A COMPARISON OF LEADERSHIP STYLES OF OCCUPATIONAL THERAPY EDUCATION PROGRAM DIRECTORS AND CLINIC ADMINISTRATORS

Rhona G. Reiss, B.S., M.O.T.

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APPROVED:

Ronald W. Newsom, Major Professor
J. Lynn Johnson, Minor Professor
John Paul Eddy, Committee Member
Ronald W. Newsom, Coordinator for the Program in Higher Education
Michael Altekruse, Chair of the Department of Counseling, Development, and Higher Education
M. Jean Keller, Dean of the College of Education
C. Neal Tate, Dean of the Robert B. Toulouse School of Graduate Studies

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Are there differences in leadership styles among occupational therapy clinic administrators and program directors in professional and technical education programs? This study investigated transformational and transactional leadership behaviors and effectiveness as measured by the Multifactor Leadership Questionnaire (MLQ) Form 5x-Short behaviors and demographic characteristics of leaders and their organizations using a questionnaire designed by the researcher. MLQ Leader Forms were received from 50 clinic administrators randomly selected from the membership list of the Administration and Management Special Interest Section (AMSIS) of the American Occupational Therapy Association (AOTA), 56 professional program directors, and 41 technical program directors from accredited occupational therapy education programs in the United States, for a total of 147 leader respondents. Rater forms were received from 2 to 5 occupational therapy staff or faculty per leader and average scores calculated. More than 86% of leader respondents were female and white.

Major findings indicate that administrative positions indifferent institutional contexts relate to leadership behaviors and effectiveness. Technical education program directors and clinic administrators scored higher on transformational behaviors and effectiveness than professional education program directors. Consistent with other research on leadership, the self-ratings of leaders were higher than ratings of subordinates. The data indicated statistically significant positive correlations between transformational leadership behaviors and perceived effectiveness, a frequent finding in the literature. With the exception of Contingent Reward (CR), all transactional behaviors had a negative correlation with effectiveness. No significant relationships were found

between transformational behaviors and leader's gender or ethnicity, but males scored higher than females on the transactional behavior Management by Exception-Passive (MEP) and Laissez-Faire (LF). Some transformational behaviors were related to the leader's age and years of experience in academia, but relationships were not linear. Highest level of education was related to leadership effectiveness. No significant relationships were found between leadership behaviors and demographic characteristics of the institution (e.g. size, public or private). Differences in leadership styles among the three groups of leaders may be attributed to differences in organizational culture and raises additional research questions on transformational leadership and measures of effectiveness in the university culture. The findings suggest the need for education and training in transformational leadership during this era of rapid change in occupational therapy practice and education.

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CHAPTER 1

INTRODUCTION

The recent increase in the number of occupational therapy education programs in universities and community colleges in the United States has provided little time to develop a knowledge base about the leadership behaviors of the program directors. Many changes have occurred in the occupational therapy profession in the last ten years, including the management of clients with diverse disabilities in an increasing variety of clinical and community settings, increased technology and expansion of intervention modalities, and significant changes in health care reimbursement influenced by managed care organizations. Concomitant changes in higher education have influenced the administration of the academic department, and many program directors are required to do more with less. These current and future challenges that are faced by occupational therapy educators and academic administrators will require effective leadership if institutions are to remain vital enclaves of teaching, research, and service.

The dearth of qualified individuals to fill occupational therapy program director positions in professional and technical education programs, and questions regarding the leadership styles of new and experienced program directors prompted this study. The Accreditation Council of Occupational Therapy Education (ACOTE) had reported that in technical level programs, directors were frequently being recruited directly from clinical positions with no previous experience in higher education. The differences in organizational culture between a hospital or community clinic and an institution of higher education raised additional questions of leadership effectiveness.

Leadership theories have evolved with changing technologies and environments. Educational researchers have expressed concern that leaders in various fields are not

sufficiently utilizing the dynamic leadership styles needed to maintain and advance higher education institutions in today's increasingly complex internal and external environments. Much discussion in recent years has focused on theories of charismatic or transformational leadership, often suggesting that charisma or a similar quality distinguishes outstanding from ordinary leadership. Bass (1985; Bass & Avolio, 1988) has operationalized a model of transactional and transformational leadership based on Burns' (1978) earlier conceptualization. This model provided the means for empirical research in the field of education, where research on charismatic or transformational leadership has thus far been sparse. A comprehensive study was conducted to compare the leadership behaviors of program directors in technical and professional level occupational therapy education programs with that of occupational therapy clinic administrators. Using Bass' model, this study compared self-rated leadership behaviors of these three groups with the ratings of their subordinates. The study also examined relationships between transformational behaviors and perceived leadership effectiveness. The purpose of the research was to contribute to the body of knowledge on transformational leadership theory and to assist the profession of occupational therapy to achieve the goal of leadership development.

Statement of the Problem

Do those persons in leadership positions in occupational therapy education and practice have the leadership skills necessary to achieve organizational effectiveness in occupational therapy education and practice settings within a rapidly changing environment?

Purposes of the Study

The purposes of the study were to determine what leadership styles, as measured by the Multifactor Leadership Questionnaire (MLQ) Form 5x-Short (Bass & Avolio, 1995), characterize professional and technical occupational therapy education program directors

and clinic administrators, to compare and contrast differences among these three groups, and to discern what relationships exist between leadership style and various demographic factors. The demographic information of interest in this study included personal characteristics, such as gender, ethnic/racial group, age, highest level of education, years of experience in the profession, in academia, and in the leadership position, previous position, previous education and training for the leadership position, number of employees supervised, and for education program directors, academic rank, and tenure status. Characteristics of the academic institution of interest in this study included level of the program (technical, professional, and post-professional), type of institution (four year college or university or two year community college), ownership/control of the institution (public or private), and size of the institution (number of students). Characteristics of interest of the organizations employing clinic administrators included ownership/control (public or private), for-profit or not-for-profit, and size (number of employees). The study was also intended to determine if there is a relationship between self versus other perceptions of leadership (using transformational, transactional, and laissez-faire styles) and perceptions of leadership effectiveness based on three outcome measures from the MLQ: satisfaction, extra effort, and effectiveness.

Hypotheses

The following hypotheses were tested using data collected from the Multifactor Leadership Questionnaire (MLQ) Form 5x-Short and a Demographic Questionnaire (DQ) designed by the researcher:

1. There will be significant differences between self-perceived leadership styles of occupational therapy education program directors in professional and technical level programs and clinic administrators. Self reported transformational behaviors will be significantly greater in education program directors than in clinic administrators.

2. There will be significant differences between the self-perceived leadership styles of occupational therapy education program directors in professional and technical level programs and the ratings by their faculty, and between occupational therapy clinic administrators and the ratings of their staff.

3. There will be a significant positive correlation between the transformational leadership behaviors of occupational therapy clinic administrators and education program directors in technical and professional level programs and perceived leadership effectiveness.

4. There will be significant correlations between leadership styles of occupational therapy education program directors in professional and technical level programs and clinic administrators and their personal background characteristics, including: 1) gender, 2) ethnic/racial group, 3) age, 4) highest level of education, 5) years of experience in the profession, in academia, and in the leadership position, 6) previous position, 7) previous education/training for the leadership position, 8) number of employees supervised, and for education programs directors, 9) academic rank, and 10) tenure status.

5. There will be significant correlations between leadership styles of occupational therapy education program directors and characteristics of their institution: 1) level of program (technical, professional, post-professional), 2) type of institution (four year or two year), 3) ownership/control of the institution (public or private), and 4) size of the institution (number of students). . . . . .

6. There will be significant correlations between leadership styles of occupational therapy clinic administrators and characteristics of their organization: 1) ownership/control (public or private), 2) for-profit or not-for-profit, and 3) size (number of employees).

Significance of the Study

The intent of the study was to determine the perceived leadership styles of occupational therapy education program directors in professional and technical education programs and compare these two groups with the leadership styles of occupational therapy clinic administrators. The study was also intended to determine if there is a relationship between leadership styles and perceived leadership effectiveness, and to determine whether transformational leadership is a predictor of satisfaction and effectiveness above that of transactional leadership in different organizational environments. An additional intent of the study was to determine if there is a relationship between leadership styles and demographic characteristics of the leader and of the organization.

This study is significant because it will:

1. Determine whether a relationship exists between leadership behaviors and organizational effectiveness as measured by the Multifactor Leadership Questionnaire (MLQ) Form 5x-Short (Bass & Avolio, 1995).

2. Provide a rationale for career counseling of occupational therapists by directing them to leadership positions in higher education or clinic administration.

3. Describe the potential for the success or failure of occupational therapists who are considering careers in academic or clinic administration, and use this information for recruitment purposes.

4. Serve as the basis for training in leadership development and form a framework for course content in leadership development in occupational therapy.

5. Promote transformational leadership techniques by providing training seminars and designing organizational cultures to accommodate transformational techniques.

6. Contribute to the body of knowledge on transformational leadership by determining whether transformational leadership theory, which was initially developed

for and researched primarily in government and business, is applicable to higher education, given higher education's vastly different organizational environment.

7. Contribute to the body of knowledge on leadership styles of occupational therapy education program directors.

Definition of Terms

The following terms have restricted meaning and are thus defined for this study:

1. Occupational Therapy Education Program Director – The major function of the program director in an academic setting is to manage the occupational therapy education program. The program director's role varies depending on the level of the program (e.g. technical, professional, or post-professional level) and the demands of the academic setting (e.g. technical school, community college, college, university, or health sciences center). The academic program director facilitates the education of competent graduates through faculty development and supervision and effective program management. Dependent on their academic environment, program directors may oversee both academic and practice related activities, externally funded projects, and continuing education programs (American Occupational Therapy Association, Inc. [AOTA], 1993.

2. Clinic Administrator - The major function of the occupational therapy administrator in a practice setting is to manage the department, program, services, or agency providing occupational therapy service. This role encompasses those individuals who organize and manage occupational therapy service units. (AOTA, 1993).

3. Leadership Style is defined as the scale scores on five transformational and four transactional factors obtained on the Multifactor Leadership Questionnaire (MLQ) Form 5x-Short. The five transformational factors are Idealized Influence-Attributed (IIA), Idealized Influence-Behavior (IIB), Inspirational Motivation (IM), Intellectual Stimulation (IS), and Individualized Consideration (IC). The four transactional factors

are Contingent Reward (CR), Management-by-Exception-Active (MEA), Management-by-Exception-Passive (MEP), and Laissez-Faire (LF).

4. Leadership Effectiveness is defined as the scale scores on three effectiveness factors obtained on the MLQ Form 5x-Short which collects data on perceptions of leadership effectiveness. The three effectiveness factors are Extra Effort (EE), Effectiveness (E), and Satisfaction (S).

5. The MLQ scale scores are defined as the average scores for the items on the scale derived by summing the items and dividing by the number of items that make up the scale.

6. The Key of Frequency is defined as follows:

4.0 = Frequently, if not always

3.0 = Fairly often . . . . . .

2.0 = Sometimes

1.0 = Once in a while

0.0 = Not at all

Limitations

The sample of clinic administrators was drawn from the list of members of the Administration and Management Special Interest Section (AMSIS) of the AOTA and was therefore limited to members of this group. Program directors were limited to only those from programs accredited by the Accreditation Council of Occupational Therapy Education (ACOTE) of AOTA and did not include interim or acting program directors.

Assumptions

1. That leadership style is definable, identifiable, and measurable.
2. That leadership effectiveness is definable, identifiable, and measurable.
3. That the Multifactor Leadership Questionnaire accurately and consistently measures leadership style and leadership effectiveness.

CHAPTER 2

LITERATURE REVIEW

Theories of Leadership

When one individual attempts to affect the behavior of others in a group without using the coercive form of power, we describe the effort as leadership (Gibson, Ivancevich & Donnelly, 1991). Leaders are agents of change, persons whose acts affect other people more than other people's acts affect them. Leadership occurs when one group member modifies the motivation or competencies of others in the group (Bass, 1982). The literature of leadership has progressed along several paths, with most of the earlier definitions and writings focused on the use of power and authority. Later research shifts attention to the traits of leaders and their behavioral styles, e.g. autocratic, participative. Another path emphasized the situation and how the leaders, followers, and situation interact and work. Other parameters that have been considered in the development of leadership theories include the organization's governance structure, such as bureaucratic, collegial, or political; leadership styles, such as democratic, laissez-faire, or political; functions of leadership, describing what leaders do; organizational task analysis, such as management by objectives (Drucker, 1954); types of people, such as Theory X and Theory Y leadership (McGregor, 1960); and relationships between tasks and people (Fleishman, 1953; Likert, 1961). The following is a discussion of some of the major theories of leadership that have been widely researched.

Trait Theories . . . . . .

In the middle of the twentieth century, discussion and research on leadership focused on identifying the traits of effective leaders and was based on the assumption that a finite number of individual traits of effective leaders could be found. The research was

designed to identify intellectual, emotional, physical, and other personal traits of successful leaders. One trait found to be associated with leadership is intelligence (Stogdill, 1974). Personality traits have been studied as well, with some researcher results suggesting that alertness, originality, personal integrity, and self-confidence are associated with effective leadership (Argyris, 1955). Some writers have argued that personality is unrelated to leadership, but this view is not widely accepted because personality is related to perception, attitudes, learning, and motivation Krasner & Ullman, 1973; Lundin, 1974). Finding valid ways to measure personality traits has been a problem for researchers (Gibson et al, 1991). Trait theories of leadership have attempted to correlate effective leadership with physical characteristics, such as age, height, weight, and appearance. These studies have produced contradictory results (Stogdill, 1948). The traits most associated with leadership effectiveness in studies conducted in the mid 1900's were:

- *intelligence,* including judgment, decisiveness, knowledge, and fluency of speech;
- *personality, including* adaptability, alertness, creativity, personal integrity, self-confidence, emotional balance and control, and independence; and
- *abilities,* including ability to enlist cooperation, cooperativeness, popularity and prestige, sociability, social participation, tact, and diplomacy. (Stogdill, 1974, Argyris, 1955)

However, leadership success is neither primarily nor completely a function of these or other traits, and many contradictory research findings still exist. Trait test scores are not consistently predictive of effective leadership. Traits do not operate singly, but in combination, and patterns of effective behavior depend largely on the situation.

Personal-Behavioral Theories . . . . . .

In the late 1940's researchers began to realize that how a person behaves determines that person's leadership effectiveness. Rather than searching for traits, these researchers examined the behaviors of leaders and their impact on the performance and satisfaction of followers, resulting in a number of well-known personal-behavioral leadership theories. These two-facto theories isolated characteristics of leaders who focused on human concerns from leaders whose main focus was the task, or getting the job done. This person-task dichotomy led to the development of the *employee-centered* and *job-centered* styles of leadership identified by Likert (1961) and his colleagues at the University of Michigan. The principle subjects in their research were formal leaders and followers in public utilities, banks, hospitals, manufacturing, food, and government agencies. An employee-centered leader delegates decision-making and helps followers satisfy their needs by creating a supportive work environment. This type of leader is concerned with the personal advancement, growth, and achievement of followers. Job-centered leaders, on the other hand, practice close supervision so that subordinates perform tasks using specific procedures. This type of leader typically uses coercion, reward, and positional power to influence the performance of followers. The University of Michigan studies concluded that although employee-centered and job-centered styles resulted in production improvement, after a brief period of time the job-centered style created pressure that was resisted through absenteeism, turnover, grievances, and poor attitudes. Although it appeared that the best style of leadership was employee-centered, the studies did not clearly show that one particular style of leadership was always the most effective.

Fleishman (1953) and his associates at Ohio State University developed another personal-behavioral leadership theory based on the person-task dichotomy. Their studies of formal leaders and followers in the military, education, public utilities, manufacturing,

and government agencies led to a theory of leadership that isolated two factors, referred to as *initiating structure* and *consideration. Initiating structure* refers to behavior in which the leader organizes and defines the relationships in the group, tends to establish well-defined patterns and channels of communication, and clearly dictates ways of accomplishing the job. This type of leader focuses on goals and results, similar to the job-centered leader identified by Likert. A leader who shows supportive concern for followers uses *consideration,* a behavior characterized by friendship, mutual trust, respect, warmth, and rapport between the leader and the followers. A leader with high consideration supports open communication and follower participation, similar to the employee-centered leader described by Likert.

The dimensions of initiating structure and consideration leadership factors have been measured extensively by two separate questionnaires: the Leadership Opinion Questionnaire (LOQ), which assesses how leaders think they behave; and the Leader Behavior Description Questionnaire (LBDQ), which measures the perceptions of subordinates, peers, or superiors. Fleishman's original premise was that leaders with both a high degree of initiating structure and a high degree of consideration would be the most effective. However, other researchers concluded that the combination of behaviors that achieve individual, group, and organizational effectiveness are strongly influenced by the situation. Other studies have examined how male and female leaders exhibit equal amounts of initiating structure and consideration and have equally satisfied followers (Dobbins & Platz, 1986). The Ohio State University studies have been criticized because they only look at two dimensions of leadership, lack the ability to generalize, and rely on questionnaire measures that are limited and controversial. The link between leadership and important performance indicators was not resolved by Fleishman's personal-behavioral theory, nor was it clarified by Likert's approach. These theories have failed to identify effective leadership mix and style for varied situations and

environmental conditions, and although person-behavioral approaches are appealing in their simplicity, neither considers environmental factors.

Situational Theories

Inconclusive and contradictory results from research on traits and personal behaviors led to the realization that the leadership behavior that was needed to maximize follower performance depended largely on the situation. Situational theories suggest that leadership effectiveness depends on the fit between personality, task, power, attitudes, and perceptions, and imply that an effective leader must be flexible enough to adapt to the differences among subordinates and situations. Two of the earlier situational theories are the *contingency model* (Fiedler, 1967) and *path-goal theory* (House, 1971).

The *contingency model* of leadership effectiveness postulates that the performance of groups is dependent on the interaction between leadership style and leadership favorableness. Leadership is viewed as a relationship based on power and influence (Fiedler, 1967), and the model considers two important questions:

1. To what degree does the situation provide the leader with the power and influence needed to be effective? Or, how favorable are the situational factors?
2. To what extent can the leader predict the effects of his or her style on the behavior and performance of the followers?

Fiedler (1951) used a questionnaire called the Least Preferred Co-Worker Scale (LPC) to assess two leadership styles: *task leadership* (controlling, structuring), and *relationship leadership* (passive, considerate). His research indicated that task-oriented leaders performed better than relationship-oriented leaders in situations that were favorable, as well as in situations that were unfavorable. Relationship-oriented leaders performed better than task-oriented leaders in situations that were intermediate in favorableness (Fiedler, 1972). These findings support the notion that each type of leader is effective in certain situations. Despite numerous criticisms of the model, Fiedler has

played one of the most prominent roles in encouraging the scientific study of leadership in work -goal settings.

Like contingency leadership approaches, the *path-goal leadership model* attempts to predict leadership effectiveness in different situations. Leaders are considered effective because of their positive impact on follower's motivation, ability to perform, and satisfaction. The path-goal model of leadership is based on the expectancy theory of motivation (Vroom, 1964), which refers to the individual's belief concerning the likelihood or subjective probability that a particular behavior will be followed by a particular outcome. Supervisors must first determine which outcomes are important to their employees in order for this motivational strategy to be effective (Larson, 1986). The path-goal leadership theory focuses on how the leader influences the followers' perceptions of work goals, self-development goals, and paths to attainment (House, 1971). According to this theory, leaders should increase the number and kinds of rewards available to subordinates, and should provide guidance and counsel to clarify the manner in which these rewards can be attained. The leader works at making the path to goals as clear as possible for subordinates. Although the path-goal model is an improvement over the trait and personal-behavior theories, the predictive power of the model is questionable.

Hersey and Blanchard (1982) developed a third situational leadership model called the *tri-dimensional leader effectiveness model.* In this model the terms *task behavior* and *relationship behavior* are used to describe the concepts similar to *initiating structure* and *consideration of* the Ohio State studies. The four basic leadership styles are labeled 1) high task and low relationship; 2) high task and high relationship; 3) high relationship and low task; and 4) low relationship and low task. These four configurations depict essentially different leadership styles, defined as the behavior that a person exhibits when attempting to influence the activities of others, as perceived by those same others. How

the leader perceives his or her behavior is defined as self-perception rather than style. Central to the concept of leadership style are two types of behavior-*task* and *relationship. Task behavior* refers to the extent to which leaders are likely to organize and define the roles of members of their group (followers); explain what activities each is to do, and how tasks are to be accomplished; and to establish well-defined patterns of organization, channels of communication, and ways of getting jobs accomplished. *Relationship behavior* refers to the extent to which leaders are likely to maintain personal relationships between themselves and members of their group (followers) by opening up channels of communication, providing socio-emotional support, "psychological strokes," and facilitating behaviors (Hersey & Blanchard, 1982, p.96).

In the tri-dimensional model, the effectiveness of leaders depends on how their leadership style interrelates with the situation in which they operate. When the style of a leader is appropriate to a given situation, it is termed effective; when the style is inappropriate to a given situation, it is termed ineffective. For example, with new employees or employees who are unmotivated or antagonistic, the leader would do better focusing on getting the job done (high task and low relationship). As the new employee learns to do the job, or when uncooperative employees change their attitudes, the leader can give more emotional support (still high task, but also high relationship). With a mature, experienced staff the leader can decrease emphasis on the task and invest more effort in getting people involved (low task and high relationship).

The third dimension of the tri-dimensional model is the *environment* in which the leader is operating. The effectiveness of the leader depends on how personal leadership style interrelates with the environment in which he or she operates. Leadership behaviors in the tri-dimensional model have been studied using the Leader Effectiveness and Adaptability Description instrument (LEAD) (Hersey & Blanchard, 1974). Researchers have concluded that there is no normative (best) style of leadership, and that effective

leaders adapt their leader behavior to meet the needs of their followers and the particular environment.

Transformational Leadership Theory

Many of the leadership theories discussed thus far have implied that leadership is an exchange process and that leaders reward followers when they accomplish agreed-upon objectives. This exchange role of the leader has been referred to as *transactional,* and uses the path-goal model as its framework (Bass, 1985). The transactional leader uses contingent rewards and will not intervene with employees unless objectives are not being accomplished (management by exception). A special case of transactional leadership, but one in which an employee's reward is internal, is referred to as *transformational.* Since the 1980's, much of the discussion on leadership has focused on transformational characteristics. A theory of leadership proposed by Burns (1978) and elaborated by Bass (1985) identifies the transformational leader as one who motivates followers to work for transcendental goals and for higher level self-actualizing needs instead of working through simple exchange relationships with followers. Self-reinforcement becomes the primary motivator of follower behavior with a transformational leader, as opposed to external pay-off (Bass, Avolio, & Goodheim, 1987). By expressing a vision, the transformational leader persuades followers to work hard to achieve the goals envisioned. While transactional leaders adjust goals, direction, and mission for practical reasons, transformational leaders make major changes in the mission, way of doing business, and human resources management, in order to achieve their vision. The transformational leader may change the entire philosophy, systems, and culture of an organization.

The development of transformational leadership factors has evolved from research by Bass (1985). In order to describe transformational leaders based on the transactional-transformational continuum, Bass identified five factors-the first three apply to transformational leadership, and the last two apply to transactional leadership. They are:

- *Charisma.* The leader is expected to instill a sense of value, respect, and pride and to articulate a vision.
- *Individual attention.* The leader pays attention to followers' needs and assigns meaningful projects so that followers grow personally.
- *Intellectual stimulation*. The leader helps promote followers' intelligence, rationality, and creative problem solving.
- *Contingent reward*. The leader contracts exchange of rewards for effort, promises rewards for good performance, and recognizes accomplishments.
- *Management by exception*. The leader permits followers to work on the task and does not intervene unless goals are not being accomplished in a reasonable time and at a reasonable cost.

The first three traits describe the leader who motivates followers to work for transcendental goals instead of for short-term self-interest, and for achievement and self-actualization instead of security. In transformational leadership the employee's reward is internal.

The original conceptualization of the transformational and transactional leadership styles led to the development of an instrument of measure called the Multifactor Leadership Questionnaire (MLQ) (Bass, 1985) which is described in greater detail in chapter 3. The MLQ was chosen as the research tool for this study because although the instrument had been used widely to describe transactional and transformational leadership behavior of various samples of leaders, research on its use in higher education was sparse, and studies using the instrument in occupational therapy did not exist. The literature review on transformational leadership strongly legitimizes the use of the MLQ as a valid and reliable research instrument for measuring transformational and transactional traits and their relationships with organizational effectiveness.

Several studies have examined the discriminant validity of transformational leader behavior as measured by the MLQ. Although the MLQ is the most widely used instrument to assess transformational leadership, there has been a lack of evidence on its construct validity (Bycio, Hackett, & Allen, 1995). Bass' assumption that transformational leadership could be defined by distinct constructs (charisma, intellectual stimulation, and individual consideration) was tested by Carless in 1998. Using LISREL 8 confirmatory factor analysis, a three-factor first-order model was compared with a single-factor model and a hierarchical model. The researcher concluded that the MLQ assesses a single higher order construct of transformational leadership and that there is little evidence to support the contention that the MLQ measures distinct transformational leadership behaviors. Although Bass has argued that there are conceptual differences between charisma, individual consideration, and intellectual stimulation, Carless' study suggests that in practice, subordinates do not distinguish between these behaviors. These findings have implications for the selection and training of leaders based on separate MLQ scales (Carless, 1998).

Den-Hartog, Van-Muijen, and Koopman (1997) tested the factor structure of the MLQ, specifically addressing (1) whether the three main leadership concepts (transformational, transactional, and laissez-faire) can be found in the collected MLQ data, (2) whether the four transformational and three transactional dimensions can clearly be distinguished, and (3) whether the data support combining Management by Exception-Passive (MEP) and Laissez-Faire leadership (LF) in one factor that would be described as passive leadership. This study concluded that Bass' framework distinguishing a transformational, a transactional, and a laissez-faire factor is also found through an exploratory analysis in their data set. In this study, the internal consistency of two of the three scales of the MLQ was not sufficient. The researchers argue that the items on the MLQ used to distinguish between MEP and LF leadership do not refer to different

components of leader behavior and that discriminating among them may call for preparing new items (Den-Hartog, Van-Muijen, & Koopman, 1997).

Tracey and Hinkin (1998) compared the transformational leadership scales on the MLQ with four scales from Yukl's Management Practices Survey (MPS) in order to assess an underlying transformational leadership construct that is distinct from an underlying managerial practices construct. The MLQ scales purport to measure idealized influence, inspirational motivation, personal consideration, and intellectual stimulation. The MPS supports four scales on managerial practices, namely clarifying, supporting, inspiring, and team building. The results of this study provided mixed support for the distinctiveness of the MLQ and identified a great deal of overlap in the two instruments. The unique elements of Bass and Avolio's description of transformational leadership that distinguish it from managerial practices include the dimension of intellectual stimulation, behaviors which encourage non-traditional thinking. Another unique characteristic of the transformational leadership construct is the strong future-oriented theme associated with the inspirational motivation dimension. Tracey and Hinkin conclude that Bass and Avolio are "well on their way" to developing a comprehensive framework and measurement instrument that explains the relevance and importance of transformational leadership, and that the work by Yukl provides an important referent for understanding transformational leadership and the relationship between leadership and management.

Overall conclusions on studies of the MLQ's construct validity support its use as a valid measure of transformational and transactional leadership. The MLQ's use in research over the last decade has produced an impressive array of findings and has been notably useful in examining the relationships between leadership behaviors and organizational effectiveness.

Research using the MLQ to study leaders in a wide variety of fields has consistently shown stronger relationships to effectiveness outcomes for transformational leadership

than between effectiveness outcomes and transactional leadership (Seltzer & Bass, 1990). Bass, Avolio, and Goodheim (1987) found this pattern of relationships in transformational characteristics and effectiveness outcomes in 69 world-class leaders who were described on the MLQ by students who had read biographies of them. Onnen (1987) used MLQ descriptions of Methodist clergymen by 454 parishioners and found significant correlations of transformational, but not transactional leadership with growth in church membership and worship attendance. Waldman, Bass, and Einstein (1987) obtained similar results in a study of 256 managers in a business firm, showing that transformational leaders generated more satisfaction with their subordinates' performance appraisals. Hater and Bass (1988) reported similar results when subordinates described managers on the MLQ and the manager's boss evaluated the manager's performance. Yammarino and Bass (1990) obtained similar findings in predicting superiors' fitness reports and recommendations for early promotion of a representative sample of 186 naval officers whose MLQ scores were generated by their subordinates. Additional corroboration was provided by Howell and Avolio (1989) for 76 managers in a large Canadian financial institution. These effects are likely to have organization-wide impact in that transformational bosses were more likely to have transformational subordinates (Bass, Waldman, Avolio, & Bebb, 1987).

The relationship between transformational leadership behaviors and employee job satisfaction has been an important area of investigation, and studies have indicated that job satisfaction of subordinates is enhanced by transformational leadership behaviors. Yusof (1998) investigated the relationship between coaches' job satisfaction and transformational leadership behaviors of athletic directors and found that subordinates' job satisfaction is enhanced by transformational leadership behaviors. Thus, coaches who evaluated their superiors as low in transformational leadership behaviors were less

likely to be satisfied with their job than their counterparts who viewed their athletic directors as highly transformational.

