calculated to be .03. Contract status had a small effect on Broker orientation behaviors.

Producer management orientation behaviors were perceived to be in more frequent practice by military cadets than D&C cadets (military cadet M=4.58; D&C M=4.38). This factor described behaviors focused on initiating action and motivating other members of the organization. Military cadets apparently motivated other members of the organization more often than D&C cadets. Eta squared was calculated to be .01. Contract status had a small effect on Producer orientation behaviors.

Military cadets perceived their Facilitator leadership orientation behaviors to be in more frequent practice than D&C cadets (military cadet M=4.41; D&C cadet M=4.23). This factor described behaviors focused on facilitating interaction among members of the organization and building consensus within the organization. Military cadets apparently exercised teamwork behaviors more often than D&C cadets. Eta squared was calculated to be .01. Contract status had a small effect on Facilitator orientation behaviors.

Director management orientation behaviors were perceived to be in more frequent practice by military cadets than D&C cadets (military cadet M=4.60; D&C cadet M=4.36). This factor described behaviors focused on providing structure in the organization. Military cadets apparently delivered directions to others in the organization and used power and influence more frequently than D&C cadets. Eta squared was calculated to be .01. Contract status had a small effect on Director orientation behaviors.

Military cadets perceived their Mentor leadership orientation behaviors to be in more frequent practice than D&C cadets (military cadet M=4.80; D&C cadet M=4.37). This factor described behaviors focused on acquiring resources and creative problem solving. Military cadets apparently exercised mentor behaviors more frequently than D&C cadets. Eta squared was calculated to be .03. Contract status had a small effect on Mentor orientation behaviors.

Current Level of Corps Leadership Involvement

Is there a difference in perceived leadership orientation for cadets based on the level of leadership involvement? Do those in major positions of leadership (Commanders, Corps Staff Members, Executive Officers, First Sergeants, and Drum Majors) differ in their perceived leadership orientation from those in minor positions of leadership (Assistant Squad Leaders, Major Unit Staff Members, Minor Unit Staff Members, Platoon or Flight Leaders, Platoon or Flight Sergeants, Sergeant Majors, Squad Leaders, Unit Chains, and Other Positions) and those not in any formal position of leadership within the Corps of Cadets (general members)? Comparative responses of cadets based upon level of leadership involvement were examined for differences in perceived leadership orientation. The ANOVA procedure compared responses from cadets based on level of leadership involvement in the Corps of Cadets. Table 29 shows the F-scores used to determine if any differences existed between cadets who were major leaders, minor leaders, and general members in the Corps of Cadets. When examining the responses of cadets in regards to level of leadership involvement, ANOVA procedures showed significant differences in all eight leadership orientations of the

TABLE 29.

Comparison of Cadets Based Upon Level of Corps Leadership Involvement

Factor	Source of Variance	SS	df	MS	F	P
Innovator	Between Groups	9.87	2	4.94	9.03	.01*
	Within Groups	276.10	505	.55		
Coordinator	Between Groups	14.46	2	7.23	13.32	.01*
	Within Groups	274.15	505	.54		
Broker	Between Groups	38.84	2	19.42	21.93	.01*
	Within Groups	447.25	505	.89		
Monitor	Between Groups	11.70	2	5.85	4.77	.01*
	Within Groups	619.95	505	1.23		
Producer	Between Groups	12.12	2	6.06	8.30	.01*
	Within Groups	369.03	505	.73		
Facilitator	Between Groups	4.35	2	2.18	3.16	.04*
	Within Groups	347.68	505	.69		
Director	Between Groups	26.58	2	13.29	16.93	.01*
	Within Groups	396.54	505	.79		
Mentor	Between Groups	26.97	2	13.49	13.64	.01*
	Within Groups	499.37	505	.99		

*Denotes significance at the .05 level.

Competing Values Instrument. These differences occurred in the Innovator, Coordinator, Broker, Monitor, Producer, Facilitator, Director, and Mentor orientations. Further analysis was performed in the orientations where significant differences were found to reveal between which groups the differences occurred. Table 30 lists the findings using the Tukey t test.

When comparing cadets based on their level of leadership involvement in the Corps of Cadets, the Innovator leadership orientation had a significant F-value. Post hoc testing revealed that in terms of their Innovator orientation behaviors, cadets in minor positions of leadership differed significantly from cadets in no formal positions of leadership. Cadets in minor positions of leadership rated survey items in the Innovator orientation category to be in more frequent use than did cadets who held no position at all (minor leaders M=4.32; general members M=4.01). In addition, cadets in major positions of leadership differed significantly from cadets in no formal positions of leadership. Cadets in major positions of leadership rated survey items in the Innovator orientation category to be in more frequent use than did cadets who held no position at all (major leaders M=4.39; general members M=4.01). This factor described behavior focused on creativity and envisioning change for the organization. Cadets in major and minor positions of leadership within the Corps of Cadets apparently exercised behaviors welcoming of change more often than cadets in no formal positions of leadership. The effect size was .03. Level of leadership position had a small effect on Innovator orientation behaviors.

TABLE 30.

Tukey HSD Leadership Orientation Mean Comparison
Based Upon Level of Corps Leadership Involvement

Factor	No Position (N=132)		Minor Position (N=336)		Major Position (N=40)		Comparison Scores	
	M	SD	M	SD	M	SD	F	P
Innovator	4.01_{ab}	.86	4.32_{a}	.71	4.39_{b}	.54	9.03	.01
Coordinator	4.07_{ab}	.85	4.39_{a}	.70	4.67_{b}	.66	13.32	.01
Broker	3.56_{ab}	1.17	4.11_{a}	.85	4.48_{b}	.79	21.93	.01
Monitor	3.40_{a}	1.26	3.60	1.06	4.01_{a}	.97	4.77	.01
Producer	4.17_{ab}	.97	4.51_{a}	.82	4.59_{b}	.74	8.30	.01
Facilitator	4.14	1.01	4.30	.77	4.48	.63	3.16	.04
Director	4.04_{ab}	1.07	4.52_{a}	.82	4.74_{b}	.70	16.93	.01
Mentor	4.09_{ab}	1.31	4.59_{a}	.85	4.74_{b}	.91	13.64	.01

Note. Means in the same row that share subscripts differ at $p<.05$ in the Tukey honestly significant difference comparison.

When comparing cadets based on their level of leadership involvement in the Corps of Cadets, the Coordinator management orientation had a significant F-value. Post hoc testing revealed that in terms of their Coordinator orientation behaviors, cadets in minor positions of leadership differed significantly from cadets in no formal positions of leadership. Cadets in minor positions of leadership rated survey items in the Coordinator orientation category to be in more frequent use than did cadets who held no formal positions of leadership (minor leaders M=4.39; general members M=4.07). In addition, cadets in major positions of leadership differed significantly from cadets in no formal positions of leadership. Cadets in major positions of leadership rated survey items in the Coordinator orientation category to be in more frequent use than did cadets who held no formal position of leadership (major leaders M=4.67; general members M=4.07). This factor described behaviors focused on maintaining structure in the organization. Cadets in major and minor positions of leadership within the Corps of Cadets apparently exercised behaviors that maintained structure in the organization more often than cadets in no formal positions of leadership. The effect size was .05. Level of leadership position had a small effect on Coordinator orientation behaviors.

When comparing cadets based on their level of leadership involvement in the Corps of Cadets, the Broker leadership orientation had a significant F-value. Post hoc testing revealed that in terms of their Broker orientation behaviors, cadets in minor positions of leadership differed significantly from cadets who held no formal position of leadership. Cadets in minor positions of leadership rated survey items in the Broker orientation category to be in more frequent use than did cadets who held no position at

all (minor leaders M=4.11; general members M=3.56). In addition, cadets in major positions of leadership differed significantly from cadets who held no formal position. Cadets in major positions rated survey items in the Broker orientation category to be in more frequent use than did cadets in no positions (major leaders M=4.48; general members M=3.56). This factor described behaviors focused on acquiring resources and creative problem solving. Cadets in major and minor positions of leadership within the Corps of Cadets apparently exercised Broker orientation behaviors in the organization more often than cadets in no formal positions of leadership. The effect size was .08. Level of leadership position had a small effect on Broker orientation behaviors.

When comparing cadets based on their level of leadership involvement in the Corps of Cadets, the Monitor management orientation had a significant F-value. Post hoc testing revealed that in terms of their Monitor orientation behaviors, cadets in no formal position of leadership differed significantly from cadets in major positions of leadership. Cadets in major positions of leadership rated survey items in the Monitor orientation category to be in more frequent use than did cadets who were in no formal position of leadership (major leaders M=4.01; general members M=3.40). This factor described behaviors focused on collecting information. Cadets in major positions of leadership within the Corps of Cadets apparently exercised Monitor orientation behaviors more often than those cadets in no formal positions of leadership. The effect size was .02. Level of leadership position had a small effect on Monitor orientation behaviors.

When comparing cadets based on their level of leadership involvement in the Corps of Cadets, the Producer management orientation had a significant F-value. Post hoc testing revealed that in terms of their Producer orientation behaviors, cadets in minor positions of leadership differed significantly from cadets who held no formal position of leadership. Cadets in minor positions of leadership rated survey items in the Producer orientation category to be in more frequent use than did cadets who held no leadership position at all (minor leaders M=4.51, general members M=4.17). In addition, cadets in major positions of leadership differed significantly from cadets in no formal leadership positions. Cadets in major leadership positions rated survey items in the Producer orientation category to be in more frequent use than did cadets in not positions of leadership (major leaders M=4.59; general members M=4.17). This factor described behaviors focused on initiating action among members of the organization and motivating other members of the organization. Cadets in major and minor positions of leadership within the Corps of Cadets apparently exercised Producer orientation behaviors in the organization more often than cadets in no formal position of leadership. The effect size was .03. Level of leadership position had a small effect on Producer orientation behaviors.

