WHAT MAKES A TRANSFORMATIONAL EDUCATION LEADER?: AN INVESTIGATION INTO THE ANTECEDENT EXPERIENCES OF K-12 TRANSFORMATIONAL LEADERSHIP

by

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TABLE OF CONTENTS

1. INTRODUCTION 1

Background 1
An Overview of Prominent Leadership Theories 2
Transformational Leadership Theory 3
Problem Statement 5
Purpose Statement 6
Research Questions 8
Delimitations 9
Limitations 10
Definition of Terms 10
Significance of the Study 13
Summary 14

2. REVIEW OF LITERATURE 17

Introduction 17
Review of Related Literature 17
Leadership vs. Management 18
Definition of Leadership for this Study 20
Importance of Studying Leadership 21
General Leadership Theories 23
Transactional Leadership Theory 24
Transformational Leadership Theory 24
Distinguishing Attributes of Transformational and Transactional Leadership 26
The Full Range Leadership Model 26
Progressive Development of Leadership Concepts in Practice 28
Assessing Transformational Leadership Skills 32
Research Supporting Transformational Leadership as Effective 35
Previous Studies Investigating Antecedent Experiences and Leadership 36
History of Transformational Leadership in Education 38
Purpose of Transformational Leadership in Education 40
Performing as a Transformational Leader in Education 42
Effect of Transformational Leadership Theory on Student Success 43
Assessing the Relationship Between Transformational Leadership and Antecedent Experiences 45

TABLE OF CONTENTS – CONTINUED

Literature Review Summary 49

3. METHODOLOGY 51

Introduction 51
Purpose Statement 52
Research Questions 53
Design 53
Population 56
Sample 57
Sampling Procedure 58
Instruments 58
Strengths and Limitations of Self-Report Surveys 60
Data Collection Procedures 61
Data Analysis 62
Methodology Summary 62

4. RESULTS 64

Introduction 64
Preliminary Analysis 65
Exploratory Factor Analysis of the Lifetime Leadership Inventory 67
Confirmatory Factor Analysis of the Lifetime Leadership Inventory 72
Confirmatory Factor Analysis of the Multifactor Leadership Questionnaire 73
Analysis of Correlations Between the MLQ and the LLI 76
Correlation Analysis Between LLI Items and the MLQ 79
Structural Equation Modeling Analysis 81
Summary 83

5. CONCLUSIONS AND RECOMMENDATIONS 85

Introduction 85
Answers to Research Questions and Contributions to the Literature 86
Implications for Theory 89
Implications for the Education Leader 94
Limitations of the Study 97
Recommendations for Future Research 100
Summary 101

TABLE OF CONTENTS – CONTINUED

Concluding Statement 103

REFERENCES CITED.....104

APPENDICES 112

APPENDIX A: Multifactor Leadership Questionnaire 113
APPENDIX B: Lifetime Leadership Inventory.....116
APPENDIX C: Subject Consent Letter 119
APPENDIX D: Institutional Review Board Approval 122
APPENDIX E: Consent From Dr Bill Schell to use LLI.....124
APPENDIX F: Letter of support from the Northwest Accreditation Commission.....126
APPENDIX G: Path Diagram for the Relationship Between the LLI and MLQ.....128

LIST OF TABLES

Table Page

1. Factor Structure for the LLI 66

2. Descriptive Statistics for Demographic Data 69

3. Descriptive Statistics for the LLI 70

4. Means, Standard Deviations and Factor Loadings for MLQ Items 75

5. Correlations Between the MLQ and LLI Factors 78

6. LLI Items Significantly Correlated to MLQ Factors 80

7. SEM Relationships Between the Seven-Factor LLI and Transformational Leadership Factor 82

LIST OF FIGURES

Figure Page

1. Visual demonstration of the LLI and MLQ variables to be correlated 55

2. Graphic demonstration of tangent and direct effect as found through SEM 93

ABSTRACT

Scant research exists investigating the relationship between antecedent life experiences and the development of transformational leadership behaviors. The purpose of this research was to investigate the relationship between education leaders' life experiences and their effectiveness as transformational leaders. To guide this study, two research questions were formulated: (1) Does a relationship exist between perceived transformational leadership skills and the lifespan factors of K-12 principals? (2) Which lifespan factors investigated for this study have the most influence on perceived transformational leadership skills?

A sample of principals leading schools accredited by the Northwest Accreditation Commission (NWAC) participated in this research by completing both the Lifetime Leadership Inventory (LLI) (Schell, 2010) and the Multifactor Leadership Questionnaire (MLQ) (Avolio & Bass, 2004). The results from these surveys were subjected to Structural Equation Modeling (SEM) analysis, Pearson correlation analysis, exploratory factor analysis, and confirmatory factor analysis. Significant relationships were found to exist between transformational leadership, as defined by the MLQ, and the Relationships with Mentors factor ($r = .224$, $p < .01$) and the Early/Previous Work Experiences factor ($r = .318$, $p < .01$) of the LLI. In descending order, the Exploratory Experiences, Relationships with Parents, Early Leadership Development Experiences, Experience with Sports, and Crucible Experiences factors of the LLI appeared in this study to have limited and tangent influence upon transformational leadership. In addition, validity and reliability of the instruments utilized in this research was established. The significance of this study, as described above, can be found in the validation of the Multifactor Leadership Questionnaire (MLQ) and the Lifetime Leadership Inventory (LLI) with a population of education leaders and in discovering significant relationships between antecedent experiences and transformational leadership. In practice, these findings may assist school leaders and researchers in finding concepts that "maximize the development experiences we put leaders through in training programs" (Avolio, 1994, p. 1577). Outcomes from this research effort may also inform research on leader levels of readiness for leader development (Avolio, 2010).

CHAPTER 1

INTRODUCTION

Background

According to Northouse (2007), two categories of leadership exist—assigned and emergent. Assigned leadership is an individual's attainment of a formal title within an organization. Emergent leadership is the influence a leader has earned from constituents. Management and leadership are often interpreted to refer to the same construct. However, they are different concepts that tend to be integrated with each other to varying degrees (Hunt, 2007). Management traditionally focuses on budgeting, personnel issues, planning, staffing, and is considered under the manager's control (Northouse, 2007). Leadership, on the other hand, emphasizes inspirational and mentoring behaviors to build a moral imperative for change (Kouzes & Posner, 2007). Leadership emphasizes sharing of power, authority, and ownership with constituents (Burns, 1978). Leadership is big business. Organizations around the world spend large amounts of capital annually to educate and develop employees into becoming more effective leaders. Leadership development has incorporated findings from research based on many theories (Avolio, 2010).

An Overview of Prominent Leadership Theories

One of the first theories of leadership to be studied empirically is trait theory, also termed the Great Man Theory. The basis of this theory is that only a few people are born with leadership traits. Trait theory focuses on "capacity, achievement, responsibility, participation, and status" (Bass, 2008, p. 30, electronic version) of the leader. Skills theory, on the other hand, suggests that abilities and skills can be learned as opposed to inherited. Leadership Style theory emphasizes the difference between task-centered leader behavior and relationship-centered leader behavior. Style theory of leadership begins to highlight the importance of follower characteristics to explain leader actions (Northouse, 2007).

Situational Leadership theory departs from the previous theories discussed by hypothesizing that different situations call for various kinds of leadership. This theory suggests an effective leader changes his or her style to meet the needs of different situations (Bass & Riggio, 2006). Contingency theory, as compared to Situational and Style leadership theories, views effective leadership as matching a leader's style, skill, and knowledge to an appropriate environment. Path-Goal theory provides a broader formula for effective leadership by emphasizing how leaders use their skill to motivate constituents in their accomplishment of set goals. Leaders in the path-goal lens provide information, support, rewards, or other important contributions to help meet their stakeholders' needs in accomplishing the organizational goals (Northouse, 2007).

Another well-known leadership model, transactional leadership theory, views effective leadership practice engaging in an exchange of rewards or discipline that is

dependent on the performance levels of followers (Bass, 2008). Bass and Riggio (2006) state that there are three modes of transactional leadership each varying in effectiveness. The modes are labeled Contingent Reward, Management by Exception-Active, and Management by Exception-Passive. The Contingent Reward mode of transactional leadership is seen as fairly effective by Bass and Riggio in motivating constituents to achieve higher levels of performance. The Management by Exception-Active and the Management by Exception-Passive modes of transactional leadership are not seen as being as effective and may actually be counter productive (Bass & Riggio, 2006). Bass and Riggio also define a form of leadership that seeks to help followers become the best they can be professionally and personally—a form of leadership that transforms followers into leaders. The authors state that this form of leadership is the most effective. This theory of leadership is titled Transformational Leadership theory.

