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The relationship between administrators' learning patterns and leadership competencies

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THE RELATIONSHIP BETWEEN ADMINISTRATORS' LEARNING PATTERNS AND LEADERSHIP COMPETENCIES

by
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ABSTRACT

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The purpose of this study was to investigate the relationship between selected administrator's learning patterns and attendant leadership competencies. Thirty-nine upper- level administrators at Rowan University completed the Leadership Assessment Instrument and Learning Combination Inventory to evaluate this relationship. Results showed a statistically significant relationship between a confluent learning pattern and conceptual thinking leadership components. Administrators demonstrated a wide variability in leadership competencies and learning patterns on descriptive tests. Findings suggest administrators at Rowan University use a wide degree of flexibility between learning patterns and leadership skills.

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CHAPTER ONE

INTRODUCTION

Statement of the Problem

Colleges and universities are dynamic institutions requiring equally dynamic leaders. According to Birnbaum (1992), most people in campus leadership positions do well in complex and autonomous situations. Today, for example, colleges and universities are finding themselves dealing with increased operating costs, dwindling state and federal budgets, experiments with cost-cutting measures, growing student populations, a changing focus to improve service to students, new technology, and the growing population of adult learners. With these administrative challenges in mind, leadership is not only compelling, but also necessary in higher education (1992).

Effective leadership is needed to deal with these growing demands in higher education. In order to maximize their leadership potential, administrators must continue to learn how to lead others (Bennis, 1989a). A major part of this process is discovering individual strengths and weaknesses within the connection of learning and leadership.

To benefit from the influence of their leadership position, administrators should first look at understanding themselves. According to Johnston (1998), human beings learn information in four distinct learning patterns (sequential, precise, technical, and confluence). While some may use all four of these patterns from time to time, the majority primarily use a specific pattern to learn and process information. With knowledge of self-learning, administrative leaders can begin to better

understand themselves, and what they can do to improve their leadership abilities.

Significance of the Problem

Administrative leadership in higher education is often tied to the title of the position. Administrators such as presidents, vice presidents, deans, and directors assume leadership positions based upon the job title. However, the proper leadership qualities and attributes for each position continually need to be refined (Birnbaum, 1992). For example, if the Dean of Students at a major university is communicating poorly with co-workers and students, the productivity and morale of the organization may suffer. To become a better leader, it is important to assess areas of strength and weakness in personal learning patterns and leadership competencies. According to Linkage, Inc. (n.d.) leadership can be developed because all people have the potential to become better leaders. The best leaders continually assess and develop their leadership skills (Leadership Assessment Instrument, n.d.). The significance of this study lies in an administrator's ability to recognize how they learn and processes information, and how this learning affects their leadership skills. A relationship between learning patterns and leadership competencies can give administrators a direct link to future development.

The results of this study can be useful for practical reasons. For example, administrators in this study will learn more about themselves. Self-reported data will help administrators discover how they learn information (learning pattern), and what competencies (strengths and weaknesses) they possess for effective leadership. Lastly, it will show the relationship between individual learning patterns and leadership abilities that correlate with that pattern. Overall, this research hopes to

discover a way for administrators to recognize how their learning affects their leadership strengths and weaknesses.

Purpose of the Study

The purpose of this project was to investigate the relationship between selected administrator's learning patterns and attendant leadership competencies. The instruments used to assess learning and leadership may show relationships in the learning patterns of administrators relative to personal strengths and weaknesses of leadership skills.

Assumptions and Limitations

Several assumptions were made when performing research. In this study, it was assumed that administrators at Rowan University are leaders because of the title they held. It was assumed that respondents would be truthful when answering the surveys. It was also assumed that respondents could reflect on their personal learning patterns and leadership skills. Finally, in answering the survey questions, it was assumed that all administrators understood the complete anonymity of the survey and thus answered the questions honestly.

There were certain limitations in the study. The survey population used selected administrators, ranging from the level of directors up to the president of Rowan University. As a result, the research has limited generalizability due to the use of only one university, and results may differ in other university settings. The selected sample of administrators was another limitation since only 55 administrators were sampled.

Another limitation in this research is potential research bias. The Leadership Assessment Instrument is a self-report instrument. Using self-reported data is often biased by social desirability. According to Birnbaum (1992), most people rate themselves more highly in leadership than others do. The discrepancies between what leaders say they do and what others see them as doing suggests that self-assessments are biased (Birnbaum, 1992). However, Birnbaum concludes that some self-reported data can reflect actual behavior, but also wishful thinking (1992).

Operational Definitions of Important Terms

Administrator: Term used in this study to describe someone who works in a collegiate setting, and has other administrators within that university reporting to them. According to McDade, an administrator can be defined as someone who "reports either directly to the president, supervises a major division of the institution, or who has substantive policy-setting responsibility" (1988, ¶ 5). An administrator in this study manages a major venture within the academy and charts a future for that unit. This study encompasses all 55 administrators at the level of director up through the president of Rowan University. Sample titles include Provost, Director of Financial Aid, Deans, etc. The term administrator applies to the 55 upper level administrators surveyed at the University.

Competency: Term used in this study to identify personal characteristics essential for effective leadership (Bennis, 1989a; 1989b; Linkage, Inc., n.d.). The five competencies identified in this study referred to focused drive, emotional intelligence, building trust and enabling others, conceptual thinking, and systems thinking.

Learning Pattern: According to Johnston (1998) the interaction of cognition, conation, and affectation form four patterns of learning behavior (p.79). In this study, the term learning pattern is used to identify four patterns of sequential, precise, technical, and confluent learning.

Learning Combination Inventory (LCI): A 28 likert-item self-report instrument used in this study to report the degree to which administrators simultaneously use each of four learning processes.

Leadership Assessment Instrument (LAI): A 75 likert-item self-report instrument developed by Linkage Inc. in partnership with Dr. Warren Bennis. This study used this instrument to measure the self-reported leadership competencies needed for effective leadership.

Research Questions

The study sought to answer the following research questions:

1. What are the primary leadership competencies and learning patterns used by selected administrators in leadership at Rowan University?
2. Is there a significant relationship between an administrator's learning pattern and competencies for effective leadership?
3. Is there a significant relationship between selected demographics of education level, gender, or leadership position and an administrator's learning pattern?

Organization of the Study

Chapter two addresses relevant literature related to leadership, administrative leadership, learning, and accompanying instruments used to assess these constructs and patterns. Chapter three provides a description of the study's methodology:

including the context of the study, an overview of the population and sample employed in the study, a description of the research design, and data collection procedures and instruments used, as well as a brief summary of how the data were analyzed. An overview of the findings of the study is presented in chapter four. Included is an analysis of the data, which is presented in the form of statistical tables and warranted descriptions, and a synopsis of how these findings relate to the research questions. Finally, a summary of the study and discussion of the interpretations of the findings, together with conclusions and recommendations for further research, is found in chapter five.

CHAPTER TWO

REVIEW OF THE LITERATURE

Leadership

Research on the topic of leadership is multi-faceted. There is disagreement over what constitutes leadership. Researchers recognize that leadership is a complex phenomenon involving both followers as well as leaders (Hughes, Ginnet, & Curphy, 1999). Taken as a whole, Hughes et al. state that leadership is "the process of influencing an organized group toward accomplishing its goals" (1999, p 9).

There is a major difference between leadership and management. According to Bennis (1989a), leaders are people who try do the right thing, while managers are people who do things right. Bennis contends that both roles are crucial for an effective organization. Oftentimes, leaders do not pay enough attention to doing the right thing, and pay too much attention to doing things right (1982). According to Birnbaum (1992), institutional leaders are often very good at managing, but are poor at leading. Frequently, leaders do extremely well in handling the daily activities, but rarely ask the question of whether the daily routine should be done at all (Bennis, 1989a).

Bolman & Deal (2003) claim that no individual characteristic of leadership has been identified as universal. However, several characteristics have been identified across a variety of divisions. Bolman and Deal (2003) suggest that vision and focus are needed for effective leadership. Furthermore, effective leaders "articulate a vision, set standards for performing, and create focus and direction" (p.340). According to Kouzes and Posner (2003), the oldest reliable finding about

leadership is that effective leaders are intelligent and hard working. They are effective at articulating a shared vision through proper communication, often through the use of symbols (Bolman & Deal, 2003). Lastly, Clifford & Cavanagh (1985) conclude that commitment, passion, honesty, and the ability to inspire trust in relationships are other attributes of effective leadership.

According to Bennis (1989b), specific qualities or competencies are essential for effective leadership. The methodology used in determining leadership qualities has varied from observations to structured interviews, and also casual impressions (Bolman & Deal, 2003). Since no leadership assessment enjoys complete agreement within the field, the following studies were examined to gain a better understanding of the competencies needed for effective leadership (Birnbaum, 1992).

Research on Leadership

In 1989, Warren Bennis reported on his findings of effective leadership. He traveled around the United States to examine the most efficient, successful leaders. Leaders examined included Ray Kroc, CEO of McDonald's, Astronaut Neil Armstrong, and Harold Williams, Chair of the Securities and Exchange Commission. Bennis' goal was to find common traits that made the leaders in corporations and public sectors so successful. His research found that organizations were under-led and over-managed, and that leaders possess diverse characteristics (Bennis, 1989a).

Bennis (1994) claims that all of the effective CEO's share a popular distinction. They view themselves as leaders, not managers, concerned with the purpose and action of "doing the right thing" (Bennis, 1982, p. 44). Bennis' research found that all CEO's possess the competencies of vision, communication, alignment,

persistence, consistency, focus, and empowerment. According to Bennis, an organization is best served when "leadership knows what it wants, communicates those intentions accurately, empowers others and knows how to stay on course and when to change" (1982, p.45).

Based on his research, Bennis (1989a) concluded that four competencies were necessary for effective leaders of organizations. The first competency is management of attention. According to Bennis (1999), leaders with this competency have an ability to draw others to them because of an incredible focus on dedication to vision. For example, an effective leader with management of attention is someone who knows exactly what he or she wants, and does not waste the time of others. Bennis (1989a) suggests that a focus from leaders on attention and dedication inspires followers. Bennis concluded that management of attention is essentially the focus of outcome, goal, and direction toward a shared vision (1989a).

Bennis' second leadership competency is management of meaning (1989a). Management of meaning is being able to effectively communicate in a way that excites followers in a way that increases production. To explain, Bennis (1989b) insists that leaders must be able to communicate their vision in a way that inspires others. Leaders are responsible for making ideas real to others, sometimes through the use of metaphors, to make their vision clear (1989b). Hence, management of meaning is a competency of effective communication that makes dreams real to others (1989b).

Bennis (1989b) identified management of trust as the third competency. According to Bennis, people would much rather follow leaders who are reliable, even

when they disagree, rather than agree with people who shift positions regularly (1989b). Bennis asserts that the main elements in this competency are reliability and consistency (1989b).

The fourth competency Bennis discovered is the management of self (1989b). Bennis maintains that it is essential to know a person's skills and place them in a successful position. Also, Bennis (1989b) claims that good leaders know themselves, and are able to nurture their strengths. Furthermore, leaders claim that they are unacquainted with the term "failure," but are more familiar with the term "mistake" (Bennis, 1989b, p.38). To Bennis (1989b), leaders are excited to learn from mistakes, and look at mistakes not as failures, but as stepping-stones.

Bennis (1989a) feels that people in authority positions must be educators. Successful people in authoritative positions analyze and offer clear alternatives to problems. It is the responsibility of people in authority to shape the culture of the work environment by examining norms and values within the organization, and tailoring them to individual needs. Whatever his or her goals, a leader facilitates understanding and encourages participation within an organization. In other words, a leader is in sync with the needs and aspirations of followers (1989a).

Overall, the collective effect of leadership is empowerment (Bennis, 1989b). According to Bennis (1989b), effective leaders make people feel significant, and make a difference to an organization because what they do has meaning. Leaders develop environments where learning and competence matter. As in management of self, leaders make it clear that there is no failure, only mistakes that can be corrected for the better. Also, Bennis (1989b) asserts that empowerment makes people feel as

if they are part of a team. Effective leaders are able to create exciting work because they have a pulling influence that is appealing, challenging, fascinating, and fun.

Bennis' attempt to assess effective leadership skills led him to Linkage Inc. According to Linkage (n.d.), the partnership with Bennis led to comprehensive research of both the personal characteristics essential to leadership and skills to which leaders apply these competencies.

Leadership Assessment

The Leadership Assessment Instrument TM (LAI TM) was researched and developed by Linkage, Inc. in partnership with Warren Bennis to determine leadership competency. The instrument was developed based on years of experience in examining leaders from around the world (Leadership Assessment Instrument, n.d.). According to Linkage Inc. (n.d.), The (LAI) measures five capabilities required for high performance leadership: (1) focused drive; (2) emotional intelligence; (3) building trust and enabling others; (4) conceptual thinking; and (5) systems thinking. According to Linkage, Inc. (n.d.), this self-managed assessment focuses on a leader's strengths and/or weaknesses within the five competencies. This assessment is then used as a guide for personal development.

Focused-Drive

Focused-drive can be defined as a leader's ability to balance between focus and drive. According to Linkage, Inc. (n.d.), to focus is to identify an important vision, and to channel specific efforts to support that goal or vision. Drive is perceived as perseverance, sacrifice, and energy to reach high levels of performance.

Together, the competency of focused drive shows that leaders are focused on outcomes, and harness their energy to meet those goals.

Emotional Intelligence

Second, emotional intelligence is measured to show the ability to understand human needs. The balance between perception and emotional maturity form the basis of this competency. Linkage Inc. (n.d.) states that perception is the ability to read the emotions and thoughts of others through the use of insight and analytical skills. Emotional maturity is the ability to balance emotions and stress in a way that encourages confidence, motivation, and group effectiveness (n.d.). In general, a balance between perception and emotional maturity gauges a person's emotional intelligence.

Trusted Influence

The third competency measured by the LAI is trusted influence. The Leadership Assessment Instrument (n.d.) states that this is the ability to place or evoke trust in others. Trust helps others to succeed by balancing commitment and empowerment. Commitment is considered as the ability to evoke trust from other people by keeping promises, high ethical standards, and building shared goals and values. Likewise, empowerment enables others to reach their capable levels of performance. The competency of trusted influence helps people to succeed through trust, delegation, participation, and coaching.

Conceptual Thinking

The (LAI)'s fourth competency measured by the LAI is conceptual thinking. According to Linkage Inc. (n.d.), conceptual thinking involves envisioning and

selecting innovative strategies for accomplishing tasks. The balance between innovation and big-picture thinking form the basis for this conceptualism. Innovating is responsible for creating and/or enhancing ideas, products, and services. Big-picture thinkers are talented in seeing the whole picture. They see the forces, people, events, and entities that affect other people. Conceptual thinking leads to bottom-up success through originality and vision.