Another important question in leadership research is the relationship between transformational leadership and learning, particularly where learning is transformed into useable knowledge to accomplish objectives or solve problems. Ash (1997) studied the influence of leadership style on work teams and found that transformational leadership behaviors and actions often do influence individual and group learning. Transformational leaders created a climate for learning by encouragement, establishing cooperation, and the identifying and using team talent. These leaders enabled team members to learn how their actions and decisions affect larger systems and provided team members with opportunities to become their own leader.

Summary of Leadership Theories

A summary of leadership theories indicates that leadership involves the use of power and acceptance of the leader by the followers. This ability to influence followers is related to followers' need satisfaction. The trait approach has attempted to predict leadership effectiveness from physical, sociological, and psychological traits. Personal-behavioral descriptions of what the leader does use terms such as employee-centered, job-centered, initiating structure, and consideration, resulting in a great deal of semantic confusion and overlap in the definition of leadership behavior. The personal-behavioral approach suggests that leaders should consider situational variables, and they can do little to improve effectiveness unless they can properly modify these variables or change their leadership style. The situational approach emphasizes the importance of forces within the leader, subordinates, and the organization. To achieve effectiveness, the interaction of these forces must be properly diagnosed. Contingency models propose that the performance of groups is dependent on the interaction of leadership style and situational favorableness. Transformational leadership theory describes the leader who motivates

followers to work for transcendental goals instead of short-term self-interest and for achievement and self-actualization instead of security. In transformational leadership, the employee's reward is internal.

Research in Leadership Theories in Higher Education

Studies of leadership behavior of academic administrators

This section will present a review of research findings relevant to the leadership behavior of academic administrators in institutions of higher education where data were collected using the Leadership Behavior Description Questionnaire (LBDQ) developed at Ohio State University, the Leadership Opinion Questionnaire (LOQ) developed by Fleishman, the Leadership Effectiveness and Adaptability Description (LEAD) developed by Hersey and Blanchard, the Leadership Practices Inventory (LPI) developed by Kouzes and Posner, and the Leadership Behavior Analysis III (LBA-II) developed by Blanchard, Hambleton, Zigarmi, and Forsyth.

Hemphill (1955) employed the LBDQ to study the relationship between the characteristics of the faculty members of 22 departments in a liberal arts college and the administrative reputations of the departments. Faculty members described their department chairpersons and indicated their concept of the ideal chairperson. Each member ranked the five best and worst departments according to the quality of leadership and administration. One of the findings indicated that departments with the best reputations for good administration also have chairpersons who are described as above average on both initiating structure and consideration and who more closely met the expected behavior of an ideal chairperson.

Carson (1962) employed the LBDQ to study differences in perceptions of leadership behavior of junior college deans at 20 junior colleges in the southeastern United States, as viewed by student leaders in comparison to the department heads, presidents, and the deans themselves. He found that student leaders tended to agree among themselves

regarding their perceptions of and expectations for the leadership behavior of the dean on both the dimensions of initiating structure and consideration. However, student leaders and department heads did not agree in their perceptions. Student leaders perceived significantly less consideration in the leadership behavior of deans than did other groups, but there were no significant differences in the expected amount of consideration among these groups. Carson recommended that deans should put greater emphasis on both dimensions in their interpersonal relationships with students and department heads.

Verbeke (1966) investigated the leadership behavior of junior college academic deans as viewed by presidents, deans, and faculty members of 22 two-year junior colleges in Pennsylvania and New York. Important disagreements were found between the three reference groups' ratings of academic deans in both initiating structure and consideration. The greatest discrepancies were between faculty members and deans; the faculty members perceived and expected more consideration than initiating structure. Verbeke concluded that the major conflict facing deans might be between them and their faculty members, and recommended that deans seek an understanding of these differences to facilitate achievement of organizational goals.

Wagner (1973) analyzed LBDQ data collected from 25 administrative departments at Michigan State University and found no differences between the scores of the leader and the scores of their subordinates. A comparison of sample means and standard deviations indicated that the LBDQ had the same degree of variability in a higher education setting as it did when used in other types of organizations.

In a study of the leadership behavior of physical education department chairpersons as perceived by themselves and their faculty in public institutions of higher education, Carlson (1973) found no significant differences between the perceptions of the chairpersons and faculties.

Cox (1974) found that faculty members did not agree with their presidents regarding the real leadership behavior of deans of instruction on initiating structure. On the dimension of consideration, faculty members did not agree with presidents on the real and ideal leadership behaviors of the deans. Presidents felt more strongly than faculty members that the deans should exhibit more leadership behavior that is indicative of the consideration dimension. A similar study by Palmer (1975) revealed that presidents, deans of instruction, and division chairmen agreed regarding the deans' real leadership behavior in terms of either initiating structure and consideration. However, the deans of instruction and faculty senate members did not agree, and all four respondent groups considered the real leadership behavior of the deans to be less than ideal in both dimensions. The study concluded that discrepancies exist between the viewpoints of superiors and subordinates in describing the leadership behavior of middle level administrators. Similar findings were supported in studies by Nicol (1976), Munsell (1977), Grill (1978), and Harris (1979).

A number of doctoral dissertations in the past two decades have examined the leadership behaviors and effectiveness of administrators in higher education. Peterson (1988) studied the differences and relationships in perceptions of leader behavior and administrative effectiveness in deans as perceived by faculty, vice-presidents and deans themselves using the LBDQ and a survey instrument designed by the researcher based on Whetten and Cameron's eight characteristics of administrative effectiveness. No significant differences were found among perceptions of deans' leader behavior on the consideration subscale or among perceptions of deans' administrative effectiveness. Vice presidents scored deans higher than faculty members on the initiating structure subscale, and high scores on the consideration and initiating structure subscales were significantly and positively related to high scores on the administrative effectiveness instrument.

Leadership training, college affiliation, college size, institution size, and institution type were found to be independent of administrative effectiveness for deans.

Mohamed (1988) investigated attitudes of faculty members and department heads towards leadership behaviors at the University of Malaya and the National University of Malaysia using the LBDQ. Findings included large differences between male and female faculty members' perceptions of leader behaviors, strongly indicating that males and females were different on this dimension. Females were perceived as displaying more desirable leadership behaviors than males. Female leaders were stronger in the initiating of structure than in consideration. Department heads consistently saw their own actual leadership behaviors as higher than their faculty members viewed them. Heads of both sexes viewed their actual behaviors as less than ideal.

Roseman (1989) assessed leadership behavior of home economics chief administrators in higher education and determined level of job-related stress using the LEAD-Self and Job Related Tension Index. The majority of respondents chose as their primary leadership style high task/high relationship and/or low task/high relationship. Most showed a moderate degree of adaptability in varying leadership style. Role conflict and role overload was higher for those with the title of director, assistant director, or division head/chair, along with those of associate rank.

Master (1990) conducted a study to determine if there were similarities or differences in the leadership styles and career paths of women in educational administration and women in corporate management using the LOQ and a biographical career path questionnaire. Executive women scored higher on both consideration and structure than the women in higher education. A similar study by Ottinger (1990) compared the leadership practices of women executives in higher education administration and banking across the United States using the Leadership Practices Inventory (LPI) (Kouzes & Posner, 1987). Leadership practices were found to differ by

areas of career specialization (i.e. higher education and banking), by line position or level of employment, and by age.

Bing (1991) used the LBDQ, a 33 item cultural awareness checklist, and an executive self-awareness checklist to investigate the correlation between leader behaviors, cultural awareness, and skills for excellence in 106 females serving as presidents, vice presidents, and deans in a sample of U.S. colleges. The findings of the study indicated that women tend to present a balanced style of leadership; that women are not more patient or more tolerant of uncertainty than their male counterparts, that women are not as ingrained into tradition having a more tolerant attitude about changes; and that women tend to downplay the more feminine skills and behaviors.

Humphrey (1991) used Hersey and Blanchard's situational leadership theory, House's path-goal theory of leadership, and Mintzberg's theory of professional bureaucracy to investigate the perceived leadership behaviors of nursing education deans and scholarly productivity activities and professionalism of nursing educators in baccalaureate and master's programs. Faculty perceived the majority of nursing deans as demonstrating high instrumental, supportive, and participative leadership behaviors. Although nursing educators demonstrated a relatively high level of professionalism, there was considerable variation in the amount of scholarly productivity of nursing educators. Deans' leadership behaviors appeared to be related to faculty scholarship and professionalism, scholarly productivity and professionalism of nursing educators appeared to be related, and advanced education appeared to be related to scholarly productivity but not to professionalism.

Ciesla (1993) conducted an investigation of leader behaviors among deans of colleges of nursing and deans of colleges of management using the Leader Behavior Analysis II developed by Blanchard, Hambleton, Zigarmi and Forsyth and found no significant differences in use of leadership styles emerged between deans of nursing

programs and deans of management programs. The majority of these deans reported use of a low-directive high-supportive leadership style. There were no significant differences in leadership style effectiveness between deans of nursing and those of management programs. It is interesting to note that in this study the majority of deans of nursing were women and all the deans of management were men.

Cummiskey (1993) conducted a study to determine the influence of initiating structure and consideration on the leadership styles and leadership outcomes of academic deans as reported by their faculties. A survey was conducted using a revised Departmental Evaluation of Chairperson Activities for Development (DECAD) questionnaire asking academic deans and faculty members to rate the preferred characteristics a leader should have and how the present dean rated on those characteristics. The findings did not support the position that high initiating structure-high consideration is the best leader behavioral style. No relationship could be established between the academic preparation or leadership training of the dean and the faculty perception of dean effectiveness. However, deans who rated themselves as using high initiating structure-high consideration leader behaviors were perceived as being more effective by their faculty than deans who reported lower levels of these leader behavior dimensions.

Stewart (1993) used the DECAD to examine the influence of leader behaviors and substitutes on higher education academic department heads' effectiveness and faculty satisfaction. Consideration and initiating of structure were the dimensions of leader behaviors measured. The substitutes included experience, spatial distance, bureaucracy, and organizational rewards within the leader's control. From the results it was concluded that organizational rewards not within the leader's control serve as a substitute for consideration leader behaviors on department head effectiveness. None of the other substitute variables acted as substitutes. The study also investigated whether leadership

behaviors influence department head effectiveness and faculty satisfaction. The results clearly supported that the most effective department heads were those who received the highest performance ratings by their faculty on consideration and initiation of structure leader behaviors.

Xu (1993) studied the relationship between perceptions of academic deans and department chairpersons regarding the leadership behaviors of deans and the relationship between perceived leadership behavior of deans and job satisfaction of department chairpersons in public institutions of higher education. Leadership behavior was measured using the Leadership Practices Inventory (Kouzes & Posner, 1987) and job satisfaction was determined through the Index of Job Satisfaction. There was a significant difference between deans and department chairpersons in the perception of leadership behaviors of deans with the overall mean score of LPI-Self significantly higher than that of LPI-Other. The deans perceived their leadership behavior to be more effective than did department chairpersons. There was a significant relationship between the leadership behaviors of deans perceived by department chairpersons and their job satisfaction. The more effective the department chairpersons perceived their dean's leadership behavior to be, the more satisfied they were with their jobs. Length of time in the department chairperson's position had a significant impact on how they perceived deans' leadership behavior. Department chairs in the position less than one year perceived dean's leader behavior as more effective than those who had been in the position for 7-9 years.

Studies in Education Leadership Using the Multifactor Leadership Questionnaire

This section will present a review of recent research on transformational leadership in education where data were collected using the Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio.

Transformational Leadership in K-12 Administrators

In the past decade many researchers in education have studied leadership characteristics and effectiveness of K-12 school administrators based on transformational theory (Leithwood, 1992; Kirby, King & Paradise, 1992; Stone, 1992; Houston, 1993; Walker, 1993; Evans, 1996; and Ingram, 1997). Educational leadership practices that emphasize cooperative relationships and a shared vision can create schools that aim for excellence. The goals of transformational school leaders are to help staff develop and maintain a collaborative professional school culture, promote teacher development, and help teachers solve problems together more effectively (Tyrell & Stine, 1997). Many of the K-12 leadership studies have concluded that cooperative relationships can help bring about a work climate in which self-esteem, commitment, and task accomplishment are so significant that they raise people to higher levels.

In a study of elementary and secondary school principals, Stone (1992) found that transactional leadership was often used to accomplish lower-order managerial objectives, such as clarifying work expectations and maintaining quality of performance. Transformational leadership was related to long-term development and change, producing higher levels of effort and satisfaction in followers, and greater productivity and quality outcomes for the organization. Principals tended to exhibit transformational leadership behaviors, but needed improvement in the transformational areas of intellectual stimulation and individualized consideration, and in the transactional areas of contingent reward and management-by-exception. The findings in this study provide a new perspective on how to view principals in relation to exceptional leadership, organizational effectiveness, satisfaction, and teacher motivation.

Evans (1996) examined the relationship between elementary principals' use of transformational leadership strategies as determined by teacher reports, and the presence of social-organizational factors within the schools. Social-organizational factors

included shared goals, teacher collaboration, teacher learning, teacher certainty, and teacher commitment. The data showed a significant correlation between teachers' reports of principals' transformational leadership and their schools' social organization. Principals categorized as high in transformational leadership led schools higher in social organization than did principals low in transformational leadership who led schools lower in social organization. Enhanced levels of social organization were reflective of effective schools. In addition, two intervening variables, principals' years of service with their present building and school staff size, were found to be significant predictors of principals' transformational leadership. Ingram (1997), who studied whether the leadership behavior of principals working in inclusive schools tended to be more transformational or transactional, based on teachers' rating on the MLQ drew similar conclusions. Principals were judged as exhibiting more transformational than transactional behaviors, and teachers were more highly motivated under the leadership of principals whom they perceived as transformational leaders.

Transformational Leadership in Higher Education Administrators

University administrators

King (1990) contributed to the body of knowledge on transformational leadership in higher education by conducting a study of 208 educators in both K-12 and higher education settings using the Multifactor Leadership Questionnaire (MLQ). As expected, transformational leadership had an incremental effect in predicting satisfaction and effectiveness above that of transactional leadership. Transformational leadership was also found to be greater in higher education than in K-12. Kirby, King, and Paradise (1992) drew similar conclusions from both qualitative and quantitative investigations of leader characteristics and behaviors associated with extraordinary performance. Transformational leadership was more prevalent in higher education than at other levels.

Tucker (1991) analyzed transformational leadership theory for adaptability in interpreting higher educational outcomes of satisfaction, effectiveness, and extra effort in a southern, urban university. The university MLQ derived profile suggested an overall transformational leadership style. Individual leaders' profiles spanned from laissez-faire leadership style to transformational leadership. Where transactional leadership was found, there was satisfaction, effectiveness, and extra effort noted. Where transformational leadership augmented transactional leadership, there was increased satisfaction, effectiveness, and extra effort. Laissez-faire leadership had a negative correlation with the outcome variables. Recommendations emerging from this research identified the need for further research in higher education leadership and emphasized the need for leadership training in higher education institutions.

Cowen (1990) asked if correlations existed between specific presidential leadership styles, as defined by seven factors of leadership behaviors (Bass, 1985), and changes in enrollment patterns at public four-year postsecondary institutions in the U.S. The study also considered if perceptions of the presidents' leadership behavior were correlated with specific approaches to planning for enrollment growth, the length of presidents' and subordinates' tenure in office, the length of the presidents' acquaintanceship and frequency of contact with immediate subordinates, and the presidents' and immediate subordinates' academic preparation in specific fields. A high percentage of presidents were perceived to display transformational behaviors. Significant positive relationships existed between the length of presidents' tenure at their current institutions and the percentage of change in FTE enrollments at the same institutions, and the length of subordinate's tenure in administrative posts under their current presidents and the percentage of change in FTE enrollments at the same institution. Other significant relationships existed between perceived presidential leadership behaviors, changes in FTE enrollment, perceptions of effectiveness, subordinate satisfaction, and other factors

of the presidency. Bensimon (1993) studied the initial actions of new college presidents and analyzed their transactional and transformational characteristics. The impact of transformational leadership was primarily on satisfaction and morale, while transactional leadership impacted structural and physical features of the institutions. Results suggested that new presidents should integrate the two approaches.

Albritton (1993) studied whether perceptions of transformational factors as defined by the MLQ would have incremental effects above transactional factors in medium size university libraries. The study also examined whether leadership factors were related to perceptions of outcome measures and perceived dimensions of library organizational effectiveness. All hypotheses associating the transformational leadership model with organizational effectiveness in medium size university libraries were supported and findings in the library sample were similar to previous research on the Bass (1985) model in other fields.

The dearth of public health leadership and lack of leadership development in higher education for public health prompted a study of leadership perspectives in schools of public health and the practices and behaviors of contemporary public health leaders and their followers (Erickson, 1993). Academic responders identified transactional leadership roles and relationships more often than those of transformational leadership roles. Variances between academic and practice findings suggest that, although many graduates do become leaders in public health, this may not be an outcome of the educational experience. Content and comparative analyses identified twelve concepts of transformational leadership, which formed a framework for course content in leadership development for public health.

Community College Leadership

A meta-ethnographic analysis of the leadership literature was conducted in order to identify the themes, patterns, and connections that describe transformational leadership in

community colleges (Pielstick, 1998). Results revealed a pattern of descriptors that provide a profile of transformational leadership. The profile includes seven major themes: creating a shared vision, communicating the vision, building relationships, developing a supporting organizational structure, guiding implementation, demonstrating character, and achieving results.

A study examining the fit of the transformational/transactional leadership paradigm to faculty of a two-year community college used student ratings of faculty on the MLQ to determine the effect of perceived faculty leadership on the outcome variables of effectiveness, extra effort, and satisfaction (Nischan, 1997). The results of the study were consistent with previously published studies demonstrating the applicability of the transformational leadership paradigm to the two-year community college classroom environment. The study concluded that the transformational leadership variables contributed more to the three outcome variables than the transactional or laissez-faire leadership variables.

Archie (1997) examined the leadership characteristics of community college associate degree nursing department heads and the relationships between department heads' leadership characteristics and nursing faculty satisfaction, willingness to exert extra effort, and perceived department head effectiveness. This correlational study used the MLQ and demographic questions on department head age, years of experience, and educational background. Results indicated that associate degree nursing department heads are transformational and to a lesser extent transactional, as perceived by nursing faculty. Transformational leadership was a statistically significant predictor of department heads' effectiveness, faculty satisfaction, and faculty extra effort. The results also suggest that the transformational factors: idealized influence-attributed (IIA), idealized influence-behavior (IIB), and inspirational motivation (IM) are significant predictors of department heads' effectiveness, and idealized influence-attributed (IIA),

inspirational motivation (IM), and individualized consideration (IC) are significant predictors of faculty willingness to exert extra effort and faculty satisfaction. The transactional factor contingent reward (CR) was a significant predictor of department heads' effectiveness, faculty satisfaction, and willingness to exert extra effort. Management-by-exception-passive (MEP) was a significant predictor of department head effectiveness and faculty satisfaction, while management-by-exception-active (MEA) exhibited a significant and negative correlation with faculty satisfaction. No significant relationships were found between transformational leadership and department heads' ages, years of experience, and educational background.

Transformational Leadership in Health Care

This section will present a review of recent research on transformational leadership in health care where data were collected using the Multifactor Leadership Questionnaire. With the emergence of transformational and transactional leadership study, there has been a resurgence of interest in the study of leader traits and abilities in those individuals who are able to bring about the transformation of organizations within a rapidly changing environment. Bauers (1996) examined the nature of the relationship between certain thinking and behaving preferences and the demonstration of transformational and transactional leadership behaviors using a sample of leaders and their direct reports from the rapidly changing health care industry. Results of the analyses indicated that the social awareness thinking preference and the behavioral attributes of assertiveness, flexibility, and expressiveness demonstrated predictive ability in the emergence of most transforming leader behaviors as defined by the MLQ.

Leadership behavior of first-line nurse managers in adult critical care and the relationship of these behaviors to leadership role preparation and other demographic and organizational variables was the purpose of a study by Ohman (1997). Findings revealed that first-line nurse managers in critical care were highly transformational, with all

participants rating themselves higher in transformational than transactional leadership. Those with previous leadership experience reported significantly higher transformational leadership. Significant, though weak, relationships were also found between the: 1) number of staff supervised and intellectual stimulation, 2) type of management structure and idealized influence (behavioral) 3) type of management structure and inspirational motivation, 4) highest level of educational preparation and management-by-exception (passive), 5) years of previous nursing management experience and management-by-exception (active), and 6) management title and management-by-exception (active). Regression analyses revealed that previous leadership experience and management structure were most predictive of inspirational motivation leadership, explaining 13.3% of the variation.

Cohen (1998) examined the individual leadership traits of hospital-based chief nurse executives who hold basic or advanced certification in nursing administration through the American Nurses Association (ANA). Results of the study supported the research literature on transformational leadership. Self-rating of leaders and ratings by followers were high for transformational leadership. Leaders generally rated themselves higher than followers rated them for organizational outcomes. This study raised some additional questions on whether advanced certification is an important prerequisite for leadership positions in nursing, and whether leadership styles are reflected in the ANA certification of chief nurse executives.

The job satisfaction and extra effort on the job of junior administrators in the Department of the Air Force medical treatment facilities was studied in relation to the transformational, transactional, and laissez-faire leadership styles of their senior administrator (Arends, 1997). Senior administrator leadership characterized by Intellectual Stimulation accounted for most of the variance in junior administrators' Extra Effort and Job Satisfaction. Inspiration explained most of the variance in perceptions of

the senior administrator's influence on workgroup and Organizational Effectiveness. When junior administrators were evaluated by their subordinates, leadership characterized by Intellectual Stimulation accounted for most of the variance in subordinates' Extra Effort on the job. Idealized Influence explained most of the variance in perceptions of junior administrator's influence on workgroup and Organizational Effectiveness. Junior administrators' use of Contingent Reward accounted for the most variance in subordinates' Job Satisfaction. Similar findings were substantiated by Opeil (1998) in a study of transformational leadership behaviors of chief nurse executives in the Department of Veterans Affairs Medical Centers. The outcome factors considered included subordinate satisfaction and leader effectiveness of the immediate supervisor as perceived by subordinates, and the relationships among outcome measures of satisfaction and leader effectiveness. Findings substantiated the advantages of transformational leadership and the positive transactional approach of Contingent Reward.

Relationships between Leadership Behaviors and Demographic Characteristics of Leaders

Numerous studies in the past decade have attempted to determine if there are differences in the leadership behaviors of men and women and whether the differences have an influence on effectiveness outcomes. Questions regarding leadership and gender have been researched in a variety of fields and have been debated and discussed by executives, academics, and the media (Billard, 1992). The debate addresses whether women have a different management style than their male counterparts, and if so, do the consensus-building, participatory methods usually attributed to women managers work more effectively. Eagly, Karau, and Makhijani (1995) conducted a meta-analysis of research on the relative effectiveness of women and men who occupy leadership and managerial roles and concluded that male and female leaders were equally effective. However, consistent with the assumption that the congruence of leadership roles with

leaders' gender enhances effectiveness, men were more effective than women in roles that were defined in more masculine terms, and women were more effective than men in roles that were defined in less masculine terms.

The relationship between transformational leadership style and gender has been studied in many work settings using the MLQ as the instrument of measure. A study of commissioned officers in the US Air Force measured personality traits for both self and other observations, the MLQ, and measures of satisfaction with the institution (Ross & Offerman, 1997). High scores on transformational leadership were associated with a distinct personality pattern characterized by higher levels of pragmatism, nurturance, and feminine attributes and lower levels of criticalness and aggression. This enabling pattern formed the core of transformational leadership. Although there was a significant relationship between transformational leadership and subordinate satisfaction, no performance effects were found on several objective measures of performance. Similar finding occurred when data were collected in countries other than the United States. Padde (1995) found that female supervisors excelled in the practice of transformational leadership in an agricultural program in Uganda, whereas male supervisors tended to be more transactional.

Gender differences in leadership styles of administrators in higher education have been examined in several research studies using a variety of theoretical models and research tools. Eberlein (1993) based a study on Loden's models of masculine and feminine leadership styles and analyzed approaches to the managerial functions of motivation, teamwork, decision-making, problem solving, and goal-setting of deans, associate deans, and assistant deans at the University of Wisconsin. Differences were found in each of the managerial functions, with male respondents choosing the masculine approach more frequently than female respondents. Eberlein concluded that there are

masculine and feminine gender differences in the leadership styles of higher education administrators.

An Australian study analyzed how feminists in high administrative positions conceptualized and practiced administrative leadership in education, focusing on the way they reconciled their feminist stance to formal authority and power in a dominant masculine culture (Blackmore, 1989). Interviews indicated that feminists prioritized educational practices and people values over administrative and economic values.

Studies of leaders in higher education using the MLQ have frequently found that females score higher in transformational behaviors and their self-ratings of effectiveness are higher than male self-ratings (Young, 1990; Daughtry & Finch, 1997; Maher, 1997). Maher's study of gender differences of male and female college students' ratings of their managers suggests that stereotypes may be one explanation for gender differences found in prior research on transformational and transactional leadership. In a study of vocational administrators who were rated by teachers, no significant differences appeared in teacher ratings of males and females (Daughtry & Finch, 1997). In several studies comparing the leadership behaviors and career paths of black and white administrators in higher education, no statistically significant association between race and leadership behavior were found (Dasher-Alston, 1992; Neal, 1992).

Leadership in Occupational Therapy

The subject of leadership in the profession of occupational therapy has been addressed for decades in the inspirational speeches given by the American Occupational Therapy Association's (AOTA) elected leaders, in the editorial commentary in the association's publications, and in the occupational therapy education classroom using theories and models researched in other disciplines. Not until the mid 1980's was leadership an area for scientific study in this profession. Brollier (1985c) recognized the need for leadership and management skills in occupational therapists, but realized there

had been no systematic approach to determining the types of expertise most needed in this profession. A study of hospital-based occupational therapy department directors was conducted to explore the influence of their managerial and leadership skills on the job performance of staff occupational therapists. The study also examined the relationship between the staff's perceptions of the leadership and the leader's self-perceptions. The researcher used Yukl's Multiple Linkage Model of Managerial Leadership Effectiveness and the Leadership Behavior Description Questionnaire XII for data collection. Results indicated that occupational therapy directors and their staff members had significant differences in their assessments of the directors' managerial leadership styles. Directors generally gave themselves higher ratings than their staff members. While the directors usually gave their staff high job performance ratings, discrepancies between the directors' and the staffs' ratings of the directors' leadership styles correlated negatively with staff job performance (Brollier, 1985b). The study also found that the managerial leadership styles of hospital based occupational therapy directors influenced staff job satisfaction much more than had been found in similar studies done with samples from other fields. When directors and staff did not share their views about the directors' managerial styles and competence, staff job satisfaction was negatively affected (Brollier, 1985b). An additional area examined in this study concerned the demographic, organizational, and other situational factors and their relationships with the directors' managerial leadership characteristics in predicting staff job satisfaction. The directors' undergraduate major contributed to the total predictive model but not to a significant degree. The number of years the director had been employed as the department director added slightly to the model, suggesting that the longer the directors had held their jobs, the more likely they were to have a satisfied staff. The number of full time occupational therapists in the department also contributed to the prediction. As departments grew larger, the staff job satisfaction was somewhat negatively effected. The occupational

therapists who listed mental health as their primary clinical expertise reported the lowest levels of overall job satisfaction in this study, a finding that suggests the need for further research in this area (Brollier, 1985a).

Occupational Therapy Education Program Directors

The title *program director* is the term recommended by the American Occupational Therapy Association (AOTA) to describe the person in an academic setting whose major functions are to manage the occupational therapy education program, and facilitate the education of competent graduates through faculty development and supervision (AOTA, 1993). The titles *department chair (*or *chairperson), department head, division chief,* and *curriculum director* are also used (Miller, 1982; Sieg, 1986; Colman, 1990).

The role of the program director is one of the most important in academia, yet few persons in this position are formally prepared for it (Tucker, 1984). In a review of occupational therapy education programs between 1975 and 1989, Rider found that it often took as long as three years to fill a program director position due to the shortage of qualified applicants (Rider, 1989). The result to occupational therapy academic programs was that inexperienced program directors were spending most of their time learning the job and struggling to cope, rather than pursuing creative and political activities necessary for strong academic leadership.

Sieg studied reasons for the shortage of qualified occupational therapy program directors and identified unfamiliarity with the administrative role and lack of preparation for the position as contributing factors. Because activities and decisions made at the department level can make or break an institution, and the stature of the department depends on the leadership provided by the chair, she proposed that the profession further this role as a specialty area (Sieg, 1986). Rider found a fairly large number of faculty respondents who were interested in becoming program directors and recommended the

importance of identifying these persons and nurturing and supporting their interest (Rider, 1989).

The need to identify, nurture, support, and train future program directors in occupational therapy continues to be a vitally important one. Not only are these leaders important in the institutions employing them, but also their contributions are critical to the survival and future of the profession. They are expected to transfer the profession's core knowledge to students, remain updated on trends and changes in practice, and integrate this information into coursework (Gilkeson, 1997).

Descriptions of the role of academic department chair recognize that this person sets the climate of the academic department primarily through interactions with faculty. The way that the program director relates to faculty members, the expectations held, and the way these expectations are communicated is critical to the effectiveness of the department (Sieg, 1986). Unfortunately there have been no studies in this profession of the relationship between characteristics of program directors and faculty job satisfaction. One study of the job satisfaction of occupational therapy faculty found that 94% of respondents were satisfied with their teaching role, attributed to their opinion that academia offers a pleasant environment with few constraints and the opportunity to design learning experiences. (Rozier, Gilkeson, & Hamilton, 1991). Although this study did not investigate the relationship between faculty satisfaction and leadership behaviors of the program director, the findings indicated that faculty who held advanced degrees found research exciting and were more satisfied with the aspects of teaching that were not necessarily satisfying to those who did not hold advanced degrees. The program director could be instrumental in creating an academic environment that fosters job satisfaction, productivity, and retention of faculty.