When comparing cadets based on their level of leadership involvement in the Corps of Cadets, the Facilitator leadership orientation had a significant F-value. Post hoc testing revealed that in terms of their Facilitator orientation behaviors, no group differed significantly from another.

When comparing cadets based on their level of leadership involvement in the Corps of Cadets, the Director management orientation had a significant F-value. Post hoc testing revealed that in terms of their Director orientation behaviors, cadets in minor positions of leadership differed significantly from cadets in no position of leadership. Cadets in minor positions of leadership rated survey items in the Director orientation category to be in more frequent use than did cadets who held no formal position at all (minor leaders M=4.52, general members M=4.04). In addition, cadets in major leadership positions differed significantly from cadets in no leadership positions. Cadets in major positions of leadership rated survey items in the Director orientation category to be in more frequent use than did cadets in no formal leadership positions (major leaders M=4.74; general members M=4.04). This factor described behaviors focused on providing structure in the organization. Major and minor leaders in the Corps of Cadets apparently delivered directions to other cadets and used power and influence more frequently than those cadets who are in no formal positions of leadership. The effect size was .06. Level of leadership position had a small effect on Director orientation behaviors.

When comparing cadets based on their level of leadership involvement in the Corps of Cadets, the Mentor leadership orientation had a significant F-value. Post hoc testing revealed that in terms of their Mentor orientation behaviors, cadets in minor positions of leadership differed significantly from cadets in no formal positions of leadership. Cadets in minor positions of leadership rated survey items in the Mentor orientation category to be in more frequent use than did cadets who held no formal

leadership position at all (minor leaders M=4.59, general members M=4.09). In addition, cadets in major leadership positions differed significantly from cadets in no formal positions of leadership. Cadets in major positions of leadership rated survey items in the Mentor orientation category to be in more frequent use than did cadets in no formal positions of leadership (major leaders M=4.74; general members M=4.09). This factor described behaviors focused on demonstrating consideration and support to others in the organization. Major and minor leaders in the Corps of Cadets apparently practiced Mentor orientation behaviors more frequently than cadets in no formal positions of leadership. The effect size was .05. Level of leadership position had a small effect on Mentor orientation behaviors.

Service Affiliation

Is there a difference in perceived leadership orientation for military cadets who have U.S. Air Force, U.S. Army or U.S. Navy contracts? Comparative responses of military cadets based upon service affiliation were examined for differences in perceived leadership orientation. The ANOVA procedure compared responses from military cadets based upon service (U.S. Armed Services) affiliation. The results from examining the data based on service affiliation are illustrated in Table 31. When examining the responses of military cadets in regards to service affiliation, ANOVA procedures showed significant differences in two of the eight leadership orientation behaviors of the Competing Values Instrument. These differences occurred in the Innovator and Monitor orientations. Further analysis was performed in the orientations where significant differences were found to reveal between which groups the differences occurred.

TABLE 31.

Comparison of Military Cadets Based Upon Service Affiliation

Factor	Source of Variance	SS	df	MS	F	P
Innovator	Between Groups	2.08	2	1.04	3.07	.05*
	Within Groups	38.27	113	.34		
Coordinator	Between Groups	.43	2	.21	.62	.54
	Within Groups	39.31	113	.35		
Broker	Between Groups	.65	2	.32	.59	.56
	Within Groups	61.89	113	.55		
Monitor	Between Groups	9.43	2	4.72	5.47	.01*
	Within Groups	97.38	113	.86		
Producer	Between Groups	.74	2	.37	.74	.48
	Within Groups	56.56	113	.50		
Facilitator	Between Groups	.26	2	.13	.27	.77
	Within Groups	53.69	113	.48		
Director	Between Groups	.73	2	.37	.76	.47
	Within Groups	54.89	113	.49		
Mentor	Between Groups	2.67	2	1.34	2.93	.06
	Within Groups	51.44	113	.46		

*Denotes significance at the .05 level.

Table 32 lists the findings using the Tukey t test.

When comparing military cadets based on their service affiliation, the Innovator leadership orientation had a significant F-value. Post hoc testing revealed that in terms of their Innovator orientation behaviors, Army military cadets differed significantly from Navy military cadets. Army military cadets at Texas A&M University rated survey items in the Innovator orientation category to be in more frequent practice than did Navy military cadets (Army M=4.53; Navy M=4.20). This factor described behaviors focused on creativity and imagining change within the organization. Army military cadets apparently exercised creative behaviors more often than Navy military cadets. The effect size was .05. Service affiliation had a small effect on Innovator orientation behaviors.

When comparing military cadets based on their service affiliation, the Monitor leadership orientation had a significant F-value. Post hoc testing revealed that in terms of their Monitor orientation behaviors, Air Force military cadets differed significantly from Navy military cadets. Air Force military cadets at Texas A&M University rated survey items in the Monitor orientation category to be in more frequent practice than did Navy military cadets (Air Force M=3.99; Navy M=3.33). This factor described behaviors focused on collecting information. Air Force military cadets apparently exercised Monitor orientation behaviors more often than Navy military cadets. The effect size was .09. Service affiliation had a small effect on Monitor orientation behaviors.

Finally, is there a difference in perceived leadership orientation for D&C cadets based on service affiliation? Comparative responses of non-military cadets based upon service affiliation were examined for differences in perceived leadership orientation. The

TABLE 32.

Tukey HSD Leadership Orientation Mean Comparison
Based Upon Military Service Affiliation

Factor	Air Force (N=41)		Army (N=34)		Navy (N=41)		Comparison Scores	
	M	SD	M	SD	M	SD	F	P
Innovator	4.35	.59	4.53_a	.54	4.20_a	.61	3.07	.05
Monitor	3.99_a	.93	3.79	.96	3.33_a	.89	5.47	.01

Note. Means in the same row that share subscripts differ at $p<.05$ in the Tukey honestly significant difference comparison.

ANOVA procedure compared responses from D&C cadets based upon service (U.S. Armed Services) affiliation. The results from examining the data based on service affiliation are illustrated in Table 33.

When examining the responses of non-military cadets in regards to service affiliation, ANOVA procedures showed no significant differences in any of the eight leadership orientation behaviors of the Competing Values Instrument. Non-military cadets' service affiliations were assigned prior to the start of their first year in the Corps of Cadets. Service affiliation aided in administration and organization of the Corps of Cadets and was in name only without any implied commitment to a U.S. Armed Services branch.

Summary

Chapter IV reported the findings received from the modified version of the Competing Values Instrument when applied to cadets in the Corps of Cadets, a college student organization, at Texas A&M University. The first section of the chapter addressed the issues of valid and reliable uses of the survey instrument with this population. A panel of leadership experts and a pilot study established validity of the instrument. Factor analysis procedures helped establish the factor structure for the survey instrument. Statistical procedures established a reliability range of .71 to .90 for the eight factors.

The second section examined the orientation behaviors perceived to be the most frequently used by leaders and members in the Corps of Cadets. For those cadets in no formal positions of leadership, the Producer management orientation behaviors were

TABLE 33.

Comparison of Drill & Ceremony Cadets Based Upon Service Affiliation

Factor	Source of Variance	SS	df	MS	F	P
Innovator	Between Groups	1.37	2	.68	1.07	.35
	Within Groups	202.85	317	.64		
Coordinator	Between Groups	.50	2	.25	.40	.67
	Within Groups	194.12	317	.61		
Broker	Between Groups	.05	2	.02	.02	.98
	Within Groups	346.07	317	1.09		
Monitor	Between Groups	4.20	2	2.10	1.67	.19
	Within Groups	398.28	317	1.26		
Producer	Between Groups	.44	2	.22	.27	.76
	Within Groups	254.97	317	.80		
Facilitator	Between Groups	3.11	2	1.56	2.04	.13
	Within Groups	242.12	317	.76		
Director	Between Groups	.29	2	.15	.15	.86
	Within Groups	303.29	317	.96		
Mentor	Between Groups	.97	2	.49	.39	.68
	Within Groups	391.82	317	1.24		

Significance at the .05 level.

perceived to be the most frequent practiced behaviors. For cadets in minor positions of leadership and cadets in major positions of leadership, the Mentor leadership behaviors were perceived to be the most frequently practiced behaviors. Also examined were the leadership orientation behaviors perceived to be the most infrequently used by leaders and members of the Corps of Cadets. For general member cadets, minor leader cadets, and major leader cadets, Monitor management orientation behaviors were perceived to be the most infrequently used category of orientation behaviors.

The third section examined the orientation behaviors cadets believed should be the most frequently used by leaders and members in the Corps of Cadets. Cadets in no formal position of leadership believed that the Producer management orientation behaviors should be the most frequently practiced behaviors. Cadets in minor and major positions of leadership believed that the Director management orientation behaviors should be the most frequently practiced behaviors. Also examined were the orientation behaviors cadets believed should be the most infrequently practiced. General members, minor leaders, and major leaders alike believed that Monitor management behaviors should be the most infrequently used category of orientation behaviors. Finally examined in this section were the disparities between self-perceptions about current practices and beliefs about what should be practiced for the three groups of cadets. The greatest disparity for general members was found to be in the category of behaviors called Broker orientation behaviors. For minor leaders, the greatest disparity was found in Director orientation behaviors. For major leaders, the greatest disparity was found in Broker orientation behaviors.