Transformational Leadership Theory

Transformational Leadership theory is distinguished from other theories of leadership by its call for long-term visioning, concern for followers' personal development, and the transformation of followers into leaders and moral agents (Burns, 1978). One of the tenets of transformational leadership is the development of followers into leaders. In practice, studies have shown a relationship between preparing "in-house" leaders and level of company success (Bower, 2008). Education researchers Kruger, Witziers, and Sleegers (2007) state the effects "of transformational leadership clearly showed that transformational leadership has a positive impact on teacher motivation, professional growth, and on a variety of organizational conditions, including school

culture, contributing to educational change in schools" (p. 16). Marzano, Waters, and McNulty (2005) found principal transformational leadership has a substantial and direct effect on student achievement. The authors state the correlation between the "behavior of the principal in the school and the average academic achievement of student in the school to be .25" (Marzano et al., 2005, p. 10). The authors continue to explain that a boost in a principal's transforming leadership skill by one standard deviation will result in student achievement increasing by ten percentile points on standardized tests.

Transformational leadership is an inspirational and caring process in which both the leader and follower learn from each other as they progress in their moral development (Burns, 1978). Bass (1995) states that transformational leaders "work to change the organization's constraints" (p. 293). Transformational leaders do not think in one place and time, rather, they construct mental models that bridge the present to the future (Thoms & Greenberger, 1995). Burns (1978) sees transformational leadership as "distinct from mere power-holding and as the opposite of brute power" (p. 4).

Bass (2008) defines transformational leadership as being constructed of four distinct subcomponents titled Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration. Leaders "behave in ways that allow them to serve as role models for their followers" (Bass & Riggio, 2006, p. 6) when they engage in activities defined as Idealized Influence. They act "in ways that motivate and inspire those around them by providing meaning and challenge to their followers' work" (Bass & Riggio, 2006, p. 6) when displaying behavior defined as Inspirational Motivation. The third subcomponent of Transformational Leadership, defined as Intellectual Stimulation, occurs when leaders "stimulate their followers' efforts to be innovative and creative by

questioning assumptions, reframing problems, and approaching old situations in new ways" (Bass & Riggio, 2006, p. 7). Finally, Individualized Consideration contributes to Transformational Leadership behaviors and is characterized by leaders paying "special attention to each individual follower's needs for achievement and growth by acting as a coach or mentor" (Bass & Riggio, 2006, p. 7).

Kouzes and Posner (2007) define transformational leadership in similar fashion to Bass (2008), but subtle differences exist. They suggest all transformational leaders engage in five types of behavior. First, leaders "Model the Way" by publicly defining their values and by living them with integrity. Second, transformational leaders "Inspire a Shared Vision" by knowing their followers' hopes, dreams, and values. Third, transformational leaders "Challenge the Process" by recognizing and supporting innovation. Transformational leaders also "Enable Others to Act" by distributing power to members of the team and encouraging open communication. Gladwell (2008) describes this behavior as reducing the power distance between follower and leader. Finally, Kouzes and Posner state transformational leaders "Encourage the Heart" by knowing, appreciating, and celebrating their stakeholders. Although slight differences exist between the above definitions of transformational leadership, they seek a common purpose—to guide organizations and followers within those organizations on a path to self-actualization (Maslow & Stephens, 2000).

Problem Statement

Transformational leaders are important facets of the public school context because they have a positive effect on student success when engaged in leadership skills like

mentoring to sustain a healthy culture that empowers and develops the potential of individuals (Chin, 2007). Many aspects of transformational leadership have been studied and identified empirically (Antonakis, Avolio, & Sivasubramaniam, 2003). Research has illuminated the behaviors, styles, and effect transformational leaders have on the vitality of organizations, including schools (Bass, 2008). Transformational leadership can be measured and described (Sergiovanni, 2007). However, scant research exists investigating how transformational education leaders develop, (Avolio, 2010). Investigating the lifespan experiences of transformational education leaders may shed light on the origins of how their transformational leadership behaviors may have developed, (Bennis & Thomas, 2002). The seminal transformational leadership theorists believed that exploring the lifespan, or antecedent, experiences of transformational leaders may inform high quality leadership development programs in organizations including schools (Bass, 2008). For example, school districts may be able to use knowledge concerning the relationship between antecedent experiences and transformational leadership to inform leader training, recruitment, and selection. Quantitative studies have shown that antecedent experiences have an influence on the transformational leadership of business leaders (Schell, 2010). However, there is very little empirical evidence available showing a relationship between antecedents and transformational leadership in education leaders (Leithwood & Jantzi, 2005).

Purpose Statement

Schell (2010) suggests that life-span variables from a leader's past have a significant effect on transformational leadership. However, as Leithwood and Jantzi

(2005) state, "few studies have examined the antecedents…of transformational school leadership" (p. 177). Bass (1995) theorizes that familial circumstance, childhood experiences, and cultural influence are some of the areas that should be explored in an effort to illuminate the process of transformational leader formation. Avolio (1994) asks, "what sort of life experiences shaped the leader's development, and the frames of reference he/she uses to interpret his/her roles" (p. 1563)? Thus the purpose of this study was to investigate the relationship between education leaders' life experiences and their effectiveness as a transformational leader.

The question of the influence of life experiences, or antecedent experiences, on leadership is not new. Burns (1978) believed that transformational leadership behaviors are taught in the holistic experience of life. He states that transformational leadership is influenced through:

> the total teaching and learning process operating in homes, schools, gangs, temples, churches, garages, streets, armies, corporations, bars, and unions conducted by both teachers and learners, engaging with the total environment, and involving influence over persons' *selves* and their opportunities and destinies, not simply their minds. (Burns, 1978, p. 448)

According to Burns, the interaction between the leader and his or her life as a whole is what influences transformational leadership behavior.

Schell (2010) was the first to test Burns' (1978) theory regarding the influence of antecedent experiences on transformational leadership using robust, valid, and reliable instruments to assess leaders' life experience in relationship to their transformational leadership behaviors. His study explored the relationships between lifespan factors using the Lifetime Leadership Inventory (LLI) and transformational leadership as operationalized by the Multifactor Leadership Questionnaire (MLQ) (Avolio & Bass,

2004) within a sample of business leaders. The titles of Schell's antecedent experience factors are (1) Nature of Key Relationships, (2) Early Development Experiences, (3) Exploratory Experiences, (4) Early/Previous Work Experiences, and (5) Formal Development Experiences. Results from Schell's study found significant relationships between each of the above factors and transformational leadership. The largest relationship found in Schell's study was between an antecedent factor titled The Nature of Key Relationships (e.g., Mentors) and transformational leadership ($r = .36$, $p < .01$). This study was undertaken to determine if similar relationships are identified with educational leaders.

Research Questions

(1) Does a relationship exist between perceived transformational leadership skills and the lifespan factors of K-12 principals?

(2) Which life span factors investigated for this study have the most influence on perceived transformational leadership skills?

For the purposes of this study, principals' lifespan experiences were operationalized with the Lifetime Leadership Inventory (LLI) (Schell, 2010) and transformational leadership skills were operationalized with the Multifactor Leadership Questionnaire (MLQ) (Avolio & Bass, 2004). The design constructed to answer the above research questions is correlational. The LLI factors and items were examined for relationships with the factors of the MLQ. Structural Equation Modeling (SEM) was used to investigate the robustness of Schell's model for investigating the relationship of principals' life span experiences to their transformational leadership skills. The purpose of correlating the life experiences

with perceived transformational leadership behaviors was to investigate the breadth of leader development experiences during leaders' lifetimes that may influence their displays of transformational leadership behavior. This research filled a gap in the literature that seminal researchers such as Burns (1978), Avolio (1994), Leithwood and Jantzi (2005) have identified as important for better understanding Transformational Leadership theory.

This study used two quantifiable instruments, the above described LLI and MLQ, in answering the proposed research questions. These two instruments were distributed to a sample of K-12 principals from the Northwest Accreditation Commission with the intent of examining the relationships between their antecedent life experiences and their transformational leadership behaviors. The results of this study add to the body of knowledge regarding the development of transformational education leaders and may influence hiring practices and leadership development programs.

Delimitations

This correlational study was intended to investigate relationships between antecedent experiences as defined by the LLI and perceived transformational leadership skills as defined by the MLQ. The study surveyed a random sample drawn from 1,648 K-12 education leaders directing schools in the Northwest region of the United States as defined by the Northwest Accreditation Commission, formerly known as the Northwest Association of Accredited Schools (Northwest Accreditation Commission [NWAC], 2011). The NWAC serves schools in Alaska, Idaho, Montana, Nevada, Oregon, Utah,

and Washington (NWAC, 2011). The results of this study can be generalized to education leaders of K-12 schools that are accredited by the NWAC.

Limitations

One limitation of this study is that the survey may have been an inconvenience for the participants, resulting in reduced participation and a biased sample. Principals who participated in this study may have a higher interest in leadership research and therefore a greater motivation to implement transformational leadership practices than non-participating administrators. Third, this study used an online survey to collect data from the population. Some participants may have been more comfortable using an online survey than others, allowing for bias in the sample of returns. Fourth, the instruments used to collect data in this study relied on participants to self-report their perceptions and may have in some cases elicited responses that tended to over or underestimate a true representation of a respondents' antecedent experiences and transformational leadership skills.