Program directors typically report to the deans of their colleges and frequently interests and needs of faculty are quite different from those of the dean. Moreover, the

expectations of faculty and deans and the actual priorities of the program director are frequently not in agreement. A study of the roles of occupational therapy program directors explored ideal and actual chairperson role expectations and perceived role conflict (Miller, 1982). Eleven major areas of the program director's role were ranked by deans, chairpersons, and faculty, including 1) planning, 2) leadership, 3) fiscal responsibility, 4) evaluation, 5) curriculum, 6) instruction, 7) climate setting, 8) faculty development, 9) extra-departmental communication, 10) interdepartmental communication, and 11) students. Ideally, both deans and faculty placed a high priority on planning, fiscal responsibility, and leadership, while in actual practice they perceived their program directors to place primary emphasis on curriculum, evaluation, fiscal responsibility, and planning, in that order. This study concluded that the potential for conflict exists between the department chairperson and the dean and/or faculty in those areas where there is lack of agreement about actual chairperson role behavior. Occupational therapy faculty saw planning, leadership, and curriculum as areas high in actual importance to their chairpersons, whereas the chairpersons saw themselves putting little importance on leadership. Miller identifies the need for better communication with faculty about the fiscal and administrative demands of the program director position, and better communication with deans about the particular needs and demands of the program, profession, and faculty (Miller, 1982).

While literature on the occupational therapy program directors published in the last two decades has drawn attention to the shortage of qualified persons, the lack of interest in the position by faculty, the lack of preparation for the roles and responsibilities, and the potential for role conflict, this has not always been the case in the history of the profession. There was an era in occupational therapy's history when the influence of a small group of women, known as the Curriculum Directors, prevailed in the growth and development of occupational therapy (Colman, 1990). During the 1950's and early

1960's, these women were members of the curriculum directors' subcommittee of the Education Committee of the American Occupational Therapy Association (AOTA), and their strong leadership and accomplishments during that time shaped a particular set of values about occupational therapy education and directions for development in the field. These women were well trained, well educated, politically astute, and like the occupational therapy pioneers who mentored them, they were willing to take risks. They rose quickly to positions of great responsibility within their educational institutions (Colman, 1990). Their work influenced a generation of occupational therapists who saw them traveling to meetings, managing the business of AOTA, attending national workshops, and orchestrating several major research studies. The profession defined this group as "awe-inspiring, successful leaders" and their multipurpose involvement strengthened this perception of their power and influence (Colman, 1990).

The Curriculum Directors identified themselves as "strong, visionary, and highly educated women" with "personal charm and a profound interest in the profession." According to the oral histories, they valued their responsibility as leaders. Students saw them as the group that wielded the greatest amount of influence within AOTA. Practicing therapists identified them as the group making most of the decisions about educational policy and setting the values and standards for professional conduct and clinical practice. They were also recognized for their leadership within their academic settings, revered for their political and administrative savvy, and highly respected as role models and mentors for new members of the profession. As the group who controlled education, they were able to control much of the profession's destiny (Colman, 1990). By the early 1960's, a movement within the profession to support the development of an assistant or technical level position within the structure of occupational therapy practice had gained a great deal of strength. As support for technical education grew, the network of education programs expanded as well. The program directors of the technical

education programs were not well received by the tightly controlled Curriculum Directors group, who at that time was attempting to upgrade entry-level education for occupational therapists to the master's degree level. A major reorganization in the national association at that time shifted decision making power from the Board of Management (five of the Curriculum Directors had served continuously on the Board between 1948 and 1964) to a Delegate Assembly (the body of elected member representatives), thus increasing the members' involvement in and responsibility for running AOTA. Another change in the organization of AOTA reduced education to a single committee within the Council on Professional Standards and eliminated the Curriculum Directors group as a separate entity. By the mid 1960's the reign of the Curriculum Directors as the primary influencers of education and as the standard-bearers for educational values was over, although the image of this small group of leaders, in terms of their power, style, and values remains a presence in educational debate (Colman, 1990). . . . . .

Research on Leadership Characteristics of Occupational Therapy Education Program Directors

Prior to the 1996 data collection for this study of transformational leadership behaviors, the published literature on program directors was limited to descriptive studies of job roles and responsibilities, demographic profiles, and oral histories documenting power and influence of this group in the middle years of the twentieth century. Not until the late 1990's, after this study was conducted, was there research data on the leadership behaviors of occupational therapy education program directors, and no other studies have yet been done describing the technical education program directors. Dudek-Shriber (1997) examined faculty perceptions of the visionary leadership qualities of their program directors using the Leader Behavior Questionnaire (Sashkin, 1990). Visionary leadership was selected as one of the conceptual frameworks for Dudek-Shriber's study

because it provided a comprehensive approach to studying leaders within the context of their environments. At the core of visionary leadership theory is the belief that visionary leaders create cultures that strengthen and support critical organizational functions, as well as critical human work needs. These leaders are able to empower others to construct their organizational visions (Sashkin & Burke, 1990). The study also investigated the relationship between visionary leadership behaviors and the organizational health of the departments using the Organizational Health Assessment (Conway, 1986). Although occupational therapy education departments are required through an accreditation process to meet minimal standards, it has not been a common practice to evaluate the department's overall effectiveness and health. Results of this study indicated that both director and faculty respondents rated their departments high in organizational health. Faculty respondents rated the overall leadership of directors as average, and only 4 of the 53 program directors were perceived by faculty respondents as fully displaying the characteristics of a visionary leader. The overall relationship between leadership and organizational health was strong (r=.97). There were however, differences in program director and faculty respondents' perceptions of their departments' organizational health. On all the subtests where there were differences, the program director respondents' mean scores were higher than those of faculty respondents. Although this research found that faculty members perceive their program directors as average leaders, they are confident that the program directors have the qualities necessary to positively influence their departments in pursuing organizational goals. This important finding suggests that the occupational therapy profession has been successful at combining the leadership and effectiveness elements necessary to support its educational objectives (Dudek-Shriber, 1997).

It is interesting to note that following publication of the Dudek-Shriber study, the American Journal of Occupational Therapy (AJOT) published a letter to the editor titled

"The Topic of Leadership Among Program Directors Deserves Expanded Study." The letter emphasized the need for further research "to assess the leadership qualities of program directors with some type of administrative background, comparing their leadership behaviors with those of administratively inexperienced program directors." The author of the letter also identified the need to differentiate between program directors of occupational therapy assistant programs and occupational therapy professional level programs. She also stated that further research on program directors, leadership, and management expectations could facilitate changes in AOTA documents, and raise awareness and respect for the program director role (Dimeo, 1997)

The need for additional research on the leadership of the program directors was also recognized by Miller who conducted a study of the leadership styles of occupational therapy program directors using a cognitive frames conceptualization of leadership (Miller, 1998). The four leadership "frames" (structural, human resource, political, and symbolic) connote ways of thinking, often described as perceptions or orientations (Bolman & Deal, 1997). Based on self-report, program directors used all four leadership frames; human resource was used most and structural was used least. Critical incidents, however, revealed that both the structural and political frames were used as frequently as the human resource frame. A multi-frame approach (three or more frames) was used by 40% of the directors on self-report, and 60% were rated multi-frame leaders on critical incidents. Male program directors were multi-frame leaders significantly more than females, and years of experience correlated with use of the political and symbolic frames. The discrepancy between the self-report scores and ratings of the critical incident narratives indicate the importance of data collection methods in studies of leadership behavior. Miller concludes that program directors can benefit from knowledge of their cognitive orientations to leadership, and recommends that research and education on

leadership could be a valuable investment in the future of occupational therapy (Miller, 1998)

In November of 1986 the president of the American Occupational Therapy Association (AOTA) addressed an audience of occupational therapy leaders at the AOTA Leadership and Management Meeting in Crystal City, Virginia (Gilfoyle, 1987). She emphasized that over the next decade leadership within the national association would be the pivotal force to provide the profession with vision. Her presentation made reference to the phrase "transformative leadership" (Bennis & Nanus, 1985) and she urged the members of the association to exert their power by adopting the concept of transformative leadership. "These are leaders who empower others, commit people to action, convert followers into leaders, and convert leaders into agents of change. Transformative leaders become social architects, persons who understand an organization and shape its future" (Bennis & Nanus, 1985). The AOTA president recognized that occupational therapists, by training and temperament, know how to be creative and to perform at high levels. She urged the leaders at this meeting to use their transformative abilities to shape their own professional lives and to make others aware of these possibilities within themselves.

Bass' transformational leadership theory was virtually unknown to occupational therapists at that time, yet the president's words articulated Bass' constructs and their importance to this profession. In her final presidential address, this same leader presented her vision for the future of occupational therapy, including:

- A body of creditable research that defines occupational therapy clearly to both our advocates and our critics.
- A respected and understood practice whose service promotes health and productive living for our consumers.

- Job security for our members through the promotion of the discipline of occupation and the application of the science of therapy.

Her vision of occupational therapy in the nineties and beyond also included an emerging leadership role for all members of the profession – "leaders who direct their services to address the complex social and economical needs of society" (Gilfoyle, 1989). A study of the transformational leadership behaviors of occupational therapy directors in professional and technical education programs, and in clinical practice was needed before the end of the twentieth century!

CHAPTER 3

PROCEDURES FOR THE COLLECTION OF DATA

Research Design

This study was designed to determine the difference between leadership styles of occupational therapy education program directors in professional and technical level programs and clinic administrators. The study was also designed to examine relationships between leadership styles and demographic characteristics of the individual and the organization, and to determine the relationship between leadership style and perceived organizational effectiveness. Thus, no experimental design was necessary. This quantitative research design allowed for exploration of relationships between variables. There was no attempt to assign causality to the variables examined in this study.

Procedures for Data Collection

Determining the perceived leadership styles of occupational therapy education program directors and clinic administrators as measured by the Multifactor Leadership Questionnaire (MLQ) Form 5x-Short (Bass & Avolio, 1995), and comparing and contrasting differences and relationships among these three groups were the purposes of this study. In order to fulfill these purposes, data collection methods and procedures were designed to reflect the actual perceptions of respondents. The perceptions of respondents were analyzed by statistical methods in order to test the hypotheses.

Written permission to reproduce copies of the MLQ for this study was obtained from Bernard M. Bass, Director of the Center for Leadership Studies, State University of New York at Binghampton. See Appendix A. The questionnaires were mailed in the Spring Semester, 1996. The mailing for this study included a cover letter from the researcher, a

letter of support from the chairperson of the Commission on Education (COE) of the AOTA which accompanied the mailing to education program directors, a letter of support from the chairperson of the Administration and Management Special Interest Section (AMSIS) of the AOTA which accompanied the mailing to clinic administrators, one copy of the Multifactor Leadership Questionnaire Leader Form (5x-Short), five copies of the Multifactor Leadership Questionnaire Rater Form (5x-Short), and one copy of a demographic questionnaire developed by the researcher. The letters and questionnaires were printed in a questionnaire booklet with instructions for returning the questionnaires to the researcher's home address using a Business Reply Mail address with prepaid postage.

Questionnaires were pre-coded with identification numbers that were used in the scoring. The cover letter included the purposes of the study and the importance of the research, and assured that results would be presented in a composite form and that all data would be treated in absolute confidence. Copies of the cover letters can be found in Appendix B, MLQ Leader Form can be found in Appendix C, and Reater Form in Appendix D. Demographic Questionnaire sent to Education Program Directors and Clinic Administrators are found in Appendix E and F. Mailing labels of the education program directors and clinic administrators were obtained from the American Occupational Therapy Association, Inc. (AOTA), 4720 Montgomery Lane, P.O. Box 31220, Bethesda, Maryland 20824-1220. A return rate of 70-80% of the education program directors was expected because the researcher is well known to this population. A return rate of 40-50% of the clinic administrators was expected because the researcher is not as well known to this population, and it was assumed that the clinic administrators would not be as supportive of research as the education program directors.

The Instruments

The Multifactor Leadership Questionnaire

Bass and Avolio's (1995) Multifactor Leadership Questionnaire (MLQ Form 5x-Short) was used as the primary research instrument for this study. The MLQ Form 5x-Short is a revised version of earlier instruments used to measure transformational and transactional leadership styles. In order to describe transformational leaders based on the transactional-transformational continuum, Bass initially identified five factors-the first three apply to transformational leadership and the last two apply to transactional leadership. They are:

1. *Charisma.* The leader is expected to instill a sense of value, respect, and pride and to articulate a vision.
2. *Individual Attention.* The leader pays attention to followers' needs and assigns meaningful projects so that followers grow personally.
3. *Intellectual Stimulation.* The leader helps promote followers' intelligence, rationality, and creative problem solving.
4. *Contingent Reward.* The leader contracts exchange of rewards for effort, promises rewards for good performance, and recognizes accomplishments.
5. *Management by Exception.* The leader permits followers to work on the task and does not intervene unless goals are not being accomplished in a reasonable time and at a reasonable cost.

The original conceptualization of the transactional and transformational leadership styles theory led to the development of an instrument of measure called the Multifactor Leadership Questionnaire (MLQ)(Bass, 1985). This version of the MLQ included six leadership factors and one factor representing absence of leadership or abdication of responsibility. The transformational factors are:

1. *Idealized Influence.* The leader has a vision and a sense of mission; gains respect, trust, and confidence; and acquires strong individual identification from followers.
2. *Inspiration.* The leader gives pep talks, increases optimism and enthusiasm, and communicates the vision with fluency and confidence.
3. *Intellectual Stimulation.* The leader actively encourages a new look at an old method; fosters creativity and emphasizes the use of intelligence; and provokes rethinking and reexamination of assumptions and contexts on which previous assessments of possibilities, capabilities, strategies, and goals were based.
4. *Individualized Consideration.* The leader gives personal attention to all members, making each individual feel valued and each person's contribution important; and coaches, advises, and provides feedback in ways easiest for group members to accept, understand, and use for personal development.

The transactional factors measured by the MLQ are:

1. *Contingent Reward.* The leader contracts exchanges of rewards for effort and agreed upon levels of performance, and gives individuals a clear understanding of what is expected of them.
2. *Management by Exception.* The leader intervenes only if standards are not met or something goes wrong.

The non-leadership factor on the MLQ is referred to as *Laissez-Faire*-a person who is indecisive, uninvolved, withdraws when needed, is reluctant to take a responsible stand, and believes that the best leadership is the least leadership.

Much revision in the MLQ has occurred since 1985. Since the time that the original 6-factor model was proposed by Bass (1985), several factors were uncovered through subsequent research using revised versions of the MLQ (Bass & Avolio, 1993, 1994). One of these factors provides for attributions regarding the leader's transformational

style, and is based on distinguishing between charismatic behaviors and attributions. Management-by-Exception has been divided into Management by Exception-Active (MEA) and Management by Exception-Passive (MEP). The nine factor scores obtained from 45 questions in the MLQ Form 5x represent a "full range" of leadership styles and behaviors, and include the following: Idealized Influence-Attributed (IIA), Idealized Influence-Behavior (IIB), Inspirational Motivation (IM), Intellectual Stimulation (IS), Individual Consideration (IC), Contingent Reward (CR), Management by Exception-Active (MEA), Management by Exception-Passive (MEP), and Laissez-Faire Leadership (LF).

The MLQ also includes items that measure perceived leadership effectiveness. These are:

1. *Extra Effort.* Individuals have a heightened motivation to succeed. They attempt to surpass their own and the group's performance expectations.
2. *Effectiveness.* The unit, composed of the leader and the leader's group, meets, and in many cases, surpasses its goals.
3. *Satisfaction.* Individuals are content with the leader and the leader's methods and feel increased pride in individual contributions to group accomplishment. They feel their work-related needs are well represented and satisfactorily met.

The Multifactor Leadership Questionnaire (MLQ, Form5R), the primary survey instrument that had been used for more than ten years to measure transformational, transactional and non-transactional laissez-faire leadership has been criticized by several authors for its lack of discriminant validity among factors comprising the survey, for including behavioral and impact items in the same survey scales and because the factor structure initially proposed by Bass (1985) had not always been replicated in subsequent empirical research (Hunt, 1991; Smith & Peterson, 1988; Yukl, 1994).

Bessai, 1996, commends the authors of the MLQ for preparing a carefully constructed instrument and informative manual. The manual provides detailed information on the development of the scales and their psychometric properties. The theoretical basis of the scales is clearly explained and ample evidence of construct validity including the factor structure is provided in the manual. Alpha reliability coefficients for the self-rating form range from .60 to .92. When using the rater form with subordinates or coworkers, the alpha reliability coefficients ranged from .77 to .95. Bass and Avolio (1985) are careful to point out that self-ratings tend to be higher and also more consistent than ratings by others and recommend that the former be used for research purposes. Although the reliability of self-ratings is lower than ratings by subordinates and coworkers, they are higher in the MLQ than in other measures of leadership such as the Leader Behavior Analysis II which reports reliability for self in a range of .43 to .60. (McNeely, 1994).

Test-retest reliabilities over a six month period for the factor scales range from .44 to .74 for the self-rating form and from .52 to .85 on the rater form. However, between the time that the two measures were taken, the leaders participated in team development and individual training. The lack of consistency over time may be reflective of a true developmental change and not a large error margin in the instrument.

Because of its good construct validity, adequate reliability, and strong research base, the test is strongly recommended for research uses (Bessai, 1996). The MLQ stands apart from other measures of leadership in its sound psychometric properties (Kirnan & Snyder, 1996) and as an instrument that shows the relationship between leadership behaviors and outcomes (Bernardin & Cooke, 1994).

Further refinements to the MLQ-Form5R were made and the construct validity of the revised version was examined in a study with over 2,000 respondents in nine samples ranging in size from 66 to 475. The divergent and convergent validity of five

transformational, four transactional and one non-leadership factor were examined with generally positive results (Bass & Avolio, 1995).

Descriptive statistics and reliabilities for MLQ 5X are presented in the MLQ Technical Report (Bass & Avolio, 1995) distributed by Mind Garden, Palo Alto, California. (See Appendix H) Reliabilities for the total items and for each leadership factor scale ranged from .74 to .94. All of the scales' reliabilities were generally high, exceeding standard cut-offs for internal consistency recommended in the literature.

This recent version of the MLQ has been used in nearly 200 research programs, doctoral dissertations and masters theses around the globe between 1991 and 1995, and has been translated into Spanish, French, German, Hebrew, Arabic, Chinese, and Korean for use in various research projects (Bass & Avolio, 1995). The instrument includes 45 descriptive statements. In the Leader Form the respondent is asked to "judge how frequently each statement fits you" using a 5-point rating scale (0=not at all, 1=once in a while, 2=sometimes, 3=fairly often, and 4=frequently, if not always. In the Rater Form respondents are asked to "judge how frequently each statement fits the person you are describing" using the same 5-point rating scale described above. In some studies raters are expected to indicate their relationship to the leader by checking one of four choices: higher level than person rating, same level as person rating, lower level than person rating, or do not wish level to be known. In this study of leaders in occupational therapy, all raters were in a lower level position than the person they were rating.

In the scoring, the MLQ scale scores are average scores for the items on the scale. The scores were derived by summing the items and dividing the sum by the number of items that make up the scale. All of the leadership style scales have four items, Extra Effort has three items, Effectiveness has four items, and Satisfaction has two items. The Scoring Key for the MLQ can be found in Appendix H.

The Demographic Questionnaires

A Demographic Questionnaire for Occupational Therapy Education Program Directors was designed by the researcher and was used to secure information regarding the institution, such as level of the program, number of employees, and ownership/control. Biographical information about the respondent included gender, age, ethnic/racial group, highest level of education, years of experience, prior position, number of employees supervised, previous education and training in academic administration, academic rank, and whether the respondent was tenured. The researcher also developed a Demographic Questionnaire for Clinic Administrators in order to secure information regarding the respondent's place of employment, including ownership/control and number of employees, as well as biographical information about the respondent, including gender, age, ethnic/racial group, highest level of education, years of experience, prior position, number of employees supervised, and previous education and training in administration. Copies of these instruments have been placed in Appendix E and F.

Population and Sample

At the time of the data collection for this study there were 108 technical level and 97 professional level accredited occupational therapy education programs in the United States (ACOTE, 1996). Each accredited program was required by ACOTE to have hired a program director who served in this position during the accreditation process. Of the 108 accredited technical level programs, in 1996 one program director position was vacant, and one had an acting director, leaving 106 program directors eligible for this study. Of the 97 accredited professional level programs, in 1996 there were 14 acting or interim directors, leaving 83 program directors eligible for this study.

In 1996, according to the Special Interest Section Program Manager of the AOTA, there were 3,949 members of AOTA who belonged to the Administration and

Management Special Interest Section (AMSIS) (K. Smith, personal communication, February 20, 1996).

The population for this study included all occupational therapy education program directors in accredited technical and professional level programs in the United States. Directors of developing programs were not included because of the short duration that these individuals had been in the leadership position. Interim or acting program directors were not included because of the temporary nature of their relationships in the institution. The population therefore included 106 technical program directors and 83 professional program directors, for a total of 189 education program directors.

A randomly selected sample of 400 members of the AMSIS of the AOTA was selected using every tenth name of the total population of members. The reason for using the AMSIS population for the sample of clinic administrators rather than those members of AOTA who indicated that their primary position was clinic administrator was because the most recent list that AOTA could provide was based on member survey data collected in 1990. The researcher assumed that many of these members were no longer serving in the same position in 1996, and that there were others who had taken a clinic administrator position after the 1990 AOTA member survey whose names would not appear.

Procedures for Analysis of the Data

Rater scores were handled in the aggregate with a mean score calculated for each leadership and effectiveness factor. In order to test for variance within groups, mean scores were used for each leadership and effectiveness factor. Each hypothesis was stated in the null form for testing. The level of significance (alpha level) was .05 in order to reject the null hypotheses.

Summary

This study was designed to determine differences in leadership styles of occupational therapy education program directors in professional and technical level programs and occupational therapy clinic administrators, and to examine relationships between leadership styles and demographic characteristics of the individual and the organization. The Multifactor Leadership Questionnaire (MLQ) Form 5x-Short was the instrument used to determine leadership style, and demographic questionnaires designed by the researcher were used to determine descriptive characteristics of respondents and their organizations. To test for statistical significance, the data were analyzed for relationships using Analysis of Variance (ANOVA) and for correlations using Pearson's Correlation Coefficient. A detailed analysis and interpretation of the findings are presented in the next chapter.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

Demographic Characteristics of the Subjects

A total of 147 leaders participated in this data analysis. Of the eligible population of 83 professional program directors, 56 responded, representing 67.5% of the total population. Of the eligible population of 106 technical program directors, 41 responded, representing 38.7% of the total population. Of the randomly selected sample of 400 members of the Administration and Management Special Interest Section (AMSIS), 50 respondents were eligible for inclusion in this data analysis, representing 12.5% of the sample. The reason for the ineligibility of many AMSIS members was that they did not hold positions of responsibility for the supervision of others, or they were already represented in the education program director population. Members of the AMSIS include many consultants, entrepreneurs, therapists in private practice, occupational therapy faculty with administration and management teaching responsibilities, education program directors, and students. The researcher received many letters from AMSIS members who were interested in the study, but wrote to disqualify themselves. Samples of these letters are in Appendix I.

The majority of those who responded were female. The professional program directors group was made up of 87.5% females, the technical program directors group included 90.9% females, and leaders in Clinic Administration were 86.1% female. These percentages are reflective of the predominance of females in the profession of occupational therapy. (See Table 1)

TABLE 1

Demographic Characteristics of Leaders

	OT Program Directors	OTA Program Directors	Clinic Administrators
Gender			
Female	87.5%	90.9%	86.1%
Male	12.5%	9.1%	11.9%
Age			
20-30	0	0	13.6%
31-40	8.3%	20.5%	49.2%
41-50	50.0%	54.5%	28.5%
51-60	33.3%	22.7%	8.5%
61-70	8.3%	2.3%	0
Ethnic Racial			
African-American	6.3%	2.3%	5.1%
Asian/Pacific	2.1%	0	0
Hispanic/Latino	2.1%	4.7%	1.7%
White	87.5%	90.7%	89.8%
Mixed Heritage	2.1%	2.3%	1.7%

The ages of occupational therapy program directors ranged from the 30's to the 60's, with more than 40% of the professional program directors over age 50, yet only 25% of the technical program directors were over age 50. The age of leaders in clinic administration ranged from the 20's to the 50's, with 91% under the age of 50. The age distribution of technical program directors was more similar to that of the clinic administrators. (See Table 1.)

The ethnic breakdown of respondents included a high percentage of White leaders in all three groups (professional program directors - 87.5%, technical program directors - 90.7%, clinic administrators - 89.8%). The minority representation of leaders was 12.6% in the professional program directors group, and 9.3% of the technical program directors group. Minorities were represented by 8.5% of the sample of clinic administrators. (See Table 1.)

The highest level of education for all three groups ranged from baccalaureate degree (34.1% of technical program directors and 59.3% of clinic administrators) to doctoral degree. None of the technical program directors or clinic administrators held doctoral degrees, while 58.3% of professional program directors held this terminal degree. The highest degree held by two-thirds of the technical program directors was the master's degree, while 40% of clinic administrators held a master's degree. (See Table 2.)

TABLE 2

Education and Experience of Leaders

	OT Program Directors	OTA Program Directors	Clinic Administrators
Highest Level of Education			
Associate	0	0	0
Baccalaureate	0	34.1%	59.3%
Masters	41.7%	65.9%	40.7%
Doctoral	58.3%	0	0
Years of Experience in Occupational Therapy			
1-5	2.1%	0	8.6%
6-10	0	4.5%	25.9%
11+	97.9%	95.5%	65.5%

	OT Program Directors	OTA Program Directors	Clinic Administrators
Years of Experience in Academia			
None	0	0	78.0%
Less than 5	0	40.9%	20.3%
6-10	33.3%	20.5%	1.7%
11+	66.7%	38.6%	0
Years of Experience as Program Director			
None	0	0	81%
Less than 5	50.0%	59.0%	12.1%
6-10	31.3%	25.0%	3.4%
11+	18.8%	15.9%	3.4%
Years of Experience as Clinical Administrators			
None or Less than 1	14.6%	29.5%	0
1-5	43.8%	31.8%	39.0%
6-10	29.2%	22.7%	35.6%
11+	12.5%	15.9%	25.4%

Almost all of the professional and technical program directors had more than eleven years of experience in occupational therapy. For detailed information on years of experience in academia and in the present leadership position, see Table 2. The academic rank and tenure status of the academic program directors is described in Table 3.

TABLE 3

Academic Rank and Tenure of Program Directors

	OT Program Directors	OTA Program Directors
Rank		
Instructor	2.1%	34.1%
Assistant	27.1%	20.5%
Associate	45.8%	13.6%
Full	25.0%	9.1%
No Rank	0	22.7%
Tenure		
Yes	69.4%	30.2%
No, Not in Tenure Track	2.0%	7.0%
Not Attained	22.4%	27.9%
Not Applicable at their Institution	6.1%	34.9%

A remarkable majority of academic program directors did not hold a rotating department chair position, nor were they responsible for clinic administration as part of their job duties. (See Table 4.)

TABLE 4

Other Characteristics of the Education Program Directors Position

	OT Program Directors	OTA Program Directors
Rotating Basis		
Yes	14.6%	2.3%
No	85.4%	97.7%

Responsibility for Clinic Administration		
Yes	17.0%	4.5%
No	83.0%	95.5%

The position held most frequently by professional program directors prior to assuming the program director position was that of faculty (43.2%). Clinical practitioner was the prior position held most frequently by technical program directors, with only 24.3% of this group rising from faculty positions. (See Table 5.)

TABLE 5

Position Held Immediately Prior to Education Program Director

	OT Program Directors	OTA Program Directors
Acting Program Director	13.6%	10.8%
Assistant to the Program Director	4.5%	2.7%
Academic Fieldwork Coordinator	6.8%	2.7%
Faculty	43.2%	24.3%
Clinic Administrator	15.9%	16.2%
Clinical Practitioner	2.3%	35.1%
Other	13.6%	8.1%

Prior to assuming the role of clinic administrator, more than half of this group held positions as staff therapists (50.9%) with fewer numbers of leaders serving as acting or assistant director. (See Table 6.)

TABLE 6

Position Held Immediately Prior to Clinic Administrator

Acting Director	10.5%
Assistant Director	15.8%
Staff Therapist	50.9%
Academic Program Director	1.8%
Other	21.1%

It is interesting to note that a greater percentage of the clinic administrators had previous education and training in administration than did the professional program directors (72.4% and 64.6% respectively). For a detailed report of prior education and training in administration for all three groups, see Table 7.

TABLE 7

Prior Education and Training in Administration

	OT Program Directors	OTA Program Directors	Clinic Administrators
Yes	64.6%	40.9%	72.4%
No	35.4%	59.1%	27.6%
Type Of Training			
In-Service	32.7%	25.0%	53.3%
Continuing Education	38.8%	25.0%	53.3%
College Course	38.8%	20.5%	30.0%
Advanced Degree	28.6%	11.4%	20.0%
Other	14.3%	2.3%	13.3%

Total numbers of employees supervised and other characteristics of the academic institutions and practice settings are detailed in Tables 8 through 10.