The fourth section examined how cadets' leadership orientation perceptions were associated with academic classification, Corps classification, gender, race/ethnicity, age, academic field of study, leadership experience prior to Texas A&M University, other current TAMU leadership experience, contract status, the level of Corps leadership position, and service affiliation.

Statistical analysis showed that significant differences existed among five of the eight orientation behavior categories when comparing cadets based on academic classification. Results of Coordinator orientation behavior survey items had academic juniors perceiving these behaviors to be more frequently in practice than academic freshmen. Findings of Broker orientation behavior survey items found academic seniors, juniors, and sophomores perceiving these behaviors to be more frequently practiced than academic freshmen. Academic juniors also perceived Coordinator orientation behaviors to be more frequently practiced than academic sophomores. Post hoc testing showed no significant differences for Producer orientation behavior survey items in existence among academic classifications. Results of Director orientation behavior survey items had academic juniors and sophomores perceiving these behaviors to be more frequently practiced than academic freshmen. Findings of Mentor orientation behavior survey items found academic seniors, juniors, and sophomores perceiving these behaviors to be more frequently practiced than academic freshmen. Academic seniors and juniors also perceived Mentor orientation behavior survey items to be more frequently practiced than academic sophomores. Academic classification had a small effect on Coordinator, Broker, Producer, Director, and Mentor orientation behaviors.

According to Corps classification, statistical analysis showed that significant differences existed in six of eight orientation behavior categories according to Corps classification. Findings of Innovator orientation behavior survey items had junior cadets perceiving these behaviors to be more frequently practiced than freshman cadets. Results of Coordinator orientation behavior survey items found junior cadets perceiving these behaviors to be in more frequent practice than freshman cadets. Findings of Broker orientation behavior survey items had senior, junior, and sophomore cadets perceiving these behaviors to be more frequently used than freshman cadets. Results of Producer orientation behavior survey items found sophomore cadets perceiving these behaviors to be in more frequent practice than freshman cadets and senior cadets perceiving the same behaviors to be more frequently practiced than sophomore cadets. Findings of Director orientation behavior survey items had junior and sophomore cadets perceiving these behaviors to be in more frequent practice that freshman cadets. Results of Mentor orientation behavior survey items found senior, junior, and sophomore cadets perceiving these behaviors to be more frequently practiced than freshman cadets and juniors perceiving the same actions to be performed more frequently than sophomore cadets. Corps classification had a small effect on Innovator, Coordinator, Broker, Producer, Director, and Mentor orientation behaviors.

Statistical analysis showed that significant differences existed among one of the eight orientation behaviors when comparing cadets based on gender. Findings of Innovator orientation behavior survey items had male cadets perceiving behaviors of this

particular category to be in more frequent practice than female cadets. Gender had a small effect on Innovator orientation behaviors.

According to race, statistical analysis showed no significant differences in orientation behaviors according to race.

Statistical analysis showed that significant differences existed among five of the eight orientation behaviors when comparing cadets according to age. Findings of Innovator orientation behavior survey items had cadets aged 20 or older perceiving behaviors of this particular category to be in more frequent practice than cadets aged 17-19. Results of Coordinator orientation behavior survey items found cadets 20 or older perceiving these behaviors to be more frequently practiced than cadets aged 17-19. Findings of Broker orientation behavior survey items had cadets 20 or older perceiving behaviors in this category to be in more frequent practice than cadets aged 17-19. Results of Director orientation behavior survey items found cadets 20 or older perceiving these behaviors to be in more frequent practice than cadets aged 17-19. Findings of Mentor orientation behavior survey items had cadets 20 or older perceiving behaviors in this category to be more frequently practiced that cadets aged 17-19. Age had a small effect on Innovator, Coordinator, Broker, Director, and Mentor orientation behaviors.

According to academic field of study, statistical analysis showed that no significant differences existed among orientation behaviors according to academic field of study.

Statistical analysis showed that significant differences existed among four of the eight orientation behaviors when comparing cadets based on the number of leadership experiences prior to college. Results of Innovator orientation survey items found cadets who were involved in four or more leadership experiences prior to college perceiving behaviors in this category to be more frequently practiced than cadets who were involved in fewer experiences prior to college. Findings of Producer orientation survey items had cadets who were involved in four or more leadership experiences prior to college perceiving behaviors in this category to be in more frequent practice than cadets who were involved in fewer experiences prior to college. Results of Facilitator orientation survey items found cadets who were involved in four or more leadership experiences prior to college perceiving behaviors in this category to be more frequently practiced than cadets who were involved in fewer experiences prior to college. Findings of Director orientation survey items had cadets who were involved in four or more leadership experiences prior to college perceiving behaviors in this category to be in more frequent practice than cadets who were involved in fewer experiences prior to college. Prior leadership experience had a small effect on Innovator, Producer, Facilitator, and Director orientation behaviors.

According to cadet involvement in other college leadership experiences, significance differences existed in six of the eight orientation behaviors. Results of Innovator orientation survey items found cadets involved in four or more other college leadership experiences perceiving the practice of behaviors in this category to be more frequent than cadets who were involved in no other college leadership experiences. Also,

cadets involved in four or more other college leadership experiences perceived the practice of Innovator behavior to be at a more frequent rate than cadets involved in one to three other college experiences. Findings of Coordinator orientation survey items had cadets involved in four or more and one to three other college experiences perceiving the practice of behaviors in this category to be more frequent than cadets who were not involved in any other college leadership experiences. Results of Broker orientation survey items found cadets involved in four or more other leadership experiences perceiving the practice of behaviors in this category to be more frequent than cadets who were involved in no other college leadership experiences. In addition, cadets involved in four or more other college leadership experiences perceived practices of Broker orientation behaviors to be at a rate more frequent than cadets involved in one to three other college leadership experiences. Findings of Producer orientation survey items had cadets involved in four or more other leadership experiences perceiving the practice of behaviors in this category to be more frequent than cadets who were involved in no other college leadership experiences. Results of Director orientation survey items found cadets involved in four or more other leadership experiences perceiving the practice of behaviors in this category to be more frequent than cadets who were involved in no other college leadership experiences. Findings of Mentor orientation survey items had cadets involved in four or more other leadership experiences and one to three other experiences perceiving the practice of behaviors in this category to be more frequent than cadets who were involved in no other college leadership experiences. Participation in other college

leadership experiences had a small effect on Innovator, Coordinator, Broker, Producer, Director, and Mentor orientation behaviors.

Statistical analysis showed that significant differences existed among six of the eight orientation behaviors when comparing cadets based on contract status. Results of Coordinator orientation survey items found military cadets perceiving the practice of behaviors in this category to be at a more frequent rate than non-military cadets. Findings of Broker orientation survey items had military cadets perceiving the practice of behaviors in this category to be at a rate more frequent than non-military cadets. Results of Producer orientation survey items found military cadets perceiving the practice of behaviors in this category to be at a more frequent rate than non-military cadets. Findings of Facilitator orientation survey items had military cadets perceiving behaviors in this category to be practiced more frequently than non-military cadets. Results of Director orientation survey items found military cadets perceiving behaviors in this category to be practiced more frequently than non-military cadets. Findings of Mentor orientation survey items had military cadets perceiving behaviors in this category to be practiced at a rate more frequent than non-military cadets. Contract status had a small effect on Coordinator, Broker, Producer, Facilitator, Director, and Mentor orientation behaviors.

According to the level of leadership involvement in the Corps of Cadets, significant differences existed in all eight orientation behaviors. Results of Innovator orientation survey items found cadets in major and minor positions of leadership perceiving behaviors in this category to be practiced more frequently than general

member cadets. Findings of Coordinator orientation survey items had cadets in major and minor leadership positions perceiving behaviors in this category to be practiced at a rate more frequent than cadets who held no formal positions of leadership within the Corps of Cadets. Results of Broker orientation survey items found cadets in major and minor position of leadership perceiving behaviors in this category more frequently practiced than general member cadets. Findings of Monitor orientation survey items had cadets in major leadership positions perceiving behaviors in this category practiced more frequently than cadets who held no formal positions of leadership within the Corps of Cadets. Results of Producer orientation survey items found cadets in major and minor positions of leadership perceiving behaviors in this category more frequently in practice than general member cadets. Post hoc testing found no significance between group means for Facilitator orientation behaviors. Results of Director orientation survey items found cadets in major and minor positions of leadership perceiving behaviors in this category more frequently than cadets who held no formal positions of leadership within the Corps of Cadets. Findings of Mentor orientation survey items had cadets in major and minor leadership positions perceiving behaviors in this category to be more frequently practiced than general member cadets. Level of leadership position had a small effect on Innovator, Coordinator, Broker, Monitor, Producer, Facilitator, Director, and Mentor orientation behaviors.

Statistical analysis showed that significant differences existed in two of the eight orientation behaviors when comparing military cadets based on service affiliation. Results of Innovator orientation survey items found Army military cadets perceiving

behaviors in this category to be practiced more frequently than Navy military cadets. Findings of Monitor orientation survey items had Air Force military cadets perceiving behaviors in this category to be practiced at a rate more frequent than Navy military cadets. Military service affiliation had a small effect on Innovator and Monitor orientation behaviors. Statistical analysis also showed that no significant differences existed in any orientation behavior when comparing non-military cadets according to service affiliation.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The final chapter included a brief introduction and summary of the research study as well as conclusions and implications drawn from the results. Limitations were discussed and recommendations for further research concluded the chapter.