Systems Thinking

According to Linkage Inc. (n.d.), the final competency for effective leadership is systems thinking. The ability to thoroughly and methodically connect processes, events, and systems is considered systems thinking. It combines the two concepts of mental discipline and process orientation. Mental discipline is the ability to sort through ambiguity and put ideas into motion. Process orientation is the skill of increasing overall learning performance by designing, implementing, and connecting processes. Mental discipline and process orientation together help individuals connect systematically with systems and organizations.

Linkage Inc. (n.d.) asserts that awareness into each of these competencies can lead to better administrative leadership development. The LAI has been developed to provide a leadership profile of a person's leadership competencies. This profile suggests areas of strength and areas of weakness, and was intended for future personal development. According to Linkage Inc. (n.d.), the more honest people are with the instrument, the better individuals can target their individual needs.

The Leadership Self-Assessment is consistent with Bennis' findings on effective characteristics of leaders. Bennis (1982) found that all CEO's of varying

degrees possessed the competencies of vision, communication, persistence, consistency, and empowerment. The Leadership Self-Assessment incorporates these competencies into focused drive, emotional intelligence, and trusted influence. However, Linkage Inc. expanded Bennis' findings by incorporating the competencies of conceptual and systems thinking. Linkage (n.d.) argues that the components of innovation, big-picture thinking, process orientation, and systems thinking also play a significant role in leadership effectiveness.

One inherent problem with the LAI is that it is a self-assessment. According to Birnbaum (1992), self-evaluation is "widely considered fraught with peril" (p.53). He argues that leaders will rate themselves better at certain qualities than their constituents would have rated them. Also, Birnbaum asserts that leaders will blame others, the environment, or bad luck on their shortcomings, and claim that their success is due to personal abilities and skills (1992). However, since there is no universal view of leadership, Birnbaum (1992) recommends that leadership evaluations focus on conceptual foundations, which is consistent with the LAI.

Administrative Leadership

Early studies of administrative leadership in higher education sought to find one leadership style that was suitable under all circumstances. For example, Blake and Mouton's (1985) research concluded that effective leadership could be examined through a managerial grid that focused on concern for task and people. Boleman and Deal (2003) criticize the grid for having only these two fundamental dimensions. Blake and Mouton's research fails at presenting leadership competencies in focused drive, trusted influence, and conceptual thinking. While Blake and Mouton do

consider systems thinking and emotional intelligence, Bennis' (1989a) research suggests that there is no one, solid leadership style that is effective under all circumstances.

The Institutional Leadership Project (ILP) is among one of the most comprehensive studies ever conducted on leadership in higher education (Birnbaum, 1992). This five-year longitudinal study examined how college and university presidents and administrators communicate, interact, assess their own and others' effectiveness, establish goals, learn, transmit values, and make sense of the complex organizations. The information collected in this study has shown that there is not a crisis in leadership in higher education. In fact, according to Birnbaum (1992), most of the people in campus leadership positions do very well in such a complex and confusing academic environment.

The study surveyed over 350 formal leaders in 32 U.S. colleges. Participants interviewed included the college president, senior administrative officers, chairs and heads of major committees of the board of trustees, faculty leaders such as the chair of the senate, the head of the faculty union, and the chairs of important faculty committees. Respondents were asked how they worked together, communicated, and how their behavior effected the achievement of campus goals. More importantly, for the purpose of the study, they were asked about how they learned and changed. Their responses challenged a number of ideas about how leaders act and think (Birnbaum, 1992).

The ILP devoted some attention to who university leaders are and what they do. However, an emphasis on the roles of administrators led the way to an

examination of the ways that these leaders think and learn. According to Birnbaum (1992), college presidents were found to rate themselves as more effective than the average president, and much more effective than their predecessors. They reported their effective leadership style in terms of integrity, commitment, honesty, openness, fairness, concern for others, compassion, and vision.

Findings of the ILP suggest that leaders should follow ten research-based principles of good academic leadership. According to Birnbaum (1992), the following principles should be offered to administrators in higher education with confidence: 1) make a good first impression; 2) listen with respect and be open to influence; 3) find a balance for governance; 4) avoid simple thinking; 5) don't emphasize the bureaucratic frame or linear strategies; 6) emphasize strong values; 7) focus on strengths; 8) encourage leadership by others; 9) check your own performance; and 10) know when to leave.

Thus far, the literature review has addressed the relevant literature related to leadership, and studies that have examined administrative leadership in higher education. Bennis (1989b) claims that good leadership entails a personal understanding of strengths and weaknesses. The Leadership Assessment Instrument developed by Linkage Inc. has addressed the personal competencies, identified through extensive research, essential to leadership. Another means for administrators to learn more about themselves is through an awareness of the individual learning process.

Learning

According to Pramling (1983), learning is an objective process measured from the outside. The focus on the evaluation of learning is discussed in *how much* of the subject is learned and understood. Another definition is that "true learning is the ability to apply a skill or fact to real life (Barbe, 1985, p.16)." For leadership, learning can be considered a process of adaptation. Anderson and Gates (1967) conclude that learning is a process by which behavioral changes occur through modifying experience. Our behavior changes in order to adapt to constantly changing environments and stimuli.

Cognitive Psychology

According to Galloway (1976), cognitive psychologists study how individuals process environmental stimuli. In other words, how individuals learn from the environment around them, and what happens inside the learner when behavior changes. Galloway (1976) maintains that this field of study includes how individuals perceive, interpret, and mentally store environmental information.

Snow and Jackson (1992) suggest that educational research has produced vast amounts of studies and data concerning the learning process; however, no standard of learning styles has satisfied both researchers and practitioners (Johnston, 1997b). Snow and Jackson (1992) argue that this is due to the lack of clarity, a common theoretical base, and educational validation. They suggest that a theoretical base for the concept of style can be found in an integrated model. Johnston (1996; 1997b) argues that a model highlighting interaction and adaptation places the learning process as an interactive pattern within the learner.

Learning Patterns

The interaction between cognition, conation, and affectation form four patterns of learning behavior. These four diverse learning patterns of sequence, precision, technical reasoning, and confluence form the basis of our thought process, our mode of action, and our feelings (Johnston and Dainton, 1997). Our will to learn is found within this unique mix of patterns. Generally, these patterns represent how the learner sees the world, takes in stimuli, integrates the stimuli, and formulates a response to it. Johnston (1996) asserts that learners use these patterns to lead others, as needed in particular situations, or avoid them altogether.

The sequential pattern is the aspect of our learning that needs to follow step-by-step directions. As stated by Johnston and Dainton (1997), the sequential learning pattern seeks order and consistency. Sequential learners think about organizing information, mentally analyzing data, and breaking down tasks into steps. They do things by organizing and making lists, but they plan first and act second. Also, they feel frustrated by a lack of time or when plans change, so they thrive on consistency and dependability. They might say, "I need more time to double-check my work," or "Could we review those directions?" To conclude, sequential learners are best at being able to plan and organize carefully (Johnston, 1998).

The precise pattern is the aspect of our learning that needs to process detailed information in a careful and accurate manner. Johnston and Dainton (1997) describe these individuals as wanting to know exactly what is going on. They think by researching information, asking lots of questions, and always wanting to know more about a particular subject. In addition, they like to challenge statements and ideas by

proving that they are right. According to Johnston (1998), precise learners particularly like to write things down (i.e. writing long e-mails or leaving long voice mails) as a way to show their exactness. Precision learners thrive on knowledge, so it feels good to them when they are correct in a matter. Conversely, they do feel frustrated when people do not share information with them, or when invalid information is considered by others to be correct.

The technical pattern of learning requires practical application and relevance to any learning task. Johnston and Dainton report that this pattern uses "stand-alone, independent reasoning (1997, p 6)." In other words, individuals who primarily use a technical pattern will seek concrete significance, and will only want to know what they need to know. They do things by getting their hands on and solving problems. Technical learners are considered self-sufficient, and enjoy knowing how things work. They may say things like, "I can do it myself," or "Let me show you how." For example, these are the people who buy a bike and insist on putting it together without reading any manual. In all, they want to get their hands-on to learn how things work.

The fourth and final pattern is confluence. Johnston's (1998) research emphasizes that these learners avoid conventional approaches. It permits people to take risks, to fail, and to have the courage to start all over again. Confluent learners read between the lines, think outside the box, brainstorm, and make obscure connections between things that are seemingly unrelated. Apparently, these learners talk about things a lot, start but not finish, and ask for directions after they have already started a task (1998). They will disagree with statements such as, "That's the way we've always done it," because they are frustrated with people who are not open

to new ideas, or who do the same things over and over again. To put it briefly, confluent learners enjoy energy, challenges, and even failure because they always have new and innovative ideas on how to do something (Johnston and Dainton, 1996).

Learning Combination Inventory

The Learning Combination Inventory (LCI) was developed to capture a learner's interactive patterns (Johnston & Dainton, 1997). The LCI reports the combination of an individual's interactive use of each of the four learning processes. The LCI measures which of the four interactive patterns a learner uses first, which one(s) he/she prefers not to use unless otherwise forced, and which one(s) he/she uses as a bridge between what they would choose to use last. Overall, the LCI captures the degree to which a learner uses patterns of sequence, precision, technical reasoning, and confluence (Johnston & Dainton, 1996).

The LCI was intended for use in several ways. It has helped numerous teachers with their life-long process of learning. Also, it has given teachers an appreciation for how learning occurs, and how students learn differently. In reality, the LCI has helped numerous teachers become more aware of the learning patterns of students. Teachers are better able to tailor their classroom activities to fit the learning patterns of all students. Furthermore, the use of the LCI has been very effective in building stronger teaching teams.

According to Johnston and Dainton (1997), the LCI is a self-report instrument. The LCI does not test a quality, or determine the capacity to learn, or measure what a learner knows. It is simply an inventory. It reports what learners

selected as descriptions of their learning behaviors. Overall, according to Johnston and Dainton (1996), it identifies the *What* and *How Much* of each pattern, and is only as precise as the administrator taking the test is willing to make it. The LCI has helped individuals better understand themselves, better understand their students, and has helped build stronger teaching teams (Johnston, 1998).

Studies using the LCI

The test of any construct, conceptualization, or theory is its ability to be observed empirically and documented. In a three-year longitudinal study, Johnston and Johnston (1997) compared student-learning processes, as assessed by the LCI, against the dynamic of school expectations in a public institution. First through third grade students were tested with the LCI in an attempt to assess the order of their four main learning patterns through the interaction of the three mental processes (cognition, connotation, and affectation). Johnston and Johnston found a correlation in the manner by which the learner-teacher-school socialization process occurs, and strongly influences a learner's perception of self. Johnston and Johnston concluded that learners tend to have a better self-image when they feel that they have success in pleasing the teacher. Conversely, when a student's learning pattern does not assimilate to his or her educational environment, he or she experiences failure, and learning is negatively affected. Johnston and Johnston claim that this research shows that learners are expected to learn information according to a teacher's method of teaching, rather than the mode most accommodating to the student learning the information.

In another study, Johnston (1997a) examined the diverse sets of learners and their learning characteristics. In a study of 2057 students from the United States, England, Ireland, and The Republic of Malta, Johnston found that learning patterns are universally and equally dispersed among learners. Johnston further reports that no single scheme in learning typified labeled students, such as special or normal education. Students with similar LCI scores were found to share common concerns and common learning objectives (1997a).

Today, the LCI is commonly used for teacher-student partnerships in developing and using learning strategies (Johnston, 1998). Johnston (1997b) reports in her study of classroom performance outcomes that student-teacher partnerships increase student performance and teacher adaptability. This three-month laboratory experience studied the effect on which knowledge of teachers' and students' learning modalities has upon classroom management, instructional planning, sense of self as a teacher, sense of self as a learner, and academic performance. Johnston's (1997b) study shows that learners have the ability to adapt for productivity.

One study of importance used the LCI to get a better understanding of managers and aspiring managers. Marcellino's (2002) action research investigation sought to apply an education model to team units in a graduate management course. Johnston (1998) asserts that the team-based model of mixed, or heterogeneous, groups affect performance positively. Marcellino (2002) reported that the use of the LCI in forming teams increased productivity and overall experience among team members. Furthermore, the internal application of the LCI inventory of team members led to the team assigning the roles of other team members to benefit the

team's final product. In addition, Marcellino (2002) claims that students who applied the LCI theory to themselves as learners gained experience in group dynamics, team development, and leadership.

Chapter Summary

The previous review has addressed the relevant literature related to leadership, administrative leadership, learning, and accompanying instruments used to assess these constructs and patterns. A significant amount of research has been done on the topic of leadership, but most of the research has concentrated on the competencies needed for effective leadership. Several studies on Johnston's work have found that knowledge of learning patterns seem to have an effective outcome on teacher-student learning. However, research to date has not produced a study that sought to find a relationship between learning patterns and leadership competencies. Thus, this research sought to demonstrate the extent of such a relationship.

CHAPTER THREE

METHODOLOGY

Context of the Study

The institution chosen for this study was Rowan University. Rowan, formerly Glassboro State College, is a selective, medium-sized state university with a population of approximately 9500 students. According to Rowan's official website (http://www.rowan.edu), the university is located in Gloucester County, New Jersey, a southern suburb amid Philadelphia and Atlantic City. The main campus of Rowan is nestled in the historic town of Glassboro. Glassboro is known for its rich heritage in glass manufacturing, and is home to approximately 20,000 permanent residents. The campus itself contains 42 buildings, including eight residence halls, and three apartment complexes. The University offers 36 undergraduate majors among six academic colleges, and more than 26 graduate programs. Lastly, there are over 200 administrative offices located on campus containing administrators of higher education.

The idea for this study originated from the Center for the Advancement of Student Learning at Rowan University. As an intern for the Associate Provost of Academic Affairs at Rowan University, this researcher was first assigned the responsibility of familiarizing himself with daily roles and responsibilities of the Associate Provost. One of the functions of the Associate Provost is the oversight of the Center for the Advancement of Student Learning. This researcher was shown how the Center for the Advancement of Student Learning uses the LCI in the *Let Me Learn* process to aid in student learning. Based on what the LCI told this researcher

about himself, he hypothesized a relationship between leadership competencies and learning patterns. At the conclusion of this thesis project, a copy of the project's report was submitted to the Director of the Center for the Advancement of Student Learning, The Associate Provost of Academic Affairs at Rowan University, and Scott Gavriel, an associate at Linkage Inc. in partial fulfillment of thesis project requirements, and to inform them of the research findings.

Population and Sample

In order to establish a relationship between selected administrators' learning patterns and leadership competencies, the researcher chose a target population consisting of administrators in higher education. According to McDade (1988), administrators in higher education are constantly exhibiting leadership duties because of a continuous need for organization, planning, human relations, and management and control skills. Therefore, this researcher chose a convience sample of administrators at Rowan University. The sample consisted of 55 participants.