TABLE 8

Total Number of Employees Supervised

	OT Program Directors	OTA Program Directors	Clinic Administrators
Less than 5	4.2%	68.2%	27.1%
6-10	39.6%	25.0%	30.5%
11-15	20.8%	4.5%	6.8%
15+	35.4%	2.3%	35.6%

TABLE 9

Characteristics of the Academic Institution

	OT Program Directors	OTA Program Directors
Two Year	0	81.8%
Four Year	100%	18.2%
Level of OT Program		
Technical	0	100%
Professional	100%	0
Post-professional Masters	38.8%	0
Doctorate	14.3%	0

Ownership/Control		
Public	51%	79.5%
Private	49%	20.5%
Size (number of students)		
Below 10,000	52.1%	65.9%
10,000 - 20,000	16.7%	18.2%
More than 20,000	31.3%	15.9%

TABLE 10

Characteristics of the Institution for Clinic Administrators

Ownership/Control	
Public	15.3%
Private for Profit	47.5%
Private/not for Profit	37.3%
Size (number of employees in the institution)	
Less than 20	15.3%
20-50	3.4%
More than 50	81.4%

Results of Tests of Hypotheses

Hypothesis 1. There will be significant differences between self-perceived leadership styles of occupational therapy education program directors in professional and technical level programs and clinic administrators. Transformational characteristics will be significantly greater in education program directors than in clinic administrators.

The data were grouped by group membership of each leader and a mean was calculated for each of the five transformational characteristics and each of the four transactional characteristics for each leader. Tables 11 and 12 present the results of these calculations. Technical program directors and clinic administrators scored consistently higher on transformational behaviors than professional program directors, which is the opposite of what was predicted in Hypotheses 1. The results of the statistical tests for ANOVA showed no statistically significant differences for transformational behaviors, but on the transactional behavior Management by Exception-Passive (MEP), professional program directors scored significantly higher than the other two groups, and the difference was at the .0160 level of significance. Table 13 presents a more detailed analysis of this significant finding.

TABLE 11

Comparison of Transformational Leadership Characteristics by Group

	All		OT Program Directors		OTA Program Directors		Clinic Administrators	
	M	SD	M	SD	M	SD	M	SD
IIA	3.1638	.7459	3.0104	.8765	3.3349	.6240	3.1988	.6498
IIB	3.0721	.6787	3.0730	.8266	3.1568	.5763	3.0035	.5666
IM	3.1737	.7112	3.1202	.7946	3.3385	.6276	3.1018	.6660
IS	2.935	.7099	2.7779	.8261	3.0566	.7180	3.0269	.5160
IC	3.1142	.6511	3.0312	.7902	3.2571	.5616	3.0929	.5267

* = Significant Difference $p < .05$

** = Significant Difference $p < .01$

TABLE 12

Comparison of Transactional Leadership Characteristics by Group

	All		OT Program Directors		OTA Program Directors		Clinic Administrators	
	M		M	SD	M	SD	M	SD
CR	2.9906	.7040	2.8548	.7361	3.1516	.6712	3.0139	.6762
MEA	1.4985	.6985	1.4410	.6003	1.3937	.6662	1.6466	.8069
**MEP	1.2345	.7914	1.4613	.8255	1.0161	.8071	1.1550	.6825
LF	.7428	.7219	.8242	.7054	.6226	.7856	.7480	.6878

* = Significant Difference p <.05

** = Significant Difference p <.01

TABLE 13

Management by Exception-Passive

	M	SD	Sum of Squares
OT Program Directors	1.4613	.8255	37.4834
OTA Program Directors	1.0161	.8071	25.4020
Clinic Administrators	1.1550	.6825	22.8221

	Sum of Squares	df	M Square	F	Sig
Between Groups	5.1037	2	2.5519	4.2577	.0160
Within Groups	85.7075	143	.5994		

The data were grouped by leader for the three scales of leadership effectiveness, Extra Effort (EE), Effectiveness (E), and Satisfaction (S) and mean scores are presented in Table 14. Technical program directors scored significantly higher than the other two groups of leaders on Satisfaction, as shown in Table 15.

TABLE 14

Comparison of Leader Effectiveness by Group

	All		OT Program Directors		OTA Program Directors		Clinic Administrators	
	M	SD	M	SD	M	SD	M	SD
EE	2.8762	.8300	2.7367	.9702	2.9708	.6700	2.9567	.7671
E	3.2036	.7380	3.0598	.8262	3.3585	.7095	3.2406	.6325
*S	3.1842	.8419	2.9696	.9497	3.3938	.8182	3.2568	.6769

* = Significant Difference p <.05

** = Significant Difference p <.01

TABLE 15

Satisfaction

	M	SD	Sum of Squares
OT Program Directors	2.9696	.9497	49.6074
OTA Program Directors	3.3938	.8182	26.1109
Clinic Administrators	3.2568	.6769	22.4484

	Sum of Squares	df	M Square	F	Sig
Between Groups	4.5982	2	2.2991	3.3491	.0379
Within Groups	98.1668	143	.6865		

It is interesting to note that the differences among the three groups for Effectiveness were close to statistical significance, with technical program directors and clinic administrators scoring higher than professional program directors on this scale.

The data revealed many similarities between technical program directors and clinic administrators on transformational and transactional leadership behaviors and effectiveness scales. To continue to test Hypothesis 1, the groups were combined as follows:

OTA Program Directors and Clinic Administrators combined for an n of 91, equaled 61.9% of respondents; OT Program Directors with an n of 56 equaled 38.1% of respondents. By combining the groups, which increases the sample size in a cell, the tests of significance are more meaningful.

A comparison of these two groups on transformational leadership characteristics resulted in significant differences on two behaviors, as shown in Table 16.

TABLE 16

Comparison of Transactional Leadership Characteristics

Combined Groups

	All		OT Program Directors		OTA Program Directors and Clinic Administrators	
	Mean	SD	Mean	SD	Mean	SD
*IIA	3.1638	.7459	.3.0104	.8765	3.2593	.6385
IIB	3.0721	.6787	3.0730	.8266	3.0716	.5729
IM	3.1737	.7112	3.1202	.7946	3.2070	.6564
*IS	2.9395	.7099	2.7779	.8261	3.0401	.6105
IC	3.1142	.6511	3.0312	.7902	3.1659	.5456

Technical program directors and clinic administrators combined scored significantly higher on the transformational behaviors Idealized Influence-Attributed (IIA) and Intellectual Stimulation (IS) than professional program directors, as shown in Table 17 and 18.

TABLE 17

Idealized Influence-Attributed

Combined Groups

	M	SD	Sum of Squares
OT Program Directors	3.0104	.8765	42.2576
OTA Program Directors and Clinic Administrators	3.2593	.6385	36.2861

	Sum of Squares	df	M Square	F	Sig
Between Groups	2.1393	1	2.1393	3.9220	.0496
Within Groups	78.5437	144	.5454		

TABLE 18

Intellectual Stimulation

Combined Groups

	M	SD	Sum of Squares
OT Program Directors	2.7779	.8261	37.5333
OTA Program Directors and Clinic Administrators	3.0401	.6105	33.1721

	Sum of Squares	df	M Square	F	Sig
Between Groups	2.3740	1	2.3740	4.8349	.0295
Within Groups	70.7053	144	.4910		

A comparison of the two groups on transactional leadership characteristics shows statistical significance for one behavior, indicated in Table 19. Professional program

directors had significantly higher scores on the transactional behavior, Management by Exception-Passive (MEP), as detailed in Table 20.

TABLE 19

Comparison of Transactional Leadership Characteristics

Combined Groups

	All		OT Program Directors		OTA Program Directors and Clinic Administrators	
	M	SD	M	SD	M	SD
CR	2.9906	.7040	2.8548	.7361	3.0751	.6737
MEA	1.4985	.6985	1.4410	.6003	1.5342	.7543
**MEP	1.2345	.7914	1.4613	.8255	1.0933	.7394
LF	.7428	.7219	.8242	.7054	.6923	.7313

* = Significant Difference p <.05

** = Significant Difference p <.01

TABLE 20

Management by Exception-Passive

Combined Groups

	M	SD	Sum of Squares
OT Program Directors	1.4613	.8255	37.4834
OTA Program Directors and Clinic Administrators	1.0933	.7394	48.6528

	Sum of Squares	df	M Square	F	Sig
Between Groups	4.6751	1	4.6751	7.8157	.0059
Within Groups	86.1361	144	.5982		

A comparison of the two groups on effectiveness scales resulted in significant differences on Satisfaction (S), as shown in Table 21. The combined group of technical program directors and clinic administrators had significantly higher scores than the professional program directors on the Satisfaction scale, and the difference was at the .01 level of significance. This difference is detailed in Table 22.

TABLE 21

Comparison of Leader Effectiveness

Combined Groups

	All		OT Program Directors		OTA Program Directors and Clinic Administrators	
	M	SD	M	SD	M	SD
EE	2.8762	.8300	2.7367	.9702	2.9630	.7216
E	3.2036	.7380	3.0598	.8262	3.2930	.6666
**S	3.1842	.8419	2.9696	.9497	3.3177	.7418

* = Significant Difference $p < .05$

** = Significant Difference $p < .01$

TABLE 22

Satisfaction

Combined Groups

	M	SD	Sum of Squares
OT Program Directors	2.9696	.9497	49.6074
OTA Program Directors and Clinic Administrators	3.3177	.7418	48.9759

	Sum of Squares	df	M Square	F	Sig
Between Groups	4.1816	1	4.1816	6.1080	.0146
Within Groups	98.5834	144	.6846		

The data analysis displayed in Tables 11 through 22 provides sufficient support to accept Hypothesis 1 and conclude that there are significant differences among the self-perceived leadership styles of occupational therapy education program directors in professional and technical level programs and clinic administrators. However, the data do not support the second part of Hypothesis 1, which predicted that transformational characteristics would be greater in education program directors than in clinic administrators. Transformational leadership behaviors were significantly greater in clinic administrators than in professional program directors; therefore, the second part of Hypothesis 1 is rejected.

Hypothesis 2. There will be significant differences between the self-perceived leadership styles of occupational therapy education program directors in professional and technical programs, clinic administrators, and the ratings of their faculty and staff.

In order to compare the self-rating scores of the leaders with the ratings of their subordinates, the mean rater score for each behavior was subtracted from the mean leader score (leader minus rater). Therefore, a positive score indicates that leaders rated themselves higher than raters for that behavior. Professional program directors rated themselves higher than their subordinate ratings on all transformational behaviors. Even when technical program directors and clinic administrators rated themselves higher than their subordinate ratings, the differences were not as high as the professional program directors' ratings, as shown in Table 23.

TABLE 23

Comparison of Leader Self-Rating and

Ratings by their Subordinates on Transformational Characteristics

	All		OT Program Directors		OTA Program Directors		Clinic Administrators	
	M	SD	M	SD	M	SD	M	SD
*IIA	-.0574	.8262	.1406	1.004	-.3655	.7375	-.0386	.6128
IIB	.2302	.7976	.3554	.9723	.1130	.7193	.1864	.6360
*IM	.0856	.7946	.2379	.8562	-.2014	.6942	.1358	.7582
**IS	.2430	.8102	.5207	.9245	.0577	.7493	.0921	.6494
IC	.3865	.7242	.5151	.8498	.2313	.6643	.3665	.6078

* = Significant Difference $p < .05$

** = Significant Difference $p < .01$

Statistically significant differences were found for three transformational behaviors, Idealized Influence-Attributed (IIA), Inspirational Motivation (IM) and Intellectual Stimulation (IS), indicated in Tables 24-26.

TABLE 24

Idealized Influence - Attributed

	M	SD	Sum of Squares
OT Program Directors	.1406	1.0004	46.0362
OTA Program Directors	-.3655	.7375	17.4072
Clinic Administrators	-.0368	.6128	16.8993

	Sum of Squares	df	M Square	F	Sig
Between Groups	4.9915	2	2.4958	3.8209	.0246
Within Groups	80.3426	123	.6532		

TABLE 25

Inspirational Motivation

	M	SD	Sum of Squares
OT Program Directors	.2379	.8562	33.7183
OTA Program Directors	-.2014	.6942	15.4207
Clinic Administrators	.1358	.7582	25.8671

	Sum of Squares	df	M Square	F	Sig
Between Groups	3.9246	2	1.9623	3.2179	.0434
Within Groups	75.0061	123	.6098		

TABLE 26

Intellectual Stimulation

	M	SD	Sum of Squares
OT Program Directors	.5207	.9245	39.3144
OTA Program Directors	.0577	.7493	17.9643
Clinic Administrators	.0921	.6494	18.9764

	Sum of Squares	df	M Square	F	Sig
Between Groups	5/8060	2	1.9030	4.6826	.0110
Within Groups	75.2551	123	.6200		

It is interesting to note that technical program directors and clinic administrators rated themselves lower on IIA than their subordinate ratings.

These differences between the leaders' self-ratings and subordinate ratings for the three groups of leaders were also found in the transactional behaviors, which are considered less effective on the leadership continuum. Table 27 indicates that the professional program directors' self-ratings were lower than their subordinates' ratings for transactional leadership behaviors.

TABLE 27

Comparison of Leader Self-Rating and

Ratings by their Subordinates on Transactional Characteristics

	All		OT Program Directors		OTA Program Directors		Clinic Administrators	
	M	SD	M	SD	M	SD	M	SD
CR	.1950	.7462	.3348	8032	-.0368	.7576	.2186	.6470
MEA	-.0657	.9769	-.2139	.9569	.2279	.9207	-.1250	1.011
MEP	-.3025	.9371	.1394	.9746	-.2798	.7331	-.4855	1.0117
LF	-.0395	.7655	.0318	.8519	.0888	.8553		

* = Significant Difference $p < .05$

** = Significant Difference $p < .01$

For all three leadership effectiveness scales (Extra Effort, Effectiveness, and Satisfaction) the professional program directors rated themselves higher than their subordinate ratings. (See Table 28.) A detailed analysis of these statistically significant differences is shown in Tables 29 through 31.

TABLE 28

Comparison of Leader Self Rating and

Ratings by their Subordinates on Leadership Effectiveness

	All		OT Program Directors		OTA Program Directors		Clinic Administrators	
	M	SD	M	SD	M	SD	M	SD
*EE	.1761	.9885	.4508	l.l528	-.0455	.8635	.0543	.8339
**E	.1910	.7661	.4106	.9221	-.0993	.6745	.1751	.5703
**S	.1513	.8943	.3899	.9561	-.2096	.9228	.1665	.7255

* = Significant Difference p <.05

** = Significant Difference p <.01

TABLE 29

Comparison of Leader Self-Rating With Ratings of Subordinates

Extra Effort

	M	SD	Sum of Squares
OT Program Directors	.4508	1.1528	61.1364
OTA Program Directors	-.0455	.8635	23.8608
Clinic Administrators	.0543	.8339	31.2923

	Sum of Squares	df	M Square	F	Sig
Between Groups	5.8491	2	2.9245	3.0933	.0489
Within Groups	116.2895	123	.9454		

TABLE 30

Comparison of Leader Self-Rating With Ratings of Subordinates Effectiveness

	M	SD	Sum of Squares
OT Program Directors	.4106	.9221	39.1100
OTA Program Directors	-.0993	.6745	14.5595
Clinic Administrators	.1751	.5703	14.6367

	Sum of Squares	df	M Square	F	Sig
Between Groups	5.0593	2	2.5297	4.5552	.0123
Within Groups	68.3062	123	.5553		

TABLE 31

Comparison of Leader Self-Rating with Ratings of Subordinates Satisfaction

	M	SD	Sum of Squares
OT Program Directors	.3899	.9561	42.0472
OTA Program Directors	-.2096	.9228	27.2517
Clinic Administrators	.1665	.7255	23.6883

	Sum of Squares	df	M Square	F	Sig
Between Groups	6.9843	2	3.4921	4.6193	.0116
Within Groups	92.9872	123	.7560		

When data on technical program directors and clinic administrators were combined and compared with professional program directors, a significant difference was found for Satisfaction (See Tables 32 and 33).

TABLE 32

Comparison of Leader Effectiveness

Combined Groups

	All		OT Program Directors		OTA Program Directors and Clinic Administrators	
	M	SD	M	SD	M	SD
EE	2.8762	.8300	2.7367	.9702	2.9630	.7216
E	3.2036	.7380	3.0598	.8262	3.2930	.6666
**S	3.1842	.8419	2.9696	.9497	3.3177	.7418

* = Significant Difference p <.05

** = Significant Difference p <.01

TABLE 33

Satisfaction

Combined Groups

	M	SD	Sum of Squares
OT Program Directors	2.9696	.9497	49.6074
OTA Program Directors and Clinic Administrators	3.3177	.7418	48.9759

	Sum of Squares	df	M Square	F	Sig
Between Groups	4.1816	1	4.1816	6.1080	.0146
Within Groups	98.5834	144	.6846		

The data analysis in Tables 23 through 33 provides sufficient support to accept Hypothesis 2 and conclude that there are significant differences between the self-perceived leadership styles of education program directors and the ratings of their faculty, and between clinic administrators and the ratings of their staff.

Hypothesis 3.a. There will be a significant positive correlation between the transformational leadership behaviors of occupational therapy clinic administrators and education program directors in technical and professional level programs and perceived organizational effectiveness.

In order to test this hypothesis all respondent groups were combined for an N of 146. Pearson's Correlation Coefficients were calculated to determine the correlation between the five transformational behaviors and the three effectiveness scales. Every behavior was statistically significant (See Table 34).

TABLE 34

Correlations Between Transformational Behaviors and Organizational Effectiveness

		IIA	IIB	IM	IS	IC
EE	Pearson Correlation	.812**	.707**	.696**	.710**	.716**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	146	146	146	146	146
E	Pearson Correlation	.878**	.732**	.739**	.804**	.740**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	146	146	146	146	146
S	Pearson Correlation	.869**	.711**	.710**	.827**	.717**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	146	146	146	146	146

* = Significant Difference $p < .05$

** = Significant Difference $p < .01$

Hypothesis 3.b. There will be a significant negative correlation between the transactional leadership behaviors of occupational therapy clinic administrators and education program directors in technical and professional education programs and perceived organizational effectiveness.

All respondent groups were combined for an n of 146 in order to test this hypothesis. Pearson's Correlation Coefficients were calculated to determine the correlation between the four transactional behaviors and the three effectiveness scales. The data did not support a negative correlation between effectiveness and the transactional behavior Contingent Reward (CR). All other correlations were negative and eight out of nine were significant, as indicated in Table 35.

TABLE 35

Correlations Between Transformational Behaviors and Organizational Effectiveness

		CR	MEA	MEP	LF
EE	Pearson Correlation	.808**	-.110	-.586**	-.618**
	Sig. (2-tailed)	.000	.187	.000	.000
	N	146	146	146	146
E	Pearson Correlation	.835**	-.220**	-.713**	-.765**
	Sig. (2-tailed)	.000	.008	.000	.000
	N	146	146	146	146
S	Pearson Correlation	.811**	-.217**	-.671**	-.713**
	Sig. (2-tailed)	.000	.009	.000	.000
	N	146	146	146	146

The data analysis displayed in Tables 34 and 35 provides sufficient support to accept Hypothesis 3 and conclude that there are significant positive correlations between transformational leadership behavior of occupational therapy clinic administrators and education program directors and perceived organizational effectiveness.

Hypothesis 4. There will be a significant relationship between leadership styles of occupational therapy education program directors in professional and technical level programs and clinic administrators and their personal background characteristics, including: 1) gender, 2) ethnic/racial group, 3) age, 4) highest level of education, 5) years of experience in the profession, in academia, and in the leadership position, 8) number of employees supervised, and for education program directors, 9) academic rank, and 10) tenure status.

The relationships between leadership styles and demographic characteristics of the leaders are displayed in Tables 36-48.

TABLE 36

Is There a Relationship between Transformational Leadership Behaviors and Demographic Characteristics?

	Gender	Age	Ethnicity
IIA	No	No	No
IIB	No	No	No
IM	No	Yes*	No
IS	No	No	No
IC	No	No	No

* = Significant where $p < .05$

** = Significant where $p < .01$

Age of the leader was related to the transformational trait, Inspirational Motivation (IM), but the relationship was not linear. Mean scores for this trait were high in the 20-30 year old age group. The scores dropped and fluctuated in age groups

between 32 and 60, and rose again for leaders between the ages of 61 and 70, as shown in Table 37.

TABLE 37

Relationship between Inspirational Motivation and Age

		M	SD	Sum of Squares
20-32 yrs		3.5167	.3333	.5556
31-40 yrs		3.0529	.6900	16.1876
41-50 yrs		3.3488	.5947	19.0964
51-60 yrs		2.9608	.8551	17.5498
61-70 yrs		3.5469	.4546	.6201
	Sum of Squares	Df	M Square	F Sig
Between Groups	4.4874	4	1.1219	2.4926 .0466
Within Groups	54.0094	120	.4501	

The data supported significant relationships between gender of the leader and the transactional behaviors Management by Exception-Passive (MEP) and Laissez-Faire (LF), with males scoring higher than females on these transactional behaviors. A significant relationship between ethnicity of the leader and the transactional behavior Management by Exception-Active (MEA) was based on one outlier. When this one case was removed from the data analysis, there was no statistical significance for ethnicity. (See Tables 38-40.)

TABLE 38

Is There a Relationship between Transactional Leadership Behaviors and Demographic Characteristics?

	Gender	Age	Ethnicity
CR	No	No	No
MEA	No	No	Yes*
MEP	Yes**	No	No

* = Significant where p <.05

** = Significant where p <.01

TABLE 39

Relationship between Management by Exception-Passive and Gender

	M	SD	Sum of Squares
Female	1.1538	.7285	56.7870
Male	1.6364	.8952	12.8226

	Sum of Squares	Df	M Square	F	Sig
Between Groups	3.4211	1	3.4211	6.0451	.0153
Within Groups	69.6096	123	.5659		

TABLE 40

Relationship between Laissez Faire Leadership and Gender

	M	SD	Sum of Squares
Female	.6756	.6993	52.3278
Male	1.0298	.7824	9.7934

	Sum of Squares	Df	M Square	F	Sig
Between Groups	1.8425	1	1.8425	3.6481	.0585
Within Groups	62.1212	123	.5051		

The same outlier demonstrated a significant relationship between ethnicity and low scores on the organizational effectiveness scales, Effectiveness (E) and Satisfaction (S). When this one case was removed from the data analysis, there were no significant relationships between gender, age, and ethnicity and organizational effectiveness.

No significant relationships were found between transformational behaviors and highest level of education, number of years in the profession, or number of years in the clinic administrator position, as shown in Table 41.

TABLE 41

Is There a Relationship between Transformational Leadership Behaviors and Education and Experience?

	Highest Level of Education	Years in OT	Years as Clinic Administrator	Years in Academia	Years as Education Program Director
IIA	No	No	No	No	No
IIB	No	No	No	No	Yes*

IM	No	No	No	No	No
IS	No	No	No	Yes*	No
IC	No	No	No	No	No

* = Significant where p <.05

** = Significant where p <.01

The transformational behavior Idealized Influence-Behavior (IIB) was significantly related to years of experience in the program director position, however, the mean score for this behavior did not rise in a linear fashion. Scores for IIB were lowest for program directors with 6 to 10 years of experience in the program directors' position and were highest between 1 and 5 years, and after 11 years in the position. (See Table 42)

TABLE 42

Relationship Between Idealized Influence-Behavior and Years of Experience as Education Program Director

		M	SD	Sum of Squares	
0-1 yr		2.9676	.6186	20.6646	
1-5 yrs		3.3186	.5612	11.0243	
6-10 yrs		2.9346	.8636	16.4074	
11+ yrs		3.3471	.4663	1.9566	
	Sum of Squares	Df	M Square	F	Sig
Between Groups	3.9198	4	1.3066	3.1326	.0282
Within Groups	50.0528	120	.4171		

The transformational behavior Intellectual Stimulation (IS) was significantly related to years of experience in academia, but once again the relationship was not linear. The mean scores for this behavior were lowest for program directors with 6 to 10 years of experience in academia and highest for those with 1 to 5 years and more than 11 years in academia, as shown in Table 43.

TABLE 43

Relationship Between Intellectual Stimulation and Years of Experience in Academia

		M	SD	Sum of Squares	
0-1 yr		2.9679	.4781	8.0008	
1-5 yrs		3.1173	.6281	18.9364	
6-10 yrs		2.6690	.8923	18.3110	
11+ yrs		3.0982	.6786	6.9069	
	Sum of Squares	Df	M Square	F	Sig
Between Groups	3.4694	3	1.1565	2.6830	.0498
Within Groups	52.1551	121	.4310		

No significant relationships were found between transactional behaviors and highest level of education, years in the profession, or years in the clinic administrator position. The transactional behavior Management by Exception-Active (MEA) was significantly related to years of experience in academia. The highest scores for this behavior were for those program directors with less than one year of experience in academia. (See Tables 44-45)

TABLE 44

Is There a Relationship between Transactional Leadership Behaviors and Education and Experience?

	Highest Level of Education	Years In OT	Years as Clinic Administrator	Years in Academia	Years as Education Program Director
CR	No	No	No	No	No
MEA	No	No	No	Yes*	No
MEP	No	No	No	No	No
LF	No	No	No	No	No

* = Significant where p <.05

** = Significant where p <.01

TABLE 45

Relationship Between Management by Exception-Active and Years of Experience in Academia

	M	SD	Sum of Squares
Less than 1 yr	1.7627	.7532	19.8542
1-5 yrs	1.3635	.6775	22.0305
6-10 yrs	1.3165	.6347	9.2642
11+ yrs	1.4530	.7008	7.3660

	Sum of Squares	Df	M Square	F	Sig
Between Groups	4.1947	3	1.3982	2.8913	.0382
Within Groups	58.5149	121	.4836		

While years of experience in the profession, in academia, and in the leader position showed no relationship to perceived organizational effectiveness, the leader's highest level of education was significantly related to the organizational effectiveness scales Extra Effort (EE) and Satisfaction (S). (See Table 46-48.) The highest scores for these effectiveness scales were leaders whose highest level of education was the baccalaureate degree (clinic administrators) and the doctoral degree (professional program directors). Levels of education by group membership are shown in Table 2 at the beginning of this chapter.

TABLE 46

Is There a Relationship between Leadership Effectiveness and Education and Experience?

	Highest Level of Education	Years in OT	Years as Clinic Administrator	Years in Academia	Years as Education Program Director
EE	Yes	No	No	No	No
E	No	No	No	No	No
S	Yes	No	No	No	No

* = Significant where p <.05

** = Significant where p <.01

TABLE 47

Relationship between Extra Effort and Highest Level of Education

	M	SD
Baccalaureate	3.1667	.6009
Masters	2.9187	.6179

Doctoral		3.1667		.5463	
	Sum of Squares	Df	M Square	F	Sig
Between Groups	2.293	2	1.146	3.264	.041
Within Groups	51.972	148	.351		

TABLE 48

Relationship between Extra Effort and Highest Level of Education

		M		SD	
Baccalaureate		3.5667		.4169	
Masters		3.2650		.5623	
Doctoral		3.4231		.5161	
	Sum of Squares	Df	M Square	F	Sig
Between Groups	1.720	2	.860	3.004	.053
Within Groups	42.373	148	.286		

No relationships were found between academic rank and tenure status and transformational, transactional, or effectiveness characteristics.

The data displayed in Tables 36 through 48 provide support for partially accepting Hypothesis 4 and concluding that there are significant correlations between leadership styles and some of the demographic characteristics of occupational therapy clinic administrators and education program directors, including gender, number of years in academia, years of experience as education program director, and highest level of education.

Hypothesis 5. There will be a significant relationship between leadership styles of occupational therapy education program directors and characteristics of their institution: 1) level of program, (technical, professional, post-professional), 2) type of institution (four year or two year), 3) ownership/control of the institution (public or private), and 4) size of the institution (number of students).

No statistically significant relationships were found between the leadership behaviors of occupational therapy program directors and characteristics of their academic institutions, and therefore Hypothesis 5 is rejected.

Hypothesis 6. There will be a significant relationship between leadership styles of occupational therapy clinic administrators and characteristics of their organization: 1) ownership/control (public or private), 2) for-profit or not-for-profit, and 3) size (number of employees).

No statistically significant relationships were found between the leadership behaviors of occupational therapy clinic administrators and characteristics of their organizations. Therefore, Hypothesis 6 is rejected.

Summary of Major Findings in Chapter 4

The following are the major findings from this study:

1. *Group membership is related to leadership behavior and effectiveness.*
    a. Technical education program directors and clinic administrators scored consistently higher on transformational behaviors than professional education program directors.
    b. There was a significant difference among the three groups in the transactional behavior, Management by Exception-Passive (MEP). Professional education program directors scored significantly higher than the technical education program directors and clinic

administrators and the difference was at the .01 level of significance.

c. There was a significant difference among the three groups in perceived organizational effectiveness. Technical education program directors scored significantly higher than the other two groups of leaders on Satisfaction (S) and the difference was at the .03 level of significance. Difference among the three groups for Effectiveness (E) were close to statistical significance, with technical education program directors and clinic administrators scoring higher than professional education program directors on this scale.

d. When data on the technical education program directors and clinic administrators were combined, there was a significant difference on the transformational behaviors, Idealized Influence-Attributed (IIA) at the .04 level and Intellectual Stimulation (IS) at the .02 level. Technical education program directors and clinic administrators combined scored significantly higher than professional education program directors on these transformational behaviors.

e. When data on the technical education program directors and clinic administrators were combined, there was a significant difference at the .005 level on the transactional behavior, Management by Exception-Passive (MEP). Professional education program directors scored significantly higher than the combined group on this transactional behavior.