Definition of Terms

Below, the reader will find definitions for important terms discussed in this research. Defining terms is necessary to facilitate a productive investigation into aspects of leadership and leadership development. The definitions of terms used in this study are as follows:

Leadership:

> The nature of the influencing process—and its resultant outcomes—that occurs between a leader and followers and how this influencing process is

> explained by the leader's dispositional characteristics and behaviors, follower perceptions and attributions of the leader, and the context in which the influencing process occurs. (Antonakis, Cianciolo, & Sternberg, 2004, p. 79-86, electronic version).

Transformational Leadership:

> Transformational leadership is the shaping, altering, and elevating of the motives, values, and goals of followers through a teaching/learning relationship that exists between leaders and followers. Through transformational leadership, persons holding separate interest unite "in the pursuit of 'higher' goals, the realization of which is tested by the achievement of significant change that represents the collective or pooled interests of leaders and followers" (Burns, 1978, p. 425-426).

Lifetime Leadership Inventory (LLI):

The Lifetime Leadership Inventory (LLI) is a quantifiable instrument developed and validated by Schell (2010) to assess antecedent life experiences and the relationship of these experiences to transformational leadership. Items for the LLI are assessed using a five point Likert scale. Results from exploratory and confirmatory factor analysis for this study identified 45 items yielding seven interpretable factors. These factors are (1) Early Leadership Development Experiences, (2) Relationships with Mentors, (3) Relationships with Parents, (4) Exploratory Experiences, (5) Crucible Experiences, (6) Early/Previous Work Experiences, and (7) Experience with Sports.

Multifactor Leadership Questionnaire (MLQ):

The MLQ is a quantifiable survey created by Avolio and Bass (2004). The MLQ differs from other instruments assessing transformational leadership in that the MLQ measures the level of transformational leadership expressed by the participant in addition to the other styles of leadership (e.g., Contingent Reward

Leadership), allowing for a more comprehensive description of leadership in action (Bass, 2008). The MLQ consists of 45 items assessing transformational, transactional, and passive/avoidant practices and outcomes. The instrument utilizes a five-point Likert scale. The MLQ was validated during its original design (Bass, 2008) and has been revised and further validated over a span of more than 20 years (Avolio, Bass, & Yung, 1999).

Structural Equation Modeling (SEM):

> Structural equation modeling (SEM) refers to a family of techniques, including path analysis, confirmatory factor analysis, structural regression models, autoregressive models, and latent change models...that utilizes the analysis of covariances and means to explore the relationships among a set of variables and to explain maximum variance within a specified model. (McCoach, 2003, p. 36).

Confirmatory Factor Analysis (CFA):

Confirmatory Factor Analysis (CFA) is a complex hypothesis testing technique in which latent variables and their relationship to each other are identified in groups termed factors (Field, 2005).

Exploratory Factor Analysis (EFA):

Exploratory Factor Analysis (EFA) is used to "determine underlying clusters or groupings of questions that could be explained by a few factors" (Gliner & Morgan, 2000, p. 301).

Antecedent Life Experiences:

Antecedent life experiences are previous experiences, or conditions of existence, pertaining to a participant in this study. Antecedent life experiences are defined, for this study, by the LLI.

Significance of the Study

This study is significant to educational researchers and practitioners because of three central outcomes concerning transformational leadership and its relationship to antecedent experiences in education leaders. First, the Lifetime Leadership Inventory (LLI) was found, through this study, to be a valid and reliable instrument for exploring the antecedent experiences of educational leaders from the Northwest Accreditation Commission (NWAC). The second significant outcome of this study was the validation of the MLQ as a reliable instrument for assessing transformational leadership behavior in education leaders of the NWAC. The advantage in using the MLQ in education research over other instruments measuring transformational leadership (e.g., Leadership Practices Inventory) is the ability of the MLQ to measure leadership behaviors other than transformational ones. These leadership behaviors include Contingent Reward leadership, Management by Exception-Active leadership, and Passive/Avoidant absence of leadership.

Finally, this study is significant because it was able to shed light on two research questions exploring the development of transformational leadership in education leaders. To answer the first research question, this study found that relationships do exist between perceived transformational leadership skills and the lifespan experiences of principals in the sample. To answer the second research question, this study found relationships between individual items of the LLI and the Transformational Leadership factor of the MLQ.

These three discoveries are significant because of the implications for educational research and for the practice of educational leadership. For education researchers, the

LLI can supply those interested in developing the literature on the relationship between leadership and antecedent experience with valuable information. The seven LLI factors offer one path to gleaning insights into education leaders' life experiences. The individual factors are reliable for examining the latent constructs. This study demonstrated that the LLI is able to provide educational researchers with a quantifiable instrument in examining antecedent experiences of participants. For leaders in the field, this study provides insight into areas of experience that can inform leader selection, recruitment, and training. The relationships found in this study between antecedent experiences and transformational leadership can be used in creating in-house leadership development programs. The individual items of the LLI related to transformational leadership can be manipulated to assist in selection and recruitment of transformational leaders.

Summary

Transformational leaders do not "simply do the right thing, or what's prescribed by the rules and procedures. Rather, they do what's right even when it goes against established rules and procedures" (Avolio, 1994, p. 1562). Understanding how education leaders develop transformational leadership skill "requires an examination of their family background, early childhood development, education, and role models, along with the social and political learning experiences" (Bass, 2008, p. 1964, electronic version). Few, if any, studies have comprehensively examined the antecedents to transformational leadership in education leaders. Thus, the purpose of this research was to investigate the relationship between education leaders' life experiences and their effectiveness as a

transformational leader. To guide this study, two research questions were formulated: (1) Does a relationship exist between perceived transformational leadership skills and the lifespan factors of K-12 principals? (2) Which lifespan factors investigated for this study have the most influence on perceived transformational leadership skills?

To answer these research questions, a sample of principals leading schools accredited by the Northwest Accreditation Commission (NWAC) participated by completing both the Lifetime Leadership Inventory and the Multifactor Leadership Questionnaire. The results from these surveys were subjected to Structural Equation Modeling (SEM) analysis, Pearson correlation analysis, exploratory factor analysis, and confirmatory factor analysis. Significant relationships between constructs were determined in addition to establishing validity and reliability of the instruments utilized in this research.

The significance of this study, as described above, can be found in the validation of the MLQ and the LLI with a population of education leaders and in discovering significant relationships between antecedent experiences and transformational leadership. In practice, these findings may assist school leaders and researchers in finding concepts that "maximize the development experiences we put leaders through in training programs" (Avolio, 1994, p. 1577). This is important, as it has been shown that leaders who increase their skill by one standard deviation have an effect on student achievement by ten percentile points (Marzano, et al., 2005). Data from this study may contribute to maximizing education leadership training in order to give participants an avenue for developing their skill by one standard deviation (Avolio, 1994, 2010). Outcomes from this research effort may also inform research on leader levels of readiness for leader

development (Avolio, 2010). Information gathered from this study may assist in the development of a K-12 leadership-training program designed for students (Avolio, 2010). A K-12 leadership program may support early leadership skill intervention and reduce leadership skill remediation (Avolio, 2010). Knowing the effect on leadership skill of lifespan experiences may assist schools in leveling the playing field for at-risk students (Epstein, 1996).

CHAPTER 2

REVIEW OF LITERATURE

Introduction

Transformational leaders use empowering leadership to promote healthy cultures and empower followers in becoming leaders that help students to succeed (Sergiovanni, 2007). Many aspects of transformational leadership have been studied and identified with empirical research (Antonakis, Avolio, & Sivasubramaniam, 2003). Scant research exists, however, investigating the life-long development of transformational leaders, (Avolio, 2010). Investigating the antecedent experiences of transformational educational leaders may highlight important aspects of their maturation (Bennis & Thomas, 2002), informing leader recruitment, development and selection (Bass, 2008). The results of this study fill a gap in the body of knowledge regarding the development of transformational leadership skill as can be seen in the following review of related literature.

Review of Related Literature

The topic of leadership has been a popular subject for discussion and research since ancient times. From an academic perspective, there have been tens of thousands of empirical studies completed during the past century on leadership (Bass, 2008). This review will begin by looking at leadership from a broad perspective and end by focusing on the proposed research investigation—exploring the relationship between antecedent experiences and transformational leadership in a population of regional education leaders.

This review will begin by comparing and contrasting leadership and management. Then, a definition of leadership will be established to serve as a common understanding between prior studies and this current research effort. Third, the importance of leadership will be highlighted. Fourth, general leadership theories and a demonstration of their progressive development will be discussed. Following, methods to measure leadership will be detailed. Fifth, studies promoting the effectiveness of transformational leadership will be explored. Then, transformational leadership in education will be described, opening the door to a more focused discussion on studies highlighting the relationship between antecedent experiences and the development of transformational leadership. Finally, this chapter will conclude by reviewing the need for knowledge on lifetime experiences and their effect on developing transformational educational leaders.