Introduction and Summary of the Study

Since the founding of Texas A&M University, the Corps of Cadets has been a distinctive source of many of the institution's traditions and has commanded a notable campus presence and role in student life. While historically linked to the land-grant nature of the institution itself, the contemporary responsibility of the Corps of Cadets lay both in the college student organization's espoused intent to promote leadership development in those who call themselves members and leaders, and in the organizational mission to assist in personal leadership growth for both civilian and military benefit.

This research project's primary purpose was to examine the perceived leadership orientations of student leaders and general members affiliated with the Corps of Cadets at Texas A&M University. Study of college student organization members and the impact of involvement on student participants may assist in discovery of support that suggests such participation affects those involved. In addition, this research study sought to address an assessment and evaluation deficiency within the college student organization and provide a framework for future research. Reviewing the literature concerning college student leadership revealed failure among researchers to examine

student perceptions of their own leadership behaviors. Previous study had largely focused on two areas: perceptions of how positional leaders had performed as the primary leaders of their respective organizations, and peers' perceptions about the positional leaders' approaches to and practices regarding leadership. None examined both leaders' and members' self-assessments of their own respective leadership behaviors and practices within the contexts and settings of their student organizations. Such neglect is significant since leadership is exhibited multi-directionally among all members of an organization. All leadership within the student organization is relevant, meaningful, and educationally important. The literature review also helped isolate many of the purposes of college student organizations. They are accepted as means to facilitate community building on campus. College student organizations are credited with teaching student participants self-awareness of strengths and weaknesses in the social context of a highly diverse college or university campus. They are also considered to function in the important role of leadership education. Additionally, student organizations are understood to serve as a process toward helping prepare college graduates for the practice of leadership in society.

How did cadets perceive their performance of leadership roles? What leadership behaviors were perceived to be in frequent use by leaders and members of the Corps of Cadets? What leadership behaviors did they think should be used? Where did disparity exist between current practice and the behaviors cadets believed should be practiced? Was leadership or management the more dominant orientation of members and leaders

of the Corps of Cadets? In order to begin to answer these questions, it was necessary to adapt an instrument that would measure perceived leadership orientations of cadets.

The Competing Values Instrument (Quinn, 1988) was selected due to its non-prescriptive nature and integrative treatment of leadership. Not focused on leadership traits, the instrument seemed to systematically organize leadership in a way Northouse (2001) might appreciate as an example of a "style approach to leadership" in that the survey instrument supported a structure for understanding leadership behavior in a "broad way" by "describing the major components" of several leadership behaviors (p. 43). The instrument and accompanying theoretical framework fit well with the research project as each focused primarily on the nature of leadership. The 32-item survey instrument incorporated eight separate factors, which dealt with managerial-leadership role orientations often practiced by leaders and members of effective organizations. The eight factors were titled the Director, Producer, Broker, Innovator, Mentor, Group Facilitator, Monitor, and Coordinator orientations. Following review of the survey instrument by a seven-member panel of leadership experts and pilot testing of the instrument with a group of cadets, the instrument was administered to the sample population.

The survey instrument was distributed to ROTC and SOMS cadets with results examined to establish validity and reliability for the use of the Competing Values Instrument with members of a college student organization. Statistical analysis was conducted to determine if cadets differ in leadership orientation according to academic and Corps classifications, gender, race/ethnicity, age, academic field of study, leadership

experience prior to college, involvement in other college leadership experiences, contract status, level of leadership position with the Corps of Cadets, and service affiliation. The contributions the student organization made to the development of leadership skills was assessed through a better understanding of leaders' and members' perceptions of their tendencies and practices associated with the Corps of Cadets, as a student organization at Texas A&M University.

Conclusions

The following conclusions may be drawn from the results of this study:

1. Based on the results received from factor analysis, the adapted version of the Competing Values Instrument is a valid and reliable instrument for use with members of the Corps of Cadets at Texas A&M University. Factor analysis provided strong evidence of internal validity.

2. While cadets perceive a wide variety of both leadership and management behaviors to be in frequent practice, they believe they should most frequently use a narrow range of leadership and management behaviors. Cadets generally believe that leadership and membership needs in the Corps of Cadets demand management skills and behaviors more so than leadership skills and behaviors. Major and minor leaders and general members believe that traditional, conventional, and conservative leadership orientation behaviors that focused on management practices should dominate the student organization.

3. Disparities exist between current leadership and management practices and beliefs about whether the same leadership and management behaviors should be

practiced for all three leadership levels of cadets. Specifically, significant disparity exists between leadership practice self-perceptions and beliefs that the same leadership behaviors should be practiced by members of the Corps of Cadets.

4. Cadets in major leadership positions practice leadership behaviors more frequently than management behaviors. Cadets in major leadership positions value the practice of management behaviors more so than the practice of leadership practices.

5. Cadets in minor positions of leadership practice management behaviors more frequently than leadership behaviors. Cadets in minor positions of leadership value the practice of management behaviors more so than the practice of leadership behaviors.

6. General members practice management behaviors more frequently than leadership behaviors. General member cadets value the practice of management behaviors more so than the practice of leadership behaviors. General members hold more of an appreciation for leadership behaviors needing to be in practice than cadets in major and minor positions of leadership.

7. The longer a cadet is enrolled at Texas A&M University and a member of the Corps of Cadets, the more frequent his or her practice of leadership and management behaviors becomes. As cadets spend more time in the Corps of Cadets and continue their academic progression, their leadership orientations change and they perceive the practice of leadership and management behaviors to be more frequent. This was consistently found to be the case up to the senior year.

8. Male cadets practice Innovator leadership behaviors more often than female cadets do. The gender difference could be a Type I error.

9. Leadership orientation is not associated with race/ethnicity.

10. Cadets aged 20 and older are more likely to practice leadership and management behaviors more often than younger cadets are. Age may be related to other variables such as academic classification, Corps classification, involvement in other college leadership experiences, contract status, and level of leadership involvement in the Corps of Cadets.

11. Leadership orientation is not associated with academic field of study.

12. Leadership orientation is associated with leadership experience prior to college. The more involved a cadet is in leadership experiences prior to college, the more frequent his or her practice of leadership and management behaviors becomes.

13. Leadership orientation is associated with participation in other college leadership experiences. The more involved a cadet is in leadership experiences at Texas A&M University other than the Corps of Cadets, the more frequent his or her practice of leadership and management behaviors becomes.

14. Leadership orientation is associated with contract status. Military cadets practice leadership and management behaviors more often than non-military cadets do.

15. Leadership orientation is associated with level of leadership position in the Corps of Cadets. The higher the level of leadership position held by a member of the Corps of Cadets, the more frequent his or her practice of leadership and management behaviors becomes.

16. Leadership orientation is associated with service affiliation of military cadets. Army military cadets practice Innovator leadership behaviors more often than Navy

military cadets do. Air Force military cadets practice Monitor management behaviors more often than Navy military cadets do.

17. Leadership orientation is not associated with service affiliation of non-military cadets.

18. The Corps of Cadets has some effect on leadership development.

Discussion and Implications

The study sought to understand the Corps of Cadets, a student organization at Texas A&M University, in a new way. Application of the survey instrument revealed the range of managerial-leadership behavior characteristics among the student organization members. The results implied that not every cadet perceived leadership orientation the same way. While broad-based leadership development programming for all members of the Corps of Cadets currently exists, the findings supported the need for continued attention to leadership education.

Bandura (1977) suggested that observers in group learning environments may learn at a rate faster than the primary performers in the organizations. With this in mind, it was suspected that general members of the Corps of Cadets, those in no formal positions of leadership, may have perceived their leadership orientations to be more complex and varied than the top student leaders of the student organization. This was found not to be the case as major leaders overwhelmingly perceived their leadership behaviors and practices to be in more frequent use as well as more varied and pluralistic. Did those in no leadership positions learn through observing as Bandura (1977) proposed they might? If general members' self-perceptions are believed to be an

indicator of learning then, yes, these non-positional cadets did learn. These same members of the Corps of Cadets perceived leadership orientation differently than others, though no more complex or varied. All members of this student organization appear to have learned about leadership.

As stated previously, until a cadet's senior year, the longer a cadet was enrolled at Texas A&M University and a member of the Corps of Cadets, the more frequent his or her practice of leadership and management behaviors became. Interestingly, senior cadets were neither the most frequent performers of leadership and management behaviors nor significantly different from the other cadets based on both Corps classification and academic classification. Junior cadets appeared to have most often been the highest performers of leadership and management behaviors. This implication is based upon the self-perceived frequencies of items in the survey instrument. Unfortunately, an inference of this particular finding is that senior cadets, those most seasoned and experienced members of the Corps of Cadets, are becoming less engaged in their performance of leadership and management behaviors at a time when they should be performing leadership and management behaviors more frequently.

As previously stated, the higher the level of leadership position held by a member of the Corps of Cadets, the more frequent his or her practice of leadership and management behaviors became. As cadets assumed more involved levels of leadership, their leadership orientations changed and they perceived the practice of leadership and management behaviors to be more frequent. This was consistently found to be the case, as mean scores on all eight leadership orientations confirmed. Those cadets in the major

positions of leadership within the Corps of Cadets appeared to perform all leadership and management behaviors more frequently and were significantly different from those in no formal position of leadership. The major leaders appeared to also perform leadership and management behaviors more frequently than cadets in minor leadership positions. Significant differences also existed between the major and minor leaders. When compared to perceptions of minor leaders and general members of the Corps of Cadets, the primary leaders of the student organization were the most frequent performers of both leadership and management behaviors. When self-perceptions of the frequencies of behaviors were considered in terms of self-beliefs, the findings support Bandura's (1997) theory that the most self-efficacious individuals assume the major or primary leadership positions within organizations.