2. *There is a difference between self-ratings of leaders and ratings of their subordinates.*

   a. Significant differences were found between the self-ratings of leaders and the ratings provided by their faculty and staff. Professional education program directors rated themselves significantly higher than the subordinate ratings for the transformational behaviors, Idealized Influence-Attributed (IIA) at the .02 level, Inspirational Motivation (IM) at the .04 level, and Intellectual Stimulation (IS) at the .01 level.

   b. For transactional behaviors, professional education program directors' ratings were lower than their subordinate ratings, but the differences were not statistically significant.

   c. For all three leadership effectiveness scales, the professional education program directors' self-ratings were significantly higher than their subordinate ratings, with Extra Effort (EE) at the .04 level, Effectiveness (E) at the .01 level and Satisfaction (S) at the .01 level. When data on the technical education program directors and clinic administrators were combined and compared with professional education program directors, a significant difference between self-ratings and subordinate ratings was found for Satisfaction (S) at the .01 level.

3. *Transformational leadership is related to leadership effectiveness.*

   a. There was a significant positive correlation between the five transformational leadership behaviors and the three perceived leadership effectiveness scales. All correlations were statistically significant.

b. There was a significant negative correlation between three of the four transactional leadership behaviors and the three perceived leadership effectiveness scales. Contingent Reward (CR) did not have a negative correlation with effectiveness. All other transactional leadership behaviors had a negative correlation with effectiveness, and except for the relationship between Management by Exception-Active (MEA) and Extra Effort (EE), all were statistically significant.

4. Demographic characteristics of leaders are not a strong predictor of leadership behaviors.

   a. No significant relationships were found between transformational leadership behaviors and the leader's gender or ethnicity. The age of the leader was significantly related to Inspirational Motivation (IM), but the relationship was not linear.

   b. There was a significant relationship between gender of the leader and the transactional behavior, Management by Exception-Passive (MEP), and Laissez-Faire (LF), with males scoring higher than females.

   c. No significant relationships were found between gender, age, and ethnicity and organizational effectiveness.

   d. No significant relationships were found between highest level of education, number of years in the profession, number of years in the clinic administrator position, and transformational behaviors.

   e. There was a significant relationship between the transformational behavior, Idealized Influence-Behavior (IIB) and years of

experience in the program director position, but the relationship was not linear.

f. The transformational behavior, Intellectual Stimulation (IS) was significantly related to years of experience in academia, but the relationship was not linear.

g. No significant relationships were found between highest level of education, years in the profession, or years in the clinic administrator position and transactional leadership behaviors.

h. There was a significant relationship between years of experience in academia and Management by Exception-Active (MEA). Program directors with less than one year of experience in academia had the highest scores for this transactional behavior.

5. *Level of education is related to organizational effectiveness.*

a. There was a significant relationship between the leader's highest level of education and the organizational effectiveness scales, Extra Effort (EE) and Satisfaction (S). Clinic administrators with baccalaureate degrees and professional education program directors with doctoral degrees had the highest scores for these effectiveness scales.

6. *Characteristics of the academic institution or organization are not related to leadership behavior or effectiveness.*

a. No significant relationships were found between leadership behaviors of the education program directors and characteristics of their academic institutions.

b. No significant relationships were found between leadership behaviors of clinic administrators and characteristics of their organizations.

A detailed discussion of these findings, the conclusions, and recommendations for future research and education are presented in Chapter 5.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Is Group Membership Related to Leadership Behavior and Effectiveness?

The first hypothesis tested in this study was:

There will be significant differences between self-perceived leadership styles of occupational therapy education program directors in professional and technical level programs and clinic administrators. Self-reported transformational behaviors will be significantly greater in education program directors than in clinic administrators.

One of the major findings from this study is that group membership appears to be related to leadership behavior and effectiveness within the context of the organization where the leader is employed. Technical education program directors and clinic administrators scored consistently higher on transformational behaviors than professional education program directors as measured by the Multifactor Leadership Questionnaire (MLQ). When data on the technical education program directors and clinic administrators were combined, there was a significant difference on the transformational behaviors Idealized Influence-Attributed (IIA) and Intellectual Stimulation (IS). Technical education program directors and clinic administrators combined scored significantly higher than professional education program directors on these transformational behaviors. The researcher expected to find higher scores on transformational behaviors in the professional program directors because of the importance of these leaders in their institutions, and their responsibility for the survival and future of the profession of occupational therapy (Gilkeson, 1997). This finding raises the question of whether or not transformational leadership style is affected by the

organizational culture of a university or college. The university culture is based on academic freedom and faculty are expected to be self-motivated, self initiating professionals whose performance is not dependent on the leadership style of the department chair. This finding supports Dudek-Shriber (1997) who found that occupational therapy faculty did not rate their program directors high as visionary leaders, and yet the departments had strong organizational health.

High scores on transformational leadership for technical program directors are consistent with other studies of community college leadership where transformational behaviors were reported (Pielstick, 1998). Leadership styles of leaders in practice settings are frequently more effective than the leadership styles of their academic counterparts (Master, 1990). Nurse managers had high scores on transformational behaviors (Ohman, 1997; Cohen, 1998), and a study comparing leaders in public health found that higher education administrators were more transactional than public health administrators in practice settings (Erickson, 1993).

Another statistically significant finding related to the first hypothesis is the difference among the three groups in the transactional behavior, Management by Exception-Passive (MEP). Program directors in professional level occupational therapy education programs scored significantly higher than the other two groups. This finding is not surprising in view of the high value placed on academic freedom and faculty autonomy in universities. A program director who "intervenes only if standards are not met or when something goes wrong" is understandable in the norms of universities.

A third major finding for the first hypothesis is the significant difference among the three groups of occupational therapy leaders in perceived organizational effectiveness. Technical education program directors scored significantly higher than the other two groups on Satisfaction (S). Differences among the three groups for Effectiveness (E) were close to statistical significance with technical education program

directors and clinic administrators scoring higher than professional education program directors. This finding is consistent with the literature on transformational leadership and its relationship to effectiveness. The technical education program directors and the clinic administrators had higher scores on transformational behaviors and therefore, would be expected to score higher on effectiveness scales. This finding is addressed in greater detail in the discussion of Hypothesis 3. MLQ data on effectiveness scales are collected by the self-report of the leader's perceived effectiveness and suggests the need for additional research using empirical measures of leader effectiveness.

Is There a Difference Between Self-Ratings of Leaders and Ratings of their Subordinates?

The second hypothesis tested in this study was:

There will be significant differences between self-perceived leadership styles of occupational therapy education program directors in professional and technical level programs and the ratings by their faculty, and between occupational therapy clinic administrators and the ratings by their staff.

Significant differences were found between the self-ratings of leaders and the ratings provided by their faculty and staff. Professional education program directors rated themselves higher than their subordinate ratings for the transformational behaviors Idealized Influence-Attributed (IIA), Inspirational Motivation (IM), and Intellectual Stimulation (IS). This is a very common finding in research on leadership using various instruments of measure (Carson, 1962; Verbeke, 1966; Mohamed, 1988). Leader self-ratings are usually higher than the ratings of their subordinates (Palmer, 1975; Nicol, 1976; Munsell, 1977; Harris, 1979; Xu, 1993). In studies comparing the self-ratings of leaders with the ratings of their superiors, discrepancies have been reported (Cox, 1974). A few studies have reported no differences in department chair self-ratings and their faculty ratings (Wagner, 1973; Carlson, 1973). In research using the MLQ as the

instrument of measure, the leaders' self-ratings for transformational behaviors are usually higher than the ratings of their followers (Cohen, 1998).

An additional unexpected finding in this study of occupational therapy leaders was the discrepancy in scores for transactional behaviors. Professional program directors' ratings were lower than their subordinate ratings, but the differences were not statistically significant.

For all three leadership effectiveness scales, the professional education program directors' self-ratings were higher than their subordinate ratings and the differences were all statistically significant, with Extra Effort (EE) at the .04 level, Effectiveness (E) at the .01 level, and Satisfaction (S) at the .01 level.

The literature on occupational therapy leadership supports this discrepancy between leaders' self-ratings and subordinate ratings. Brollier (1985a) found that occupational therapy clinic directors and their occupational therapy staff had different perceptions of the directors' leadership style. In a recent study of leadership and occupational therapy education program directors, for all subtests where there were differences, the director respondents rated themselves higher than did the faculty respondents (Dudek-Shriber, 1997). The literature on leadership has acknowledged the fact that many leaders have an inflated opinion of their own importance and competence. A possible explanation for these discrepancies in higher education may be due to the complexity of the department chair's responsibilities and conflicting priorities, which are often not clearly understood by faculty (Sieg, 1986). The potential for conflict exists between the program director and the faculty in those areas where there is lack of agreement about the leader's role behavior (Miller, 1982).

Is Transformational Leadership Related to Organizational Effectiveness?

The third hypothesis tested in this study was:

There will be a significant positive correlation between the transformational leadership behaviors of occupational therapy clinic administrators and education program directors in technical and professional level programs and perceived leadership effectiveness.

There was a significant positive correlation between the five transformational leadership behaviors and the three leadership effectiveness scales. All correlations were statistically significant. The positive relationship between transformational leadership behaviors and effectiveness has been strongly supported in the literature, including, but not limited to, studies of world leaders, clergy, business managers, naval officers, and financial executives (Seltzer & Bass, 1990; Bass, Avolio & Goodheim, 1987; Onnen, 1987; Waldman, Bass & Einstein, 1987; Hater & Bass, 1988; Yammarino & Bass, 1990; Howell & Avolio, 1989). Yusof (1998) found that transformational behaviors in athletic coaches resulted in the job satisfaction of their employees. Ash (1997) found that transformational leaders had the knowledge and skills to accomplish organizational objectives and solve problems. Research on leadership in health care has also supported the positive relationship between transformational behaviors and effectiveness (Arends, 1997; Opeil, 1998). Arends (1997) found that Intellectual Stimulation (IS) was correlated positively with Extra Effort (EE) and Satisfaction (S).

The education literature also supports the positive relationship between transformational leadership and effectiveness. In a study of K-12 school administrators, Stone (1992) found that transformational behaviors were related to long term development and change, produced higher levels of effort and satisfaction of teachers, and greater productivity and outcomes for the organization. Transformational school principals have teachers who are highly motivated (Ingram, 1989). In higher education, transformational behaviors were related to effectiveness in studies of university

administrators (King, 1990; Albritton, 1993) and in studies of community college leadership (Nischan, 1997; Archie, 1997). Idealized Influence-Attributed (IIA), Idealized Influence-Behavior (IIB) and Inspirational Motivation (IM) were related to the department chair's effectiveness, and Idealized Influence-Attributed (IIA), Inspirational Motivation (IM) and Individualized Consideration (IC) were related to faculty satisfaction and willingness to exert extra effort (Archie, 1997).

Leadership behaviors of occupational therapy clinic administrators and education program directors had not previously been studied using the MLQ. The findings in this study on the positive relationship between transformational behaviors and effectiveness are consistent with the research on leaders in other disciplines and contribute to the body of knowledge on transformational leadership.

An additional finding in this study that was not frequently addressed in the leadership literature was the significant negative correlation between three of the four transactional leadership behaviors and the three perceived effectiveness scales. Contingent Reward (CR) did not have a negative correlation with effectiveness. All other transactional leadership behaviors had a negative correlation with effectiveness, and except for the relationship between Management by Exception-Active (MEA) and Extra Effort, all correlations were statistically significant. A recent study of community college administrators reported a negative correlation between MEA and faculty satisfaction (Archie, 1997).

While transformational behaviors define the charismatic, enthusiastic leader who inspires others with a vision, encourages creativity, and gives personal attention to all individuals, transactional behaviors describe a leader who gives individuals a clear understanding of what is expected of them and "intervenes only if standards are not being met or if something goes wrong." While transactional behaviors relate to lower order managerial objectives and rewards for effort, with transformational leadership the

employee's reward is internal. In repeated investigations leaders have been shown to be both transactional and transformational (Avolio, Bass & Jung, 1995).

The finding that Contingent Reward (CR) did not have a negative correlation with effectiveness in the study of occupational therapy leaders was consistent with transformational leadership theory. When a factor analysis of relationships among all the scales on the MLQ was done, the transactional behavior, Contingent Reward, was highly correlated with the transformational behaviors (Avolio, Bass & Jung, 1995). The consistent honoring of transactional agreements builds trust, dependability, and perceptions of consistency with leaders by followers, which are a basis for transformational leadership. These findings have been supported in the literature on leaders in health care, where Contingent Reward was related to job satisfaction (Arends, 1997; Opeil, 1998). In the higher education literature, Archie (1997) also found that the transactional behavior, Contingent Reward, was related to the department chair's effectiveness, faculty satisfaction, and extra effort.

Is There a Relationship Between Demographic Characteristics of Leaders and Leadership Behaviors?

The fourth hypothesis tested in this study was:

There will be significant relationships between leadership styles of occupational therapy education program directors in professional and technical level programs and clinic administrators and their personal background characteristics, including: 1) gender, 2) ethnic/racial group, 3) age, 4) highest level of education, 5) years of professional experience in the profession, in academia, and in the leadership position, 6) previous position, 7) previous education/training for the leadership position, 8) number of employees supervised, and for education program directors, 9) academic rank, and 10) tenure status.

One of the major findings of this study was that demographic characteristics of leaders do not have a strong relationship to leader behaviors. No significant relationships were found between transformational leadership behaviors and the leader's gender or ethnicity. The age of the leader was significantly related to Inspirational Motivation (IM) but the relationship was not linear. One possible explanation for this finding may be that age is related to years of experience in the program director position. There was a significant relationship between the transformational behavior, Idealized Influence-Behavior (IIB) and years of experience in the position, and like the findings for age, the relationship was not linear. The transformational behavior, Intellectual Stimulation (IS) was significantly related to years of experience in academia, but once again, this relationship was not linear. Program directors with less than one year of experience in academia had significantly higher scores for the transactional behavior, Management by Exception-Active (MEA). These findings demonstrate the full range of leadership behaviors across the transactional-transformational continuum. Program directors new to the position may use both transactional and transformational behaviors in the early stages of the job. When they are first becoming acquainted with faculty, they may choose not to intervene, a behavior consistent with the organization's culture and support of academic freedom. The fluctuation in their transformational behaviors over time can be attributed to the directors' own scholarly endeavors. During the middle years, when transformational behaviors decreased, the program directors may have been very absorbed by promotion and tenure activities, leaving little time to inspire and motivate the faculty. It is likely that during their later years in academe, after they were tenured, these directors could once again be an idealized influence on faculty. Other studies of education administrators found that the length of time in the leadership position was positively related to transformational behaviors, however this was attributed to increased

building and staff size in elementary principals (Evans, 1996), and the increase in full time equivalent (FTE) enrollments for university presidents (Cowen, 1990).

In studies of occupational therapy clinic administrators, the years of experience as clinical department director related positively to staff job satisfaction, while the increase in the size of the department was inversely related to job satisfaction (Brollier, 1985a). No relationship was found between transformational behaviors and age or years of experience of community college administrators (Archie, 1997), although Ohman (1997) found that nurses with previous experience had high scores in transformational scales.

Several studies have supported the hypothesis that female leaders are more transformational than male leaders (Young, 1990; Padde, 1995; Daughtry & Finch, 1997; Maher, 1997). Although the finding was not supported in this study of occupational therapy leaders, there was a significant relationship between gender of the leader and the transactional behavior, Management by Exception-Passive (MEP), and Laissez-Faire (LF), with males scoring higher than females. No significant relationships were found between gender, age, and ethnicity of the occupational therapy leaders and their perceived organizational effectiveness, however, several studies in other fields have indicated that female leaders' self-ratings for effectiveness are higher than the self-ratings of males (Young, 1990; Daughtry & Finch, 1997; Maher, 1997). One possible explanation for the lack of statistical significance in the study of occupational therapy leaders is the high prevalence of females and whites in this profession.

No significant relationships were found between transformational behaviors or transactional behaviors and the occupational therapy clinic administrators' highest level of education, number of years in the profession, and number of years in the position.

Although no significant relationships were found between transformational and transactional behavior and highest level of education, this demographic characteristic was related to organizational effectiveness. There was a significant relationship between the

leader's highest level of education and the effectiveness scales, Extra Effort (EE) and Satisfaction (S). Clinic administrators with baccalaureate degrees and professional program directors with doctoral degrees had the highest scores for these effectiveness scales.

Does this finding contradict AOTA's 1999 decision to phase out baccalaureate professional education programs by the year 2007? The answer is no, because the purpose of entry level occupational therapy professional education is to provide students with the knowledge, skills and attitudes needed to practice and research occupational therapy. Entry-level occupational therapy education is not expected to focus on the development of transformational leadership behaviors. The mission of occupational therapy education has changed from a primary emphasis on teaching clinical skills to an expanded focus that includes more research and scholarship (Dudek-Shriber, 1997). These changes provided the rationale for moving entry-level education to a post-baccalaureate degree, and not the relationship between level of education and leadership skills. Any person with management responsibilities in an organization needs to have effective leadership skills, regardless of that person's level of education.

This study has demonstrated that the highest level of education does not necessarily contribute to an occupational therapists' leadership effectiveness. The data show that for professional education program directors, whose positions require graduate degrees, the doctoral degree holders are more effective leaders than those with master's degrees. The critical factor in this finding is the level needed for the position and for the organizational environment. In the academic culture it is important for education administrators to have earned the doctoral degree.

Is There a Relationship Between Leadership Behavior and Effectiveness and Characteristics of the Academic Institution or Organization?

The fifth hypothesis of this study was:

There will be significant correlations between leadership styles of occupational therapy education program directors and characteristics of their institution: 1) level of the program, 2) type of institution (four year or two year), 3) ownership/control of the institution (public or private), and 4) size of the institution (number of students).

No significant relationships were found between leadership behaviors of the education program directors and characteristics of their academic institutions. Other studies of leadership in higher education support this finding (Peterson, 1988). The demographic questionnaire for describing characteristics of the academic institutions did not examine differences in leadership styles and effectiveness in relation to the institution's mission or Carnegie classification. This presents an interesting question for future investigation.

The sixth hypothesis in this study was:

There will be significant correlations between leadership styles of occupational therapy clinic administrators and characteristics of their organization: 1) ownership/control (public or private), 2) for-profit or not-for-profit, and 3) size (number of employees).

No significant relationships were found between leadership behaviors of clinic administrators and characteristics of their organizations. Brollier (1985a) found an inverse relationship between size of the occupational therapy department and staff job satisfaction. As departments grew larger the directors were required to supervise more professional staff and may have had less time for the quality of supervision and management that often promotes job satisfaction of staff. This recent study of occupational therapy clinic administrators looked at size of the organization and not of the occupational therapy department.

Limitations

An understanding of the limitations of this study is necessary for accurately interpreting and using its findings and conclusions. One limitation was the use of a convenience sample. Each leader was responsible for the selection of subordinates to complete the rater forms. Completion of the leader forms and the rater forms was done on a voluntary basis. There were education program directors and clinic administrators who did not return the questionnaires, and those non-respondents may have had different perceptions than the respondents. Therefore no statements can be made about relationships among the variables for non-volunteers.

The sampling procedure used for the selection of clinic administrators may pose a threat to the validity of the findings. Questionnaires were sent to a random sample of members of AOTA's Administration and Management Special Interest Section (AMSIS). Members of the AMSIS may hold different beliefs about leadership and effectiveness than nonmembers.

Another limitation in the data collection and analysis using the MLQ is that effectiveness is measured by the leader's perception and not the rater's perception. Although the rater form includes questions on the faculty and staff perceptions of leader effectiveness, this data was used only in the comparison of differences between leader scores and rater scores. Leader effectiveness in this study is defined by the leader's perception of the three effectiveness scales and is not an empirical measure of effectiveness. Future studies might compare leadership behaviors with more objective outcomes of effectiveness.

Conclusions

This study investigated transformational and transactional leadership behaviors of occupational therapy education program directors and clinic administrators. The results of this research show that technical education program directors and clinic administrators

are more transformational than professional education program directors, that leaders typically rate themselves higher than subordinates, and that transformational leadership is related to effectiveness. Other significant findings identify relationships between leadership style and age, number of years of experience, and highest level of education of the leader. The differences in leadership styles of the three groups indicate the significance of the organizational culture and its influence on leadership behaviors. The findings on leadership effectiveness raise additional questions for investigation. The MLQ measures the leader's perception of effectiveness rather than empirical outcomes. Effectiveness is defined by the MLQ as the leader's perceptions of the subordinates' willingness to exert extra effort to succeed, the subordinates' ability to meet and surpass the department's goals, and the subordinates' feelings of contentment and pride in accomplishment. The MLQ did not measure the program directors' or clinic administrators' effectiveness as a professional, which is much more complex than their perceptions of the satisfaction of faculty and staff.

The finding on level of education and leadership effectiveness suggests that the highest level of education does not necessarily contribute to an occupational therapists' leadership effectiveness. Effectiveness is related to the level of education needed for the position and for the organizational environment. Program directors with doctorates in professional education programs had higher scores on effectiveness than those with master's degrees. The doctoral degree relates to the norms of the academy and solidifies the position of occupational therapy program directors in the academy.

It is important to remember that the transactional-transformational model of leadership is based on a continuum. In this continuum leaders may reward followers when they accomplish agreed-upon objectives as well as through motivation and inspiration of followers to work for transcendental goals where rewards are internal. While research has shown that transformational leadership is related to organizational

effectiveness, both approaches are needed. Leaders have been shown in repeated investigations to be both transactional and transformational and both styles can represent active, positive forms of leadership (Avolio, Bass & Jung, 1995). Transactional leadership behaviors are needed for effective department management, identifying performance standards, clarification of job expectations, and for management by exception when the organizational culture warrants this behavior in its leaders. Leaders in occupational therapy also need transformational behaviors to provide a vision and to motivate and inspire their followers during this era of environmental and professional change.

Implications

What are the implications of this study for occupational therapy practice and education? Because transformational leadership behaviors are related to worker satisfaction and organizational effectiveness, occupational therapy practitioners would benefit from understanding their own transformational and transactional styles and use this awareness as a rationale for career decisions and as a basis for personal growth. The awareness of one's leadership style can be used to identify the potential for success or failure in leadership positions in both clinic and academic settings. Transformational leadership theory and its relationship to organizational effectiveness can serve as a basis for continuing education and form a framework for course content in leadership development. Transformational leadership behaviors can be taught in departmental in-services and training seminars, and promoted through designing organizational cultures to accommodate transformational styles of leadership. Increasing transformational leadership within organizations where occupational therapists work may help in the recruitment of employees, clients, and students who are likely to be attracted to a department whose leader is charismatic, successful, optimistic, and dynamic.

Recommendations for Future Research and Education

Several questions that were raised in this study need to be addressed in future research. Among them are:

1. What are the differences in leadership behaviors of occupational therapy education program directors when the rater form on the MLQ is completed by their deans and students?
2. Is there a relationship between the demographic characteristics of the faculty raters and their ratings of the program director leaders? For example, does length of time in the position of the rater make a difference in his or her evaluation of the leader? Xu, (1993) found that raters in the position for less than one year rated leaders higher on effectiveness than those in the position 7 to 9 years.
3. Is there a relationship between the transformational and transactional behaviors of occupational therapy education program directors and clinic administrators and the actual job performance and job satisfaction of their subordinates? Job performance and satisfaction would be measured with instruments other than the MLQ. Another interesting question for investigation is the relationship between job satisfaction and job performance in occupational therapy faculty.
4. Is there a relationship between transformational and transactional leadership behaviors of occupational therapy education program directors and department effectiveness when effectiveness is evaluated by objective outcomes and not the leaders' perceptions of effectiveness?
5. Would training in transformational leadership make a difference in occupational therapy leaders ratings on the MLQ? Would other forms of leadership training make a difference?

6. Do transformational leaders in occupational therapy education and practice have faculty and staff who are transformational?

In order to increase our understanding of the transactional-transformational leadership continuum in occupational therapy, these questions, as well as others that arise, will need to be answered. As we gain an understanding of the transactional-transformational leadership continuum, and the factors that influence it, we can design education and training programs to develop these behaviors in our colleagues and students.

APPENDIX A

PERMISSION

Rhona Reiss Zukas
110 Willowbrook Drive
Duncanville, Texas 75116
(214) 780-7476

February 13, 1995

Dr. Bernard M. Bass
Binghamton University
P.O. Box 6015
Binghamton, New York 13902-6015

Dear Dr. Bass,

I am writing to request your permission to use the Multifactor Leadership Questionnaire (MLQ) as the data collection instrument for my doctoral dissertation. I am a graduate student at the University of North Texas in Denton, Texas, pursuing a Ph.D. in Higher Education Administration with a minor in Management. My major professor is Dr. Howard Smith (tel. 817-565-2952), with Dr. Dwane Kingery of the Department of Higher Education, and Drs. Lynn Johnson and Robert Insley of the College of Business, serving on my committee.

My undergraduate degree is in occupational therapy from the University of Pennsylvania (1966), and I hold a master's degree in occupational therapy from the University of Florida (1975). I have held faculty positions in occupational therapy educational programs since 1972, including the Fuchu Institute in Tokyo, Japan (1972-74), the University of Illinois at Chicago (1975-77), Northwestern University Medical School (Associate - 1977-85), and the Texas Woman's University (1986-94). During my tenure at Texas Woman's University, I served as Assistant Dean, and was responsible for teaching management courses to undergraduate and graduate students. My doctoral studies have enhanced my knowledge and understanding of leadership theories and I have already completed a paper comparing leadership styles of male and female university presidents using the LEAD Questionnaire (Hersey & Blanchard, 1974).

In the past few months I have been reading books, journal publications, and dissertation abstracts on the transformational theory of leadership. I am very interested in investigating the charismatic or transformational leadership qualities of academic administrators in institutions of higher education, where research of this nature has thus far been relatively sparse. I would like to send the MLQ to program directors and faculty of occupational therapy educational programs in the United States to identify the characteristics and behaviors of transformational and transactional leadership in this population. There are a total of eighty-six occupational therapy program directors, and with your permission to duplicate the MLQ, I would be able to afford to study the entire population. Because I am unemployed at present, without your permission to duplicate the MLQ, I would have to use a less costly instrument for my doctoral research.

This research would enable me to describe the perceived leadership profiles of occupational therapy program directors, and to determine the instrument's ability to predict perceived satisfaction of followers with leadership style, and followers' perceptions of leadership effectiveness. This study will also address whether the transformational leadership theory, developed for and used extensively in government and business, is applicable in higher education, given education's vastly differing organizational environment. Results of the study would provide validity data for the MLQ and could serve as a basis for leadership training of program directors in occupational therapy educational programs.

Upon completion of my study, I agree to share my data with you. I am looking forward to hearing from you soon and thank you for your consideration of this request.

Sincerely,

Rhona Reiss Zukas

CENTER FOR LEADERSHIP STUDIES

Name_____
(Rhona Reiss Zukas)
(Please sign and return to show agreement with this letter.)

February 15, 1995

Ms. Rhona Reiss Zukas
110 Willowbrook Drive
Duncanville, TX 75116

Dear Ms. Zukas:

This is in reply to your request to use the MLQ in your study.

Enclosed please find a copy of an experimental form 5X for self and raters and the scoring key. They should be reproduced only for your own research use.

You should use the instruments in their entirety. Also, please be sure to cite the title and authors on the lead page of our survey. You must also indicate the copyright at the bottom of each page e.g., © Bass & Avolio, 1991, if you are inserting the MLQ in a larger survey. If absolutely necessary to reduce, please eliminate entire scales rather than some items from some scales.

We will appreciate also receiving a copy of the results of your research effort. In addition, please provide us with the raw data on the MLQ on a 3 1/2" disk (see attached "suggested standard format" guidelines), so that we would be able to add it to our normative data base.

If you have the budget to do so, or are supported by a grant, we would appreciate your making a contribution to the Center for Leadership Studies of $2.00 U.S. for each of the copies of 5x you reproduce. You can do this by making a check payable to:

RESEARCH FOUNDATION ACCT # 240-1586A

Cordially,

Bernard M. Bass

BMB/sb
(mlq.for)
Enclosure: Form 5X and key

Center for Leadership Studies, Binghamton University, State University of New York
PO Box 6000, Binghamton, NY 13902-6000 Tel (607) 777-4181 Fax (607) 777-4188
Director: Tel (607) 777-3007/4028 E-mail: BG1584@bingvmb.cc.binghamton.edu

APPENDIX B

COVER LETTERS

April, 1996

10201 Grosvenor Place
Apt. 1602
Rockville, Maryland 20852

Dear OT Education Program Director,

I am a doctoral candidate at the University of North Texas College of Education, majoring in Higher Education Administration, with a minor in Management from the College of Business. The topic for my doctoral dissertation is A COMPARISON OF LEADERSHIP BEHAVIORS OF OCCUPATIONAL THERAPY EDUCATION PROGRAM DIRECTORS AND CLINIC ADMINISTRATORS.