Participants were comprised of administrators above the level of campus directors up through the President of Rowan University. The researcher selected administrators who manage a major division within the university. According to McDade (1988), administrators who hold the title of campus director and above are considered middle and upper level managers. They report either directly to the president, supervise a major division of the institution, have substantive policy-setting responsibility, manage a major venture, or chart a future for that unit. The administrators were selected from a campus organizational chart (see Appendix F) detailing their oversight of various units on campus.

Instrumentation

To investigate the research questions, two instruments were used in this study: The Learning Combination Inventory (LCI) (see Appendix D) and The Leadership Assessment Instrument (LAI) (see Appendix E). According to Johnston and Dainton (1997), the (LCI) consists of two parts, namely 28 descriptive sentences with a five point numerical continuum and a written portion. The combination of Likert responses and three corresponding questions indicate a learner's use of each of the four patterns (Johnston and Dainton, 1997). According to Johnston (1998), the (LCI) shows that every learner uses each of these patterns in collaboration with each other to varying degrees. Administrators were administered the Professional Form of the (LCI). According to Curry (1990; as cited in Johnson and Dainton, 1997), this instrument has been found to be valid and reliable for use in adults.

Technical Support for the LCI

The first draft of the (LCI) instrument was tested with 80 students (Johnston, 1993; Johnston & Dainton, 1994 as cited in Johnston, 1997). Students were asked to identify the parts of the instrument that were confusing (i.e. vague wording). These questions were then edited for clarity for the next version of the instrument, and teachers reviewed the instrument for face validity (1997). In addition, child study teams made recommendations for physical arrangement within the questionnaire, and advised inclusion of several items.

The second pilot study was a 36 item, Likert-scale version with four written responses that had been refined from the original study. The instrument was administered to 2010 students in thirteen private, public, and parochial school

districts in New Jersey (Johnston & Dainton, 1997). Each item was evaluated for conceptual clarity and fit. More importantly, it revealed that it was possible to differentiate among sequential, precise, confluent, and technical characteristic behaviors. First, the researchers observed that the four patterns were clearly present in written responses. Then, students, regardless of age, used words or phrases that correlated with the learning patterns. The instrument was then adjusted to capture the essence of these differences (Johnston, 1997).

The results of the second pilot study led to the current 28-item iteration of the instrument. According to Johnston and Dainton, the current professional form of the instrument has "undergone extensive piloting with adult learners (1997, p.8)." It has been tested with various populations including law enforcement, education, business, engineering, and medicine (1997). The following studies were researched to show the validity and reliability of the LCI.

In an effort to confirm the reliability and validity of the (LCI), six separate studies were conducted in elementary, middle, secondary school, and adult populations at 16 sites (Johnston, J. 1996; Hayes, 1996; Addy, 1996; Borg, 1996; Johnston, C., 1995; Johnston, C., 1997 as cited in Johnston & Dainton, 1997). For the purpose of this literature review, the fourth factor matrix was analyzed because of the adult learners who piloted the Professional Form. The results supported the factor structure identified in earlier pilot studies. According to Johnston and Dainton (1997), "the interactive dimension as well as the discreteness of each scale held as theoretically expected (p.11)."

The reliability of the (LCI) has been confirmed through test-retest procedures (McLaughlin & Angilletta, 1995; Johnston & Capasso 1995). McLaughlin and Angilletta report that 242 third and fourth grade students completed the LCI, and four weeks later, a sample of 56 students was randomly re-selected to be retested. They concluded the retest data to be at a significance of <.01 (1995). Johnston and Capasso also found the same results. 803 Students completed the LCI, and five months later, 99 randomly selected students were chosen to retake the LCI. Again, a significance of <.01 was achieved (1995). This researcher has found no study to confirm the same reliability significance in adult learners, however age has been shown to be reliable in this instrument (Johnston & Dainton, 1997).

To test for content validity, 19 school teachers representing five different school districts were given a single sheet of descriptive definitions of the four interactive learning patterns (Johnston & Dainton, 1997). They were asked to identify which subscale the definitions referred to. Johnston and Dainton report that out of 560 possible correct classifications, the teachers had a 95% rate of effectiveness (1997, p.12). This indicates that the LCI has identifiable items acknowledging the strong content validity of the instrument.

The LCI has also been tested for construct and predictive validity. For construct validity, factorial analysis was confirmed through previous scores. Johnston and Dainton (1997) report that the relationships between student scale scores and written responses from previous studies have showed a strong correlation. For predictive validity, McLaughlin and Haye's (1995) research suggests that the ability of teachers to predict student scale scores show that students have observable

patterns definable by the LCI. Thus far, the LCI has been found to be a valid and reliable instrument, but will continue to undergo structure, reliability and validity assessments (Johnston and Dainton, 1997; Johnston, 1998).

Technical Support for the LAI

The Leadership Assessment Instrument (LAI) is a comprehensive, current, and behavioral instrument intended to identify strengths in specific leadership behaviors (The Leadership Assessment Instrument, p. 3). The LAI is a self-managed assessment used to addresses personal competencies that have been identified through "extensive research on what leaders need to succeed in today's environment" (p.3). According to Linkage Inc. (n.d.), the LAI is intended for people to understand themselves as leaders through identifying strengths and weaknesses in their self-reported competencies.

The (LAI) focuses on five personal competencies, or characteristics, essential to effective leadership. The LAI evaluates the frequency of a behavior on a 5 point Likert scale (i.e. rarely, sometimes, often, very often, or always demonstrates each behavior). Then, the instrument combines 10 leadership components to create a higher order of 5 competencies (Linkage Inc., n.d.). According to Linkage Inc., there is "considerable merit to be gained by simply looking at high and low scores and considering how one should leverage strengths and develop weaknesses (n.p.).

To determine scale reliability, item-to-scale correlations, inter-item correlations, and Cronbach's Alpha were utilized. Cronbach's Alpha scores were computed for each of the LAI scales based on an average of 2200 cases from the GILD database. According to Linkage Inc. (n.d.), all of the competencies show

alphas between .80 and .89, with a mean of .86. Item-to-scale correlations showed a mean score that was developed by averaging all of the inter-correlations on each scales' correlation matrix. The mean inter-item correlations were in the .40 to .50 range. Linkage Inc. asserts that these moderately strong scores provide a practical degree of significance for the reliability of scales and the scale structure. Finally, the inter-correlations between the competencies and components were examined. Analysis suggests that raters can distinguish between Focused Drive, Emotional Intelligence, and the remaining competencies; however, the lines between the remaining competencies are a bit blurred (Linkage, Inc., n.d.). Since this study, items have been revised to component distinctiveness.

Factorial validity was established using principle components analysis. Utilizing the 2243 cases from the GILD database, scale reliability results were substantiated and clarified. According to Linkage Inc. (n.d.), a five-factor solution was found to me the most representative of the data, accounting for 49.5% of the data variance. These factors are consistent with the item scores and predicted scales, suggesting a solid degree of construct validity. The components and competencies are all solidly represented, with the exception of Empowerment. The initial version of the LAI is a valid and reliable device, and additional concurrent and predictive studies are planned.

Instrument Permission

Permission to use the LCI was gained on October 1, 2003 by Christine Johnston, director of the Center for the Advancement of Student Learning. Next, permission to use the LAI was gained on October 30, 2003 by Scott Gavriel of Linkage Inc. via e-mail. Then, permission to test human subjects was sought through Rowan University's Institutional Review Board. An IRB application (see Appendix A) was filled out and approved by Burt Sisco, Professor of Educational Leadership, and sent for review on January 1, 2004. IRB approval for this project was gained on February 25, 2004 via e-mail (see Appendix A).

Procedures of Gathering Data

The first procedure used to collect data for this research was a blanket E-mail sent to the selected administrators at Rowan University. The E-mail identified the researcher, the purpose of the study, design of the research, confidentiality concerns, and incentives. Furthermore, the e-mail documented the date in which the surveys were personally dropped-off (March 15, 2004) and collected (March 21, 2004).

Next, on March 15, 2004, 55 survey packages were dispatched to the selected administrators. To help in the rate of participation, the secretaries of the selected administrators were given a lollipop and candy bar. Participants were given a packet containing directions, two assessments, and incentives for completing these assessments. Upon opening the packet, participants were given a letter (see Appendix B) stating this researcher's position as a graduate student seeking help in investigating the relationship between leadership competencies and learning patterns.

In order to standardize the means by which the instructions were completed, standard directions for completing the assessments were given in the letter. These directions stated that participants were to complete the Learning Combination Inventory (LCI) followed by the Leadership Assessment Instrument (LAI). Also, they were to complete both surveys as accurately and honestly as possible. To increase the rate of participation and trustworthiness, subjects were given a professional pen for their participation.

Confidentiality was addressed in the letter as an essential part of this survey. Participants were advised that the results of this study would in no way reflect their names or job titles, and that the research was being done to merely establish a relationship between leadership and learning. Next, participants were informed that an executive summary of the results would be provided once the information was analyzed.

Finally, on March 21, 2004, this researcher returned to the selected administrator's offices for survey collection. Several subjects were unable to complete the survey in the designated time, and were therefore given another week to complete the survey. These administrators were advised that this researcher would return to re-collect the surveys on March 28, 2004, and would appreciate their participation in this research. Finally, all surveys for this study were collected on March 28, 2004. Thirty-nine of the fifty-five participants in this study returned the survey information.

Data Analysis

The methods of analyses chosen for this study are correlational in nature. This researcher used quantitative data analysis to investigate the relationship between select administrator's learning patterns and leadership competencies. Data were coded and analyzed using SPSS software. Using SPSS, this researcher was able to describe the degree of relationship between the two variables. Descriptive statistics, Chi-square tests, and cross tabulations were used to identify the extent of this relationship. Tables were also utilized to show this relationship.

Conclusion

Data on the relationship between select administrators' learning patterns and leadership competencies were collected from a total of 55 administrators at Rowan University between March 15 and March 21, 2004. The findings contained in the following chapter will demonstrate the success of the data collection procedures outlined in chapter three. In chapter four, the findings pertaining to the research questions will be presented. Finally, this researcher will present insights and recommendations for further research in chapter five.

CHAPTER FOUR

FINDINGS

Profile of the Sample

Of the 39 selected administrators who participated in this study, 66.7% were male, while 33.3% were female. Seventy-one percent of the participants held the position of director, followed by Deans (10.3%), Provosts and Associate Provosts (7.7%), President and Vice Presidents (7.7%), and Bursar (2.6%). The education level of the participants was 12.8% for undergraduate degree, 53.8% for master degree, and 33.3% for doctoral degree. Table 4.1 depicts this distribution.

Table 4.1

Selected Demographics

Variable		Frequency n=39	Percent
Gender			
	Male	26	66.7
	Female	13	33.3
Education Level			
	BA; BS	5	12.8
	MA; MS; MBA	21	53.8
	JDD; EDD; PhD; JS	13	33.3
Position			
	Director (Executive)	28	71.8
	Dean	4	10.3
	Provost (Associate)	3	7.7
	Bursar	1	2.6
	President (Vice); Chief of Staff	3	7.7

Research Questions

Research Question 1: What are the primary leadership competencies and learning patterns used by selected administrators in leadership at Rowan University?

Table 4.2 provides data on the primary leadership competencies used by selected administrators at Rowan University. The Focus-Drive competency had a mean of 39.28 (*SD* 5.50). The Emotional Intelligence competency had a mean of 39.32 (*SD* 5.80). The Trusted Influence competency had a mean of 40.47 (*SD* 6.22). The Conceptual Thinking competency had a mean of 38.97 (*SD* 7.06). Finally, the Systems Thinking competency had a mean of 37.84 (*SD* 6.70).

Table 4.2

Leadership Competencies of Selected Administrators at Rowan University

Competency	Components	N	Minimum	Maximum	Mean	Std. Deviation
Focus-Drive		39	21	48	39.29	5.5
	Focus	39	12	24	19.11	2.68
	Drive	39	9	25	20.29	3.35
Emotional Intelligence		39	28	49	39.31	5.79
	Perception	39	13	25	20.28	2.9
	Emotional Maturity	39	13	25	19.28	3.06
Trusted Influence		39	24	50	40.47	6.22
	Commitment	39	13	25	20.92	3.08
	Empowerment	39	11	25	19.82	3.31
Conceptual Thinking		39	22	50	38.97	7.06
	Innovation	39	11	25	19.73	3.67
	Big Picture Thinking	39	11	25	19.5	3.59
Systems Thinking		39	25	50	37.84	6.7
	Process Orientation	39	10	25	18.31	3.6
	Mental Discipline	39	12	25	19.76	3.41

Table 4.3 demonstrates the primary learning patterns revealed by select administrators at Rowan University. The overall mean of the learning patterns of selected administrators was 22.39 (*SD* 5.61) Sequential, 25.39 (*SD* 2.52) Precise, 22.21 (*SD* 5.87) Technical, and 24.10 (*SD* 4.48) Confluent processing.

Table 4.3

Learning Patterns of Selected Administrators at Rowan University

Learning Pattern	N	Minimum	Maximum	Mean	Std. Deviation
Sequential processing	39	9	33	22.3947	5.61147
Precise processing	39	18	32	25.3947	3.52243
Technical processing	39	10	33	22.2105	5.87785
Confluent processing	39	7	33	24.1053	4.48294

Research Question 2: Is there a significant relationship between an administrator's learning pattern and competencies for effective leadership?

Table 4.4 depicts the relationship of select administrator's learning patterns and leadership competencies. The correlation between confluence and innovation is statistically significant ($r = .376$, $p = .02$) at a $p = .02$ level. Likewise, the correlation between confluence and big picture thinking is also statistically significant ($r = .461$, $p = .004$) at the $p <. 01$ level. Correlations between other learning patterns and leadership components were not found to be significant.

Table 4.4

Relationship Between Selected Administrator's Learning Patterns and Leadership Components

Item Pairs	*r* coefficient	*p*-level
Sequence-Focus	0.249	0.127
Sequence- Empowerment	0.206	0.216
Sequence- Process Orientation	0.221	0.183
Technical-Drive	0.092	0.582
Technical-Commitment	0.211	0.204
Confluence-Innovation	0.376	.020*
Confluence-Big Picture Thinking	0.461	.004**
Precise-Mental Discipline	0.276	0.093

* Statistically Significant $p <. 05$

** Statistically Significant $p <. 01$

Research Question 3: Is there a significant relationship between selected demographics of education level, gender, or leadership position and an administrator's learning pattern?

Table 4.5 provides the relationship between selected demographics and select administrator's learning patterns. A Pearson Chi-Square test for independence showed no significant relationship between education level, gender, or leadership position and learning patterns.