Leadership vs. Management

Leadership and management are big business (Avolio, 2010). Organizations around the world spend enormous amounts of capital annually to educate and develop employees into becoming better leaders and managers. Leadership and management development has incorporated findings from empirical research based on many theories as cited in Chapter 1. In common discussion, management and leadership are often interpreted to mean the same thing (Bass, 2008). However, most scholars agree that management and leadership are distinct concepts that have some overlap in purpose (Bass & Riggio, 2006; Kotter, 1990). Management traditionally focuses on budgeting, personnel issues, planning, staffing, and is considered under the manager's control. Schell (2010) states that the focus of management is to maintain efficiency and safeguard

"against disruptive change" (p. 15). Mintzberg (2009) characterizes management as unattached strategizing and planning. In contrast, leadership emphasizes release of control through sharing power, authority, control and ownership (Kouzes & Posner, 2007). Authentic leadership promotes inspirational and mentoring behaviors that build moral imperative for change (Burns, 1978). Fullan (2006) summarizes the discussion nicely by stating management is concerned with maintaining the status quo, and leadership is consumed with creating change.

Still, some scholars see that leadership and management are not mutually exclusive. Mintzberg (2009) states leadership and management are different in essence, yet symbiotic in practice. They are, according to author, two sides of a single coin. Mintzberg relates, "management without leadership is disheartening or discouraging. And leadership without management is disconnected" (2009, p. 12). Understanding of the differences between leadership and management is important because of its relationship to the nature of transformational leadership in comparison to other styles of leadership (Schell, 2010). The practice of leadership is often thought of as a linear range, with transformational leadership being the most effective and at the top of the range — while transactional and passive/avoidant styles of leadership fall in descending order to the bottom of the range. Some authors refer to this range as the Full Range of Leadership (FRL) model (Bass, 2008). In education, high quality school leadership makes full use of the FRL. It is most effective to engage in transformational behaviors in school leadership. However, sometimes it is necessary to engage in transactional behavior. The best school leaders engage in all leadership behaviors described by the Full Range of Leadership model, but engage in transformational leadership behaviors most of the time,

(Sergiovanni, 2001). Bass and Riggio (2006) imply that the difference between transformational leadership and transactional leadership is similar to the difference between leadership and management, both of which are very important to school administration (Fullan, 2006).

Definition of Leadership for this Study

As has been illustrated in the above section, leadership is a broad topic seen from many different points of view. It is a phenomenon that has been examined extensively by social science researchers. The intense focus on leadership is not surprising. Leadership is a universal concept that is evident in every culture across the globe. Since ancient times, leadership has been noted in the writings of the classical authors, emphasizing leadership as necessary for effective societal organization and success (Bass, 1990). Leadership appears to be identifiable in the moment in which it is occurring, yet difficult to define on paper. Leadership is complex by nature, inhibiting the creation of a precise and universally accepted definition of the term (Antonakis, Cianciolo, & Sternberg, 2004). Many different researchers have developed their own profiles of leadership to help describe what is necessary in their time and historical context, and the search to define the concept of leadership is not new. Empirical efforts to define leadership have been evolving for more than a century (Bass, 2008).

Although many definitions of leadership exist, a single and comprehensive definition must be applied here to guide this study in an organized manner. This project seeks to incorporate a methodology similar to that employed by Schell (2010) in exploring the relationship between antecedent experiences and transformational

leadership. It would be prudent here to discuss Schell's approach to operationalizing the term leadership. In his study, Schell (2010) adopted Antonakis, et al.'s (2004) general definition to guide his work. Schell (2010) stated the following definition "is consistent with those commonly used in investigations of transformational leadership" (p. 11). The definition states leadership is:

> The nature of the influencing process—and its resultant outcomes—that occurs between a leader and followers and how this influencing process is explained by the leader's dispositional characteristics and behaviors, follower perceptions and attributions of the leader, and the context in which the influencing process occurs. For us, a necessary condition for effective and authentic leadership is the creation of empowered followers in pursuit of a moral purpose, leading to moral outcomes that are guided by moral means (Antonakis, et al., 2004, p. 79-86, electronic version).

This definition is consistent with and comprehensively includes the central themes concerning leadership disseminated by Sergiovanni (2007), Fullan (2006), Kouzes and Posner (2007), and Burns (1978). In light of its comprehensive breadth and use in a similar study, the above definition of leadership will be used for this study as well. At this point, leadership has been discussed and defined. Following is a discussion on the importance of studying leadership.

Importance of Studying Leadership

The study of leadership is an important venture that has an effect upon many aspects of individual and organizational wellbeing. Bennis (2004) suggests that the death of tens of millions of innocent human beings at the hands of evil pseudo-leaders during World War II is a reminder of why we study leadership. He further states we can only guide, mentor, and develop authentic leaders when we fully understand them through

empirical means. In short, Bennis relates the quality of life, if not its actual existence, depends upon the study of leadership.

In business, for example, studying leadership is important because it has an effect on the bottom line. At the beginning of the 20th century, Taylor (1911) began studying leadership in business to improve profits for industry and forces of labor. Through his studies on scientific management, he found purposeful leadership helps laborers attain their maximum potential during the workday. At Western Electric, Mayo (1960) found humanizing the management/labor relationship in business leads to higher quality work, more production, and an invested labor force that achieves higher levels of individual growth through his studies on leadership. In education, studying leadership is important because it has an effect on school and individual student success. Marzano, et al. (2005) state a direct relationship exists between student achievement and school leadership. They propose improving educational leadership by one standard deviation will improve student achievement by 10 percentile points on average. Marzano, et al. seek to improve educational leadership by studying the characteristics of successful principals.

As demonstrated above, studying leadership and its development is important. Leaders have unique potential to destroy organizations, or to transform them into something they never thought was possible. Improving leadership through empirical means can improve the lives of people on a global scale (George & McLean, 2007; Maak and Pless, 2009). The study of leadership begins with having a general understanding of leadership theory.

General Leadership Theories

One of the first theories of leadership to develop is trait theory, also termed the Great Man Theory (Bass, 2008). The basis of this theory is only a few people are born with leadership traits. Trait theory focuses on "capacity, achievement, responsibility, participation, and status" (Bass, 2008, p. 30, electronic version) of the leader. Skills theory, on the other hand, suggests that abilities and skills can be learned as opposed to inherited. Leadership Style theory emphasizes the difference between task-centered leader behavior and relationship-centered leader behavior. Style theory of leadership begins to highlight the importance of follower characteristics to explain leader actions (Northouse, 2007).

Situational leadership theory departs from the previous theories discussed by hypothesizing different situations call for various kinds of leadership. This theory suggests that an effective leader changes his or her style to meet the needs of different situations (Bass & Riggio, 2006). Well-known examples of situational leadership theories are Contingency and Path-goal theory. Contingency theory, as compared to situational and style leadership theories, views effective leadership as matching a leader's style, skill, and knowledge to an appropriate environment. Path-goal theory provides a broader formula for effective leadership by emphasizing how leaders use their skill to motivate constituents in their accomplishment of set goals. Leaders in the path-goal lens provide information, support, rewards, or other important contributions to help meet their stakeholders' needs in accomplishing the organizational goals (Northouse, 2007).

Transactional Leadership Theory

Another competing leadership model, transactional leadership theory, views effective leadership practice as an exchange of rewards or discipline that is dependent on the performance levels of followers (Bass, 2008). Bass and Riggio (2006) state there are three modes of transactional leadership within their Full Range of Leadership (FRL) framework. The modes are labeled Contingent Reward, Management by Exception-Active, and Management by Exception-Passive. The Contingent Reward mode of transactional leadership is seen as fairly effective in motivating constituents to achieve higher levels of performance. The Management by Exception-Active and the Management by Exception-Passive modes of transactional leadership are selfish styles of leadership. They are not seen as effective and may actually be counter productive (Bass & Riggio, 2006).

Transformational Leadership Theory

Transformational leadership theory is distinguished from other theories of leadership by its call for long-term visioning, selfless concern for followers' personal development, and the transformation of followers into leaders and moral agents (Burns, 1978). One of the tenets of transformational leadership is the development of followers into leaders. Studies have shown a relationship between in-house leaders that have been promoted through the company ranks and level of company success (Bower, 2008; Collins, 2001). Kruger, Witziers, and Sleegers (2007) state the effects "of transformational leadership clearly showed that transformational leadership has a positive impact on teacher motivation, professional growth, and on a variety of organizational

conditions, including school culture, contributing to educational change in schools" (p. 16). Marzano, et al. (2005) found that principals employing transformational leadership behaviors have a substantial and direct effect on student achievement. They state that the correlation between the "behavior of the principal in the school and the average academic achievement of student in the school to be .25" (p. 10). They also emphasize that a boost in a principal's transformational leadership skill by one standard deviation will result in student achievement increasing by ten percentile points on standardized tests.