Whether a cadet was military or non-military in the Corps of Cadets played a significant role in his or her practice of leadership and management behaviors. Military cadets perceived their performance of leadership and management behaviors to be in more frequent practice than non-military cadets. Military cadets were significantly more likely to perceive their practice of leadership and management behaviors to be more frequent than non-military cadets. Again, this implication is based upon the self-perceived frequencies of items in the survey instrument. Unfortunately, an inference of this particular finding is that non-military cadets are becoming less engaged in their performance of leadership and management behaviors.

In examining service affiliation, Army military cadets appeared to practice Innovator leadership behaviors more frequently than Navy military cadets did. Navy

military cadets appeared to practice Monitor management behaviors more infrequently than Air Force military cadets did. Service affiliation did not affect non-military cadets' perceptions of their leadership orientations. There appears to be an absence of any permanent or sustained effect of ROTC leadership education curriculum, to which cadets were introduced during their first two years in the Corps of Cadets, on non-military cadets' leadership orientations. The direct results of the cadet survey supported this since no differences were found for any factor when comparing responses of non-military cadets based on service affiliation.

Results suggest that specific leadership orientations need to be developed further, for cadets to increase the likelihood of their effectiveness within organizations (Whetten & Cameron, 2002). One example in particular lies in the opportunity for cadets to increase their personal competency regarding the practice of Monitor management behavior. The research demonstrated that cadets overwhelmingly rated those particular behaviors to be among the most infrequently practiced behaviors.

Limitations of the Study

Data were obtained from only one source, Texas A&M University, and the results were generalized only to the population from which the sample was drawn. Results of this study apply only to members of the Corps of Cadets at Texas A&M University, as the student organization under study was not representative of the larger undergraduate student community based on gender and race/ethnicity. It is unknown if the leadership orientations of general members and leaders of the Corps of Cadets are similar to cadets at the other five senior military colleges or the U.S. service academies.

This research study was based on respondent-participants' perceptions, and survey results may be skewed to the degree that individuals' perceptions of their own leadership roles may not be completely accurate. Concerning factor analysis procedures used in this research study, some factors, when independently loaded, reassigned individual survey items which varied the weight for three factors.

Effect size calculations must be considered for all findings and conclusions as all showed the strengths of association between the dependent variable and the independent variable to be small. No large effect sizes were found in any cadet response comparison. Possible reasons for the small effects include undetermined influence of variables and the absence of specific outcomes that are indicators of leadership in the Corps of Cadets.

The sample did not accurately reflect the population in five areas of classification, and this may have been a source of bias. Chi square results suggested a military service bias, contract status bias, academic classification bias, Corps classification bias, and academic field of study bias in selection of cadets for participation in the research study. Class sizes, particularly ROTC class sizes, varied greatly. Cadet academic schedule adjustments also affected changes in class size, and some classes were consolidated into larger classes after cluster sample selection commenced and survey administration began. The researcher exercised no control over the number of cadets who attended class on the day the researcher administered the survey instrument. In addition, the researcher exercised no control over the number of cadets who declined to participate in survey completion. Thus, representativeness may have contributed to differences in data and findings.

Recommendations for Student Affairs Administrators as Leadership Educators

Given the research findings, the following recommendations are made in the spirit of the student affairs professional serving an important campus role as a leadership educator, one who often comes in direct contact with the members and leaders of college student organizations.

One of the most valuable insights gained from the research study was that senior members of the student organization do not perceive themselves to be the most frequent practitioners of leadership and management behaviors in the Corps of Cadets. Deliberate attempts to further understand this phenomenon should be undertaken in the hope of quickly reversing this observed perception. The open-ended question included in the survey instrument provided feedback in the form of cadet responses that hint at the phenomenon of leadership disengagement by senior cadets.

Cadets suggested, as evidenced in the qualitative data, that a leadership position shortage may exist within the student organization. Apparently, many perceive that the Corps has too many leaders and not enough leadership positions and opportunities. Another cadet seemed to offer a solution by drawing attention to the need for members of the Corps of Cadets to figuratively, if not at times literally, leave the Corps Quad and area of campus where the Corps dining hall and residence halls are located and seek out positions of leadership in other Texas A&M University student organizations. Student affairs administrators and Corps of Cadets advisors and instructors should collaborate to increase cadet involvement and participation in other student organizations as well. Both

student affairs and the Corps of Cadets should welcome and advise cadets to pursue additional leadership positions off the Quad. Only so many can hold formal leadership positions in the Corps of Cadets. Undoubtedly, many more cadets are qualified for major leadership positions than there are positions. Cadets should be encouraged to put into practice what will ultimately assist them as they strive for success in their student life and professional life. Now is the time to experiment with leadership in an environment where periodic delays and infrequent failures carry low risk and are treated as being expected in a community of learning. All cadets should be encouraged to learn about leadership through involvement and participation in a diverse array of college student organizations.

Equally valuable is the insight that non-military cadets of the Corps of Cadets do not perceive themselves to be as frequent practitioners of leadership and management behaviors as military cadets. This is of particular concern given the fact that non-military cadets vastly outnumber military cadets. Is a military lifestyle for contemporary college students effective in leadership development for a student organization whose members are predominantly planning a civilian professional future? As was the concern with senior cadets, attempts to further understand this particular phenomenon should be undertaken in the hope of reversing this observed perception.

Also learned from the research findings was the valuable insight that a generally perceived belief exists among cadets that leadership and management needs in the student organization demand management skills and behaviors more than leadership behaviors. In light of the increasingly complex world in which we all live, it behooves

all leadership educators, and student affairs professionals in particular, to impress upon students the need for understanding the interdependence of leadership and management. One's ability to practice multiple behaviors over the course of a relatively short period of time is important as one strives to maximize personal effectiveness within the organization. Those who understand the importance of portraying multiple and diverse roles within a single organization stand a higher likelihood of effectiveness in the organization. Cadets' generally held belief that management practices should dominate the student organization demonstrates the importance of the existing leadership education curriculum offered for cadets and the need for future curriculum development focused on the practice of innovative, unconventional, and perhaps more liberal approaches to leadership.

The research findings pertaining to differences in leadership orientation based on the levels of leadership within the student organization reflect a noticeable pattern. Those in higher positions of leadership perceive their performance of leadership and management behaviors to be more frequent. Student affairs administrators should intentionally and deliberately create opportunities to impress upon all members of college student organizations the importance of considering the wide variety of practices associated with leadership. No behavior is more important than another, just as no member of the student organization is more important than another. Gaps between current practice and beliefs about how frequently those same practices should be performed demonstrate that opportunities to increase awareness and learning about leadership exist. Leadership education curriculum development should never cease nor

efforts succumb to complacency. Changing national and world situations demand that attention to leadership evolve and change. Increasingly broadened perceptions of leadership orientations are best.

Finally, determining the perceived leadership orientations of members of a college student organization will also assist in future recruitment, education, and more effective advising of the student members. Understanding the leadership orientations of members of a student organization whose traditions are ingrained and entwined in the traditions of the host institution will have lasting importance as student affairs administrators improve their abilities to direct leadership education on campus. Recognizing that differences in leadership orientation exist among groups of cadets signals the existence of leadership education. Efforts should be increased to promote the student organization as the leadership building opportunity it was intended to be.

Recommendations for Further Research

As stated previously, the noticeable absence of evidence directed toward leadership development as a measured result of college attendance and college student organizational involvement suggests that this is an area of opportunity for additional research. The ambiguity associated with leadership and its development demonstrates further the need for additional study of the topic. In order for colleges and universities to accelerate and increase institutional efforts to prepare graduates for executing leadership behaviors and practices in society, research specific to how college affects students' perceptions of, tendencies toward, and practice of leadership actions should be undertaken with an enthusiastic spirit that recognizes the importance and value of

student learning in college. As such, the following recommendations are made for further research on the topic of college student leadership.

Single-sex or coeducational composition of individual Corps of Cadet outfits and units should be analyzed. Possible association between leadership orientation and the college environmental factor of same-sex or coeducational (gender integrated) living unit should be explored. Despite gender integration of the student organization at Texas A&M University in 1974, some Corps of Cadet outfits and units remain all-male. Some of these same outfits and units confuse the history of the all-male Corps of Cadets as a tradition worthy of retention today, albeit on a scale much smaller than the entire Corps of Cadets. Do differences in leadership orientation perceptions exist based on being a leader or general member of an all-male or integrated unit or outfit?

Future study of leadership orientations and practices of members of college student organizations might also incorporate group size variance as a factor under investigation for possible association with leadership tendencies. Units and outfits vary in total member size. Magnitude or smallness of college student organizations should be included in analysis of leadership. Is leadership orientation associated with size of the college student organization?

Since the Corps of Cadets is one of the oldest college military organizations in the nation and among the oldest and most continuously operated student organizations at Texas A&M University, it would be interesting to learn how its members' perceptions of leadership orientation compare to those members of other large, long-established student

organizations at the institution. How does the Corps of Cadets differ, in terms of perceptions of leadership orientation, from other student organizations?

Quinn, Hildebrandt, Rogers, and Thompson (1991) developed a Competing Values Framework specific to presentational communication department professors. The researchers developed an accompanying instrument to measure communication methods, based the instrument on the personalized theoretical framework they developed, and made both available for faculty members to better understand effective presentation methods for college and university learning environments. Using the methodological steps developed by Quinn et al. (1991), future research could determine if ROTC and service academy instructors share "an implicit framework" (p. 218) for describing managerial-leadership of cadets enrolled at service academies and senior military colleges where full-time college ROTC programs operate.