Table 4.5

Relationship Between Selected Demographics and Administrator Learning Patterns

Item Pairs	Value	df	Asymp. Sig. (2-sided)
Gender-Sequence	7.742	4	0.102
Gender-Technical	3.915	3	0.271
Gender-Confluence	2.275	4	0.605
Gender-Precise	4.913	3	0.178
Position-Sequence	13.836	16	0.611
Position-Technical	8.348	12	0.757
Position-Confluence	16.272	16	0.434
Position-Precise	8.52	12	0.743
Edu.Level-Sequence	4.345	8	0.825
Edu.Level- Technical	3.897	6	0.691
Edu.Level- Confluence	7.68	8	0.465
Edu.Level- Precise	2.977	6	0.812

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Summary of the Study

Administrators in higher education are expected to exert leadership qualities that are linked to their job duties. Likewise, a considerable part of understanding leadership competencies comes from learning about individual differences. According to Johnston (1998), learning patterns of individuals vary considerably. According to Johnston and Dainton (1997), understanding the learning combination profile helps adult learners understand their personal learning process in a way that encourages on-going educational pursuits. Bennis (1989a) asserts that leadership is an ever-changing phenomenon that requires individuals to commit to learning about self in their quest to become effective leaders. In this study, administrators were expected to show a relationship between learning patterns and leadership competencies.

Purpose of the Study

The purpose of this project was to investigate the relationship between selected administrator's learning patterns and attendant leadership competencies. In order to understand effective leadership, selected administrators at Rowan University were examined. Administrators ranging in learning patterns of sequence, precise, technical and confluent processing mirror several leadership competencies, defined by Linkage (n.d.), as essential for effective leadership. This study addressed a possible relationship by examining 1) the primary leadership competencies and learning patterns of selected administrators, 2) the extent of the relationship between an administrator's learning patterns and specific leadership competencies, and 3) the extent of the relationship

between selected demographics of education, level, gender, or leadership position and an administrator's learning pattern.

Methodology

The participants in this study consisted of 39 administrators, from the level of director up through the president of Rowan University. These administrators manage a major division within the university, and are mainly responsible for reporting directly to the president, supervising a major division, policy setting, managing a major venture, or charting a future for a unit. In order to safeguard the rights and welfare of the participating administrators, an Institutional Review Boad (IRB) application (Appendix A) was completed on January 1, 2004 and submitted to Rowan University IRB for approval. The application was approved by the IRB on February 25, 2004. Participants were given a consent form (Appendix C) to read and sign prior to completing the survey.

Data were gathered through two distinct surveys. Administrators were first given a Likert-type/short answer instrument titled Learning Combination Inventory (Appendix D). A five point Likert-scale was utilized to address the level of agreement with statements that identify four specific leaning patterns. To ensure the data represent these specific learning patterns, three short answer questions were given for correlation. Next, administrators were asked to complete a 75 Likert-item instrument titled Leadership Assessment Instrument. The instrument asks its raters to evaluate the frequency of a behavior on a 5-point Likert scale. Lastly, the demographics of education, gender, and leadership position were determined by reviewing the 2002-04 undergraduate catalog for Rowan University.

On February 26, 2004, 55 survey packages were distributed to the selected administrators at Rowan University. The package included a cover letter explaining the purpose of the project, a participant consent form, LCI, and LAI (in that order). A fine ballpoint pen donated by the Center for Addiction Studies was included in the package as a token of appreciation for the administrator's participation. The researcher personally collected the packets on March 3 and March 10, 2004 and the data analysis began.

Data Analysis

The Likert scale data were coded and analyzed using SPSS software. SPSS group statistics provided means, percent, and standard deviation (SD) for each learning pattern and leadership component. A correlation test was used to determine the strength of the correlation between learning patterns and selected leadership competencies. A chi-square test for independence sought the relationship between gender, leadership position, and education level and learning pattern. Finally, a descriptive test showed the descriptive statistics of selected demographics of administrators.

Findings

Research Question 1: What are the primary leadership competencies and learning patterns used by selected administrators in leadership at Rowan University?

Johnston (1997a) presented findings in a study of 2057 students from the United States, England, Ireland, and the Republic of Malta. Johnston found that by examining the diverse sets of learners and their learning characteristics that learning patterns are universally dispersed among learners. Furthermore, Johnston (1997b) studied the effect on which knowledge of personal learning modalities has upon the sense of self as a learner and teacher. Johnston's findings suggest that learners have the ability to adapt for

better productivity. Overall, the mean learning patterns of the selected administrators at Rowan University were 22.39 (*SD* 5.61) Sequential, 25.39 (*SD* 2.52) Precise, 22.21 (*SD* 5.87) Technical, and 24.10 (*SD* 4.48) Confluent processing.

According to Linkage Inc. (n.d.), statistics used to validate the LAI examined item-to-scale correlations. Findings showed mean inter-item correlations in the .55 to .65 *SD* ranges. Furthermore, the Leadership Assessment Instrument (n.d.) reports that all leaders apply the five personal leadership competencies to one degree or another. Overall, the Focus-Drive competency had a mean of 39.28 (*SD* 5.50). The Emotional Intelligence competency had a mean of 39.32 (*SD* 5.80). The Trusted Influence competency had a mean of 40.47 (*SD* 6.22). The Conceptual Thinking competency had a mean of 38.97 (*SD* 7.06). Finally, the Systems Thinking competency had a mean of 37.84 (*SD* 6.70).

Research Question 2: Is there a significant relationship between an administrator's learning pattern and competencies for effective leadership?

According to Johnston (1998), confluence processing "gives us permission to start before all directions are given; take a risk, fail, and start again; use imaginative ideas and unusual approaches; and improvise" (p.29). The Leadership Assessment Instrument (n.d.) reports that innovation is "the ability to create or improve new ideas, products, and services by challenging assumptions and thinking out of the box" (p.13). Next, big-picture thinking is "the ability to conceptualize and clarify all of the forces, events, entities, and people that are affecting the situation at hand" (p.13). Overall, the findings showed that the correlation between confluence and innovation is statistically significant ($r = .376, p = .02$) at a $p = .02$ level. Likewise, the correlation between confluence and

big picture thinking is also statistically significant ($r = .461, p = .004$) at the $p < .01$ level. Correlations between other learning patterns and leadership components were not found to be significant.

Research Question 3: Is there a significant relationship between selected demographics of education level, gender, or leadership position and an administrator's learning pattern?

Again, Johnston (1997a) presented findings in a study of 2057 students from the United States, England, Ireland, and the Republic of Malta. Johnston found that by examining the diverse sets of learners and their learning characteristics that learning patterns are universally dispersed among learners. Johnston (1998) asserts that the team-based model of mixed, or heterogeneous, groups affect performance positively. Marcellino (2002) reported that the use of the LCI in forming teams increased productivity and overall experience among team members. Overall, A Pearson Chi-Square test for independence showed no significant relationship between education level, gender, or leadership position and learning patterns.

Discussion and Conclusion

Findings suggest administrators at Rowan University use a wide degree of flexibility between learning patterns and leadership skills. On the whole, administrators at Rowan University illustrated nominal results. While the results showed a "flat profile," data suggests that confluent and sequential processing are use-first patterns compared to technical and precision processing, which are use as needed.

The mean number of administrators rated their leadership competencies as strengths. Results in leadership competencies also pointed to a flat profile. Findings in

this study suggest a degree of flexibility across the leadership competencies with trusted influence and emotional intelligence showing the highest mean scores by a small margin. On the other hand, administrators appear to show lower skills in conceptual and systems thinking. Bennis (1989a) claims that effective leaders must be able to use various leadership skills in a variety of different circumstances. Perhaps, the nature of leadership exhibited by administrators at Rowan University require this wide-degree of flexibility among competencies. The data do seem to suggest that this is true at Rowan University.

Findings do suggest a significant relationship between confluence processing and conceptual thinking. According to the Leadership Assessment Instrument, conceptual thinking is the competency of "conceiving and selecting innovative strategies and ideas for an organization; a balance between innovation and big-picture thinking" (n.d., p. 13). This operational definition seems to agree with the thought processes of confluent learners. According to Johnston (1998), confluent learners avoid conventional approaches, so their style of leadership is unique in that administrators showing this pattern will often look for unique ways to complete any learning task. These findings suggest that these administrators may be more willing to take a risk, fail, and start again. Lastly, it would explain why administrators with a confluent learning pattern would use imaginative ideas, improvise, and use unusual approaches to leadership.

Recommendations for Further Research

The following recommendations are made for further research:

1. A larger study involving administrators from multiple higher education colleges and universities should be done. The researcher was limited to examining administrators at Rowan University only. The researcher was unable to find any other studies that directly compare learning patterns to leadership competencies.
2. It is recommended that considerable time be given to administrators to complete the two survey instruments. It is important to acknowledge time constraints associated with the daily functions of administrators.
3. A study that further examines the effectiveness of administrative leadership at Rowan University. Thus far, data gathered has showed the extent of the leadership competencies without addressing effectiveness. It is recommended that the survey instrument used in this study ask administrators if they feel they are effective leaders. Going one step further, it would be valuable to compare administrative data with data gathered from personnel who work for these individual administrators. Administrators can lead better by learning about their effectiveness on personnel.
4. A study that examines the extent of leadership skills. A study needs to be done in higher education that shows the extent to which administrators exhibit change management, coaching/mentoring, communication, negotiation, and problem solving on a daily basis.

5. A study that investigates whether a learner gravitates toward a particular leadership position. In such a study, close attention needs to be paid to specific job titles and duties in higher education.

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APPENDIX A

Institutional Review Board (IRB) Application
Rowan University IRB approval

INSTITUTIONAL REVIEW BOARD
DISPOSITION FORM

Mark Hendricks	
Principal Investigator	**Co-Principal Investigator (if applicable)**
8 W. High St. Apt. B	
Address of Principal Investigator	**Address of Co-Principal Investigator**
Glassboro, NJ 08028	
City, State, and Zip Code	**City, State, and Zip Code**
856-371-7539 heny10@yahoo.com	
Telephone # Fax # e-mail address	**Telephone # Fax # e-mail address**

TITLE OF RESEARCH:

The relationship between administrators' learning patterns and leadership competencies.

ADMINISTRATIVE DISPOSITION - DO NOT WRITE BELOW THIS LINE

Your claim for exemption for the research study identified above has been reviewed. The action taken is indicated below:

_____ **APPROVED FOR EXEMPTION AS CLAIMED: CATEGORY #**
Note: Anything that materially changes the exempt status of this study must be presented to the IRB for approval before the changes are implemented. Such modifications should be sent to the IRB Office at the address above.

_____ **APPROVED FOR EXEMPTION - BUT NOT AS CLAIMED. Your claim for exemption does not fit the criteria for exemption designated in your proposal. However, the study does meet the criteria for exemption under CATEGORY #_____ .**

_____ **A determination regarding the exempt status of this study cannot be made at this time. Additional information is required.**

_____ **Your proposal does not meet the criteria for exemption, and a full review will be provided by the IRB.**

EXPEDITED REVIEW: _____Approved _____Denied

FULL REVIEW: _____Approved _____ Approved with modifications _____ Denied

DENIED:_____

See attached Committee Action Letter for additional comments.

_____ _____

Chair, IRB **Co-Chair, IRB**

Date_____ **Date**_____

Appendix D

INSTITUTIONAL REVIEW BOARD
APPLICATION FOR REVIEW OF RESEARCH

1. Type of approval review requested (check one): Full Review_____ Expedited Review _____ Review Exemption__X___

2. PRINCIPAL INVESTIGATOR: Mark A. Hendricks

3. DEPARTMENT: M.A., Higher Education Administration

TITLE OF RESEARCH: The relationship between administrators' learning patterns and leadership competencies

CO-INVESTIGATORS: _____

PURPOSE OF RESEARCH (INDEPENDENT PROJECT, MASTER'S THESIS, ETC.):_____

To investigate the relationship between selected administrator's learning patterns and leadership competencies.

4. IF YOU ARE A STUDENT RESEARCHER PLEASE PROVIDE THE FOLLOWING:

MAILING ADDRESS: 8 W. High St. Apt. B Glassboro, NJ 08028

EMAIL: henry10@yahoo.com TELEPHONE NO. 856-371-7539

FACULTY
SPONSOR NAME: Dr. Burton Sisco, Professor of Educational Leadership, College of Education, Rowan

DEPARTMENT OF SPONSORING FACULTY: Higher Education Administration, Ed. Leadership Dept.

PHONE NO. 256-4500 (3717)_____ FAX NO. _____ EMAIL: Sisco@rowan.edu

FACULTY
SPONSOR SIGNATURE: _____

DATE: _____

5. HAS THIS RESEARCH PROJECT BEEN CONSIDERED PREVIOUSLY BY THE IRB? YES _____ NO ___X____

IF YES, GIVE DATE OF LAST REVIEW: _____ _____

6. SOURCE OF FUNDING (IF APPLICABLE):

_____ SBR GRANT

_____ UNIVERSITY GRANTS (INCLUDING FOUNDATION)

_____ CAREER DEVELOPMENT GRANT

_____ EXTRAMURAL FUNDS
PLEASE INDICATE AGENCY NAME: _____

7. ARE YOU WORKING WITH A RESEARCHER FROM ANOTHER INSTITUTION? IF SO, BE AWARE THAT YOUR CO-INVESTIGATOR MUST ALSO SUBMIT YOUR JOINT PROPOSAL TO THE IRB AT THE INSTITUTION THAT EMPLOYS HIM/HER. _____YES ___X___NO

8. DOES YOUR RESEARCH INVOLVE ANY OF THE FOLLOWING (CHECK ALL THAT APPLY)?

___ minors _____ prisoners _____ pregnant women _____
___ use of the investigators current students as subjects
___ drugs or other controlled substances
___ psychological or physiological stress above the level of normal everyday activities
___ misleading or deceiving subjects about any aspect or purpose of the research
___ collection of information which deals with sensitive aspects of the behavior (e.g., illegal activity, drug or alcohol use, sexual behavior)
___ collection of information which would place subjects at risk of criminal or civil liability if it became known
___ collection of information which could affect subjects' financial standing, employability, or reputation if it became known.
___ examination of existing data, documents, or specimens that are <u>not</u> part of the public record
___ children involved in your research without sensitive information about themselves or their families.
___ collecting or studying existing data, documents, records, pathological specimens or diagnostic specimens, which are publicly available and from which participants cannot be identified by anyone other than the investigator(s).

9. WHAT IS THE OBJECTIVE OF THE RESEARCH?

The objective of the research is to investigate the relationship between administrators' learning patterns and leadership competencies.

10. DESCRIBE THE DESIGN OF THE RESEARCH INCLUDING WHAT WILL BE REQUIRED OF SUBJECTS (ATTACH ADDITIONAL SHEET IF NECESSARY):

In this quantative research, subjects will be asked to truthfully answer the questions in two instruments, namely the Leadership Assessment Instrument and the Learning Combination Inventory. At the conclusion of this study, participants will be e-mailed a personal profile of their results, along with the results of this study. This will be a convenience study of selected administrators at Rowan University done in the spring of 2004. Confidentiality will be maintained.

11. UNDER WHICH OF THE FOLLOWING CATEGORIES ARE YOU APPLYING FOR EXEMPTION?

_____ 1. Research conducted in established or commonly accepted educational settings, involving normal educational practices such as, (i) research on regular and special educational instructional strategies, or (ii) research on the effectiveness of the comparison among instructional techniques, curricula, or classroom management methods.