Transformational leadership is a selfless inspirational process in which both the leader and follower learn from each other as they progress in their moral development (Burns, 1978). Bass (1995) states that transformational leaders "work to change the organization's constraints" (p. 293). Transformational leaders do not think in one place and time (Thoms & Greenberger, 1995). Burns (1978) sees transformational leadership as "distinct from mere power-holding and as the opposite of brute power" (p. 4).

Kouzes and Posner (2007) found all transformational leaders engage in five types of behavior. First, leaders model leadership by publicly defining their values and by living them with integrity. Second, transformational leaders inspire their colleagues and create a shared vision by knowing their followers' hopes, dreams, and values. Third, transformational leaders challenge the process and create change by recognizing and supporting innovation. Transformational leaders enable others to lead by distributing power to members of the team and reducing the power distance between follower and leader (Gladwell, 2008). Finally, Kouzes and Posner (2007) suggest that transformational leaders encourage stakeholders by knowing, appreciating, and celebrating them.

Transformational leaders behave in ways that allow them to serve as role models (Bass & Riggio, 2006). They motivate and inspire by providing meaning and challenge to their followers' work. According to the authors, transformational leaders stimulate creative and innovative efforts by analyzing assumptions, restructuring problems, and approaching old problems in new ways. Finally, leaders give attention to each follower's need for growth and success by acting as a mentor.

Distinguishing Attributes of Transformational and Transactional Leadership

Transformational leadership behaviors and the Contingent Reward aspect of transactional leadership are active forms of leading and both can be effective. In fact, Sergiovanni (2001) states the most effective transformational leaders employ both transactional and transformational leadership styles depending upon the situation. Generally, research has identified transactional leadership as being effective when an organization is not in need of much change in vision, values, or culture (e.g., Hall & Hord, 2001; Sergiovanni, 2007). When second order change is required, however, research has supported transformational leadership as being most effective (Fullan, 2006).

The Full Range Leadership Model

Transformational leadership is only one part of a comprehensive leadership framework developed by Bass (2008) known as the Full Range of Leadership (FRL) model. In addition to transformational leadership, the FRL structure includes transactional management practices and identifies absence of leadership in laissez-faire

behaviors. Under this model, transactional leaders use rewards and punishments to gain follower compliance. Bass's (2008) definition of transactional leadership has two factors. The first is Contingent Reward. When leaders engage in Contingent Reward leadership, a contract is developed between leader and subordinate. The employee's activities are actively monitored and guided by the leader with proactive advice. When the terms of the contract are completed, the subordinate will receive a reward, usually in the form of wage, praise, or promotion. If, however, the subordinate fails to meet the terms of the contract, he or she is penalized. Contingent Reward leadership can be effective if it is employed with consistency.

The second category of transactional leadership as defined by the Full Range of Leadership (FRL) model is Management by Exception (Active and Passive). This form of management is more passive than Contingent Reward transactional leadership. Under this style of management, employees that follow through on their end of the bargain are given little feedback or guidance, and in extreme cases, completely ignored. When, however, followers fail to meet standards the leader reacts, often with negative feedback. This style of leadership is defined on a spectrum and becomes more ineffective the further the behavior falls away from transformational leadership on the FRL range.

The Full Range of Leadership (FRL) model is a comprehensive look at leadership behavior (Schell, 2010). All leaders display behaviors that span the FRL model. Effective leaders, however, display more transformational leadership behaviors more of the time than ineffective leaders (Bass & Riggio, 2006).

Progressive Development of Leadership Concepts in Practice

Taylor (1911) was seminal in his scientific studies of leadership. Taylor performed quantifiable time and motion industrial research to demonstrate both the company and the employee could profit from defining high quality leadership. Taylor was the first industrial scientist to study differences that occur in production when each employee's "personal ambition is stimulated" (1911, p. 674, electronic edition). Unbeknownst to Taylor at the time, this aspect of leadership would become recognized as an important component of transformational leadership (Bass & Riggio, 2006).

Mayo (1960) built upon Taylor's work in his studies at Western Electric during the late 1920's and early 1930's. Mayo's work led to the popularization of the term "Hawthorne Effect". His research was fairly complex. Mayo found work place morale, productivity, and efficiency are linked to a complex internal and external equilibrium of conditions that are uniquely human. At the time of Mayo's research, laborers were managed as if they were an extension of machinery—a gear to be driven hard at a consistent pace and then periodically replaced. Through data analysis, Mayo demonstrated that the worker was not a machine that is productive if it is just greased properly every now and then. Mayo proved with empirical evidence that the employee is a social being, finding motivation in identifying with a group and being part of something of value. He discovered that part of being an effective leader is being responsible for building a culture of concern, care, and community. A central tenet of Mayo's theory identified that effective leaders take responsibility for developing social unity. The concept of social unity examined from the perspective of a leadership role suggests that leaders create change by helping employees see the value of the work upon which they have embarked. Mayo's work found that leaders facilitate organizational and individual

growth by being multifaceted and defining success from many different angles. In particular, he made public that the relationship between communicating, caring, and including the employee in the vision creation process is key to organizational and personal success.

Maslow (1950) built upon Mayo's Human Relations theory by displaying a framework from which the needs of human beings could be viewed as hierarchical. In the hierarchy, basic needs must be satisfied first, and are at the bottom of the structure. The need for self-actualization is at the top of human purpose and can be pursued when the other lower needs are met. In his work, Maslow provided a foundation for understanding human behavior that is applied by a number of leadership theorists to explain employee motivation (Schell, 2010).

McGregor (1957) contributed to the emerging theories developed by Mayo in the early 1930's and Maslow's hierarchy of needs by designing Theory Y to incorporate into practice as opposed to Theory X. According to McGregor, Theory X guided common management practices for the first 50 years of the twentieth century. Essentially, Theory X claims the average man is indolent, ambitionless, selfish, resistant to organizational change, and readily duped. In light of man's supposed nature, Theory X claims management must use any means necessary to command and control employees if the organization's goals are to be met. At first, McGregor promoted Theory X as accurate. Then, McGregor's paradigm began to change because of findings such as Mayo's at Western Electric — that man's inherent nature is not to be blamed for the poor disposition of industrial employees. Rather, it is the "nature of industrial organizations, of management philosophy, policy, and practice" (McGregor, 1957, p. 44) that causes

labor apathy. Industry at the time believed it could only motivate employees based on the lowest levels of physiological and safety human needs.

In light of increasing social science research, McGregor (1957) developed Theory Y of management. Theory Y sates the responsibility of organizational leadership is to create opportunities, remove obstacles, nurture employee potential, encourage growth, and to mentor subordinates. In sum, "Theory X places exclusive reliance upon external control of human behavior, while Theory Y relies heavily on self-control and self-direction" (McGregor, 1957, p. 44). McGregor explains Theory X is similar to central management treating employees like children, and Theory Y is similar to treating employees like mature adults.

Herzberg (1968) expanded upon McGregor's theory with his two-factor Motivation-Hygiene theory. Herzberg states there is a difference between true long-term motivation and short-term satisfaction of lower needs. His main thesis suggests that two different factors have an effect on employee attitude. The first set of conditions is labeled Hygiene Factors. These include variables such as company policy, levels of salary, administration, supervision, work relationships, status, and security. In essence, these factors are part of transactional leadership theory, which suggests that the leaders must be aware of ensuring that the animalistic needs of employees are met as well as the occurrence of momentary job satisfaction. The second factor in Herzberg's (1968) theory is labeled Motivators. This category incorporates higher needs of mankind and sustains motivation for the employee to work harder in the job. Herzberg explains the main function of leadership is to incorporate Motivators into job design such as self-scheduling, resource control, personal accountability, and opportunities to undertake

special tasks in which the employee can develop an expertise. He suggests that motivation is developed through vertical job loading as opposed to horizontal job loading. Horizontal job loading simply adds more meaningless work onto the employee's plate and does not promote motivation.

Burns crystallized the building knowledge on effective leadership by introducing Transformational Leadership theory in his seminal work titled *Leadership* (1978). Burns states in his work that authentic leadership is distinct from mere power-holding and is opposite of brute power. Transforming leadership is complex and potent. The transforming leader looks for potential motives in followers, seeks to satisfy higher needs, and engages the full person of the follower. The result is a relationship of mutual stimulation and elevation that converts followers into leaders and may convert leaders into moral agents. Transformational leadership binds leader and follower together with an enduring purpose. Together, they pursue higher achievements for themselves and for the organization.