Borrowing the methodological steps Quinn et al. (1991) devised, future research should encourage a group of successful military instructors to devise a listing of the leadership and management roles military personnel portray. The military instructors would also be asked to devise as complete a listing as possible of the most effective characteristics of military personnel. Textbooks, files, readings traditionally incorporated into military classes, and evaluation forms could be consulted in development of the comprehensive listing. The military instructors would next be asked to match each characteristic with a highly contrasting characteristic included in the listing. They would then be asked to indicate the extent to which a role reflected each characteristic. From these steps would emerge a model for understanding leadership and management and an

evaluation tool for specific use by military instructors and cadets to better understand effective leadership and management in the context of the military. In addition, such a model could help illustrate conflicts or competing values of military life, similar to the Competing Values Framework and the Competing Values Instrument developed by Quinn (1988).

How leadership orientations change over time should be analyzed as well. Future research on the topic of college student leadership of a longitudinal nature could prove to be both fascinating as well as revealing. Following a group of members of the Corps of Cadets over a period of multiple years would provide invaluable information as to how sustainable and enduring college students' leadership orientations are. Do perceptions of leadership orientations change over the course of students' matriculation periods? What about after college? Following a group of cadets after graduation would be equally intriguing.

One final opportunity for future research involved consideration of the cultural change of the Corps of Cadets since the arrival of a new Commandant of the Corps of Cadets. Traditionally, a retired officer of the U.S. military and former student of Texas A&M University holds the distinction and responsibility of chief executive officer of the Corps of Cadets. How do cadets' orientations toward leadership differ according to a newly transitioned Commandant?

It is only through continued efforts to understand college student leadership that institutions of higher education will be better able to meet the needs of society and effectively prepare graduates for leadership performance. Considering how members of

college student organizations perceive leadership presents researchers and student affairs administrators alike with a valuable opportunity to begin to move college student leadership development from anecdote to verifiable support.

REFERENCES

Adams, J. A. (2001). *Keepers of the spirit: The Corps of Cadets at Texas A&M University, 1976-2001*. College Station, TX: Texas A&M University Press.

Adams, T. C., & Keim, M. C. (2000). Leadership practices and effectiveness among Greek student leaders. *College Student Journal, 34*(2), 259-270.

Allen, K. E. (1990). Creating a new agenda for student leadership development. *Campus Activities Programming, 23*(3), 56-61.

Astin, A. W. (1977). *Four critical years: Effects of college on beliefs, attitudes, and knowledge*. San Francisco: Jossey-Bass.

Astin, A. W. (1993). *What matters in college?: Four critical years revisited*. San Francisco: Jossey-Bass.

Ayman, R., Chemers, M. M., & Fiedler, F. (1997). The contingency model of leadership effectiveness: Its levels of analysis. In R. P. Vecchio (Ed.), *Leadership: Understanding the dynamics of power and influence in organizations,* (pp. 351-377). Notre Dame, IN: University of Notre Dame Press.

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman and Company.

Bass, B. M. (1990). *Bass & Stogdill's handbook of leadership: Theory, research, and managerial applications* (3rd ed.). New York: Free Press.

Boatman, S. A. (1999). The leadership audit: A process to enhance the development of student leadership. *NASPA Journal, 37*(1), 325-326.

Bossidy, L., & Charan, R. (2002). *Execution: The discipline of getting things done*. New York: Crown Business.

Brungardt, C. (1996). The making of leaders: A review of the research in leadership development and education. *Journal of Leadership Studies, 3*(3), 81-95.

Brungardt, C., & Crawford, C. B. (1996). A comprehensive approach to assessing leadership studies and programs: Preliminary findings. *The Journal of Leadership Studies, 3*(1), 37-48.

Buckner, J. K., & Williams, M. L. (1995, November). *Reconceptualizing university student leadership development programs: Applying the competing values model*. Paper presented at the meeting of the Speech Communication Association, San Antonio, TX.

Burns, J. S. (1995). Leadership studies: A new partnership between academic departments and students affairs. *NASPA Journal, 32*(4), 242-250.

Cameron, K. S., & Quinn, R. E. (1999). *Diagnosing and changing organizational culture: Based on the competing values framework*. Reading, MA: Addison-Wesley.

Campbell, J. P. (1977). On the nature of organizational effectiveness. In P. S. Goodman & J. M. Pennings (Eds.), *New perspectives on organizational effectiveness,* (pp. 13-55). San Francisco: Jossey-Bass.

Chambers, T. (1992). The development of criteria to evaluate college student leadership programs: A Delphi approach. *Journal of College Student Development, 33*(4), 339-347.

Chambers, T. (1994). Criteria to evaluate student leadership programs: What leadership educators consider important. *NASPA Journal, 31*(3), 225-234.

Chemers, M. M. (1995). Contemporary leadership theory. In J. T. Wren (Ed.), *The leader's companion: Insights on leadership through the ages,* (pp. 83-99). New York: Free Press.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.), Hillsdale, NJ: Lawrence Erlbaum Associates.

Cress, C. M., Astin, H. S., Zimmerman-Oster, K., & Burkhardt, J. C. (2001). Developmental outcomes of college students' involvement in leadership activities. *Journal of College Student Development, 42*(1), 15-27.

Cronin, T. E. (1995). Thinking and learning about leadership. In J. T. Wren (Ed.), *The leader's companion: Insights on leadership through the ages,* (pp. 27-32). New York: Free Press.

Denison, D. R., Hooijberg, R., & Quinn, R. E. (1995). Paradox and performance: Toward a theory of behavioral complexity in managerial leadership. *Organizational Science, 6*(5), 524-540.

Donnithorne, L. R. (1993). *The West Point way of leadership*. New York: Doubleday.

Drath, W. H., & Palus, C. J. (1994). *Making common sense: Leadership as meaning-making in a community of practice*. Greensboro, NC: Center for Creative Leadership.

Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction* (6th ed.). White Plains, NY: Longman.

Goldberg, L. S. (1985). ROTC and the college: A complex relationship. *NASPA Journal, 23*(2), 15-18.

Green, M. F. (1992). Developing effective leaders: Can it be done? *Innovative Higher Education, 17*(1), 57-69.

Gwynne-Thomas, E. H. (1981). *A concise history of education to 1900 A.D.* Lanham, MD: University Press of America.

Healy, M. A. (1996). Community building: A method of keeping balance. *College Student Affairs Journal, 15*(2), 49-57.

Herren, R. V., & Edwards, M. C. (2002). Whence we came: The land-grant tradition—origin, evolution, and implications for the twenty-first century. *Journal of Agricultural Education, 43*(4), 88-98.

Hersey, P., Blanchard, K. H., & Johnson, D. E. (2001). *Management of organizational behavior: Leading human resources* (8th ed.). Upper Saddle River, NJ: Prentice Hall.

Hooijberg, R., & Choi, J. (2000). Which leadership roles matter to whom?: An examination of rater effects on perceptions of effectiveness. *Leadership Quarterly, 11*(3), 341-364.

Kezar, A., & Moriarty, D. (2000). Expanding our understanding of student leadership development: A study exploring gender and ethnic identity. *Journal of College Student Development, 41*(1), 55-69.

Komives, S. R., Lucas, N., & McMahon, T. R. (1998). *Exploring leadership: For college students who want to make a difference*. San Francisco: Jossey-Bass.

Kotter, J. P. (1999). *John P. Kotter on what leaders really do*. Cambridge, MA: Harvard University Press.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*(3), 607-610.

Kuh, G. D. (1993). In their own words: What students learn outside the classroom. *American Educational Research Journal, 30*(2), 277-304.

Lucas, C. J. (1994). *American higher education: A history*. New York: St. Martin's Press.

Malpass, L. F. (1985, Winter). The benefits of ROTC on campus: A president's perspective. *Educational Record, 66*, 15-18.

McCuen, T. L. (1929). Leadership and intelligence. *Education, 50*, 89-95.

McDonald, W. (2002). *Creating campus community: In search of Ernest Boyer's legacy*. San Francisco: Jossey-Bass.

Miller, T. K. (Ed.). (1997). *The CAS book of professional standards in higher education*. Washington, DC: Council for the Advancement of Standards in Higher Education.

Mouritsen, M. M., & Quick, T. M. (1989). A curricular approach to ethical issues in student leadership development. *NASPA Journal, 25*(1), 62-69

Neiberg, M. S. (2000). *Making citizen-soldiers: ROTC and the ideology of American military service*. Cambridge, MA: Harvard University Press.

Northouse, P. G. (1997). *Leadership: Theory and practice*. Thousand Oaks, CA: Sage Publications.

Northouse, P. G. (2001). *Leadership: Theory and practice* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Office of the Commandant. (2001). *Quick facts: Corps of Cadets strength report, TAMU* (08-11-01). College Station, TX: Texas A&M University, Office of the Commandant.

Office of the Commandant. (2004). *Quick facts: Corps of Cadets strength report, TAMU* (01-26-04). College Station, TX: Texas A&M University, Office of the Commandant.

Pascarella, E., & Terenzini, P. (1991). *How college affects students: Results from twenty years of research*. San Francisco: Jossey-Bass.

Paterson, J. W. (2000). *Development of an assessment instrument to determine the development level of student organizations*. Unpublished doctoral dissertation, Texas A&M University, College Station, TX.

Pike, G. R., & Askew, J. W. (1990). The impact of fraternity and sorority membership on academic involvement and learning outcomes. *NASPA Journal, 28*(1), 13-19.

Posner, B. Z., & Brodsky, B. (1992). A leadership development instrument for college students. *Journal of College Student Development, 33*(3), 231-237.