__X__ 2. Research involving the use of social sciences or educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior where (i) information is not obtained in such away that the participants can be identified directly or indirectly or (ii) the participants' responses, if they became known, could not place the participant at risk of criminal or civil liability or be damaging to the participants' financial standing, reputation, or employability. (All research involving survey and interview procedures is exempt when the participants are elected or appointed public officials or candidates for public office. However, confidentiality must be maintained when required by federal statute).

_____ 3. Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that participants cannot be identified.

_____ 4. Research and demonstration projects which are funded by a federal agency and determined to be exempt by the agency head and which are designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.

_____ 5. Exemption for collection or study of existing data: research involving collection or study of existing data, documents, records, if these data are non-identifiable and publicly available or information is recorded by the investigator in such a manner that subjects cannot be identified directly through identifiers

linked to the subject (codes linking names to data are considered indirect identifiers).

_____ 6. Exemption for study of the department of health and human services: unless specifically required by the statute, research and demonstration projects which are conducted by or subject to the approval of the Department of Health and Human Services, and which are designed to study, evaluate, or otherwise examine:

_____ (a) programs under the Social Security Act or other public benefit or service programs

_____ (b) procedures for obtaining benefits or services under those programs;

_____ (c) possible changes in or alternatives to those programs or procedures;

_____ (d) possible changes in methods or levels of payment for benefits or services under those programs.

IF YOUR RESEARCH IS GIVEN EXEMPTION STATUS, THE FOLLOWING MUST BE STATED ON A COVER LETTER (ON DEPARTMENTAL LETTERHEAD) ACCOMPANYING ANY SURVEY OR QUESTIONNAIRE:

1. A statement that all participation is voluntary
2. A statement that you are conducting research and the reason for it (e.g., master's thesis, publication, etc.)
3. Purpose of the research - what you are investigating
4. A statement that all responses will be kept anonymous and confidential
5. A statement that participants need not respond to all questions
6. If participants are your own students, a statement that class standing will not be affected in any way based on participation
7. The name and telephone number of the Principal Investigator (PI) and faculty sponsor (if applicable)

CLAIMS FOR EXEMPTION MAY NOT BE MADE FOR (A) RESEARCH INVOLVING CHILDREN, (B) AIDS-RELATED RESEARCH, (C) RESEARCH INVOLVING SUBSTANCE OR CHILD ABUSE OR (D) RESEARCH TO BE CONDUCTED AT THE V.A. (RESEARCH UNDER THESE CATEGORIES IS

COMPLETE THE FOLLOWING ADDITIONAL QUESTIONS FOR A FULL IRB REVIEW

12. DESCRIBE THE SUBJECTS WHO WILL BE PARTICIPATING (NUMBER, AGE, GENDER, ETC):

Subjects participating in this study will consist of approximately 55 higher education administrators at Rowan University. Both male and female administrators from the title of Director to the President of the University will be asked to participate.

13. HOW WILL SUBJECTS BE RECRUITED? IF STUDENTS, WILL THEY BE SOLICITED FROM CLASS?

The subjects were selected by title in the 2003-2004 Rowan Administrative Offices phone book. Subjects will be e-mailed a letter asking them to participate in this study. In this letter, the subjects will be advised that a desperate graduate student is seeking their help in conducting this study, and this researcher will hand-deliver and pickup the surveys at specific dates. As incentive, subjects will be given a lollipop and candy bar, and a small letter thanking them for their participation.

14. WHAT RISKS TO SUBJECTS (PHYSIOLOGICAL AND/OR PSYCHOLOGICAL) ARE INVOLVED IN THE RESEARCH?

This researcher is unaware of any risks involved with this research. Again, confidentiality will be maintained.

15. IS DECEPTION INVOLVED IN THE RESEARCH? IF SO, WHAT IS IT AND WHY WILL IT BE USED?

No deception will be involved with this research.

16. WHAT INFORMATION WILL BE GIVEN TO THE SUBJECTS AFTER THEIR PARTICIPATION? IF DECEPTION IS USED, IT MUST BE DISCLOSED AFTER PARTICIPATION.

Subjects will be given the contact information of this researcher if they are interested in the results of this study.

17. HOW WILL CONFIDENTIALITY BE MAINTAINED? WHO WILL KNOW THE IDENTITY OF THE SUBJECTS? IF A PRE-AND POSTTEST DESIGN IS USED, HOW WILL THE SUBJECTS BE IDENTIFIED?

This study will not use the names or titles of the subjects involved. Nowhere on either of the (2) surveys does it ask for personally identifiable information. The subjects will be given a coded number to identify that the correct administrator has completed the surveys. These results will be sent to each individual subject at the conclusion of this study, along with a summary of the research findings. This researcher is simply looking for a relationship between learning patterns and leadership competencies.

18. HOW WILL THE DATA BE RECORDED AND STORED? WHO WILL HAVE ACCESS TO THE DATA? ALL DATA MUST BE KEPT BY THE PRINCIPAL INVESTIGATOR FOR A MINIMUM OF THREE YEARS.

Once collected, the survey information will be placed into Microsoft Excel. Then, this information will be coded and analyzed using SPSS software to show the relationship between the two instruments. This information will then be protected by this principal investigator and held for a period of three years. No other investigator will have access to this information without consent.

Institutional Review Board
Approval for the Use of Human Participants in Research

Rowan University is obliged to safeguard the rights and welfare of persons participating in any research project initiated by or involving Rowan University personnel. Therefore, all research involving human participants regardless of funding source or status of investigator (i.e., faculty, staff or student) must be reviewed and approved by the Rowan University Institutional Review Board (IRB) ***before*** such research is initiated. The request for approval should be submitted at least six weeks before the research is to begin or before the application/proposal deadline for funding. The policies and procedures of the IRB are guided by the *Federal Policy for the Protection of Human Subjects; Notices and Rules,* Federal Register, Vol.56, No. 117, June 18, 1991, and are explained in detail in the Rowan University Institutional Review Board policy statement. Copies of this document are available in the Office of Government Grants and Sponsored Projects.

In accordance with federal regulations, the IRB defines *research* as any systematic investigation designed to develop or contribute to generalizable knowledge. Under this definition some research-like activities will not be subject to the review process (e.g., evaluation of teaching methods if intended solely as a means to help an individual instructor decide the best method to use in his/her classes). However, if information is to be used for publication, presentation, or other research purposes, then it qualifies as research and must be approved by the IRB. All research involving human participants conducted by employees and students of Rowan University must be approved by this institution's IRB. If the research is conducted at another institution, the researcher must also obtain approval from that institution as well as from Rowan University.

In order to gain either full or expedited review or an IRB exemption, the Principal Investigator (PI) must submit the IRB *Application for Review of Research* along with (a) copies of all surveys, questionnaires, and standardized tests to be used; (b) the Informed Consent Form; and (c) a detailed description of how participants will be debriefed if any deception is used in the research. Failure to submit any of this information will result in the application being returned to the PI without consideration by the IRB, and a possible delay in notification of approval.

In order to expedite the approval process, the PI should:

1. Complete all questions on the application giving sufficient detail such that the IRB can make an informed decision as to whether the participants will be treated in accordance with federal, state, and institutional ethical guidelines.
2. Attach all required materials (e.g., consent forms, surveys).
3. Submit completed application at least six weeks prior to initiating research.

The IRB will review proposals monthly. If applications are not complete at the time of the monthly meeting, they will not be reviewed until the next scheduled meeting.

YAHOO! Mail

Print - Close Window

Date: Wed, 25 Feb 2004 10:44:17 -0500

From: "Tricia J. Yurak" <yurak@rowan.edu>

To: "Burton R. Sisco" <sisco@groupwise.rowan.edu>, "Tricia J. Yurak" <yurak@groupwise.rowan.edu>, HENY10@YAHOO.COM

Subject: Re: IRB APPROVAL: HENDRICKS

your IRB application is now approved.

you will receive formal notification from the IRB shortly.

thank you!

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Tricia J. Yurak, Ph.D.
Chair, Rowan University Institutional Review Board
Department of Psychology
Rowan University
Glassboro, NJ 08028

856.256.4500 x3778
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

APPENDIX B

Letter to Participants; Statement of Purpose

2/25/04

Dear Participant,

Thank you for your participation in this research project. The purpose of this study is to determine the relationship between leadership competencies and learning patterns amongst administrators. The following two instruments, the Learning Combination Inventory and Leadership Self-Assessment, will attempt to measure this relationship.

Permission to use the Leadership Assessment Instrument (LAI) was given by David Giber, Vice President of Linkage Inc. on November 20, 2003. Also, Christine Johnston, director of the Center for the Advancement of Learning, gave permission to use the Learning Combination Inventory (LCI) for this project on October 20, 2003. Recently, Institutional Review Board (IRB) approval for this project was gained from Rowan University on 2/20/04.

IMPORTANT: I will collect the surveys in person on Wednesday, March 3, 2004. If you are going to be out of work, please tape the package to your door.

Feel free to contact me via e-mail for any problems you may encounter. An executive summary of this study's results will be forwarded to you upon completion of this project. For the generous time you have taken to contribute to this study, I am offering you a nice pen donated to me by the Center for Addiction Studies to show my appreciation for your participation. On a final note, this information is 100% confidential, so please **answer all questions as truthfully as possible**, and have fun learning about yourself.

Sincerely,

Mark Hendricks
Rowan University Graduate School
M.A. Higher Education Administration
Hendricks@rowan.edu

APPENDIX C

Informed Consent Form

CONSENT FORM

I agree to participate in a study entitled "The relationship between administrators' learning patterns and leadership competencies" which is being conducted by Mark Hendricks, Graduate Student in Higher Education Administration program at Rowan University. The purpose of this study is to investigate the relationship between selected administrator's learning patterns and leadership competencies. The data collected in this study will evaluate this relationship, and the findings will be reported in the required thesis project for graduate study.

I understand that I will be required to truthfully answer all questions in both the Leadership Assessment Instrument and Learning Combination Inventory. At the conclusion of my answer period, I will tally the results in the location provided. My participation in the study should not exceed one hour.

I understand that my responses will be anonymous and that all the data gathered will be confidential. I agree that any information obtained from this study may be used in any way thought best for publication or education provided that I am in no way identified and my name is not used.

I understand that there are no physical or psychological risks involved in this study, and that I am free to withdraw my participation at any time without penalty.

I understand that my participation does not imply an employer-employee relationship exists between the participant and the state of New Jersey, Rowan University, the principal investigator or any other project facilitator.

If I have any questions or problems concerning my participation in this study, I may contact Mark Hendricks at (856) 371-7539 or heny10@yahoo.com.

_____ _____

(Signature of Participant) (Date)

_____ _____

(Signature of Investigator) (Date)

APPENDIX D

Learning Combination Inventory

Let Me Learn

Making a difference, each day, all year –
one learner at a time

Learning Combination Inventory

Professional Form

Christine A. Johnston
Gary R. Dainton

LCI INSTRUMENTS, LLC

Making a difference, each day, all year, one learner at a time

This instrument was developed for use within educational contexts. It's validity and reliability are maintained when administered by an individual who has been trained in the Let Me Learn Process (See Johnston, C. (1998). Let Me Learn. Corwin Press).

For further information or support contact:

Let Me Learn
2 Tiverstock Drive
Pittsgrove, NJ 08318
USA
Telephone: (609) 358 0039
Fax: (609) 358 6998
E-mail: Johnstca@bellatlantic.net
Web Page: www.letmelearn.org

Resources:

Learning Combination Inventory Form I (Recommended for years K-4)
ISBN 1-892385-00-7

Learning Combination Inventory Form II (Recommended for years 5-12+)
ISBN 1-892385-01-5

Learning Combination Inventory Professional Form
ISBN 1-892385-02-3

Learning Combination Inventory Manual
ISBN 1-892385-03-1

Books:

Unlocking The Will to Learn (1996) by C. A. Johnston
Let Me Learn (1998) by C. A. Johnston

Books Published by:
Corwin Press, Inc.
A Sage Publications Company
2455 Teller Road
Thousand Oaks, CA 91320
E-mail: order@corwin.sagepub.com

LCI

Learning Combination Inventory

Christine A. Johnston
Gary R. Dainton

You have always known that if you want to be a successful learner you need to use your intellectual abilities to their fullest. Something you may not have known is that your learning abilities interact to form a highly individualized learning combination.

Your responses to the following statements can help you to understand what your learning combination is. Please read each sentence carefully and respond to it as accurately as you can.

PROFESSIONAL FORM

ISBN 1-892385-02-3

Part I

INSTRUCTIONS:

Below are 28 statements, each followed by five phrases: "Never Ever," "Almost Never," "Sometimes," "Almost Always," and "Always." Read each statement carefully and then circle the phrase which best depicts the degree to which the sentence describes how you learn.

Sample Statements:

A. I listen carefully whenever directions are given.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

B. I like to show my knowledge by giving impromptu presentations.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

Words of Encouragement: Take absolutely all the time you need, and consider your responses carefully. Have fun, relax, and enjoy learning more about yourself.

1. I would rather build a project than read or write about a subject.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

2. I need a clear understanding of the directions before I begin a task.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

3. I just enjoy generating lots of unique or creative ideas.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

4. I instinctively correct others whose information or answers are not totally accurate.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

5. I feel better when I have time to double check my work.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

6. I like to take things apart to see how they work.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

7. I am interested in knowing detailed information about whatever I am studying.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

8. I like to come up with a totally new and different way of doing an assignment instead of doing it the same way as everybody else.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

9. I look for well-documented, factual articles to read.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

10. I keep a neat desk or work area.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

11. I like to work with hand tools, power tools, and gadgets.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

12. I am willing to risk offering new ideas even in the face of discouragement.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

13. I need to have a complete understanding of the directions before I feel comfortable doing an assignment.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

14. Before I begin any work assignment, I research as much information about it as possible.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

15. I like hands-on assignments where I get to use mechanical/technical equipment.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

16. I become frustrated when I have to wait patiently for someone to finish giving directions.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

17. I prefer to build or make things by myself without anyone's guidance.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

18. I become frustrated if I am given a second task to do before I have completed the first.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

19. I pride myself in giving factually correct answers to the questions I am asked.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

20. I don't like having to do my work in just one way, especially when I have a better idea I would like to try.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

21. I clean up my work area and put things back where they belong as soon as I finish a job.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

22. I enjoy the challenge of fixing or building something.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

23. I react quickly to assignments and questions without thinking through my answers.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

24. I automatically take notes whenever I listen to a presentation.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

25. I ask more questions than most people because I just enjoy knowing things.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

26. I like to figure out how things work.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

27. I am told by others that I am very organized.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

28. I like to make up my own way of doing things.

NEVER EVER	ALMOST NEVER	SOME-TIMES	ALMOST ALWAYS	ALWAYS

Part II: Please answer each of the following questions in your own words.