Avolio and Bass (2002) advanced the Transformational Leadership theory in the late 1980's and early 1990's by stating transformational leadership is an expansion of transactional leadership. They claimed effective leaders display many different kinds of behavior in practice that range from laissez-fair (absence of leadership) at the bottom, to transformational leadership at the top. Avolio and Bass state empirical research shows effective leaders display more transformational leadership behaviors with higher frequency than less effective leaders. A major contribution to a deeper understanding of factors explaining transformational leadership was Bass and Avolio's development of the Multifactor Leadership Questionnaire (MLQ). The instrument has been used to study

transformational, transactional, and laissez-fair behaviors against many variables in thousands of empirical studies including the realm of educational leadership (e.g., Chin, 2007; Stewart, 2006).

Kouzes and Posner (2001) built upon Transformational Leadership theory by highlighting the concept that people can learn to be transformational leaders. The scholars developed and validated their own quantitative instrument to measure transformational leadership titled the Leadership Practices Inventory (LPI). After thousands of studies and surveys, Kouzes and Posner (2001) found high quality "leadership is an observable, learnable set of practices" (p. 1). Being able to perform quantitative studies concerning transformational leadership opened many doors in studying the topic. A discussion of the two most commonly utilized instruments in assessing transformational leadership follows.

Assessing Transformational Leadership Skills

Two instruments are most commonly used for researching transformational leadership. The first is the Leadership Practices Inventory (LPI) developed by Kouzes and Posner (1988). The LPI is a 30-item instrument developed by Kouzes and Posner. The authors coded responses from over 1,000 participants about their personal best leadership. They found when leaders are at their personal best in a leadership situation they engage in five behaviors categorized as Challenging the Process, Inspiring a Shared Vision, Enabling Others to Act, Modeling the Way, and Encouraging the Heart. Each of the five identified behaviors is quantitatively measured on the LPI. A total

transformational leadership score can be obtained by combining all the scores from each of the five LPI scales (Kouzes & Posner, 2001).

Kouzes and Posner (2001) incorporated several methods in establishing validity with the Leadership Practices Inventory (LPI). First, the LPI is continually analyzed for internal reliability. Posner (2009) recently reported the Cronbach's alpha coefficients for the LPI five scales and found the coefficients to range between .73 and .88. The author states "Cronbach alpha coefficients greater than .70 are generally regarded as very good" (Posner, 2009, p. 5). Second, the Kouzes and Posner (2001) state the Leadership Practices Inventory (LPI) has face validity that is gained through continual expert review. Finally, Kouzes and Posner (2001) state the LPI has "predictive and/or concurrent validity" (p. C-2) which is shown by its relationship with several other instruments that measure credibility, work-group performance, team structure, commitment, employee satisfaction, and influence (Posner, 2007).

The second instrument commonly used to explore transformational leadership is the Multifactor Leadership Questionnaire (MLQ). The Multifactor Leadership Questionnaire (MLQ) was developed by Avolio and Bass (2004) and has been completed by more than fifteen thousand participants. In the past twenty years, the MLQ has been used to measure transformational leadership in American companies, Russian companies, Korean institutions, and organizations from New Zealand. The instrument has been used to measure transformational leadership in the military and the private sector. The instrument has been found to have several models that are valid and reliable. Some of common factor models for the MLQ include the four-factor model, nine-factor model, and three-factor model. According to Avolio and Bass (2004), five categories of

behavior are related to transformational leadership and include Idealized Influence (Attributes), Idealized Influence (Behaviors), Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration. The Multifactor Leadership Questionnaire (MLQ) contains three categories that are related to transactional leadership. These transactional categories include behaviors defined as Contingent Reward, Management-by-Exception (Active), and Management-by- Exception (Passive). The MLQ measures one category of behavior that is so passive, it is considered to demonstrate a total lack of leadership. This category of behavior is titled Laissez-Faire. The MLQ has a total of 45 items rated on a five point Likert scale (0= Not at all, 1= Once in a while, 2= Sometimes, 3= Fairly often, and 4= Frequently, if not always). The Multifactor Leadership Questionnaire (MLQ) was validated during its original design (Bass, 2008) and has been revised and further validated over a span of more than 20 years (Avolio, Bass, & Young, 1999). Bass and Riggio (2006) state "the MLQ scales have demonstrated good to excellent internal consistency, with alpha coefficients above the .80 level for all MLQ scales" (p. 22). The correlation coefficients range in rate-rerate consistency across all MLQ scales from a high of .74 to a low of .45.

The MLQ differs from the Leadership Practices Inventory. The instrument measures the level of transformational leadership expressed by the participant in addition to the other levels of leadership as previously discussed, allowing for a more comprehensive description of leadership in action (Bass, 2008). This study proposes to use the MLQ to explore the relationship between transformational leadership and antecedent life experiences of educational leaders because of the MLQ's comprehensive scope and use in similar studies as stated in above sections.

Research Supporting Transformational Leadership as Effective

Transformational leadership in education is effective (Leithwood & Jantzi, 2008). Transformational Leadership in schools works "because it fits better the way in which schools are organized and work and because of its ability to tap higher levels of human potential" (Sergiovanni, 2007, p. 72). Avolio and Bass (2002) explain that for the past thirty years "research has supported the idea that transformational leadership is more effective than transactional leadership in generating the extra effort, commitment, and satisfaction of those led" (p. 128, electronic version). Transformational leaders sustain a healthy culture by mentoring, empowering, and developing the potential of individuals (Sergiovanni, 2007). Numerous studies have supported transformational leadership as being effective in times of change. Bass (2008), for example, cites many examples of transformational leaders successfully changing organizations. These examples include Mary Kay Ash of Mary Kay Cosmetics, Thomas Watson of IBM, and Dwight Eisenhower in his role as General of the United States Army. Transformational leadership was found to be effective in sales (Jolson, Dubinsky, Yammarino, and Comer, 1993). Jolson et al. state "transformational leadership in sales management is…appealing because it…improves the performance of subordinate sales managers and salespeople beyond typical expectations" (p. 105).

Leithwood and Jantzi (2008) found transformational leadership has a significant effect on teacher satisfaction and organizational health. In addition, they found transformational leadership to be related to student achievement. For example, a dissertation study by Blatt (2002) found a significant relationship between

transformational leadership and school climate (r= .569, p< .01). Blatt's findings are further supported by Marzano, et al.'s (2005) research which found a correlation coefficient of .25 exists between transformational leadership practices and student success. As was the case with Marzano et al.'s research, Chin (2007) also found a significant effect size between transformational leadership as defined by the Multifactor Leadership Questionnaire (MLQ) and student achievement (r= .487, p< .001).

The research discussed suggests that effective leaders employ transformational leadership behaviors very frequently. However, Avolio and Bass (2002) also hypothesize that effective leaders employ many different styles of leadership ranging from transformational to transactional when necessary. Likewise, Kouzes and Posner (2001) state that highly effective leadership is not the sole privilege of a select few and that anyone can become a transformational leader. How does this happen? How do transformational leaders develop? Part of the answer can be found in lifetime experiences.

Previous Studies Investigating Antecedent Experiences and Leadership

Bass (1995) theorized familial circumstance, childhood experiences, cultural influence, and ethnic background are some of the areas that should be explored in an effort to understand the process of transformational leader formation. A qualitative study of leaders spanning several generations conducted by Bennis (2004) found that transformational leaders emerge after some defining experience or cultural shock, termed a crucible experience. He states that transformational leaders develop four competencies essential to effective leadership within these experiences: "adaptive capacity, the ability

to engage others through shared meaning, a distinctive voice, and integrity" (p. 334, electronic version).

Muldoon and Miller (2005) explored antecedent experiences of industry managers using a qualitative research method. The authors coded interview data, and found excellent managers displayed many transformational leadership behaviors. These included aligning employee goals and promoting pathways for followers to become leaders. The researchers found a relationship between many antecedent experiences and being defined as an excellent manager, such as having a positive childhood rich with experiences and having a role model involved in business. Participating excellent managers in the study also recalled having performance deficiencies corrected by others in their childhood with constructive, but positive, criticism. Excellent managers stated early career experiences were influential. Participants also cited early career crises that quickly developed into career opportunities as antecedent experiences related to their success as a leader.

Wong (2004) utilized a qualitative research method to examine the effects of wartime experience on the development of transformational leadership skills in United States Army junior officers. His study revealed that junior officers develop an increase in adaptability to constant change from modern combat experience. Atwater, Dionne, Avolio, Camobreco, and Laue (1999) studied the development of military leadership by tracking over 200 cadets at a military collegiate academy. The purpose of their study was to explore the leader developmental process and to determine if leader "emergence and effectiveness could be predicted by individual characteristics assessed early in an individual's development" (p. 1544). The authors collected biographical, personality,

self-esteem, hardiness, moral development, and physical fitness data in efforts to identify factors influencing the emergence of leadership over time. The researchers found that a significant relationship exists between physical fitness (r=.22, p<.01), prior influences (r= .24, p<.01) and succeeding as a leader over time.