The purpose of this letter is to request your participation in this study, unless your program has not yet been accredited, or if you are serving as interim or acting program director. The instruments to be completed include "The Multifactor Leadership Questionnaire (MLQ) Leader Form and the Demographic Questionnaire for Occupational Therapy Education Program Directors. If you supervise a minimum of two faculty (full time, part time, or adjunct), please complete these two instruments yourself and return them to me according to the instructions provided on the last page of this booklet. No postage is required.

Five copies of the Multifactor Leadership Questionnaire (MLQ) Rater Form are enclosed for distribution to your faculty. Faculty should return the questionnaires directly to me according to the instructions provided on the last page of their booklets.

The study is designed to compare leadership behaviors of occupational therapy education program directors and occupational therapy clinic administrators and to determine if there are relationships between leadership styles and demographic characteristics of the leader and the organization. This information will be useful for career counseling, for training in leadership development, and to contribute to the body of knowledge in leadership theory. This study will not single out an individual or a specific institution. The data derived will be handled as group data. Please be assured that the results will be presented in a composite form, and all data will be treated in absolute confidence.

Early response to this request and your support in facilitating completion of this project will be highly appreciated. Please return the questionnaires by May 3, 1996.
Thank you very much for your help.

Sincerely,

Rhona Reiss Zukas

Rhona Reiss Zukas, MOT, OTR, FAOTA
Doctoral Candidate

April, 1996

10201 Grosvenor Place
Apt. 1602
Rockville, Maryland 20852

Dear OTA Education Program Director,

I am a doctoral candidate at the University of North Texas College of Education, majoring in Higher Education Administration, with a minor in Management from the College of Business. The topic for my doctoral dissertation is A COMPARISON OF LEADERSHIP BEHAVIORS OF OCCUPATIONAL THERAPY EDUCATION PROGRAM DIRECTORS AND CLINIC ADMINISTRATORS.

The purpose of this letter is to request your participation in this study, unless your program has not yet been accredited, or if you are serving as interim or acting director. The instruments to be completed include "The Multifactor Leadership Questionnaire (MLQ) Leader Form and the Demographic Questionnaire for Occupational Therapy Education Program Directors. If you supervise a minimum of two faculty (full time, part time, or adjunct), please complete these two instruments yourself and return them to me according to the instructions provided on the last page of this booklet. No postage is required.

Five copies of the Multifactor Leadership Questionnaire (MLQ) Rater Form are enclosed for distribution to your faculty. Faculty should return the questionnaires directly to me according to the instructions provided on the last page of their booklets.

The study is designed to compare leadership behaviors of occupational therapy education program directors and occupational therapy clinic administrators and to determine if there are relationships between leadership styles and demographic characteristics of the leader and the organization. This information will be useful for career counseling, for training in leadership development, and to contribute to the body of knowledge in leadership theory. This study will not single out an individual or a specific institution. The data derived will be handled as group data. Please be assured that the results will be presented in a composite form, and all data will be treated in absolute confidence.

Early response to this request and your support in facilitating completion of this project will be highly appreciated. Please return the questionnaires by May 3, 1996.
Thank you very much for your help.

Sincerely,

Rhona Reiss Zukas

Rhona Reiss Zukas, MOT, OTR, **FAOTA**
Doctoral Candidate

University of Pittsburgh

School of Health and Rehabilitation Sciences
Department of Occupational Therapy

116 Pennsylvania Hall
Pittsburgh, Pennsylvania 15261
412-624-8860
Fax: 412-624-5019

April 1, 1996

Dear Program Director

I know from experience how many survey instruments you receive for completion, but I would like to urge you to complete the enclosed instrument **NOW** before it goes to the bottom of the pile. This study is very timely and important for our profession!

It will provide a comparative knowledge base of the leadership styles of academic program directors and clinical administrators in order to determine the relationship between leadership style and the organization. This base may provide the rationale for career counseling individuals with specific leadership potential to either academic or clinical administration. It may also provide the bases for training and course content in leadership development.

During this time when there is a need for leadership in both academic and clinical facilities, this study has the potential to assist occupational therapists to prepare for administrative positions which are most closely fitted to their style of leadership. In addition developing content to train leaders will be invaluable to the profession.

Again this is a timely study! I encourage you to complete it and return it by the deadline. Thank you.

Sincerely,

Caroline Robinson Brayley

Caroline Robinson Brayley, Ph.D., FAOTA, OTR/L
Associate Professor
Chair, Commission on Education, AOTA

Transforming the Present Discovering the Future

April, 1996

10201 Grosvenor Place
Apt. 1602
Rockville, Maryland 20852

Dear OT Clinic Administrator,

I am a doctoral candidate at the University of North Texas College of Education, majoring in Higher Education Administration, with a minor in Management from the College of Business. The topic for my doctoral dissertation is A COMPARISON OF LEADERSHIP BEHAVIORS OF OCCUPATIONAL THERAPY EDUCATION PROGRAM DIRECTORS AND CLINIC ADMINISTRATORS.

The purpose of this letter is to request your participation in this study, unless you are serving as interim or acting administrator. The instruments to be completed include "The Multifactor Leadership Questionnaire (MLQ) Leader Form and the Demographic Questionnaire for Occupational Therapy Clinic Administrators. If you supervise a minimum of two staff (OTR's, COTA's, other health professionals), please complete these two instruments yourself and return them to me according to the instructions provided on the last page of this booklet. No postage is required.

Five copies of the Multifactor Leadership Questionnaire (MLQ) Rater Form are enclosed for distribution to your staff. Staff should return the questionnaires directly to me according to the instructions provided on the last page of their booklets.

The study is designed to compare leadership behaviors of occupational therapy education program directors and occupational therapy clinic administrators and to determine if there are relationships between leadership styles and demographic characteristics of the leader and the organization. This information will be useful for career counseling, for training in leadership development, and to contribute to the body of knowledge in leadership theory. This study will not single out an individual or a specific institution. The data derived will be handled as group data. Please be assured that the results will be presented in a composite form, and all data will be treated in absolute confidence.

Early response to this request and your support in facilitating completion of this project will be highly appreciated. Please return the questionnaires by May 3, 1996.
Thank you very much for your help.

Sincerely,

Rhona Reiss Zukas, MOT, OTR, FAOTA
Doctoral Candidate

413 Lilly Road Northeast
Olympia, Washington
98506 5166

Tel 360 491 9480
Fax 360 493 7924

Occupational/Speech Therapy
April 1, 1996

Dear Colleague/Fellow Member of the Admin. & Mgmt. SIS:

Please take the time to fill out and return this survey as it will yield important information on leadership styles to help members with career guidance and direction including a fcous on leadership training options. We need to have a stake in training the Occupational Therapy leaders of the future.

Sincerely,

Gayle Green Smith

Gayle Green Smith MEd. OTR/L
Supervisor, Occupational and Speech Therapy
Outpatient Staff Support
Chairperson, Admin. & Mgmt. SIS, AOTA

April, 1996

10201 Grosvenor Place
Apt. 1602
Rockville, Maryland 20852

Dear Faculty Member,

Thank you for taking part in my doctoral research on leadership behaviors of occupational therapy education program directors and clinic administrators.

Please complete the Multifactor Leadership Questionnaire (MLQ) to describe your OT program director and return it to me according to the instructions provided on the last page of this booklet. No postage is required.

This study will not single out an individual or a specific institution. The data derived will be handled as group data. The results will be presented in a composite form and all data will be treated in absolute confidence.

Please return the questionnaire by May 3, 1996. Your support of the project is greatly appreciated.

Sincerely,

Rhona Reiss Zukas

Rhona Reiss Zukas, MOT, OTR, FAOTA
Doctoral Candidate

April, 1996

10201 Grosvenor Place
Apt. 1602
Rockville, Maryland 20852

Dear Colleague,

Thank you for taking part in my doctoral research on leadership behaviors of occupational therapy education program directors and clinic administrators.

Please complete the Multifactor Leadership Questionnaire (MLQ) to describe your OT clinic administrator and return it to me according to the instructions provided on the last page of this booklet. No postage is required.

This study will not single out an individual or a specific institution. The data derived will be handled as group data. The results will be presented in a composite form and all data will be treated in absolute confidence.

Please return the questionnaire by May 3, 1996. Your support of the project is greatly appreciated.

Sincerely,

Rhona Reiss Zukas

Rhona Reiss Zukas, MOT, OTR, FAOTA
Doctoral Candidate

APPENDIX C

LEADER FORM QUESTIONNAIRE

MLQ Multifactor Leadership Questionnaire
Leader Form (5x-Short)

My Name: OT Program Director Date:

Organization ID #: _____ Leader ID #: _____

This questionnaire is to describe your leadership style as you perceive it. Please answer all items on this answer sheet. **If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.**

Forty-five descriptive statements are listed on the following pages. Judge how frequently each statement fits you. The word "others" may mean your peers, clients, direct reports, supervisors, and/or all of these individuals.

Use the following rating scale:

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

1.	provide others with assistance in exchange for their efforts	0	1	2	3	4
2.	re-examine critical assumptions to question whether they are appropriate	0	1	2	3	4
3.	fail to interfere until problems become serious	0	1	2	3	4
4.	focus attention on irregularities, mistakes, exceptions, and deviations from standards	0	1	2	3	4
5.	avoid getting involved when important issues arise	0	1	2	3	4
6.	talk about my most important values and beliefs	0	1	2	3	4
7.	am absent when needed	0	1	2	3	4
8.	seek differing perspectives when solving problems	0	1	2	3	4
9.	talk optimistically about the future	0	1	2	3	4
10.	instill pride in others for being associated with me	0	1	2	3	4
11.	discuss in specific terms who is responsible for achieving performance targets	0	1	2	3	4
12.	wait for things to go wrong before taking action	0	1	2	3	4
13.	talk enthusiastically about what needs to be accomplished	0	1	2	3	4
14.	specify the importance of having a strong sense of purpose	0	1	2	3	4
15.	spend time teaching and coaching	0	1	2	3	4

Continued =>

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

16.	I make clear what one can expect to receive when performance goals are achieved	0	1	2	3	4
	I show that I am a firm believer in "If it ain't broke, don't fix it."	0	1	2	3	4
18.	I go beyond self-interest for the good of the group	0	1	2	3	4
19.	I treat others as individuals rather than just as a member of a group	0	1	2	3	4
20.	I demonstrate that problems must become chronic before I take action	0	1	2	3	4
21.	I act in ways that build others' respect for me	0	1	2	3	4
22.	I concentrate my full attention on dealing with mistakes, complaints, and failures	0	1	2	3	4
23.	I consider the moral and ethical consequences of decisions	0	1	2	3	4
24.	I keep track of all mistakes	0	1	2	3	4
25.	I display a sense of power and confidence	0	1	2	3	4
26.	I articulate a compelling vision of the future	0	1	2	3	4
27.	I direct my attention toward failures to meet standards	0	1	2	3	4
28.	I avoid making decisions	0	1	2	3	4
29.	I consider an individual as having different needs, abilities, and aspirations from others	0	1	2	3	4
30.	I get others to look at problems from many different angles	0	1	2	3	4
31.	I help others to develop their strengths	0	1	2	3	4
32.	I suggest new ways of looking at how to complete assignments	0	1	2	3	4
33.	I delay responding to urgent questions	0	1	2	3	4
34.	I emphasize the importance of having a collective sense of mission	0	1	2	3	4
35.	I express satisfaction when others meet expectations	0	1	2	3	4
36.	I express confidence that goals will be achieved	0	1	2	3	4
37.	I am effective in meeting others' job-related needs	0	1	2	3	
38.	I use methods of leadership that are satisfying	0	1	2	3	4
39.	I get others to do more than they expected to do	0	1	2	3	4
40.	I am effective in representing others to higher authority	0	1	2	3	4
41.	I work with others in a satisfactory way	0	1	2	3	4
42.	I heighten others' desire to succeed	0	1	2	3	4
43.	I am effective in meeting organizational requirements	0	1	2	3	4
44.	I increase others' willingness to try harder	0	1	2	3	4
45.	I lead a group that is effective	0	1	2	3	4

APPENDIX D

RATER FORM QUESTIONNAIRE

MLQ Multifactor Leadership Questionnaire Rater Form (5x-Short)

Name of Leader: OT Program Director Date:

Organization ID #: _____ Leader ID #: _____

This questionnaire is to describe the leadership style of the above-mentioned individual as you perceive it. Please answer all items on this answer sheet. **If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.** Please answer this questionnaire anonymously.

IMPORTANT (necessary for processing): Which best describes you?

___ I am at a higher organizational level than the person I am rating.
___ The person I am rating is at my organizational level.
___ I am at a lower organizational level than the person I am rating.
___ I do not wish my organizational level to be known.

Forty-five descriptive statements are listed on the following pages. Judge how frequently each statement fits the person you are describing. Use the following rating scale:

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

THE PERSON I AM RATING.

	Provides me with assistance in exchange for my efforts	0	1	2	3	4
2.	Re-examines critical assumptions to question whether they are appropriate	0	1	2	3	4
3.	Fails to interfere until problems become serious	0	1	2	3	4
4.	Focuses attention on irregularities, mistakes, exceptions, and deviations from standards	0	1	2	3	4
5.	Avoids getting involved when important issues arise	0	1	2	3	4
6.	Talks about their most important values and beliefs	0	1	2	3	4
7.	Is absent when needed	0	1	2	3	4
8.	Seeks differing perspectives when solving problems	0	1	2	3	4
9.	Talks optimistically about the future	0	1	2	3	4
10.	Instills pride in me for being associated with him/her	0	1	2	3	4
	Discusses in specific terms who is responsible for achieving performance targets	0	1	2	3	4
12.	Waits for things to go wrong before taking action	0	1	2	3	4
13.	Talks enthusiastically about what needs to be accomplished	0	1	2	3	4
14.	Specifies the importance of having a strong sense of purpose	0	1	2	3	4
15.	Spends time teaching and coaching	0	1	2	3	4

Continued =>
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Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

16.	Makes clear what one can expect to receive when performance goals are achieved	0	1	2	3	4
17.	Shows that he/she is a firm believer in "If it ain't broke, don't fix it."	0	1	2	3	4
18.	Goes beyond self-interest for the good of the group	0	1	2	3	4
19.	Treats me as an individual rather than just as a member of a group	0	1	2	3	4
20.	Demonstrates that problems must become chronic before taking action	0	1	2	3	4
21.	Acts in ways that builds my respect	0	1	2	3	4
22.	Concentrates his/her full attention on dealing with mistakes, complaints, and failures	0	1	2	3	4
23.	Considers the moral and ethical consequences of decisions	0	1	2	3	4
24.	Keeps track of all mistakes	0	1	2	3	4
25.	Displays a sense of power and confidence	0	1	2	3	4
26.	Articulates a compelling vision of the future	0	1	2	3	4
27.	Directs my attention toward failures to meet standards	0	1	2	3	4
28.	Avoids making decisions	0	1	2	3	4
29.	Considers me as having different needs, abilities, and aspirations from others	0	1	2	3	4
30.	Gets me to look at problems from many different angles	0	1	2	3	4
31.	Helps me to develop my strengths	0	1	2	3	4
32.	Suggests new ways of looking at how to complete assignments	0	1	2	3	4
33.	Delays responding to urgent questions	0	1	2	3	4
34.	Emphasizes the importance of having a collective sense of mission	0	1	2	3	4
35.	Expresses satisfaction when I meet expectations	0	1	2	3	4
36.	Expresses confidence that goals will be achieved	0	1	2	3	4
37.	Is effective in meeting my job-related needs	0	1	2	3	4
38.	Uses methods of leadership that are satisfying	0	1	2	3	4
39.	Gets me to do more than I expected to do	0	1	2	3	4
40.	Is effective in representing me to higher authority	0	1	2	3	4
41.	Works with me in a satisfactory way	0	1	2	3	4
42.	Heightens my desire to succeed	0	1	2	3	4
43.	Is effective in meeting organizational requirements	0	1	2	3	4
44.	Increases my willingness to try harder	0	1	2	3	4
45.	Leads a group that is effective	0	1	2	3	4

APPENDIX E

DEMOGRAPHIC QUESTIONNAIRE

EDUCATION PROGRAM DIRECTORS

DEMOGRAPHIC QUESTIONNAIRE FOR OCCUPATIONAL THERAPY EDUCATION PROGRAM DIRECTORS

I. Profile of the Program Director

1. What is your gender?

   1. Female 2.____Male

2. What is your age?

1.___20-30 2.___31-40 3.___41-50 4.___51-60 5.___61-70 6.___70+

3. Which best describes your ethnic/racial group? (check one only)

   1. African American
   2. Asian/Pacific Islander
   3. Hispanic/Latino
   4. Native American
   5. White
   6. Mixed Heritage
   7. Other (specify)_____

4. What is your highest level of education in any field?

   1 Baccalaureate degree 2. Masters degree 3. Doctoral degree

5. How many years of experience do you have in OT?
   (If less than one, enter zero)____

   1.____1-5 years 2.___6-10 years 3 11 Years+

6. How many years of experience do you have in academia?
   (If less than one, enter zero) ____

   1-5 years 2.____6-10 years 3. 11 years+

7. How many years of experience do you have in the program directors position?
   (If less than one, enter zero)____

   1.___1-5 years 2. 6-10 years 3 11 years+

8. How many years of experience do you have as a clinic administrator? (If none or less than one,enter zero)_____

1. 1-5 years 2. 6-10 years 3._____11 years+

9. What position did you hold immediately before becoming program director? (check one only)

1. Acting program director

2. _Assistant to the program director (e.g. graduate coordinator, curriculum director)

3. Academic fieldwork coordinator

4. Full time faculty 5. Part time faculty 6. Adjunct Faculty

7._____Clinic administrator 8._____Clinic practitioner

9. Other (specify)_____

10. What is the total number of employees you currently supervise? (Include full and part time faculty, adjunct faculty, and support staff)

1._ 1-5 2._____6-10 3._____11-15 4._____15+

11. Have you had any previous education/training in academic administration?

1.___yes 2. no

If yes, check all that apply:

1.___in-service training 2. continuing education workshops

3. college courses for credit 4. advanced degree

5._ Other (specify) _____

12. What is your academic rank?

1.___Lecturer 2.___Instructor 3. Assistant Professor

4.___Associate Professor 5.___Full Professor 6.___No Rank

13. Do you have tenure?

1.___Yes, I have tenure 2. No, I am not in a tenure track position

3. No, I have not yet attained tenure status

4. No, tenure is not applicable at my institution

14. Is the program director's position assigned on a rotating basis?

1 Yes 2.____No

15. In your present position as education program director, do you also have responsibility for administration of an OT clinic and supervision of clinical staff?

Yes 2. No

Comments:

II. Profile of the Institution

. Which best describes your institution? (Check only one)

Four year institution (university, college)

2. Two year institution (community college)

2. What is the level of your occupational therapy program? (Check all that apply)

1. Technical (OTA) 2. Professional (BS, BA, Entry level masters)

3. Post professional masters 4. Doctorate

3. Which describes the control/ownership of your institution?

1.___Public 2.___Private

4. How many students are enrolled at your institution?

1 (below 10,000) 2.____(10,000 - 20,000)

3.____(more than 20,000)

APPENDIX F

DEMOGRAPHIC QUESTIONNAIRE

CLINIC ADMINISTRATORS

DEMOGRAPHIC QUESTIONNAIRE FOR OCCUPATIONAL THERAPY CLINIC ADMINISTRATORS

I. Profile of the Clinic Administrator

1. What is your gender?

   1. Female 2. Male

2. What is your age?

   1. 20-30 2. 31-40 3. 41-50 4. 51-60 5. 61-70 6. 71+

3. Which best describes your ethnic/racial group? (check one only)

   1. African American 4. Native American
   2. Asian/Pacific Islander 5. White
   3. Hispanic/Latino 6. Mixed Heritage
   7. Other (specify)_____

4. What is your highest level of education in any field?

   1. Associate degree 2. Baccalaureate degree
   3. Masters degree 4. Doctoral degree

5. How many years of experience do you have in OT? (If none, enter zero)

   1. 1-5 years 2. 6-10 years 3. 11 years+

6. How many years of experience do you have in a clinic administrator position? (If none, enter zero) ____

   1-5 years 2. 6-10 years 3. 11 years+

7. How many years of experience do you have in an academic position? (If none, enter zero) ____

   1-5 years 2. 6-10 years 3. 11 years+

8. How many years of experience do you have as an education program director? (If none, enter zero)____

1.___1-5 years 2. 6-10 years 3. 1 years+

9. What position did you hold immediately before becoming a clinic administrator? (check one only)

1. Acting director 4. Academic program director
2. Assistant director 5. Academic faculty
3. Staff therapist 6._____Other (specify)_____

10. What is the total number of employees you currently supervise? Include OTR's, COTA's, other health professionals, and support staff. (If none, enter zero)____

1. ___1-5 2.___6-10 3. 11-15 4. 15+

11. Have you had any previous education/training in clinic administration?

1._____yes 2. no

If yes, check all that apply:

1. in-service training 2. continuing education workshops
3. college courses for credit 4. advanced degree
5._____other (specify)_____

II. Profile of the Institution

1. Which best describes the control/ownership of your institution?

1. Public 2. Private, for profit 3. Private, not-for-profit

2. How many people work in your institution?

1. (fewer than 20) 2. (20 to 50) 3. (more than 50)

APPENDIX G

MLQ TECHNICAL REPORT

1995

MIND GARDEN
Palo Alto, Calif

MLQ Multifactor Leadership Questionnaire

Technical Report

Bruce J. Avolio

Bernard M. Bass

Dong I. Jung

Center for Leadership Studies

Binghamton University

Distributed by MIND GARDEN
P.O. Box 60669 Palo Alto California 94306 (415) 424-8493

Abstract

Over 2,000 respondents (in nine samples ranging in size from 66 to 475) completed the Multifactor Leadership Questionnaire (Form 5X) to describe a leader they knew well enough to evaluate. This experimental form was made available for survey research among US and foreign subjects describing managers, nurses, and other professionals. The divergent and convergent validity of five transformational, four transactional and one non-leadership factor, which constitute what Avolio and Bass (1991) call the full range of leadership development, were examined with generally positive results. Normative tables are also provided in this report.

Table of Contents

I. Introduction

Over the last 15 years, there has been considerable interest in testing a new paradigm of transformational and transactional leadership, (Bass & Avolio, 1994; Bass & Avolio, 1993). In the last five years alone, there have been close to 100 theses and doctoral dissertations on the subject that go beyond consideration and initiation of structure, task and relations orientation, and path-goal theory. Previous leadership models fell short in explaining the "full range" of leadership styles, which includes the charismatic and inspirational leaders through to avoidant laissez-faire leaders (Avolio & Bass, 1988; Bass & Avolio, 1990).

Although attention has shifted in the leadership literature to charisma and inspirational leadership, the need still remains to include the "full range" of leadership styles in models and measures (Bass & Avolio, 1994). Consequently, the purpose of the current study, was to examine the construct validity of a broader and/or fuller range of leadership styles using the most commonly employed measure of transformational and transactional leadership — the ***Multifactor Leadership Questionnaire*** in its most recent experimental version (Form 5X).

Since a new genre of leadership theory was introduced by Burns (1978) and expanded by Bass (1985), many conceptual and empirical studies have now confirmed that transformational as compared with transactional leadership has greater impact on associates' motivation, self-efficacy and individual, group and organizational performance (Avolio & Bass, 1995; Bass & Avolio, 1993). In terms of performance, three recent meta-analyses of the military and broader organizational psychology literature have confirmed that the relationships between transformational leadership and rated and objectively measured performance were stronger and more positive than the transactional styles of leadership and the less active non-transactional style of laissez-faire leadership (Gaspar, 1992; Patterson, Fuller, Kester & Stringer, 1995; Lowe, Kroeck & Sivasubramaniam, in press). Lowe, Kroeck, et al., who included in their meta-analysis over thirty independent empirical studies using the ***Multifactor Leadership Questionnaire*** (**MLQ**), concluded that there were strong positive correlations between all components of transformational leadership, and both objective and subjective measures of performance. Transactional contingent reward leadership was less positively correlated with performance and management-by-exception was negatively correlated with measures of performance.

Focusing on military compared to civilian samples, Gaspar (1992) reported that the MLQ transformational leadership scales were more strongly and positively correlated with measures of performance in the military. Gaspar's results were confirmed by a more recent meta-analysis of the MLQ by Patterson, Fuller, Kester & Stringer (1995), which also showed stronger positive relationships between transformational leadership and performance in both military and non-military settings, as compared to transactional contingent reward leadership and more passive and corrective styles of leadership i.e., management-by-exception.

The hierarchical ordering of leadership constructs with respect to their relationship with performance reported by Bass (1985) and further developed by Avolio and Bass (1991) has been confirmed in each of the meta-analyses discussed above. Specifically, Avolio and Bass

(1991) proposed that transformational leadership would be most highly correlated with effectiveness followed by transactional and nontransactional styles of leadership. Results confirming the proposed hierarchy are summarized in Figures 1a and 1b below, and are based on the findings reported by Lowe, Kroeck, et al. (in press).

Ia. Augmentation Effects

The augmenting effects of transformational leadership proposed by Bass (1985) have also been confirmed across several independent studies (Hater & Bass, 1988; Howell & Avolio, 1993; Yammarino, Spangler, & Bass, 1993). Bass (1985) argued that transformational leadership raises individual needs and desires to achieve more, to work harder and to strive for the highest levels of performance. The "augmentation effect" was conceptualized by Bass (1985) as a challenge to Burns' (1978) original assumption that transformational and transactional leadership were at opposite ends of the same continuum, i.e., you were either one *or* the other. In contrast to Burns' original assumption, several studies have confirmed the augmentation effect reporting that transformational leaders motivate followers to perform beyond their own expectations based on the leaders' Idealized Influence (II) or Charisma, Inspirational Motivation (IM), Intellectual Stimulation (IS), and Individualized Consideration (IC) [See Bass & Avolio (1994) for detailed descriptions of each of these components, as well as a complete list of the constructs below].[1] These transformational leadership styles build on the transactional base in contributing to the extra effort and performance of followers.

The initial conceptualization of the transactional and transformational leadership model presented by Bass (1985) included six leadership factors (Charisma, Inspirational, Intellectual Stimulation, Individualized Consideration, Contingent Reward, Management-by-Exception, and Laissez-Faire). A five factor structure combining Charisma and Inspirational leadership was recently confirmed by Bycio, Hackett and Allen (1995) for the earliest version of the Multifactor Leadership Questionnaire (MLQ Form 1) used by Bass (1985). However, Bycio et al. (1995) do note some reservations regarding their findings indicating that,

> "although the overall confirmatory factor analysis fit indices tended to support the existence of five leadership components the transformational factors were highly correlated, and more important, they generally did not have strong differential relationships with the outcome variables (p.474)."

However, much revision in the MLQ has occurred since 1985. Since the original 6-factor model was proposed by Bass (1985), several additional factors have been uncovered through subsequent research using revised versions of the MLQ (Bass & Avolio, 1993, 1994). One of these factors provides for attributions regarding the leader's transformational style, and is

[1]The following abbreviations will be used to represent the leadership constructs.
II(A) Idealized Influence (Attributed). IIB: Idealized Influence (Behavior). IM: Inspirational Motivation.
IS: Intellectual Stimulation. IC: Individualized Consideration. CR: Contingent Rewards.
MBEA: Management-By-Exception-Active. MBEP: Management-By-Exception-Passive.
LF: Laissez-Faire.

based on distinguishing between charismatic behaviors and attributions. Management-by-Exception is divided into Management-by-Exception—Active (MBEA) and Management-by-Exception—Passive (MBEP). Thus, nine factor scores were obtained for MLQ Form 5X and the analyses for this report. Six had been used previously in MLQ Form 5R and three were newly created.

Refinements to these leadership factors do not negate the theoretical relevance nor significance of the original 6 factor model. Rather, they represent an attempt to define more precisely the constructs associated with leadership style and behaviors that constitute what Avolio and Bass (1991) have labeled a "full range" of leadership styles and behavior. This "full range" includes leadership styles which are highly transformational at one end to those which are highly avoidant at the other end. Still another possible factor, not considered further in this report, could be created by splitting CR into Contingent Reward Recognition and Exchange.

Ib. Prior Concerns Regarding the MLQ (Form 5R)

The Multifactor Leadership Questionnaire (MLQ, Form 5R), the primary survey instrument that has been used over the last ten years to measure transformational, transactional and non-transactional/laissez-faire leadership has been criticized by several authors for its lack of discriminant validity among the factors comprising the survey, for including behavioral and impact items in the same survey scales and because the factor structure initially proposed by Bass (1985) has not always been replicated in subsequent empirical research (Hunt, 1991; Smith & Peterson, 1988; Yukl, 1994). Bass and Avolio (1993), following their review of prior empirical studies completed on the MLQ, concluded,

> "that the original factor structure presented by Bass (1985) does still represent conceptually and in many instances empirically, the factors of transformational, transactional and laissez-faire leadership. But already we see that the structure is more complex than originally proposed. Further refinements are in the offing (p.61)."

The current study addresses some of the refinements to the MLQ, while also addressing some of the concerns raised by Hunt (1991), Yukl (1994) and Smith and Peterson (1988) regarding the psychometric problems with earlier versions of the MLQ. In addition, we attempt here to validate a broader or "fuller range" of leadership styles than the original 6-factor model.

Ic. Examining the Construct Validity of MLQ 5X

The latest version of the MLQ, Form 5X, has been used in nearly 200 research programs, doctoral dissertations and masters theses around the globe over the last four years. This current version of the MLQ has also been translated into Spanish, French, German, Hebrew, Arabic, Chinese, and Korean for use in various research projects.