What makes assignments frustrating for you?

If you could choose, what would you do to show what you have learned?

What hobby or sport do you do well? How would you teach someone else to do it?

SCORING SHEET

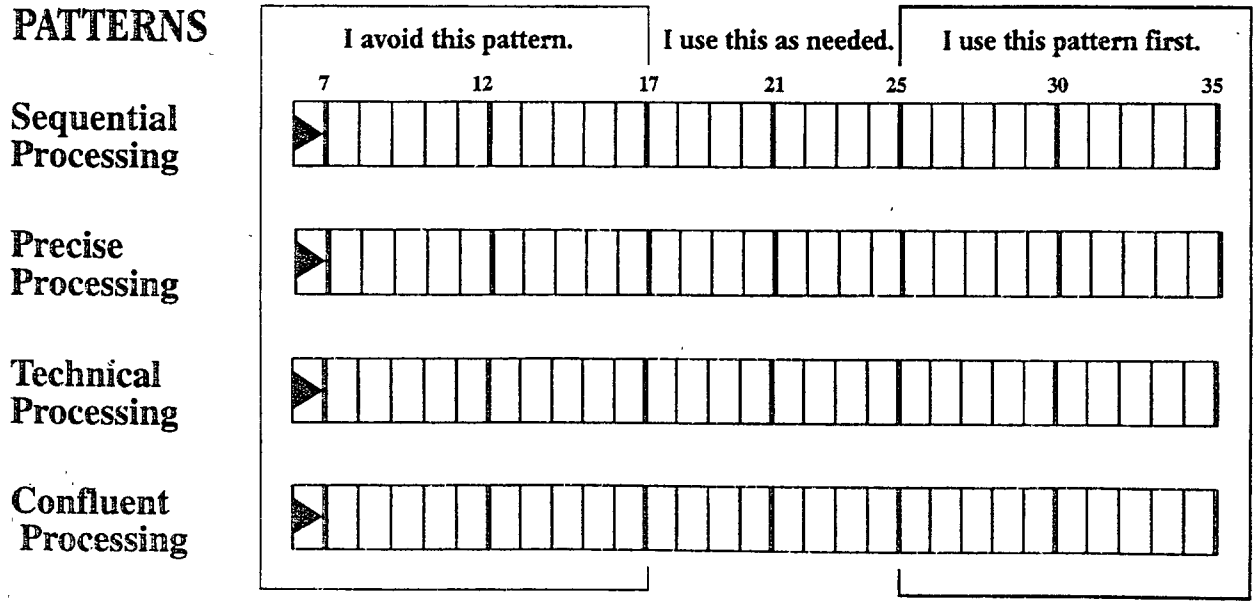
Name_____

Score the responses for Questions 1 - 28 using a 1 for "never ever," 2 for "almost never," 3 for "sometimes," 4 for "almost always," and 5 for "always." Next, transfer the score of each response to the center of the corresponding tumbler. Add up the tumbler numbers and write the total in the space at the end of each line. Transfer your total for each pattern to the bar graph at the bottom of the page.

PATTERNS								TOTAL
Sequential Processing	2	5	10	13	18	21	27	_____
Precise Processing	4	7	9	14	19	24	25	_____
Technical Processing	1	6	11	15	17	22	26	_____
Confluent Processing	3	8	12	16	20	23	28	_____

Your Learning Combination

Graph the totals from each of the tumbler lines above on the appropriate bars below.



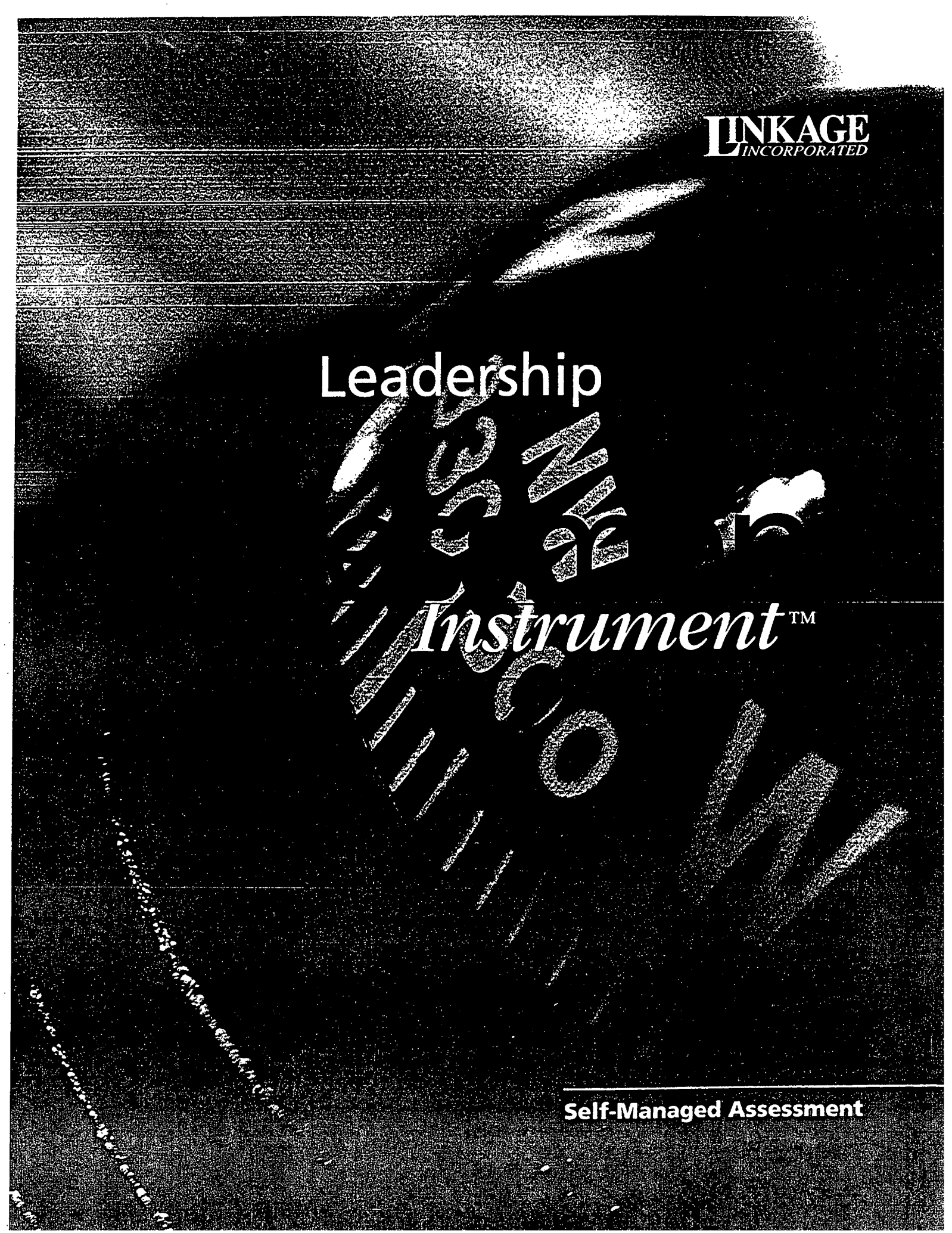
Printed in the United States of America

APPENDIX E

Leadership Assessment Instrument

LINKAGE INCORPORATED

Leadership



Instrument™

Self-Managed Assessment

Completing the LAI

DIRECTIONS

1. On pages 6-10 of the LAI Self-Managed Assessment are 75 items, each describing a specific leadership behavior. Using the scale below, rate how often you demonstrate each behavior. Write the score in the corresponding numbered box on this page (working from top to bottom).

   1 = Rarely Demonstrate
   2 = Sometimes Demonstrate
   3 = Often Demonstrate
   4 = Very Often Demonstrate
   5 = Almost Always Demonstrate

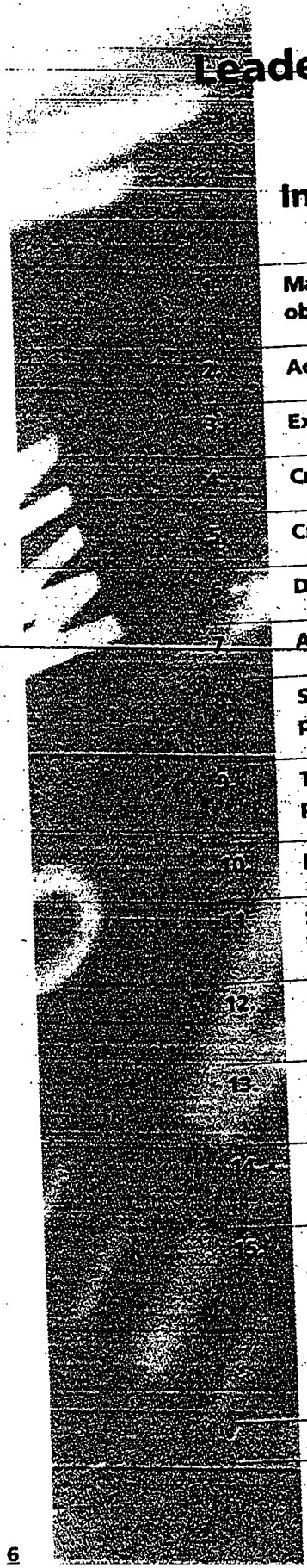
2. After completing the 75 items, tear the top sheet from the page. The scores you entered will have been copied to the worksheet underneath, "Calculating Your Results."

Example: If you believe you "often" demonstrate the behavior described by item 1, write a "3" in box 1 below.

1	16	31	46	61
3				

1	16	31	46	61
2	17	32	47	62
3	18	33	48	63
4	19	34	49	64
5	20	35	50	65
6	21	36	51	66
7	22	37	52	67
8	23	38	53	68
9	24	39	54	69
10	25	40	55	70
11	26	41	56	71
12	27	42	57	72
13	28	43	58	73
14	29	44	59	74
15	30	45	60	75

Leadership Assessment Questionnaire



In my day-to-day work as a leader, I...

1. Maintain focus when disruptions might detract attention from key issues and objectives.
2. Act decisively to make things happen.
3. Exhibit consideration of the feelings of others when or before taking action.
4. Create a positive environment through the use of sincerity and optimism.
5. Create a view of the future that motivates others.
6. Display trust in others by giving them additional responsibilities.
7. Ask "What if?" questions to test assumptions and challenge the status quo.
8. Search for and conceptualize the underlying or systemic causes that drive a problem.
9. Take steps to make sure that new ideas are integrated with established procedures or processes.
10. Display rigor and discipline in my thinking in difficult situations.
11. Successfully provide a visible anchor for others in times of great change, e.g., by reaffirming key goals or values.
12. Use a variety of methods (reason, inspiration, etc.) to help individuals attain higher levels of performance.
13. Represent and articulate viewpoints in a way that positively influences the dialogue.
14. Use fact and argument to create a meeting of the minds among stakeholders with differing viewpoints.
15. Fashion solutions by synthesizing and applying relevant information or data.

RATING SCALE

1	2	3	4	5
Rarely Demonstrate behavior	**Sometimes** Demonstrate behavior	**Often** Demonstrate behavior	**Very Often** Demonstrate behavior	**Almost Always** Demonstrate behavior

15. Am able to pick out and target the projects or initiatives that require special attention.

16. Strive to set and achieve ambitious goals rather than settling for the safety of achievable results.

17. Treat each person differently according to his or her own unique makeup.

18. Demonstrate maturity in reassuring teams and/or individuals in the face of setbacks.

19. Gain the trust and loyalty of others by fulfilling the commitments I make to them.

20. Display confidence in individuals by delegating key tasks or functions.

21. Seek better solutions to problems instead of falling back on obvious ones.

22. Intuitively form ideas that clarify the many possibilities in a complex situation.

23. Adhere to processes to make sure that the right people are involved in a project.

24. Thoughtfully reach decisions by reviewing ideas and assumptions with key individuals within the organization.

25. Help detect or resolve team breakdowns resulting from change.

26. Help others recognize their areas of weakness in a constructive, beneficial manner.

27. Communicate effectively with individuals up, down, and across the organization.

28. Balance the interests of different constituencies to reach "win-win" solutions.

29. Employ thorough analysis and pragmatism to sort through options and reach timely decisions.

30.

RATING SCALE

1	2	3	4	5
Rarely Demonstrate behavior	**Sometimes** Demonstrate behavior	**Often** Demonstrate behavior	**Very Often** Demonstrate behavior	**Almost Always** Demonstrate behavior

Display single-mindedness in directing energy at key targets.

Overcome potential stumbling blocks to achieve an objective.

Take into account the impact of emotions and feelings on a situation.

Demonstrate an ability to control and filter emotions in a constructive way.

Stimulate strong commitment to collective efforts through praise and recognition of individual contributions.

Display a strong commitment to the success of others by providing clear feedback on issues or behavior.

Demonstrate an ability to create new business ideas by thinking out of the box.

Make connections between and among information, events, etc. that reveal key issues or opportunities.

Talk about and perceive the organization in terms of critical and highly interrelated work processes.

Crystallize thoughts by deliberately and systematically steering through ambiguity and information clutter.

Am able to convince others of the need for change due to critical organizational objectives.

Identify and confront critical developmental issues or barriers with respect to peers, reports, etc.

Distill ideas into focused messages that inspire support or action from others.

Find common ground to accommodate the conflicting needs and wants of different stakeholders.

Spot what is at the root of a problem; i.e., distinguish its symptoms from its causes.

RATING SCALE

(1)	(2)	(3)	(4)	(5)
Rarely Demonstrate behavior	**Sometimes** Demonstrate behavior	**Often** Demonstrate behavior	**Very Often** Demonstrate behavior	**Almost Always** Demonstrate behavior

46. Focus on key tasks when faced with limited time and/or resources.

47. Display a willingness to do whatever it takes to get it done.

48. Understand the various psychological and emotional needs of people.

49. Model how to handle failure by accepting setbacks with grace and renewed determination.

50. Set a clear example for others by following through on important commitments.

51. Give others the power to participate in decision making and to share in the responsibility.

52. Demonstrate creativity in developing and/or improving ideas and concepts better.

53. Come up with new concepts or distinctions that better organize the interpretation of ambiguous data, information, or events.