Howard and Bray (1988) performed a 30-year mixed methods study of leaders at AT&T. As part of their study, the authors explored antecedent experiences to evaluate relationships to leadership success. They found parental education, parental career choice, and level of adulthood independence from parental control were related to later success. The largest significant correlation to leadership success was found in the antecedent experience of familial independence (r= -.24, p< .05). The smallest antecedent correlation to leadership success was level of education (r= .14, p< .05).

McCauley, Moxley, and Van Velsor (1998) state seeing leadership development as a single event is inadequate. The authors found that leadership development occurs over time and must be understood "in a longer time frame, requiring several elements to support it and having different outcomes in different contexts" (p. 3). In referencing McCauley, et al. (1998), Schell (2010) states these experiences can be broken into formal (e.g. skill-based training, 360 degree leadership profiles, etc.) and informal (e.g. job assignments, crucible moments of hardship, etc.) experiences.

History of Transformational Leadership in Education

As stated previously, Transformational Leadership theory had its birth in political science, with Burns striving to find the qualities of transcending leadership through phenomenological studies of historical leaders (Leithwood & Jantzi, 2005). The business

world quickly grasped the Transformational Leadership paradigm in the 1980's. Bass became the leading researcher of the model's effects on corporate success. In the early 1990's, the educational leadership community began to study the effects of transformational leaders on schools and student success (Leithwood, 1992). Part of the educational community's desire to explore the effects of Transformational Leadership was to move away from Hallinger's (2003) notion of Instructional Leadership. Hallinger writes that in the early 1980s, models and theories describing Instructional Leadership began to be developed from the empirical research on Effective Schools. Effective Schools research found that authoritative leadership from the principal with a focus on curriculum and instruction was effective in helping children in poor urban communities to achieve academic success. This directive model, described by Sergiovanni (2001) as the Traditional Management model, guided much of the professional discourse concerning successful school leadership in the1980s and early 1990s. The Instructional Leadership model soon became the standard philosophy disseminated by school administration graduate school programs.

During the 1990's a paradigm shift began to take place within the educational leadership community in an effort to find an effective model in dealing with the chaotic aspects of education that were not being addressed by the Instructional Leadership model as described above. Some of the nonlinear (i.e., chaotic) aspects of education include collaborating with stakeholders within a pluralistic society and empowering teachers with the authority to provide instructional leadership. Transformational Leadership practices began to be explored in the research and were found to be effective in building extraordinary levels of commitment within the complex and nonlinear nature of planned

change, and in fostering growth in the abilities of stakeholders to meet ever increasing levels of expected excellence (Leithwood & Jantzi, 1997).

Transformational and empowering terms such as teacher leadership, value based leadership, organizational learning, transformational leadership and distributed leadership began to become popular (Leithwood & Jantzi, 1990). These empowering models emerged as an outgrowth of dissatisfaction with the Instructional Leadership theory as an effective model in most school cultures. Many theorists and practitioners came to believe Instructional Leadership theory focused too heavily on the school administrator as sole expert and authority. Theories promoting the transformation of all key stakeholders into leaders were proving to be most effective (Sergiovanni, 2001). From the mid-1990's on, the most frequently applied leadership theory in educational leadership has been Transformational Leadership theory (Leithwood & Jantzi, 1999).

Purpose of Transformational Leadership in Education

The purpose of Transformational Leadership in education is to assist the school community in creating a culture of moral commitment to student success and exemplary sustained performance in schools. The goal of transformational leadership is developing the school community's capacity for innovation. Transformational leaders seek to build the stakeholders' capacity to identify their purpose as part of the education team. They seek to support the development of changing instructional practices focused on teaching and student leaning. Part of the purpose of transformational leadership is in distributing power with a focus on creating a shared vision and community commitment to positive cultural change (Hallinger, 2003).

Transformational leadership theory and practice is built on helping stakeholders to become the best they can be — to achieve maximum potential, as opposed to minimum requirements (Fullan, 1999). Transformational leadership in education relies upon moral authority to drive excellence. When moral authority is nurtured by school leaders, stakeholders become empowered to take on leadership roles. Stakeholders become motivated from an internal desire to go above and beyond the call of duty, as opposed to complying with rules to avoid negative consequences. The vision of Transformational Leadership theory in education is to help school personnel transcend ordinary compliance and attain exceptional commitment to values-based performance. In addition, transformational education leaders set their goal on transforming compliant subordinates into moral leaders who practice their craft with a foundation in beliefs, moral imperative and value-based purposes (Sergiovanni, 2001).

Transformational leadership when embraced in education prevents the use of a "one size fits all" approach to curriculum and instruction (Fullan, 1997). For students to succeed, education leaders need to focus on the uniqueness of their interactions with other school level stakeholders (Fullan, 1999). Effective school leaders ensure all students attain their highest potential in academic achievement. Extraordinary performance and commitment in schools is built upon transforming personnel into leaders that have the capacity to manage the unexpected in their daily journey to ensuring student success by building a culture on ideals, values, beliefs and moral authority (Sergiovanni, 2007). This is the essence of the purpose of transformational leadership in education, and skilled transformational leaders engage in common categories of behavior to bring this vision of transcendence into reality (Fullan, 2006).

Performing as a Transformational Leader in Education

Transformational leaders in education emphasize shared decision making when possible. Their model relies on a "form of power that is 'consensual' and 'facilitative' in nature — a form of power manifested through other people, not *over* other people" (Leithwood, 1992, p. 9). Power derived from engaging in transformational leadership in education is created when stakeholders are assisted in meeting higher-level needs and meaning through their work, as described by Maslow (1950). When stakeholders move closer to self-actualization the result is broader capacity for teaching all students. The ability to facilitate shared leadership arises as members of the school community learn how to harness their collective competencies in solving organizational problems. Power to lead through transformational practices is sustainable and effective in helping students to achieve academic success (Leithwood & Riehl , 2003).

The development of a vision and goals for their organization, by identifying new opportunities for their schools, developing and inspiring stakeholders with hope for the future, and building consensus in the creation of organizational goals; is the work of transformational school leaders (Sergiovanni, 2001). Authentic leaders create collaborative decision making systems promoting school-community involvement in making decisions, and distributing leadership among staff. Transformational leaders symbolize the ideal in professional practice by modeling appropriate interactions with stakeholders and being open to change related to new understandings. Highly effective school leaders provide individualized consideration by showing respect and concern for staff in regard to about their individual needs, feelings, and ideas. Transformational

leadership in education provides intellectual stimulation by challenging staff to reexamine assumptions about the business of education and reflect on innovative approaches to helping students succeed. School leaders displaying transformational behaviors maintain high expectations for staff and student performance by visibly demonstrating expectations for quality, rigorousness, and excellence (Leithwood & Jantzi, 1997).

Effect of Transformational Leadership Theory on Student Success

Transformational leadership in schools is effective. Leithwood and Riehl (2003) state leadership explains about twenty five percent of the total effect of all school level factors on student achievement. The effect of school leadership in comparison to all other school level variables proves to account for substantial variance in student success (Leithwood, Louis, Anderson, & Wahlstrom, 2004). Leithwood and Jantzi (2008) found transformational leadership has a significant effect on teacher satisfaction and organizational health. Results from their research found a moderate ($r = .33$, $p < .01$) relationship between transformational leadership behavior and student achievement. Others, such as Blatt (2002), found a significant relationship between transformational leadership and school climate ($r = .569$, $p < .01$). Meta-analytic research conducted by Marzano, et al. (2005) found that across studies a correlation coefficient of .25 exists between transformational leadership practices and student success. Chin (2007), after investigating transformational school leadership effects on school outcomes in Taiwan and the United States, found significant effect size between transformational leadership as defined by the Multifactor Leadership Questionnaire (MLQ) and student achievement

(r= .487, p< .001). Research by K. Leithwood,, Menzies, Jantzi, and J. Leithwood, (1996) investigating the contribution of transformational leadership to the reduction of staff burnout during school restructuring found transformational leadership practices have a significant effect on teachers' capacity beliefs and a "powerful ameliorating effect on teacher burnout" (p.213). The findings of Leithwood and Jantzi (2005) from their research on transformational leadership and organizational conditions suggest that when transformational leadership increases by one standard deviation, teacher commitment to the organization's mission was expected to increase by more than eight tenths of a standard deviation. The results from the Leithwood and Jantzi study also found that when transformational leadership is increased by one standard deviation, one could expect to find a large increase in teachers contributing to the school as a professional learning community and a large increase in commitment to stakeholder partnerships.

An earlier Leithwood and Jantzi (1990) study suggested that principals can systematically create collaborative and shared cultures where toxic cultures currently exist by engaging in transformational practices. They collected and analyzed detailed interview data from 132 participants spanning across 12 schools to explore methods principals engage in to turnaround toxic school environments. The researchers found that school leaders were engaged in six practices associated with Transformational Leadership theory to nurture greater collaboration and a shared culture. These strategies included "strengthening the culture, using bureaucratic mechanisms, fostering staff development, frequent and direct communication, sharing power and responsibility and using rituals and symbols to express cultural values" (Leithwood & Jantzi, 1990, p. 276). Leithwood (1992), in a study encompassing 47 schools, found highly significant relationships

between engaging in transformational leadership practices and influencing teacher attitude towards school improvement and improved instructional practices. In addition, the study reported no significant relationships exist between transactional, or control based, forms of leadership and teacher change.