The MLQ 5X was primarily developed to address substantive criticisms of the MLQ 5R survey. (See Bass & Avolio, 1993 for a discussion of these criticisms and rebuttals). Again, the

criticisms concerned the generally high correlations among the transformational scales, as well as between the transformational leadership scales and contingent reward; the mixing of behaviors, impact and outcomes within a single leadership scale, such as charisma, and distinguishing between charismatic leadership that was behaviorally-based [referred to as idealized influence (behaviors) in this report], versus an attribution or impact on followers referred to as idealized influence (attributed) in this report, or elsewhere as "attributed charisma". (Conger & Kanungo, 1987; House, Spangler, & Woyke, 1991).

This report describes the development of a revised version of the MLQ, Form 5X, and summarizes tests of its convergent and discriminant validity, utilizing several different methods for confirming the construct validity of the instrument.

Confirmatory Factor Analysis This approach was used in the current study for two reasons. First, there are now over ten years' worth of published research on the MLQ, which includes the original survey reported in Bass (1985), as well as the published MLQ 5R version by Bass and Avolio (1990). (Everywhere in this report we are referring to results based on colleagues and/or followers using the rater (R) version of Form 5 (5R) and Form 5X[2], not the self rating (S) forms of 5 and 5X). This extensive body of research provides an adequate conceptual basis for proposing a factor structure to be tested with data collected using the MLQ 5X. A second reason for using confirmatory analyses is that it provides a more rigorous test of the underlying factor structure of the MLQ 5X than traditional exploratory factor analysis (Bollen, 1989; Long, 1983a & 1983b). More specifically, the confirmatory analysis tests convergent and discriminant validities by incorporating structural relations among latent variables to determine whether the data confirm the theoretical model (Joreskog & Sorbom, 1989).

The samples used in this confirmatory analysis have been collected by a number of independent researchers, mainly in the United States (see Table 1). Most data sets were collected for doctoral dissertation purposes and the sources of data sets range widely from a U.S. government research organization to a not-for-profit hospital organization. Since the types of organizations were quite broad, we have also examined the generalizability and cross-sample validity of the MLQ 5X in this report on a sample-by-sample basis.

To summarize, this report provides a summary of approximately ten percent of the data which has been collected thus far using the MLQ 5X. A second report of research on the MLQ 5X will present a cross-validation of the results reported here, with a larger and more comprehensive sample of organizations.

[2]MLQ 5X was an experimental version of Form 5 introduced in 1991 originally for research purposes and is now available as MLQ 5X (Short Form) and MLQ 5X (Long Form).

Table 1: Samples Used in the Study

Author	Title	Institution	Sample	Country
Sample 1: Ben Ting-Pang Huang (N=254)	Relationships Among the Values of Collectivism & Individualism and the Transformational and Transactional Leadership Factors	Illinois Institute of Technology	Americans & Taiwanese students	US & Taiwan
Sample 2: Karen Maher (N=162)	Explore the Relationship of Affect (Liking Toward the Supervisor) to Transformational and Transactional Leadership Ratings	University of Missouri - St. Louis	UM - St. Louis evening undergraduate students	US
Sample 3: Margaret Colyar (N=45)	Leadership Behaviors, Timing, Type, and Faculty Acceptance of changes made by Nurse Education Executives in the First 24 Months of a Deanship	University of Alabama, School of Nursing	Dean of a Nursing School, been in position, 2-5 years; and 4-10 of his/her faculty	US
Sample 4: Tom Kessler (N=66)	The Relationship Between Transformational, Transactional, and Laissez-faire Leadership Behaviors and Job Satisfaction in a Research Environment	Nova University	US Government research organization	US
Sample 5: Linda Anthony (N=457)	The Relationship of Transformational and Transactional Leadership to Organizational Culture, Employee Job Performance, Employee Satisfaction, and Attrition	University of Miami	Subordinates of Executives, Middle-Managers, First-Level Supervisors Sample Size: 305 Participants	US
Sample 6: Mary Uhl-Bien (N=320)	Analyze Employee Perceptions of the Current Organizational Environment (e.g., culture, leadership, teamwork, job design, etc.) as it Pertains to Quality Improvement	University of Alaska Anchorage	500 Employees and Managers	US
Sample 7: Mark Kilker (N=475)	Correlates of Transformational and Transactional Leadership Styles: An Empirical Investigation of Rogers' Principle of Integrality	Teachers College, Columbia University	National Sample 400 Nurse Educators	US
Sample 8: Thomas Lokar (N=202)	Empowerment as a Leadership Tool and Process that has the Potential to Significantly Change Employees' Psychological Experience of Work and Their Subsequent Work Behaviors	Kansas State University	10 Platoons of 20-30 members each	US
Sample 9: David Carnegie (N=99)	Leadership in the Offshore Oil Industry	Robert Gordon University, Aberdeen, Scotland	Offshore Supervisor in the North Sea Oil and Gas Industry	Scotland

II. Method For Item Development

MLQ 5X items were pooled from several sources. First, we completed a series of factor analyses with the MLQ 5R, which provided a base for selecting items that exhibited the best convergent and discriminant validities. Second, we made use of Howell and Avolio (1993)'s preliminary results with an earlier version of MLQ 5X (MLQ Form 10), using Partial Least Squares (PLS) analysis (see Fornell & Larcker, 1981), to select items for inclusion in MLQ 5X. Third, we developed some new items for MLQ 5X from recent literature distinguishing charismatic from transformational leadership. Fourth, six scholars in the field of leadership received an earlier version of the MLQ 5X (MLQ Form 10) and made recommendations for modifying and/or eliminating items based on the conceptual model of the full range of leadership development (Avolio & Bass, 1991). They judged also whether items were about behavior or impact, guided by the "full range" of leadership behaviors and styles. These recommendations were included in the final development phase of the MLQ 5X.

The MLQ 5X survey tested in the current study is composed of behavioral items for all of the leadership scales, except Idealized Influence (formerly called Charisma). Since Idealized Influence can be viewed as both a *behavior* and an *impact* in the eye of the beholder linked to the relationship of the leader and follower, a fifth transformational scale was included in the revised survey to capture these nonbehavioral and/or impact items. Also, items continued to be included dealing with outcomes on followers of extra effort, leader effectiveness and satisfaction with the leader.

IIa. Some Preliminary Statistics on MLQ 5X

Descriptive statistics and reliabilities for MLQ 5X are shown in Table 2 for all items in each scale. These scale scores are based on ratings by others evaluating a target leader. No self-ratings are included. Reliabilities for the total items and for each leadership factor scale ranged from **.74** to **.94**. All of the scales' reliabilities were generally high, exceeding standard cut-offs for internal consistency recommended in the literature. Table 2 also presents the reliabilities for each leadership factor broken down for each individual sample. Since some of data sets did not include all MLQ 5X scales, reliabilities for some of the scales were not available. The reliabilities *within* each data set generally indicated that the MLQ 5X was reliably measuring each of the leadership factors across the nine data sets included in this report, with some minor deviations.

Table 2
Descriptive Statistics and Reliability Scores for MLQ 5X

Scale	Total Sample (N=2080)			Sample 1			Sample 2		
	Mean	SD	Reli-ability	M	SD	R	M	SD	R
II(A)	2.56	.84	.86	2.88	.49	.54	2.19	.92	.87
II(B)	2.64	.85	.87	2.89	.49	.69	2.03	.86	.89
IM	2.64	.87	.91	3.00	.47	.68	2.22	.90	.91
IS	2.51	.86	.90	2.88	.49	.70	1.85	.85	.89
IC	2.66	.93	.90	3.07	.50	.66	2.05	.97	.91
CR	2.20	.89	.87	2.63	.63	.87	1.85	.91	.89
MBEA	1.75	.77	.74	2.02	.60	.55	1.67	.71	.70
MBEP	1.11	.82	.82	1.12	.66	.66	1.63	.92	.84
LF	.89	.74	.83	-	-	-	1.23	.84	.85
EE	2.60	1.16	.91	-	-	-	1.81	1.28	.91
EFF	2.62	.72	.91	-	-	-	2.39	.88	.88
SAT	2.57	1.28	.94	-	-	-	2.18	1.34	.90

Scale	Sample 3			Sample 4			Sample 5			Sample 6		
	M	SD	R	M	SD	R	M	SD	R	M	SD	R
II(A)	3.14	.51	.81	2.42	.81	.82	2.28	.84	.90	2.22	.94	.90
II(B)	3.48	.40	.76	2.03	.85	.88	2.56	.85	.89	2.05	.88	.89
IM	3.49	.38	.79	2.31	.77	.86	2.27	.87	.93	2.16	.91	.92
IS	3.36	.43	.81	2.42	.90	.92	2.28	.86	.88	1.94	.90	.92
IC	3.28	.52	.83	2.17	.89	.90	2.35	.93	.91	2.09	.91	.91
CR	2.63	.55	.61	2.08	.93	.89	1.83	.89	.85	1.68	.89	.88
MBEA	1.08	.56	.71	1.72	.82	.78	2.00	.77	.73	1.48	.83	.80
MBEP	.71	.41	.52	1.04	.80	.84	1.09	.82	.85	1.22	.94	.89
LF	.60	.37	.48	.75	.71	.84	.79	.74	.83	.99	.79	.85
EE	3.10	.65	.74	2.38	1.16	.91	-	-	-	1.60	1.17	.90
EFF	-	-	-	-	-	-	-	-	-	-	-	-
SAT	-	-	-	-	-	-	-	-	-	-	-	-

Continued =>

Table 2
Descriptive Statistics and Reliability Scores for MLQ 5X (Continued)

Scale	Sample 7			Sample 8			Sample 9		
	M	SD	R	M	SD	R	M	SD	R
II(A)	3.00	.43	.68	2.53	.89	.86	2.57	.53	.71
II(B)	3.29	.42	.74	2.38	.73	.81	2.79	.57	.81
IM	3.26	.42	.78	2.51	.79	.85	2.70	.54	.80
IS	3.16	.47	.82	2.20	.70	.80	2.78	.48	.74
IC	3.43	.41	.78	2.35	.83	.84	2.95	.54	.70
CR	2.80	.55	.74	2.09	.82	.83	2.21	.66	.77
MBEA	1.44	.64	.76	2.06	.70	.67	2.15	.66	.64
MBEP	.78	.55	.68	1.55	.86	.79	.86	.55	.58
LF	.71	.50	.68	1.39	.88	.82	.51	.42	.63
EE	3.15	.61	.79	2.41	1.11	.82	2.69	.73	.77
EFF	2.70	.68	.85	-	-	-	2.60	.52	.71
SAT	2.59	1.30	.93	-	-	-	3.08	.82	.94

Table 3 shows intercorrelations among MLQ 5X factor scores. There were generally high, positive correlations among the five transformational leadership scales, similar to the intercorrelations reported for the MLQ 5R survey (see Bass & Avolio, 1990). There were also positive and significant correlations between the contingent reward scale of constructive transactions and each of the five scales comprising transformational leadership. However, the average intercorrelation among the 5 transformational scales was **.83**, versus **.71** for the five transformational scales with ratings of contingent reward leadership.

The high correlations between the transformational scales and transactional contingent reward leadership was expected for several reasons. First, both transactional and transformational leadership represent active, positive forms of leadership. Second, leaders have been shown in repeated investigations to be both transactional and transformational. Third, as Shamir (1995) argues, the consistent honoring of transactional agreements builds trust, dependability, and perceptions of consistency with leaders by followers, which are each a basis for transformational leadership. Therefore, we would expect to obtain a high positive correlation among these factors, as was observed in Table 3.

As expected, active *corrective* transactional leadership or management-by-exception (Active) labeled MBEA in Table 3, exhibited either low positive or negative correlations with the transformational and more a *constructive* form of transactional leadership (CR). MBEA also positively correlated with its more passive and corrective form (MBEP) and inactive laissez-faire leadership ratings (LF).

Table 3 Intercorrelations among MLQ Factor Scores

	II(A)	II(B)	IM	IS	IC	CR	MBEA	MBEP	LF	EE	EFF	SAT
II(A)	-											
II(B)	.79**	-										
IM	.85**	.86**	-									
IS	.76**	.84**	.85**	-								
IC	.82**	.82**	.87**	.84**	-							
CR	.68**	.69**	.73**	.70**	.75**	-						
MBEA	-.12**	-.03	-.10**	-.08**	-.12**	.03	-					
MBEP	-.54**	-.54**	-.55**	-.52**	-.54**	-.34**	.28**	-				
LF	-.53**	-.54**	-.51**	-.47**	-.49**	-.29**	.18**	.74**	-			
EE	.68**	.69**	.73**	.69**	.74**	.62**	0.03	-.36**	-.34**	-		
EFF	.51**	.44**	.46**	.41**	.44**	.32**	-.14**	-.35**	-.41**	.45**	-	
SAT	.25**	.22**	.21**	.18**	.27**	.19**	0.06	-.21**	-.25**	.23**	.15**	-

* $p < .05$
** $p < .01$

Overall, the MBEP and LF scores were each negatively correlated with all of the respective transformational leadership scales. The correlation matrix presented in Table 3, confirms earlier patterns and results with the MLQ 5R: (1) transformational leadership scales were highly correlated with all criterion variables such as followers' rated Extra Effort (EE), Effectiveness (EFF), and Satisfaction (SAT); (2) Contingent reward was also positively related with the outcome measures, but less so then the transformational scale ratings; (3) MBEA was only slightly correlated with these outcome measures; and (4) MBEP and LF scales were strongly, negatively correlated with EE, EFF, and SAT. This hierarchical pattern of relationships replicated earlier results reported with the MLQ 5R (Bass & Avolio, 1990), and parallels results of two meta-analyses of studies using MLQ 5R, which included subjective *and* objective criterion measures (Lowe, Kroeck, et al., 1995; Patterson, Fuller, et al., 1995). Specifically, in descending order, the transformational, transactional and non-transactional leadership factors were correlated with extra effort, effectiveness and satisfaction, with the more corrective and passive forms of leadership being negatively correlated with the outcome measures. Figure 1a and 1b from Lowe, Kroeck, et al. (in press) represented the hierarchical ordering of leadership and outcome measures noted above.

Table 4 contains univariate statistics for each individual item generated by the PRELIS program. Generally, the means of transformational leadership items were higher than the means of CR and MBEA items, which are also higher than those of the MBEP and LF items. Many previous analyses have emerged with the same findings that transformational ratings are higher than CR and MBEA, which, in turn, are higher than MBEP and LF items. It may be that the transformational items are more socially desirable, but this still needs to be demonstrated. Norms for the nine factor model and outcome variables are shown in Appendix A.

Figure 1a. Comparing two types of performance measures (follower perceptions/ratings vs. organizational measures) on the relationship between MLQ scales and leader effectiveness. (Source: Lowe, et. al., in press)

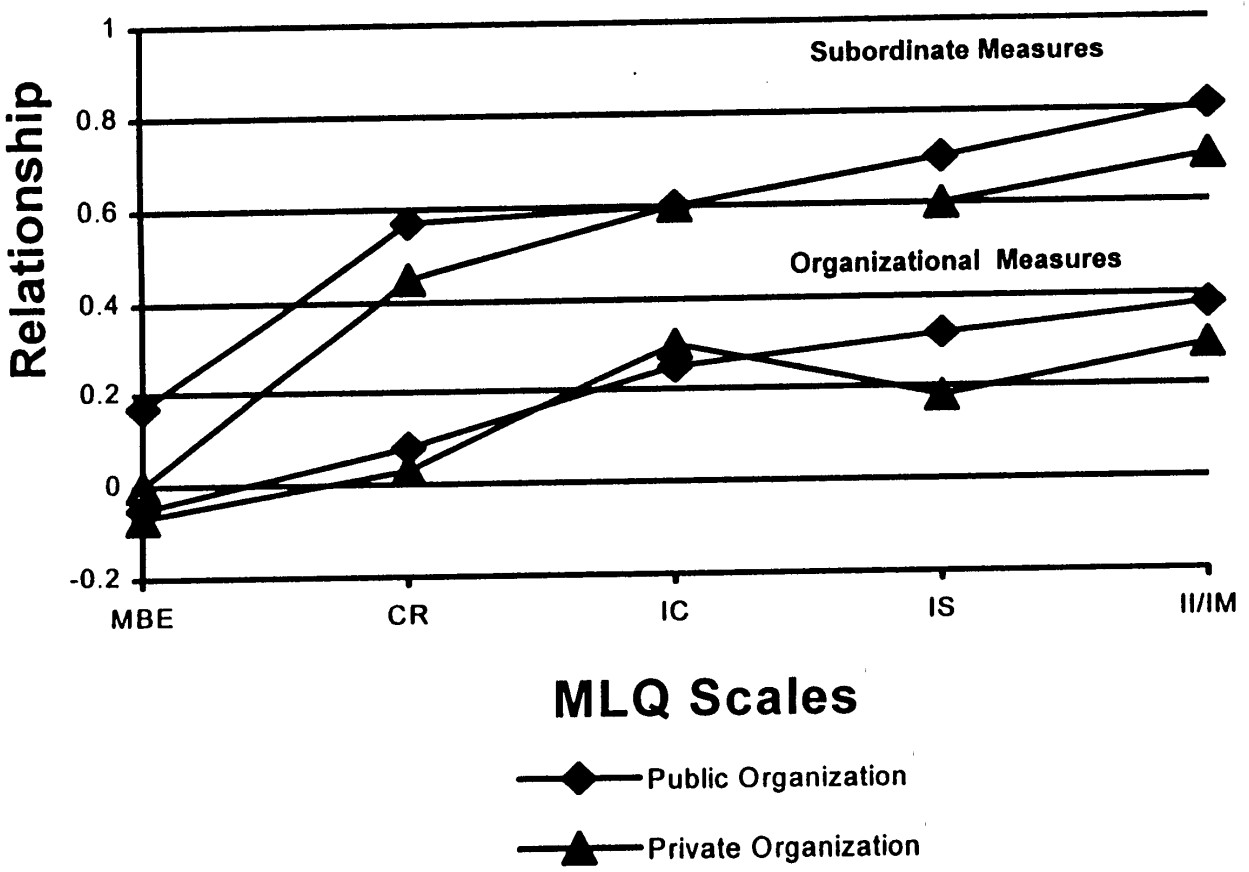

Figure 1b. The moderating effect of types of performance measures (follower perceptions/ratings vs. organizational measures) on the relationship between MLQ scales and high vs. low level leaders. (Source: Lowe, et. al., in press)

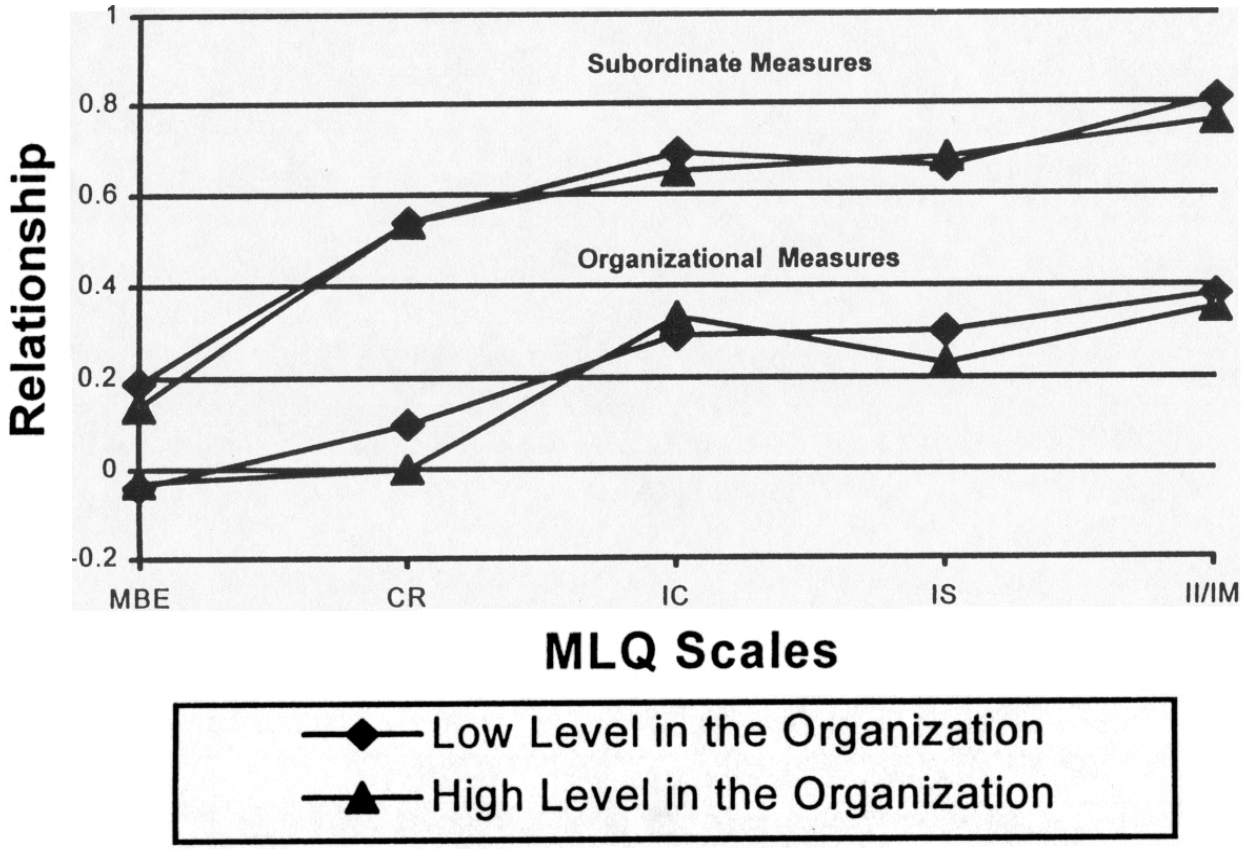

Table 4
Univariate Summary Statistics for MLQ 5X Leadership Items

Final Scale Items in MLQ5X		Item Content (Rater Version)	Mean	SD	Skewness	Kurtosis
Long	Short					
Idealized Influence (Attributed)						
II(A)1**		Makes personal sacrifices for the benefit of others	2.27	1.09	-0.32	-0.51
II(A)11		Remains calm during crisis situations	2.78	1.18	-0.88	-0.05
II(A)21*	10	Instills pride in being associated with him/her	2.47	1.26	-0.59	-0.59
II(A)31*	18	Goes beyond his/her own self-interest for the good of our group	2.51	1.16	-0.58	-0.40
II(A)41**		Provides reassurance that we will overcome obstacles	2.75	1.13	-0.78	-0.09
II(A)51		Displays extraordinary talent and competence in whatever he/she undertakes	2.52	1.09	-0.52	-0.26
II(A)61*	21	His/her actions build my respect for him/her	2.54	1.27	-0.62	-0.66
II(A)67*	25	Displays a sense of power and confidence	2.43	1.25	-0.52	-0.71

* Items selected for the analysis in this study.
** Items selected to represent the additional conceptual content of the construct for training purposes.

Continued =>

Table 4 (Continued)
Univariate Summary Statistics for MLQ 5X Leadership Items

Final Scale Items in MLQ5X		Item Content (Rater Version)	Mean	SD	Skewness	Kurtosis
Long	Short					
Idealized Influence (Behavior)						
II3*	6	Talks to us about his/her most important values and beliefs	2.36	1.25	-0.40	-0.87
II13		Emphasizes the importance of being committed to our beliefs	2.68	1.23	-0.74	-0.43
II23*	14	Specifies the importance of having a strong sense of purpose	2.63	1.20	-0.71	-0.36
II33*	23	Considers the moral and ethical consequences of his/her decisions	2.88	1.20	-0.93	-0.06
II43		Displays conviction in his/her ideals, beliefs, and values	2.89	1.16	-0.90	-0.04
II53**		Takes a stands on difficult issues	2.75	1.13	-0.76	-0.14
II63		Clarifies the central purpose underlying our actions	2.59	1.18	-0.64	-0.42
II68*		Talks about how trusting each other can help us to overcome our difficulties	2.29	1.31	-0.32	-1.00
II71	34	Emphasizes the importance of having a collective sense of mission	2.52	1.15	-0.56	-0.43
II75		Behaves in ways that are consistent with his/her expressed values	2.85	1.14	-0.86	-0.01

* Items selected for the analysis in this study.
** Items selected to represent the additional conceptual content of the construct for training purposes.

Continued =>

Table 4 (Continued)
Univariate Summary Statistics for MLQ 5X Leadership Items

Final Scale Items in MLQ5X Long	Short	Item Content (Rater Version)	Mean	SD	Skewness	Kurtosis
Inspirational Motivation						
IM5		Sets high standards	3.15	1.03	-1.24	-0.93
IM15		Envisions exciting new possibilities	2.47	1.24	-0.48	-0.74
IM25*	9	Talks optimistically about the future	2.51	1.23	-0.51	-0.69
IM35*	36	Expresses his/her confidence that we will achieve our goals	2.93	1.06	-0.93	0.26
IM45		Provides continuous encouragement	2.60	1.23	-0.64	-0.55
IM55		Focuses my attention on "what it takes" to be successful	2.13	1.21	-0.28	-0.86
IM64*	13	Talks enthusiastically about what needs to be accomplished	2.76	1.14	-0.74	-0.20
IM69**		Arouses awareness on what is essential to consider	2.32	1.20	-0.51	-0.62
IM72*	26	Articulates a compelling vision of the future	2.20	1.23	-0.25	-0.84
IM76**		Shows determination to accomplish what he/she sets out to do	3.01	1.15	-1.11	0.37

* Items selected for the analysis in this study.
** Items selected to represent the additional conceptual content of the construct for training purposes.

Continued =>

Table 4 (Continued)
Univariate Summary Statistics for MLQ 5X Leadership Items

Final Scale Items in MLQ5X		Item Content (Rater Version)	Mean	SD	Skewness	Kurtosis
Long	Short					
Intellectual Stimulation						
IS7		Emphasizes the value of questioning assumptions	2.47	1.16	-0.54	-0.44
IS17*	2	Re-examines critical assumptions to question whether they are appropriate	2.51	1.11	-0.55	-0.38
IS27**		Encourages us to rethink ideas which had never been questioned before	2.30	1.20	-0.34	-0.75
IS37		Questions the traditional ways of doing things	2.13	1.15	-0.23	-0.67
IS47*	8	Seeks differing perspectives when solving problems	2.57	1.14	-0.62	-0.35
IS57*	32	Suggests new ways of looking at how we do our jobs	2.39	1.16	-0.46	-0.53
IS65		Encourages me to express my ideas and opinions	2.87	1.19	-0.92	-0.10
IS73*	30	Gets me to look at problems from many different angles	2.48	1.16	-0.55	-0.49
IS77**		Encourages non-traditional thinking to deal with traditional problems	2.60	1.20	-0.60	-0.53
IS81		Encourages addressing problems by using reasoning and evidence, rather than unsupported opinion	2.68	1.23	-0.71	-0.43

* Items selected for the analysis in this study.
** Items selected to represent the additional conceptual content of the construct for training purposes.

Continued =>

Table 4 (Continued)
Univariate Summary Statistics for MLQ 5X Leadership Items

Final Scale Items in MLQ5X		Item Content (Rater Version)	Mean	SD	Skewness	Kurtosis
Long	Short					
Individualized Consideration						
IC9*	19	Treats me as an individual rather than just a member of a group	3.06	1.20	-1.27	0.65
IC19**		Listens attentively to my concerns	2.99	1.14	-1.12	0.46
IC29		Provides useful advice for my development	2.46	1.19	-0.56	-0.55
IC39*	31	Focuses me on developing my strengths	2.48	1.34	-0.02	3.22
IC49*	15	Spends time teaching and coaching me	2.06	1.39	-0.07	-1.26
IC59*	29	Treats each of us as individuals with different needs, abilities, and aspirations	2.87	1.25	-0.98	-0.07
IC66		Teaches me how to identify the needs and capabilities of others	2.38	1.33	-0.42	-0.96
IC74**		Promotes self-development	2.62	1.21	-0.71	-0.39
IC78		Gives personal attention to members who seem neglected	2.64	1.18	-0.61	-0.98

* Items selected for the analysis in this study.
** Items selected to represent the additional conceptual content of the construct for training purposes.

Continued =>

Table 4 (Continued)
Univariate Summary Statistics for MLQ 5X Leadership Items

Final Scale Items in MLQ5X		Item Content (Rater Version)	Mean	SD	Skewness	Kurtosis
Long	Short					
Contingent Rewards						
CR8		Gives me what I want in exchange for my support	1.78	1.23	0.09	0.98
CR16*	16	Makes clear what I can expect to receive, if my performance meets designated standards	2.38	1.28	-0.49	-0.80
CR24		Works out agreements with me on what I will receive if I do what needs to be done	1.77	1.31	0.02	-1.20
CR32		Negotiates with me about what I can expect to receive for what I accomplish	1.67	1.28	0.14	1.12
CR40*	1	Provides his/her assistance in exchange for my effort	2.30	1.25	-0.38	-0.86
CR48		Tells me what to do to be rewarded for achieving performance targets	1.68	1.21	0.10	-1.00
CR56*	11	Makes sure that we receive appropriate rewards for achieving performance targets	2.35	1.28	-0.42	-0.88
CR62		I earn credit with him/her by doing my job well	2.65	1.19	-0.73	-0.30
CR80*	35	Expresses his/her satisfaction when I do a good job	2.82	1.19	-0.84	-0.19

* Items selected for the analysis in this study.
** Items selected to represent the additional conceptual content of the construct for training purposes.