Quinn, R. E. (1984). Applying the competing values approach to leadership: Toward an integrative framework. In J. G. Hunt, R. Stewart, C. Schriesheim, & D. Hosking (Eds.), *Managers and leaders: An international perspective* (pp. 10-27). New York: Pergamon.

Quinn, R. E. (1988). *Beyond rational management: Mastering the paradoxes and*

competing demands of high performance. San Francisco: Jossey-Bass.

Quinn, R. E., Faerman, S. R., Thompson, M. P., & McGrath, M. R. (1990). *Becoming a master manager: A competency framework*. New York: Wiley.

Quinn, R. E., Hildebrandt, H. W., Rogers, P. S., & Thompson, M. P. (1991). A competing values framework for analyzing presentational communication in management contexts. *The Journal of Business Communication, 28*(3), 213-232.

Quinn, R. E., & McGrath, M. R. (1982). Moving beyond the single-solution perspective: The competing values approach as a diagnostic tool. *The Journal of Applied Behavioral Sciences, 18*(4), 463-472.

Quinn, R. E., & Rohrbaugh, J. (1981). A competing values approach to organizational effectiveness. *Public Productivity Review, 5*(2), 122-140.

Quinn, R. E., & Rohrbaugh, J. (1983). A spatial model of effectiveness criteria: Towards a competing values approach to organizational analysis. *Management Science, 29*(3), 363-377.

Rice, N. D., & Darke, E. M. (2000). Differences between leadership and academic scholarship recipients' retention and cumulative grade point averages. *College Student Affairs Journal, 19*(2), 20-28.

Rogers, J. L. (1996). Leadership. In S. Komives & D. Woodward (Eds.), *Student services: A handbook for the profession* (pp. 299-319). San Francisco, Jossey-Bass.

Schroeder, C. C. (1998, September/October). Being all that we can be. *About Campus, 3*, 4-12.

Schuh, J. H., & Laverty, M. (1983). The perceived long-term influence of holding a significant student leadership position. *Journal of College Student Personnel, 24*(1), 28-32.

Shelton, J. E. (1985, Winter). Why military training programs need campus support in the '80s. *Educational Record, 66*, 22-24.

Smith, D. C. (1985, Winter). To protect a free society: Maintaining excellence in the military. *Educational Record, 66*, 10-13.

Spaulding, C. B. (1934). Types of junior college leaders. *Sociology and Social Research, 18*, 164-168.

Spitzberg, I. J. (1995). Paths of inquiry into leadership. In J. T. Wren (Ed.), *The leader's companion: Insights on leadership through the ages*, (pp. 33-36). New York: Free Press.

SPSS for Windows-Version 11.0 (2001). Chicago: SPSS Inc.

Stogdill, R. M. (1948). Personal factors associated with leadership: A survey of the literature. *The Journal of Psychology, 25*, 35-71.

Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (2nd ed.). Boston: Allyn and Bacon.

Texas Higher Education Coordinating Board. (2003). *Texas public universities' data and performance report* (FY02-1). Austin, TX: Texas Higher Education Coordinating Board.

Thompson, M. P., McGrath, M. R., & Whorton, J. (1981). The competing values approach: Its application and utility. *Public Productivity Review, 5*(2), 188-200.

Van Velsor, E., McCauley, C. D., & Moxley, R. S. (1998). Our view of leadership development. In C. D. McCauley, R. S. Moxley, & E. Van Velsor (Eds.), *The Center for Creative Leadership handbook of leadership development,* (pp. 1-25). San Francisco: Jossey-Bass.

Vardiman, P. D. (2001). *Environmental factors that impact leadership development*. Unpublished doctoral dissertation, Texas A&M University, College Station, TX.

Watt, W. M. (1995). Teaching essential behaviors of leadership: A rationale and syllabus. *The Journal of Leadership Studies, 2*(1), 149-161.

Whetten, D. A. & Cameron, K. S. (2002). *Developing management skills* (5th ed.). Upper Saddle River, NJ: Prentice Hall.

Wielkiewicz, R. M. (2000). The leadership attitudes and beliefs scale: An instrument for evaluating college students' thinking about leadership and organizations. *Journal of College Student Development, 41*(3), 335-347.

Wren, J. T. (1994). Teaching leadership: The art of the possible. *The Journal of Leadership Studies, 1*(2), 73-93.

Yukl, G. (1981). *Leadership in organizations*. Englewood Cliffs, NJ: Prentice-Hall.

Zeleny, L. D. (1939). Characteristics of group leaders. *Sociology and Social Research, 24*, 140-149.

APPENDIX A

INFORMATION SHEET

INFORMATION SHEET
Corps of Cadets Leadership Survey—Spring 2004

As a current member of the Corps, you possess valuable insight about Texas A&M University's oldest student organization. You have been asked to participate in a research study which seeks to better understand the leadership culture of the Corps of Cadets. The researcher named below holds great interest in the Corps and needs your assistance in completing a survey. The researcher's work relates to a dissertation. You were selected to be a possible participant in the study because you are currently enrolled in a SOMS or ROTC course and are a member of the Corps of Cadets at Texas A&M University. The researcher is requesting that approximately 450 cadets participate in this research study.

If you agree to participate in this study, you will be asked to complete a survey. A risk and possible inconvenience associated with the completion of this survey is that of time consumption, and completing the survey will take approximately 15 minutes. While this research study does not directly benefit you in any specific way, it is hoped that increased understanding of the Corps of Cadets as a leadership organization occurs for the researcher named below. You will receive no monetary compensation for your participation in this study.

This study is anonymous. The information you provide in the survey cannot be connected to you. The records of this study will be kept private. No identifiers linking you to the study will be included in any sort of report that might be published. Research records will be stored securely and only Mr. Scott Blackwell and Dr. Richard Cummins will have access to the records. Your decision whether or not to participate will not affect your current or future relations with Texas A&M University or the Corps of Cadets. If you decide to participate, you are free to refuse to answer any of the questions that may make you uncomfortable. You can withdraw at any time without penalty. You can contact Mr. Scott Blackwell and Dr. Richard Cummins with any questions about this study.

This research study has been reviewed by the Institutional Review Board—Human Subjects in Research, Texas A&M University. For research-related problems or questions regarding subjects' rights, you can contact the Institutional Review Board through Dr. Michael W. Buckley, Director of Research Compliance, Office of Vice President for Research at (979) 845-8585 (mwbuckley@tamu.edu).

You have read the above information. You have asked questions and have received answers to your satisfaction. You have been given a copy of this information sheet for your records. **By completing and returning the survey, you hereby agree to participate in this research.**

You may contact the following persons for information about the study:

Mr. Scott Blackwell, Principal Investigator
Center for Leadership Excellence
Lounge F-107
College Station, TX 77843-1227
(979) 458-0436
eblackwell@corps.tamu.edu

Dr. Richard Cummins, Research Advisor
Center for Leadership Excellence
Lounge F-106
College Station, TX 77843-1227
(979) 458-0436
dcummins@corps.tamu.edu

APPENDIX B

INFORMATION SHEET FOR ALTERNATIVE DATA COLLECTION METHOD

INFORMATION SHEET
Corps of Cadets Leadership Survey—Spring 2004

As a current member of the Corps, you possess valuable insight about Texas A&M University's oldest student organization. You have been asked to participate in a research study which seeks to better understand the leadership culture of the Corps of Cadets. The researcher named below holds great interest in the Corps and needs your assistance in completing a survey. The researcher's work relates to a dissertation. You were selected to be a possible participant in the study because you are currently enrolled in an ROTC course and are a member of the Corps of Cadets at Texas A&M University.

A risk and possible inconvenience associated with the completion of this survey is that of time consumption, and completing the survey will take approximately 15 minutes. While this research study does not directly benefit you in any specific way, it is hoped that increased understanding of the Corps of Cadets as a leadership organization occurs for the researcher named below. You will receive no monetary compensation for your participation in this study.

This study is anonymous. The information you provide in the survey cannot be connected to you. The records of this study will be kept private. No identifiers linking you to the study will be included in any sort of report that might be published. Research records will be stored securely and only Mr. Scott Blackwell and Dr. Richard Cummins will have access to the records. Your decision whether or not to participate will not affect your current or future relations with Texas A&M University or the Corps of Cadets. If you decide to participate, you are free to refuse to answer any of the questions that may make you uncomfortable. You can withdraw at any time without penalty. You can contact Mr. Scott Blackwell and Dr. Richard Cummins with any questions about this study.

This research study has been reviewed by the Institutional Review Board—Human Subjects in Research, Texas A&M University. For research-related problems or questions regarding subjects' rights, you can contact the Institutional Review Board through Dr. Michael W. Buckley, Director of Research Compliance, Office of Vice President for Research at (979) 845-8585 (mwbuckley@tamu.edu).

By completing and returning the survey, you hereby agree to participate in this research. After completing the survey, please return it to Lounge F (adjacent to Dorm 12/Utay) by Friday, March 12, 2004. You may return the survey between the hours of 8:00 a.m. and 5:00 p.m. Monday through Friday. THANK YOU.

You may contact the following persons for information about the study:

Mr. Scott Blackwell, Principal Investigator
Center for Leadership Excellence
Lounge F-107
College Station, TX 77843-1227
(979) 458-0436
eblackwell@corps.tamu.edu

Dr. Richard Cummins, Research Advisor
Center for Leadership Excellence
Lounge F-106
College Station, TX 77843-1227
(979) 458-0436
dcummins@corps.tamu.edu

APPENDIX C

INSTRUMENT FOR CADETS

Texas A&M University Corps of Cadets
Leadership Survey — Spring 2004

☆ ☆ ☆ ☆ ☆

Thank you for completing this survey. This survey is anonymous. None of the information you provide can be connected to you. The first part of this survey is about your background. The second part is about your frequency of certain behaviors. The third part is about the frequency of certain behaviors that should be used in your leadership position. The fourth part is about leadership culture.