54. Ensure successful implementation by building and connecting processes within the organization.

55. Critically and thoroughly analyze the data available on alternatives when seeking the best solution to a problem.

56. Learn and develop new skills or behaviors to adapt to constant, sometimes turbulent change.

57. Instill a sense of confidence in others—even those who are convinced that "they can't do it."

58. Present opinions accurately and persuasively—both one-on-one and to a group.

59. Persuasively use relevant data or information to gain the needed sponsorship or buy-in from others.

60. Break down a problem or a situation into discrete parts that are easier to manage.

RATING SCALE

1	2	3	4	5
Rarely Demonstrate behavior	**Sometimes** Demonstrate behavior	**Often** Demonstrate behavior	**Very Often** Demonstrate behavior	**Almost Always** Demonstrate behavior

61. Devote at least 80 percent of my time to the top 20 percent of my priority list.

62. Display stamina and energy over the long term in achieving high standards of performance.

63. Consider the impact of my own behavior or decisions on other people.

64. Consistently express myself in moods that invite participation and open up communication.

65. Inspire dedication to the organization's shared goals and values through my own visible actions.

66. Provide whatever is needed to help others take charge of their work and successfully produce results.

67. Create innovative concepts that have growth or profit potential.

68. Ask questions to try to form a complete picture of seemingly unrelated information, events, etc.

69. Demonstrate a commitment to build processes by documenting critical action steps and organizational learnings.

70. Think through problems in a logical and well-organized fashion.

71. Recognize and help remedy individual or collective barriers to the implementation of change.

72. Help others work their way through problems or crises.

73. Effectively communicate to all those who need to be informed.

74. Reach agreements with individuals (internal and external) for the benefit of the organization.

75. Figure out how to solve problems, even those that appear hopeless.

Go on to Step Three

RATING SCALE

1	2	3	4	5
Rarely Demonstrate behavior	**Sometimes** Demonstrate behavior	**Often** Demonstrate behavior	**Very Often** Demonstrate behavior	**Almost Always** Demonstrate behavior

Calculating Your Results

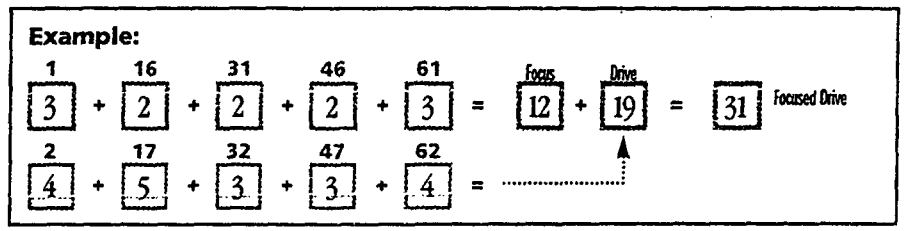
DIRECTIONS

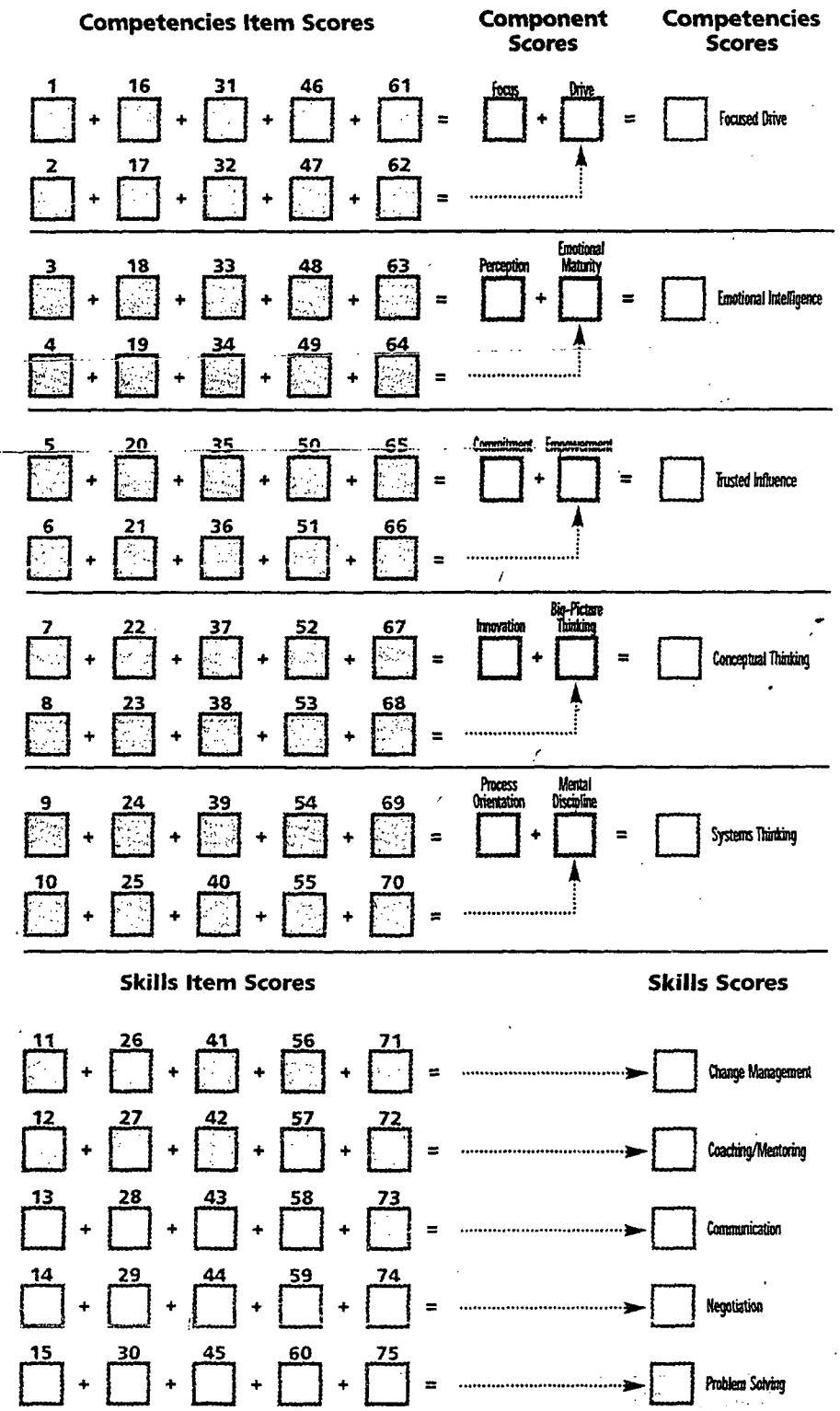
1. Total each of the ten rows of five **Competencies Item Scores**, writing each total in the box indicated by the arrow in the **Component Scores** column. (Each score should be between 5 and 25.)

2. Calculate the total of each pair of component scores, writing the result in the box in the **Competencies Scores** column. (Each score should be between 10 and 50.)

3. Total each of the five rows of five **Skills Item Scores**, writing each total in the box indicated by the arrow in the **Skills Scores** column. (Each score should be between 5 and 25.)

4. If you wish to transfer your numeric results to a visual display, turn to page 11 in your Self-Managed Assessment booklet. Otherwise, continue with "Step Three: Understand the Leadership Assessment Instrument" on page 12.