Continued =>

Table 4 (Continued)
Univariate Summary Statistics for MLQ 5X Leadership Items

Final Scale Items in MLQ5X Long	Short	Item Content (Rater Version)	Mean	SD	Skewness	Kurtosis
Management-By-Exception-Active						
MBEA6*	4	Focuses attention on irregularities, mistakes, exceptions, and deviations from standards	2.20	1.13	-0.11	-0.85
MBEA14		Closely monitors my performance for errors	2.02	1.22	-0.01	-1.02
MBEA22*	22	Spends his/her time looking to "put out fires"	1.37	1.10	0.11	-0.54
MBEA30*	24	Keeps track of my mistakes	1.58	1.26	0.38	-0.89
MBEA38		Enforces rules to avoid mistakes	2.32	1.11	-0.28	-0.65
MBEA46*	27	Directs his/her attention toward failure to meet standards	1.61	1.22	0.28	-0.89
MBEA54		Searches for mistakes before commenting on my performance	1.22	1.21	0.75	-0.39
MBEP4		It requires a failure to meet an objective for him/her to take action	1.05	1.15	0.84	-0.26
MBEP12		Work has to fall below minimum standards for him/her to try to make improvements	0.98	1.14	0.94	-0.12

* Items selected for the analysis in this study.
** Items selected to represent the additional conceptual content of the construct for training purposes.

Continued =>

Table 4 (Continued)
Univariate Summary Statistics for MLQ 5X Leadership Items

Final Scale Items in MLQ5X Long	Short	Item Content (Rater Version)	Mean	SD	Skewness	Kurtosis
Management-By-Exception-Passive						
MBEP20*	3	Fails to intervene until problems become serious	1.02	1.16	1.00	0.34
MBEP28		Tells me what I've done wrong rather than what I've done right	1.39	1.13	0.64	-0.31
MBEP36*	12	Things have to go wrong for him/her to take action	0.96	1.16	1.09	0.25
MBEP44*	17	Shows he/she is a firm believer in "If it ain't broke, don't fix it"	1.58	1.22	0.29	-0.84
MBEP52*	20	Problems must become chronic before he/she will take action	0.87	1.11	1.16	0.43
Laissez-Faire						
LF2*	5	Avoids getting involved when important issues arise	0.90	1.07	1.14	0.68
LF10		Takes no action even when problems become chronic	0.65	1.03	1.61	1.80
LF18*	7	Is absent when needed	0.94	1.10	1.08	0.37
LF26**		Fails to follow-up requests for assistance	0.86	1.06	1.19	0.70
LF34		Resists expressing his/her views on important issues	0.97	1.07	0.93	0.14
LF42*	28	Avoids making decisions	0.84	1.07	1.21	0.65
LF50*	33	Delays responding to urgent questions	0.93	1.12	1.21	0.81
LF58		Diverts his/her attention away from addressing work-related problems	0.93	1.09	1.04	0.30

* Items selected for the analysis in this study.
** Items selected to represent the additional conceptual content of the construct for training purposes.

III. Confirmatory Factor Analysis Using LISREL VII

As noted earlier, Confirmatory Factor Analysis (CFA) was used to test the convergent and discriminant validities of each MLQ 5X scale by examining the structural relations among latent constructs. Specifically, these tests were conducted to determine whether the data from the combined samples confirmed the conceptual model proposed by Avolio and Bass (1991).

CFA is a widely used technique for testing the psychometric properties of measurement instruments because it tests a pre-specified factor structure and the goodness of fit of the resulting solution (Anderson & Gerbing, 1988; Bagozzi, Yi, & Phillips, 1991; Bobko, 1990; Kenny & Kashy, 1992). Bagozzi, Yi, et al. summarized the superiority of CFA to other methods such as traditional factor analysis and Campbell & Fiske's (1959) MTMM for testing the construct validity of instruments. For example, they argued that CFA allows methods to affect measures of constructs to different degrees and to correlate freely among themselves, thus providing more useful information about the psychometric properties of instruments. Moreover, utilization of chi-square differences tests and the size of factor loadings for items representing constructs, allow researchers to estimate convergent and discriminant validity of tests or surveys more accurately.

LISREL compares the implied correlation matrix with the observed correlation (or covariance) matrix (Bollen, 1989). LISREL stops estimating model parameters if the two correlation (or covariance) matrices are perfectly matched. When the two matrices are not perfectly matched, LISREL adjusts the starting values using a process of iterative estimation, until a prespecified criterion has been achieved. Some of the most frequently used criteria are Ordinary Least Squares, Generalized Least Squares, and estimates of Maximum Likelihood (Long, 1983a & 1983b).

In addition, LISREL produces several other fit indices to help determine the degree of goodness of fit of the substantive model with the available data. Some commonly used fit indices generated by LISREL include the Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI) and Root Mean Squared Residual (RMSR). The GFI is a ratio of the sum of the squared discrepancies to the observed variances. Values greater than .90 generally indicate a reasonable level of fit (Bentler & Bonett, 1980). The RMSR is the square root of the mean of squared discrepancies between the implied and observed correlation (or covariance) matrices, and values less than .05 are considered a good fit (Joreskog & Sorbom, 1989).

The first confirmatory factor analysis was implemented with all items from the MLQ 5X included: 8 items for II(A); 10 items for II(B); 10 items for IM; 10 items for IS; 9 items for IC; 9 items for CR; 8 items for MBEA; 8 items for MBEP; and 8 items for LF. Based on the correlation matrix generated by PRELIS, confirmatory factor analysis was performed with LISREL VII using the maximum likelihood estimation method. The overall "full range" of leadership styles model did not converge after 10 iterations due to high intercorrelations among the transformational leadership factors. The same problem also occurred between MBEP and LF factors. The GFI and RMSR were .73 and .10, respectively. The chi-square

with 2889 degrees of freedom was 13,378 ($p < .0001$), indicating a suboptimal fit of the substantive model.

LISREL provides Modification Indices (MI) for every model parameter, which are the expected decrease in the chi-square values, if some items are selected for testing in the model. The MI can be used to determine which items do not fit into the model parameters. Although there are some concerns about using the MI for post hoc model modifications, we believe that the use of this strategy was valid for several reasons. First, we were **not** modifying the original substantive model, rather we were simply attempting to eliminate items that were too highly correlated across similar components of higher order factors, e.g., transformational items within scales, that relate to the higher order construct of transformational leadership. Second, new items written by the first two authors for MLQ 5X, may not have accurately tapped the components they were intended to measure. (To assure that the revised instrument accurately measures the latent constructs, we intend to cross-validate it in an independent sample of data collected using the MLQ 5X). Third, our goal has been to reduce the number of items per scale, since new scales have been added to the overall instrument. Finally, we were attempting here to maximize the convergent and discriminant validity of the MLQ 5X, realizing that some items may be good indicators of "active" leadership but too highly correlated with multiple scales. Consequently, using the parameters from the model based on the MI to increase the measurement's construct validity, we eliminated items from each scale without changing the original substantive model.

We proceeded by selecting four items for each leadership factor based on the MI indices produced by LISREL. All of these items exceeded the recommended cut-offs for discriminant and convergent validity. Our item selection process also included an extensive content analysis of all of the selected items for each leadership construct. Our goal was to choose a set of items for MLQ 5X, that would *best* represent a broader range of unique aspects for each leadership component, while increasing the GFI, and decreasing the RMSR indices to acceptable levels of fit. The final items were selected for the next set of LISREL analyses, with results presented in Table 4.

After we finalized the item selection process to choose four items that represented each of nine leadership factors operationalized by Avolio and Bass (1991), we ran a series of CFAs to determine if the data were represented best by several different competing models. Specifically, we tested several competing models to see which factor structure solutions best represented the current MLQ 5X data. The competing models included: (1) one general or global leadership factor model; (2) a two correlated factors model (active versus passive leadership); (3) a three correlated factors model (transformational, transactional leadership and nonleadership); and (4) a nine correlated factors full range of leadership model (AC, II, IM, IS, IC, CR, MBEA, MBEP, and LF. Each CFA was based on the maximum likelihood estimation method.

To determine which factor solution results in the smallest differences between the actual matrix and estimated matrix generated by LISREL, we used several fit criteria, including chi-square, adjusted goodness of fit index AGFI, and RMSR. Since we used a relatively large sample in these analyses (N=1,394, after leastwise deletion from a total sample size of 2080), the chi-square test was not considered useful in and of itself, because the results of this test will almost always be significant due to the high level of power to detect any slight differences between the matrices. Several researchers have recognized the problems in using the chi-square test with large sample sizes, and recommended using other goodness of fit measures such as GFI and RMSR as additional indices of fit (Anderson & Gerbing, 1988; Bentler, 1990; Bollen, 1989; James, Mulaik, & Brett, 1982; James, Van Alstine & Mulaik, 1989).

Table 6 shows the comparison of several fit measures as well as the chi-square test results of the competing factor/model solutions. All of the fit measures, as well as chi-square tests improved as the model progressed from a one factor solution to the full range of leadership model solution (nine factors model). Indeed, improvement became substantial as one progressed from the two-factor model to the three-factor model and again from the three-factor model to the full nine-factor model. In particular, the goodness of fit index (GFI) of .91 for the full model exceed the .90 cut-off criterion recommended in the literature (Bentler, 1990; Bollen, 1989). Also, the root mean squared residual (RMSR) of .04 of the full model satisfies the cut-off criterion of less than .05 recommended by Joreskog & Sorbom (1989).

Table 6
Comparison of overall fit measures among several factor models

	Model			
fit measure	**one-factor model**	**two-factor model**	**three-factor model**	**nine-factor model (full model)**
Chi-square / *df*	5,674 / *594*	5,260 / *593*	3,529 / *591*	2,394 / *558*
GFI*	0.75	0.77	0.86	0.91
AGFI**	0.72	0.74	0.84	0.89
RMSR***	0.07	0.08	0.05	0.04

*Goodness of fit index
**Adjusted Goodness of Fit Index
***Root Mean Squared Residuals

Table 7 shows the squared parameter estimates of the full range of leadership model. All of the indicators loading on each construct were statistically significant, indicating that these respective scales each have satisfactory levels of internal consistency.

Table 7
Item loadings with the nine-factor model

Item*	Factor II(A)	Item	Factor II(B)	Item	Factor IM	Item	Factor IS	Item	Factor IC
II(A)21	0.73	II(B) 3	0.63	IM25	0.69	IS17	0.71	IC 9	0.60
II(A)31	0.71	II(B)23	0.76	IM35	0.68	IS47	0.73	IC39	0.82
II(A)61	0.85	II(B)33	0.70	IM64	0.79	IS57	0.79	IC49	0.77
II(A)67	0.65	II(B)71	0.72	IM69	0.77	IS73	0.81	IC59	0.73

Item	Factor CR	Item	Factor MBEA	Item	Factor MBEP	Item	Factor LF
CR16	0.65	MBEA 6	0.59	MBEP20	0.73	LF 2	0.57
CR40	0.65	MBEA22	0.37	MBEP36	0.83	LF18	0.51
CR56	0.70	MBEA30	0.60	MBEP44	0.37	LF42	0.71
CR80	0.78	MBEA46	0.65	MBEP52	0.88	LF50	0.68

*Item numbers are for the MLQ5x Form and for the current study.

IV. Further Construct Validation Processes Using PLS

Since Howell & Avolio (1993) reported preliminary evidence of convergent and discriminant validity using an earlier version of the MLQ (Form 10) with PLS, and the results of the study were used as a basis for selecting items for inclusion in MLQ 5X, we attempted to replicate the findings of Howell & Avolio (1993) in this report using the shorter version of MLQ 5X. The PLS analysis will lend more confidence to our results reported in the previous section, and allow us to compare these two procedures with the ultimate goal of improving the psychometric properties of the MLQ 5X.

Like LISREL, PLS has several advantages over other traditional statistical procedures, in that it estimates and tests relationships among constructs within a specified or *a priori* measurement model (Fornell, 1982). PLS also provides a number of useful indicators of reliability and validity that can be used to determine the convergent and discriminant validity of the instrument (Fornell & Larcker, 1981).

The reliability of questionnaire items for the constructs will be assessed by:

(1) examining the factor loadings of indicators on latent variables. Fornell & Larcker (1981) suggest that factor loadings should exceed .70, since this implies that less than half of the indicators' variance is due to error. This .70 minimum requirement is also more stringent than some criteria required in traditional factor analytic methods;

(2) computing a variable's composite scale reliability, which is a measure of internal consistency similar to Cronbach's alpha. Fornell & Larcker (1981) recommend using a reliability cut-off of .70;

(3) examining the average variance extracted by the construct variables from indicators. An average cut-off variance of .50 or more is frequently recommended (Fornell & Larcker, 1981).

Table 8 shows factor loadings, average variance extracted for each construct and composite scale reliability. All constructs except MBEA exceeded the criterion cut-off of .50 in terms of average variance extracted by the construct variables from indicators. For MBEA, the average variance extracted was .46, although its composite scale reliability was .76. Composite scale reliability indices indicated that all constructs met the minimum cut-off requirement of .70. As shown in Table 8, most indicators exceeded the above criterion for the factor loadings of indicators on latent variables except items Q22 and Q44, which were far below the .70 cut-off line, and Q6 and Q 18 which fall slightly below the factor loading cut-off. These items were retained, however, given that the overall scales met or exceeded the cut-offs for reliability of .70.

Table 8
Factor loadings of indicators, composite scale reliability, and average variance extracted by constructs

Factor	Item	Factor loadings of indicators	Average variance extracted by constructs	Composite scale reliability
II(A)	II(A)21	0.77	0.61	0.86
	II(A)31	0.73		
	II(A)61	0.88		
	II(A)67	0.74		
II(B)	II(B)3	0.74	0.59	0.85
	II(B)23	0.81		
	II(B)33	0.75		
	II(B)71	0.77		
IM	IM25	0.80	0.65	0.88
	IM35	0.80		
	IM64	0.84		
	IM69	0.79		
IS	IS17	0.79	0.66	0.89
	IS47	0.79		
	IS57	0.82		
	IS73	0.84		
IC	IC9	0.66	0.61	0.86
	IC39	0.84		
	IC49	0.79		
	IC59	0.81		
CR	CR16	0.74	0.59	0.85
	CR40	0.73		
	CR56	0.81		
	CR80	0.79		
MBEA	MBEA6	0.66	0.46	0.76
	MBEA22	0.40		
	MBEA30	0.77		
	MBEA46	0.80		
MBEP	MBEP20	0.84	0.60	0.85
	MBEP36	0.88		
	MBEP44	0.37		
	MBEP52	0.89		
LF	LF2	0.71	0.53	0.81
	LF18	0.61		
	LF42	0.79		
	LF50	0.78		
EFF	EFF82	0.80	0.68	0.90
	EFF83	0.85		
	EFF84	0.85		
	EFF85	0.81		

Convergent and discriminant validity estimates of the MLQ 5X was assessed by examining whether the construct shares more variance with its own measure or indices than with other constructs or indices included in the model (Carmines & Zeller, 1979). Table 9 presents the correlation matrix of the constructs represented in the full range theoretical model, including in the matrix an effectiveness scale. Since PLS tests the construct validity of the model within the context of predicting some criterion, we included the effectiveness scale, which has been used extensively in prior research with the MLQ 5R and MLQ 5X (see Bass & Avolio, 1993). The diagonal elements in this matrix show the average variance extracted.

For adequate convergent and discriminant validity, Fornell and Larcker (1981) recommend that the diagonal elements should be greater than entries in the corresponding rows and columns. An examination of Table 9 indicates that all measures satisfied this criterion except II, which has one correlation score higher than the average variance extracted by the construct. We also tested convergent and discriminant validity by including other common criterion variables used with the MLQ (e.g., extra effort and satisfaction), receiving similar support for the convergent and discriminant validity of MLQ 5X. The overall patterns of factor loadings, average variance extracted by constructs, and composite scale reliability were very similar to those found in the model including the scale for measuring effectiveness. These results also parallel the findings from the series of LISREL analyses.

Table 9
Average variance extracted by constructs (diagonal elements) and correlations between constructs (off diagonal elements) to assess convergent and discriminant validity

	AC	II	IM	IS	IC	CR	MBEA	MBEP	LF	EFF
AC	0.61*	-	-	-	-	-	-	-	-	-
II	0.53	0.59*	-	-	-	-	-	-	-	-
IM	0.59	0.59	0.65*	-	-	-	-	-	-	-
IS	0.50	0.62	0.60	0.66*	-	-	-	-	-	-
IC	0.57	0.54	0.58	0.55	0.61*	-	-	-	-	-
CR	0.52	0.49	0.54	0.54	0.59	0.59*	-	-	-	-
MBEA	0.04	0.02	0.04	0.01	0.06	0.02	0.46*	-	-	-
MBEP	0.24	0.27	0.24	0.26	0.24	0.18	0.06	0.60*	-	-
LF	0.22	0.21	0.20	0.19	0.18	0.12	0.04	0.47	0.53*	-
EFF	0.27	0.17	0.20	0.17	0.18	0.17	0.03	0.14	0.14	0.68*

* Average variance extracted by constructs

Norms in the form of percentile scores are provided in Appendix A. It also should be kept in mind that the mean scores may be interpreted as absolute frequencies ranging from 0, meaning never to 4, meaning "frequently, if not always" (See Bass & Avolio, 1990).

V. Conclusions and Implications

By using the two most powerful confirmatory factor analyses, we intended to develop a survey instrument that best represented each leadership component within a "full range" model of leadership, while also satisfying the most stringent measurement criteria. The two confirmatory factor analyses, using PLS and LISREL, resulted in our selecting 45 items to include in the MLQ-Form 5X (Short Form). There were four items selected for each leadership factor, which best represented the content of the construct and also ones that exhibited the best fit with the overall theoretical model. We also obtained adequate convergent as well as discriminant validity for the constructs contained in the full range of leadership behavior. Our next step is to test the results obtained in this derivation sample, using a cross-validation sample with the shorter version of this MLQ 5X. A longer form of 63 items, MLQ 5X (Long Form), has also been constructed for training purposes and 360° feedback.

Approximately five years ago, Avolio and Bass (1991) recommended an extension to earlier models of transformational and transactional leadership, which included nine factors or components of leadership. Data that were collected from numerous research projects conducted by independent investigators over the last four years comprised the sample of data used in the current study. Results of this investigation extend the range of leadership factors, which have been considered in a single model beyond the 6-factor model proposed by Bass (1985), as well as earlier two factor models based on initiation of structure and consideration.

There are several implications for these preliminary results. First, by measuring a broader range of leadership factors, we have increased our chances of tapping into the full range of leadership styles that can and are exhibited across different cultures and settings. Second, to the extent that this full range of leadership factors holds up in cross-validation, we will have developed a more effective and comprehensive means for both leadership assessment and development purposes. Third, all of the factors included in the full range model, have been discussed in the leadership literature over the last forty years (Bass, 1990). However, following this initial study, we have a better idea of how to measure this range of leadership styles.

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Appendix A: Percentiles for individual based on others' ratings factor scores

	II(A)	II(B)	IM	IS	IC	CR	MBEA	MBEP	LF	EE	EFF	SAT	
N =	2,080	2,080	2,080	2,080	2,079	2,078	2,078	2,077	1,826	1,605	733	703	
Percentile	MLQ Scores									Outcomes			Percentile
95	3.7	3.8	3.8	3.7	3.9	3.5	3.0	2.7	2.4	4.0	3.7	4.0	95
90	3.5	3.6	3.6	3.5	3.7	3.3	2.7	2.3	2.0	4.0	3.5	4.0	90
80	3.2	3.4	3.4	3.2	3.4	3.0	2.4	1.7	1.4	3.7	3.2	4.0	80
70	3.1	3.2	3.2	3.0	3.2	2.7	2.1	1.4	1.1	3.3	3.0	4.0	70
60	2.9	3.0	3.0	2.8	3.1	2.5	2.0	1.1	0.9	3.0	3.0	3.0	60
50	2.7	2.8	2.8	2.7	2.9	2.3	1.7	1.0	0.7	3.0	2.7	3.0	50
40	2.5	2.6	2.6	2.4	2.6	2.0	1.6	0.7	0.5	2.7	2.5	2.0	40
30	2.2	2.3	2.3	2.2	2.3	1.8	1.3	0.6	0.4	2.0	2.2	1.5	30
20	1.9	0.9	1.9	1.8	1.9	1.4	1.1	0.4	0.2	1.7	2.0	1.0	20
10	1.4	1.4	1.3	1.3	1.2	0.9	0.7	0.2	0.1	0.7	1.7	1.0	10
5	0.9	1.0	0.9	0.8	0.8	0.5	0.5	0.1	0.0	0.0	1.2	1.0	5

LEGEND:
II(A) = IDEALIZED INFLUENCE (ATTRIBUTED)
II(B) = IDEALIZED INFLUENCE (BEHAVIOR)
IM = INSPIRATIONAL MOTIVATION
IS = INTELLECTUAL STIMULATION
IC = INDIVIDUALIZED CONSIDERATION
CR = CONTINGENT REWARD
MBEA = MANAGEMENT-BY-EXCEPTION (ACTIVE)
MBEP = MANAGEMENT-BY-EXCEPTION (PASSIVE)
LF = LAISSEZ-FAIRE
EE = EXTRA EFFORT
EFF = EFFECTIVENESS
SAT = SATISFACTION

KEY OF FREQUENCY: 4.0 = Frequently, If not always
3.0 = Fairly often
2.0 = Sometimes
1.0 = Once in a while
0.0 = Not at all

APPENDIX H

MLQ SCORING KEY

MLQ Multifactor Leadership Questionnaire Scoring Key (5x) Short

My Name: _____ Date:

Organization ID #: _____ Leader ID #: _____

Scoring: The MLQ scale scores are average scores for the items on the scale. The score can be derived by summing the items and dividing by the number of items that make up the scale. All of the leadership style scales have four items, Extra Effort has three items, Effectiveness has four items, and Satisfaction has two items.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

Idealized Influence (Attributed) total/4 =

Idealized Influence (Behavior) total/4 =

Inspirational Motivation total/4 =

Intellectual Stimulation total/4 =

Individual Consideration total/4 =

Contingent Reward total/4 =

Management-by-Exception (Active) total/4 =

Management-by-Exception (Passive) total/4 =

Laissez-faire Leadership total/4 =

Extra Effort total/3 =

Effectiveness total/4 =

Satisfaction total/2 =

	Contingent Reward	0	1	2	3	4
2.	**Intellectual Stimulation**	0	1	2	3	4
3.	**Management-by-Exception (Passive)**	0	1	2	3	4
4.	**Management-by-Exception (Active)**	0	1	2	3	4
5.	**Laissez-faire Leadership**	0	1	2	3	4
6.	**Idealized Influence (Behavior)**	0	1	2	3	4
7.	**Laissez-faire Leadership**	0	1	2	3	4
8.	**Intellectual Stimulation**	0	1	2	3	4
9.	**Inspirational Motivation**	0	1	2	3	4
10.	**Idealized Influence (Attributed)**	0	1	2	3	4
11.	**Contingent Reward**	0	1	2	3	4
12.	**Management-by-Exception (Passive)**	0	1	2	3	4
13.	**Inspirational Motivation**	0	1	2	3	4
14.	**Idealized Influence (Behavior)**	0	1	2	3	4
15.	**Individual Consideration**	0	1	2	3	4

Continued =>

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

16.	Contingent Reward	0	1	2	3	4
17.	Management-by-Exception (Passive)	0	1	2	3	4
18.	Idealized Influence (Attributed)	0	1	2	3	4
19.	Individual Consideration	0	1	2	3	4
20.	Management-by-Exception (Passive)	0	1	2	3	4
21.	Idealized Influence (Attributed)	0	1	2	3	4
22.	Management-by-Exception (Active)	0	1	2	3	4
23.	Idealized Influence (Behavior)	0	1	2	3	4
24.	Management-by-Exception (Active)	0	1	2	3	4
25.	Idealized Influence (Attributed)	0	1	2	3	4
26.	Inspirational Motivation	0	1	2	3	4
27.	Management-by-Exception (Active)	0	1	2	3	4
28.	Laissez-faire Leadership	0	1	2	3	4
29.	Individual Consideration	0	1	2	3	4
30.	Intellectual Stimulation	0	1	2	3	4
31.	Individual Consideration	0	1	2	3	4
32.	Intellectual Stimulation	0	1	2	3	4
33.	Laissez-faire Leadership	0	1	2	3	4
34.	Idealized Influence (Behavior)	0	1	2	3	4
35.	Contingent Reward	0	1	2	3	4
36.	Inspirational Motivation	0	1	2	3	4
37.	Effectiveness	0	1	2	3	4
38.	Satisfaction	0	1	2	3	4
39.	Extra Effort	0	1	2	3	4
40.	Effectiveness	0	1	2	3	4
41.	Satisfaction	0	1	2	3	4
42.	Extra Effort	0	1	2	3	4
43.	Effectiveness	0	1	2	3	4
44.	Extra Effort	0	1	2	3	4
45.	Effectiveness	0	1	2	3	4

APPENDIX I

LETTERS OF REPLY

INELIGIBLE

BUTLER
HOSPITAL

April 21, 1996

Rhona Reiss Zukas, MOT, OTR, FAOTA
10201 Grosvenor Place
Apt. 1602
Rockville, Maryland 20852

Dear Rhona,

I received the questionnaires related to your study. I was the Director of the Occupational Therapy Department until about six months ago when I left that position to accept the position of Director of Program Development for the hospital. There is a new Director of OT - she was a senior staff person prior to accepting the Director position. All of the staff whom I supervised are still in the department. I was the Director of the department for twenty years prior to my leaving.

Please advise as to how you would like me to proceed with your questionnaire. I would be most happy to support your project.

Sincerely,

Mary Hostetler Brinson, OTR/L, FAOTA
Director, Program Development

345 Blackstone Boulevard, Providence, RI 02906
Affiliated with the Brown University School of Medicine
(401)-455-6200, TDD/TTY (401)-455-6239

Northeast Louisiana University
College of Pharmacy and Health Sciences
School of Allied Health Sciences
Occupational Therapy
(318) 342-1610

April 22, 1996

Rhona Reiss Zukas
10201 Grosvenor Place
Apt. 1602
Rockville, MD 20852

Dear Rhonda:

I am returning the survey materials that I recently received from you-not because I do not want to participate, but because I did not feel that I was a qualified candidate for the study. Because I understand the cost of supplies and equipment, though, I wanted to return my part of what has probably been a costly venture in hope that you may be able to use them.

The best of luck to you in your doctoral studies.

Sincerely,

Peggy Meredith

Peggy Meredith, M.A., LOTR
Fieldwork Coordinator

Monroe, Louisiana 71209-0430

April 23, 1996

Dear Rhona Reiss Zukoss,

I am in receipt of your request to participate in your study and materials. Although I am supportive of your project and OT's conducting research, I am unable to participate as I do not believe I qualify as a candidate. Currently, I am a rehabilitation consultant and do not have staff reporting directly to me.

I wish you success in your studies.

Sincerely,

Joan Lothberg

1900 Jefferson Ave.
St. Paul, MN 55105
612-696-0234

Dear Ms. Zukas, *April 26, 1996*

I am writing this letter to apologize to you because, unfortunately, I can not assist you in your research project. In my occupational therapy department there are only three OTRs and one COTA. None of the OTRs have a supervisory relationship with each other at this point; we are pretty much equal. And as each of us only supervise the one COTA, unfortunately, none of us qualify for your project. I would have been delighted to help you if I could. Please find enclosed your material which I am returning to you in case it will be useful.

Sincerely,

Dianalee Rode, OTR

Dianalee Rode, OTR

Florida International University

4/30/96

Dear Rhona,

all good wishes on completing your data collection.

Unfortunately I am not a clinic administrator here in Florida. While I was at NYU in New York city I had a dual appointment – as program ~~director~~ coordinator & clinical coordinator of work study programs. Perhaps this is why I got on your list

If I can be of further help, don't hesitate to contact me.

Very truly yours,

Sharon Lefkofsky, Ph.D, OTR/L
Associate Professor
dept. of OT
college of Health.
University Park, Miami, Florida 33199
Equal Opportunity/Equal Access Employer and Institution
(305) 348 2921

THE COLLEGE OF
ST. CATHERINE
MINNEAPOLIS
Specializing in health-care education
601 25th Avenue South
Minneapolis, Minnesota 55454
(612) 690-7700 FAX (612) 690-7849

Rhona Reiss Zukas, MOT,OTR,FAOTA
10201 Grosvenor Place Apt. 1602
Rockville, MD 20852

June 23, 1996

Dear Ms. Zukas,

I did receive the packet of questionnaires that you sent in early May, however just prior to receiving those, the faculty in our program had completed two similar sets of questionnaires related to leadership. I was involved in a leadership workshop and the faculty were asked to complete forms regarding my leadership in preparation for that workshop. They also were completing end of the year evaluation forms related to my leadership at that time. Therefore, it seemed to be "poor timing" to ask them to complete any additional forms. I apologize for not having returned the forms to you or writing to let you know why we would not be participating in your research. Our academic year ended in mid May and faculty are now away until Labor Day.

Again, I am sorry for our lack of response and hope that it will not be a problem for you as your research sounds interesting.

Sincerely,

Marianne F. Christiansen

Marianne F. Christiansen, MA, OTR
Program Director, Occupational Therapy Assistant Program

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