PART ONE

With your current position of membership and leadership within the Corps of Cadets in mind, please complete each of the ten numbered sections of information by marking the appropriate item(s) for each category of information.

1. Academic Classification □ Freshman □ Sophomore □ Junior □ Senior

2. College & Major

□ Agriculture and Life Sciences
□ Architecture
□ Business
□ Education
□ Engineering
□ Geosciences
□ Liberal Arts
□ Science
□ Veterinary Medicine

Major Course of Study: _____

3. Gender & Age □ Male □ Female **4. Age** _____

5. Ethnicity

□ Alaskan Native
□ American Indian
□ Asian or Pacific Islander
□ Other: _____
□ Black/African American, Non-Hispanic
□ Hispanic or Latino/a
□ White, Non-Hispanic

6. Contract Status □ Drill & Ceremony (no contract) □ Military (contract)

7. Service Affiliation or Military Contract □ Air Force □ Army □ Navy/Marine

8. Current Position within the Corps of Cadets

□ Assistant Squad Leader
□ Commander
□ Corps Staff Member
□ Drum Major
□ Executive Officer
□ 1st Sergeant
□ Major Unit Staff Member
□ Minor Unit Staff Member
□ Platoon/Flight Leader
□ Platoon/Flight Sergeant
□ Sergeant Major
□ Squad Leader
□ Unit Chain
□ Other: _____

9. Leadership Experience(s) Prior to Attending Texas A&M University

□ Boys'/Girls' State
□ Boy/Girl Scouts
□ Band/Choir
□ Church/Young Life
□ Debate
□ 4H/FFA
□ Junior ROTC
□ Language Club
□ Newspaper/Yearbook
□ Varsity Athletics
□ Other: _____

10. Other Leadership Experience(s) While Attending Texas A&M University

□ Class Council
□ Community Service Organization
□ Fish/T-Camp
□ Honor Society
□ Intramural Sports
□ Professional Society
□ Social Fraternity/Sorority
□ Special Corps Outfit(s): _____
□ Sports Club
□ Student Government
□ Traditions Council
□ Varsity Athletics
□ Other: _____

PART TWO

Listed below are some behaviors that a leader might employ. Using the following scale, please indicate the frequency with which YOU use each behavior in your current position of membership and leadership within the Corps of Cadets. Circle only ONE number for each statement.

1 Almost never	2 Very seldom	3 Seldom	4 Frequently	5 Very frequently	6 Almost always

1. I come up with inventive ideas.	1	2	3	4	5	6
2. I protect continuity in day-to-day operations.	1	2	3	4	5	6
3. I exert upward influence in the organization.	1	2	3	4	5	6
4. I carefully review detailed reports.	1	2	3	4	5	6
5. I focus on "results" in my group.	1	2	3	4	5	6
6. I facilitate consensus building in my group.	1	2	3	4	5	6
7. I define areas of responsibility for subordinates.	1	2	3	4	5	6
8. I listen to the personal problems of subordinates.	1	2	3	4	5	6

 Adapted from the Competing Values Instrument (Quinn, 1988)

1 Almost never	2 Very seldom	3 Seldom	4 Frequently	5 Very frequently	6 Almost always

9. I minimize disruptions to the accomplishment of tasks.	1	2	3	4	5	6
10. I experiment with new concepts and procedures.	1	2	3	4	5	6
11. I encourage participative decision-making in my group.	1	2	3	4	5	6
12. I make sure everyone knows where my group is going.	1	2	3	4	5	6
13. I influence decisions made at higher levels.	1	2	3	4	5	6
14. I compare records and reports to detect discrepancies.	1	2	3	4	5	6
15. I see that my group delivers on stated goals.	1	2	3	4	5	6
16. I show empathy and concern in dealing with subordinates.	1	2	3	4	5	6
17. I work with technical information.	1	2	3	4	5	6
18. I get access to people at higher levels.	1	2	3	4	5	6
19. I set clear objectives for my group.	1	2	3	4	5	6
20. I treat every individual in a sensitive and caring way.	1	2	3	4	5	6
21. I keep track of what goes on in my group.	1	2	3	4	5	6
22. I solve problems in creative and clever ways.	1	2	3	4	5	6
23. I push the group to meet objectives.	1	2	3	4	5	6

1 Almost never	2 Very seldom	3 Seldom	4 Frequently	5 Very frequently	6 Almost always

24. I encourage subordinates to share ideas in my group.	1	2	3	4	5	6
25. I search for innovations and potential improvements.	1	2	3	4	5	6
26. I clarify priorities and direction.	1	2	3	4	5	6
27. I persuasively sell new ideas to higher-ups.	1	2	3	4	5	6
28. I bring a sense of order to my group.	1	2	3	4	5	6
29. I show concern for the needs of subordinates.	1	2	3	4	5	6
30. I emphasize my group's achievement of stated purposes.	1	2	3	4	5	6
31. I build teamwork among my group members.	1	2	3	4	5	6
32. I analyze written plans and schedules.	1	2	3	4	5	6

PART THREE

Using the following scale, please indicate the frequency with which each behavior should be used by a leader in your position. Circle only ONE number for each statement.

1 Almost never	2 Very seldom	3 Seldom	4 Frequently	5 Very frequently	6 Almost always

33. A leader in my position should come up with inventive ideas.	1	2	3	4	5	6
34. A leader in my position should protect continuity in day-to-day operations.	1	2	3	4	5	6
35. A leader in my position should exert upward influence in the organization.	1	2	3	4	5	6
36. A leader in my position should carefully review detailed reports.	1	2	3	4	5	6

	1 Almost never	2 Very seldom	3 Seldom	4 Frequently	5 Very frequently	6 Almost always
37. A leader in my position should focus on "results" in the group.	1	2	3	4	5	6
38. A leader in my position should facilitate consensus building in the group.	1	2	3	4	5	6
39. A leader in my position should define areas of responsibility for subordinates.	1	2	3	4	5	6
40. A leader in my position should listen to the personal problems of subordinates.	1	2	3	4	5	6
41. A leader in my position should minimize disruptions to the accomplishment of tasks.	1	2	3	4	5	6
42. A leader in my position should experiment with new concepts and procedures.	1	2	3	4	5	6
43. A leader in my position should encourage participative decision-making in the group.	1	2	3	4	5	6
44. A leader in my position should make sure everyone knows where the group is going.	1	2	3	4	5	6
45. A leader in my position should influence decisions made at higher levels.	1	2	3	4	5	6
46. A leader in my position should compare records and reports to detect discrepancies.	1	2	3	4	5	6
47. A leader in my position should see that the group delivers on stated goals.	1	2	3	4	5	6
48. A leader in my position should show empathy and concern in dealing with subordinates.	1	2	3	4	5	6
49. A leader in my position should work with technical information.	1	2	3	4	5	6

	1 Almost never	2 Very seldom	3 Seldom	4 Frequently	5 Very frequently	6 Almost always
50. A leader in my position should get access to people at higher levels.	1	2	3	4	5	6
51. A leader in my position should set clear objectives for the group.	1	2	3	4	5	6
52. A leader in my position should treat every individual in a sensitive and caring way.	1	2	3	4	5	6
53. A leader in my position should keep track of what goes on in the group.	1	2	3	4	5	6
54. A leader in my position should solve problems in creative and clever ways.	1	2	3	4	5	6
55. A leader in my position should push the group to meet objectives.	1	2	3	4	5	6
56. A leader in my position should encourage subordinates to share ideas in the group.	1	2	3	4	5	6
57. A leader in my position should search for innovations and potential improvements.	1	2	3	4	5	6
58. A leader in my position should clarify priorities and direction.	1	2	3	4	5	6
59. A leader in my position should persuasively sell new ideas to higher-ups.	1	2	3	4	5	6
60. A leader in my position should bring a sense of order to the group.	1	2	3	4	5	6
61. A leader in my position should show concern for the needs of subordinates.	1	2	3	4	5	6
62. A leader in my position should emphasize the group's achievement of stated purposes.	1	2	3	4	5	6
63. A leader in my position should build teamwork among group members.	1	2	3	4	5	6
64. A leader in my position should analyze written plans and schedules.	1	2	3	4	5	6

 Adapted from the Competing Values Instrument (Quinn, 1988)

PART FOUR
In the space provided below, please include any comments you have about the culture of leadership within the Corps of Cadets at Texas A&M University.

AGAIN, THANK YOU FOR YOUR PARTICIPATION

VITA

Edward Scott Blackwell

Educational Background:

Ph.D. in educational administration, Texas A&M University, 2004

M.S. in educational administration, Texas A&M University, 1997

B.A. in history, DePauw University, 1992

Professional Background:

2004-present	Residence Area Coordinator, Department of Residential Life, Oklahoma State University
2002 – 2004	Graduate Assistant and Instructor of Military Science, Office of the Commandant, Texas A&M University
2001 – 2002	Graduate Assistant, Department of Educational Administration and Human Resource Department, Texas A&M University
1999-2001	Greek Life Advisor, Department of Student Life, Texas A&M University
1998-1999	Assistant Director of Greek Life, Department of Student Activities, University of Texas at Arlington
1997-1998	Judicial Coordinator and Residence Hall Director, Department of Residence Life, Albion College
1996-1997	Residence Director, Department of Residence Life, Texas A&M University

Permanent Mailing Address:

Edward Scott Blackwell
802 S. Ridge
Stillwater, Oklahoma 74074