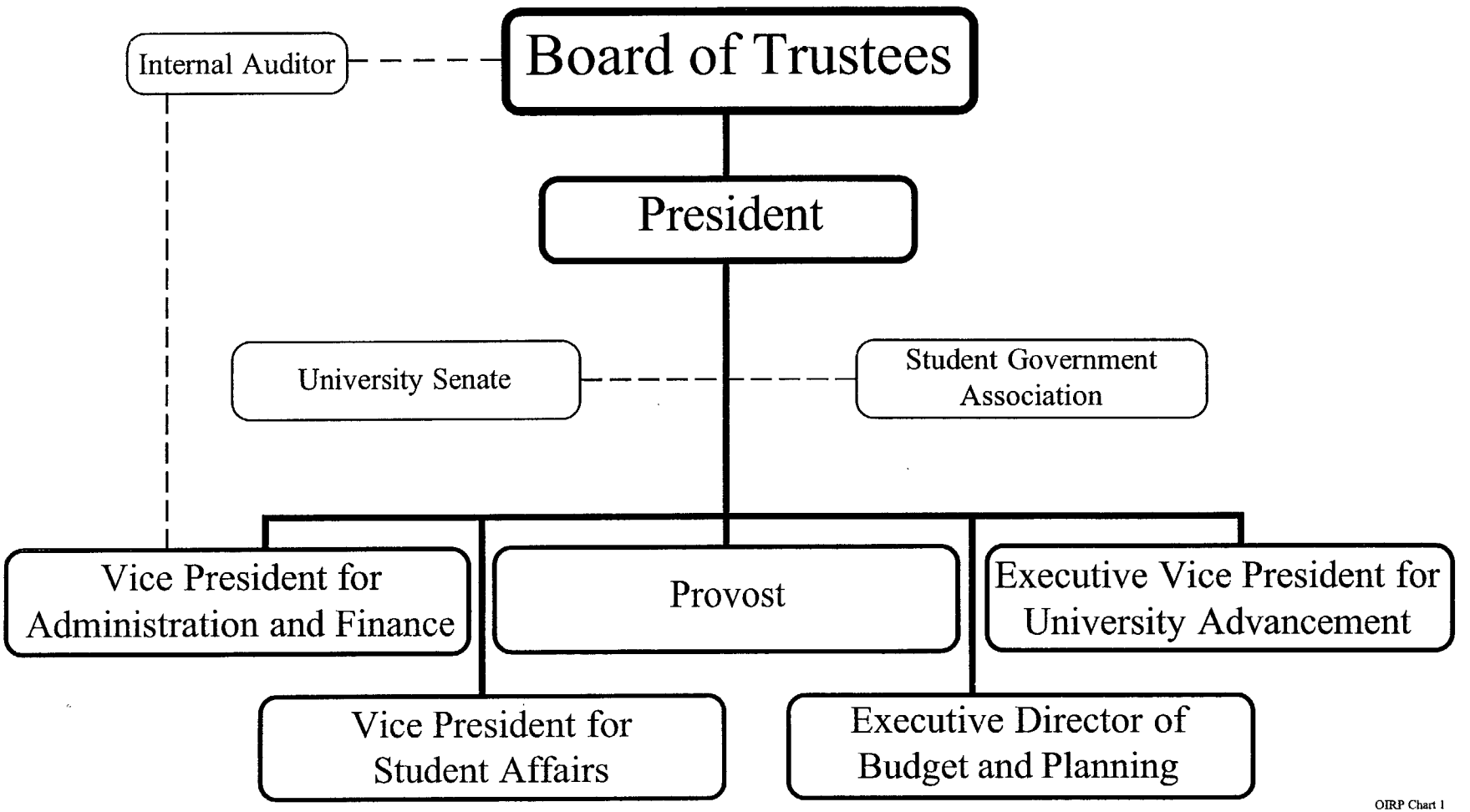




APPENDIX F

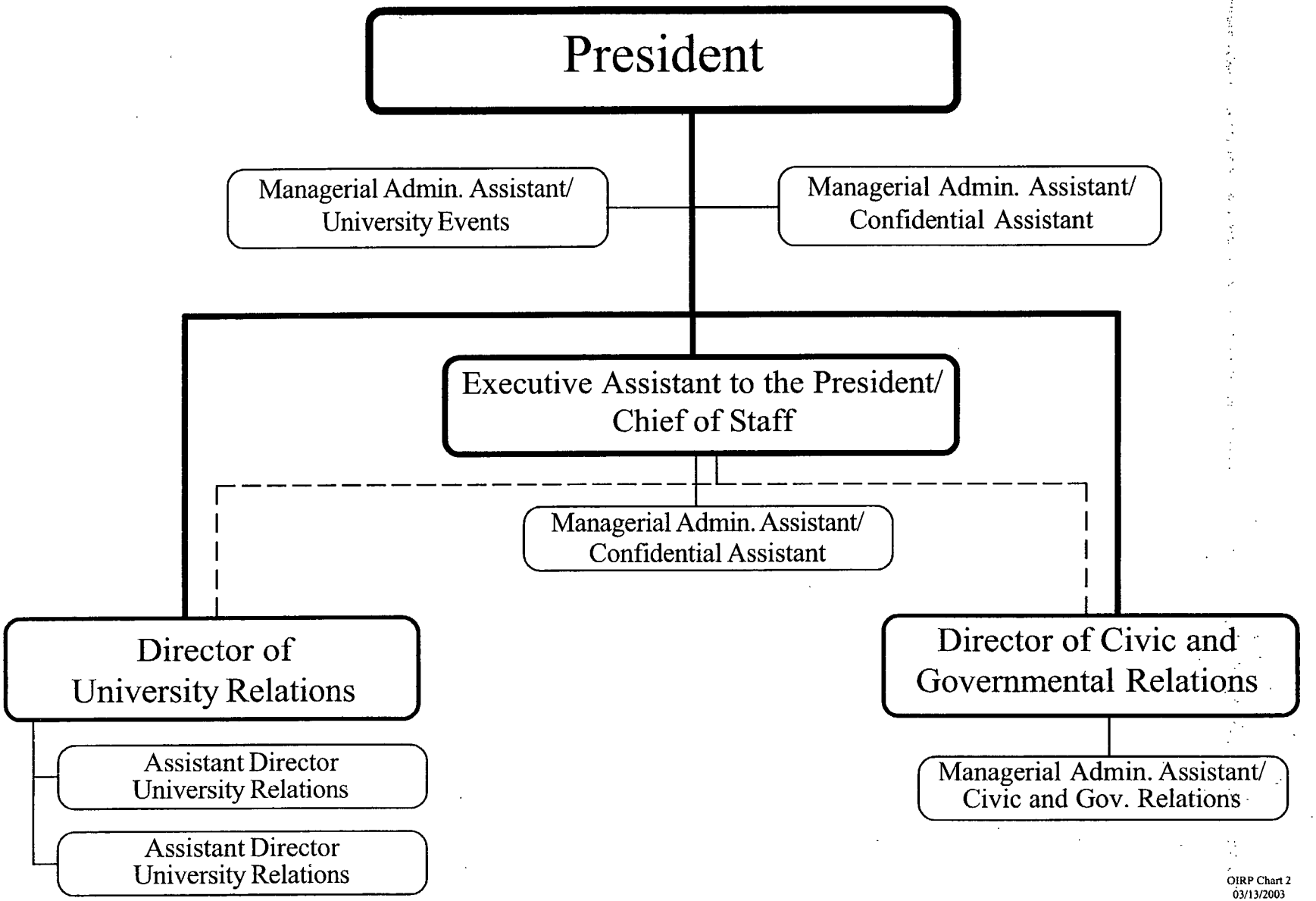
Rowan University Organizational Chart

Rowan University
Organization Chart



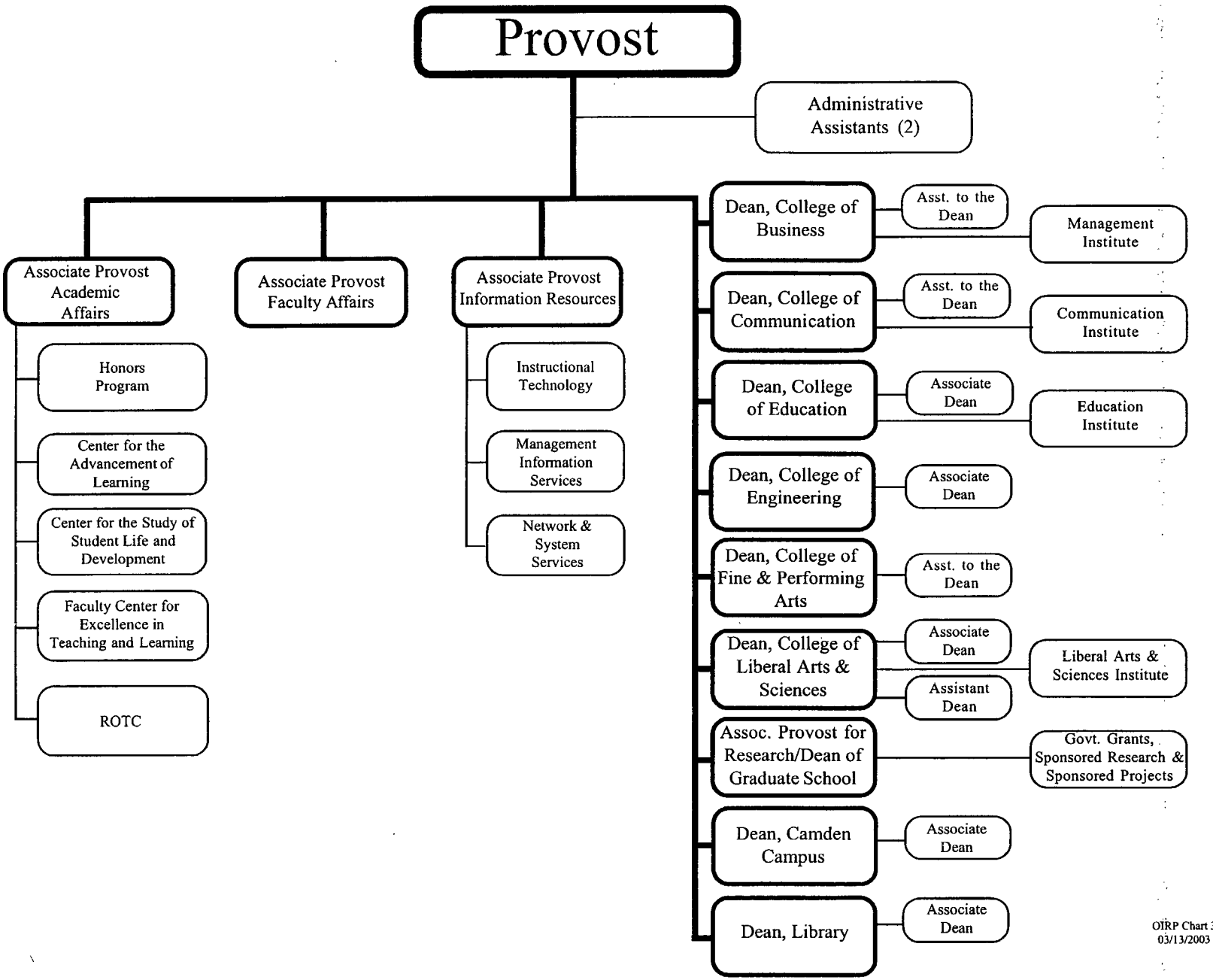
OIRP Chart 1
03/13/2003

Office of the President



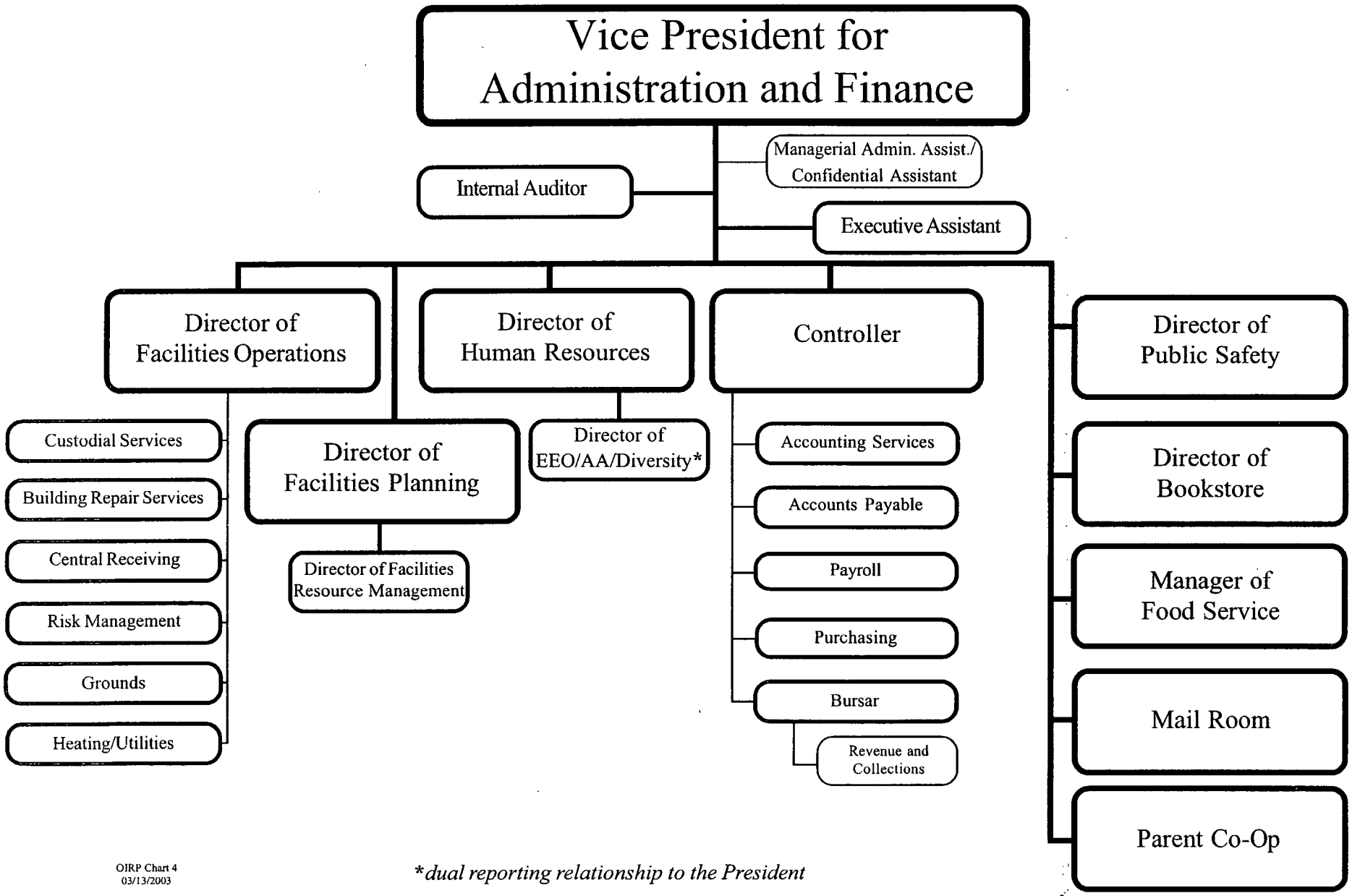
OIRP Chart 2
03/13/2003

Division of Academic Affairs



OIRP Chart 3
03/13/2003

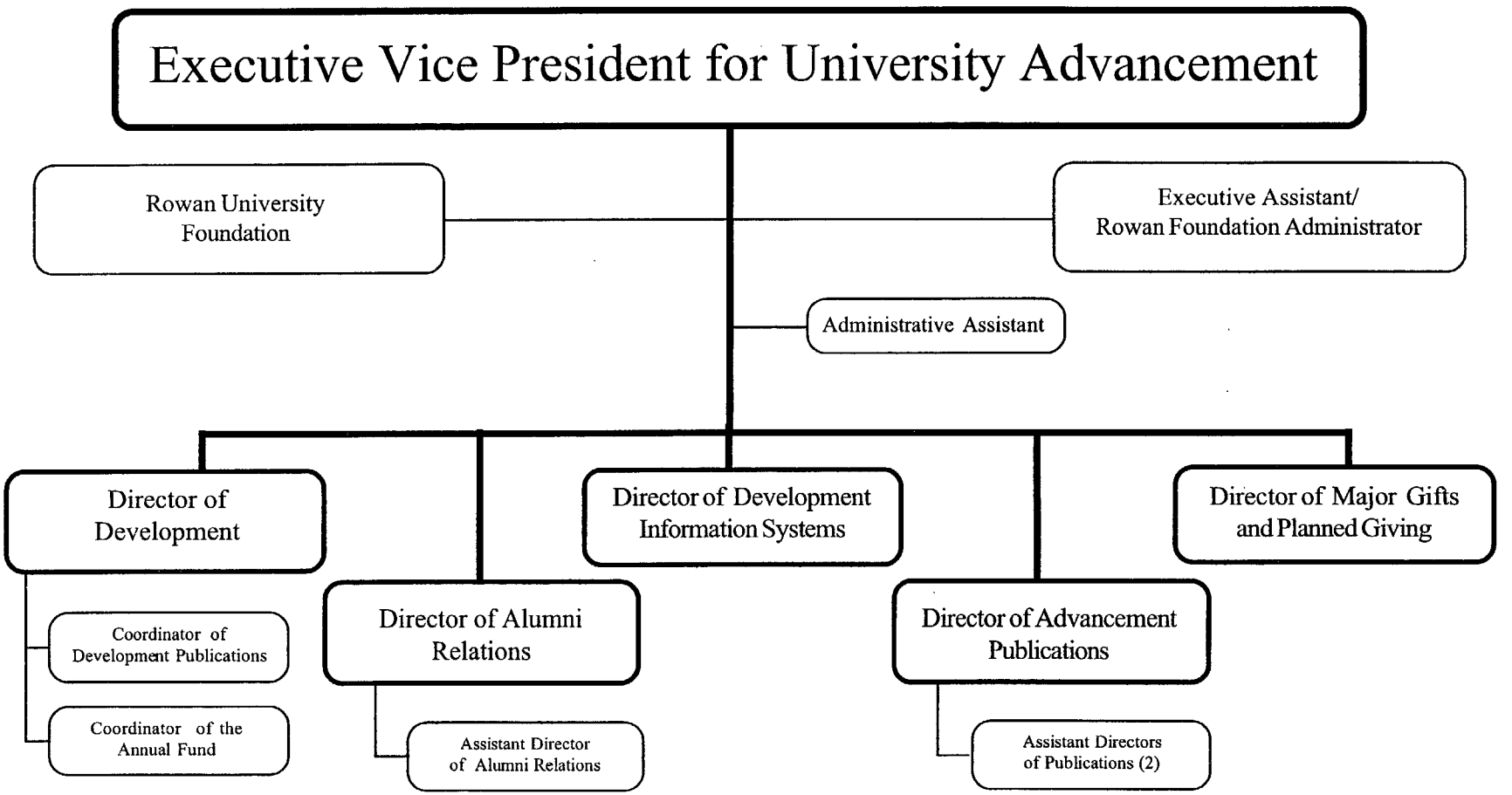
Division of Administration and Finance



OIRP Chart 4
03/13/2003

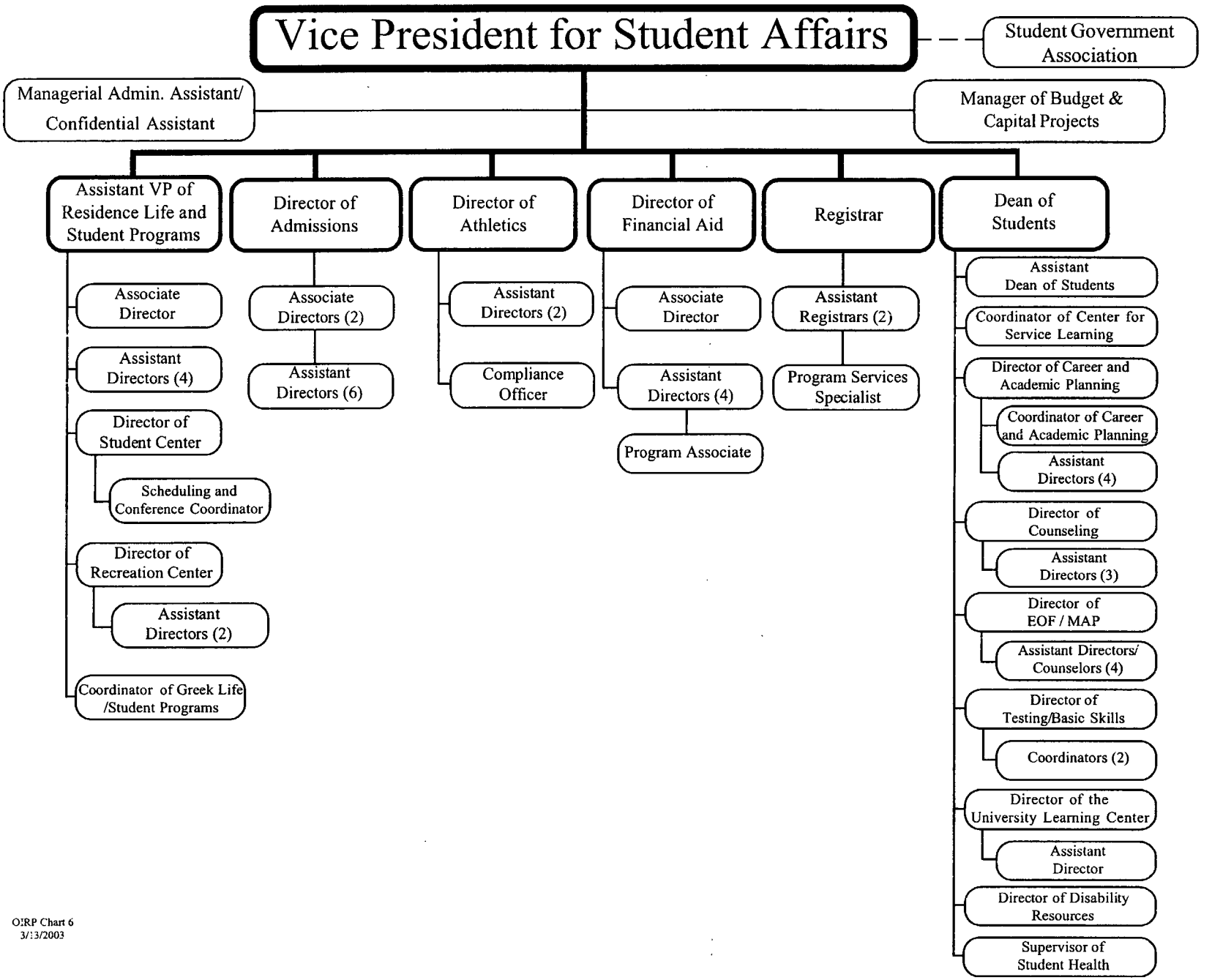
**dual reporting relationship to the President*

Division of University Advancement



OIRP Chart 5
03/13/2003

Division of Student Affairs



Division of Budget and Planning