Assessing the Relationship Between Transformational Leadership and Antecedent Experiences

Towler (2005) investigated the relationship between parental psychological control, attachment style, and transformational leadership in young adults in an effort to investigate the implications of a lifespan approach to leadership development. Results from this study found parent attachment style was positively related to displays of transformational leadership ($r = .32$, $p < .001$). Fathers' parental control was negatively related to displays of transformational leadership ($r = -.23$, $p < .05$). Avolio (1994) set out to empirically investigate "What sort of life experiences shaped the leader's development, and the frames of reference he/she uses to interpret his/her roles" (p. 1563)? To investigate the question Avolio developed his Life History Survey (LHS). This instrument measures seven variables: (1) Life Satisfaction, (2) Parental Interest, (3) Moral Standards, (4) Parental Description, (5) High school-Extracurricular, (6) High School Experience, and (7) Work Experience. Avolio used his LHS to study a sample of 182 community leaders. Avolio found significant relationships between positive work experience, school experience, moral standards of parents, life satisfaction; and transformational leadership. The smallest significant relationship with transformational leadership was found with Moral Standards of Parents category ($r = .16$, $p < .01$). The largest relationship was found in the Positive Work Experience category ($r = .36$, $p < .01$).

Schell (2010) performed the most recent and most closely related study to the proposed research for this dissertation study. The objective of Schell's research was to more thoroughly understand the developmental experiences of transformational leaders. To accomplish the objective, Schell created the Lifetime Leadership Inventory (LLI) in order to comprehensively assess the life history experiences of leaders. The LLI model Schell used for his study contained five factors. The initial 98-item version of the Lifetime Leadership Inventory was piloted by gathering responses to items from three different sample groups. The first two sample groups were made up of members of the Belgian Armed Forces officer training corp. These groups included students within the Belgian Armed Forces Officer's Course (Group 1, $n = 9$) and Senior Officer's Course for upper classmen (Group 2, $n = 21$). The third group was comprised of graduate Engineering Management students at the University of Alabama in Huntsville ($n = 29$). Data from this pilot group was analyzed using exploratory and confirmatory factor analysis. Results from the exploratory analysis retained 57 items and identified five factors. The first factor of Schell's LLI is titled Nature of Key Relationships. The questions included in this factor were created to explore the impact of significant relationships on participant's leadership development. Included in this factor are items highlighting relationships with mentors and parents. Example questions Schell included under this factor are protected by copyright. Only partial items appear here. (1) My parents.....(2) During my career.....

The second factor of Schell's LLI is titled Early Development Experiences. The items in this factor were created to understand the experiences participants had early in

their lives that may have impacted the development of their leadership. These items include questions centered on sports activity, group participation, and other extracurricular activities. Example questions Schell included under this factor are (1) As a child I.....; (2) In high school I.....

Schell's third factor of the LLI is called Exploratory Experiences. Schell defines this factor as involving experiences outside of the work place including those in nature, travel, cultures, participation in service clubs, and moments of intense challenge. Example questions Schell included under this factor include (1) During childhood or adolescence.....(2) I have.....

The fourth factor identified by Schell for his LLI is titled Early/Previous Work Experiences. The questions in this factor were created to gain understanding of the experiences in participants' work lives that might have had an influence on their development as leaders. This factor includes items similar to the following: (1) I held my..... (2) I served in.....

Schell's final factor identified for his instrument is titled Formal Development Experiences. The items included in this factor capture experiences describing formal experiences including purposeful job rotation, training courses, and management coaching. Example questions included in this factor include: (1) My career experience .....(2) I have received.....

The coefficient alphas for the five factors ranged from .62 to .72. Results from a confirmatory factor analysis found the 57-item LLI scale was an acceptable fit to the LLI model hypothesized to exist in the study population. Schell (2010) then used correlation

analysis and Structural Equation Modeling (SEM) to investigate the relationship between transformational leadership (as defined by the MLQ) and antecedent experiences (as defined by the LLI). The five-factor model of the LLI was correlated with the nine-factor model of the MLQ**.** This comparison found that all five factors of Schell's instrument had significant correlations with transformational leadership measured by the MLQ. The strongest relationship occurred between Nature of Key Relationships of the Lifetime Leadership Inventory and transformational leadership, (r=.269). The range of the correlation coefficients spanned from 0.159 to 0.269 with an average correlation of 0.220 (p< 0.01). Schell (2010) found no significant correlations between the factors of the LLI and the more passive leadership transactional factors within the MLQ. In these comparisons transactional factors recorded almost no relationship, with an average correlation score of 0.009. The exception in this category was the comparison with the active transactional leadership style titled Contingent Reward. This made practical sense. The use of Contingent Reward leadership is seen as effective when performed consistently (Bass, 2008).

Through his study, Schell (2010) bridged the gap in research between antecedent experiences and transformational leadership identified by Avolio (1994) by thoroughly developing the Lifetime Leadership Inventory (LLI) and identifying a quantifiable relationship between antecedent experiences and transformational leadership in a sample of business leaders. Schell's (2010) work has opened the door to exploring the relationship between lifetime experiences and transformational leadership in educational leaders.

Literature Review Summary

The study of leadership is important because leaders have the potential to help transform individuals and organizations into subjects of greatness or instruments of destruction (George & McLean, 2007). Bennis (2004) reminds scholars we can only influence the development of authentic leaders if we fully understand them through empirical means. Leadership has an effect on success in all areas of life including business, education, and social justice on a global scale (Maak and Pless, 2009). Great change can be influenced through the study of leadership.

Understanding the development of transformational leaders is important for contributing to the global understanding of leadership theory and practice across many professions. Many aspects of transformational leadership have been studied and identified empirically (Bass, 2008). Few quantitative studies, however, exist that comprehensively explore the relationship between antecedent experiences and transformational leadership. Two studies are closely related to this proposed research. The first, published by Avolio in 1994, explored the relationship between lifetime experiences and transformational leadership by utilizing the Multifactor Leadership Questionnaire (MLQ) and his Life History Survey. The second closely related study was completed by Schell (2010) with a sample of 200 business leaders. Schell found significant relationships between factors of the Lifetime Leadership Inventory, which he created to measure antecedent experiences, and transformational leadership.

Bass and Riggio (2006) state "We still need to learn a lot more about the roots of leadership, generally, and of transformational leadership in particular" (p. 232). Variables from a transformational leader's past have a significant effect on their skill and

moral aptitude (Schell, 2010). Bass (1995) theorizes that familial circumstance, childhood experiences, and cultural influence are some of the areas that should be explored in an effort to illuminate the process of transformational leader formation. Leithwood and Jantzi (2005) state "Few studies have examined the antecedents…of transformational school leadership" (p. 177). Avolio (1994) asks, "What sort of life experiences shaped the leader's development, and the frames of reference he/she uses to interpret his/her roles" (p. 1563)? This research effort will hopefully shed light on these important questions as they relate to the field of educational leadership theory and practice.

CHAPTER 3

METHODOLOGY

Introduction

Transformational leaders use empowering leadership to protect healthy cultures that assist individuals in achieving the maximum of their potential (Sergiovanni, 2007). Many aspects of transformational leadership have been studied and identified empirically (Antonakis, Avolio, & Sivasubramaniam, 2003). Research has illuminated the effect transformational leaders have on the vitality of organizations (Bass, 2008). Transformational leadership is measurable and describable (Leithwood & Jantzi, 2005). However, scant research exists investigating how transformational leaders develop. (Avolio, 2010). Investigating the antecedent experiences of transformational educational leaders may illuminate important aspects of their development (Bennis & Thomas, 2002). Seminal transformational leadership theorists believe exploring the lifespan experiences of transformational leaders may inform leadership development programs (Bass, 2008). Quantitative and qualitative research has been performed showing antecedent experiences have an influence on the transformational leadership of business leaders (Schell, 2010). There is, however, little empirical evidence available demonstrating a relationship between lifetime experiences and transformational leadership in education leaders (Leithwood & Jantzi, 2005).

Purpose Statement

Bass and Riggio (2006) state, "we still need to learn a lot more about the roots of leadership, generally, and of transformational leadership in particular" (p. 232). Leithwood and Jantzi (2005) state, "few studies have examined the antecedents…of transformational school leadership" (p. 177). Variables from a transformational leader's past have a significant effect on their skill and moral aptitude (Schell, 2010). Bass (1995) theorizes familial circumstance, childhood experiences, and cultural influence are some of the areas that should be explored in an effort to illuminate the process of transformational leader formation. Avolio (1994) asks, "what sort of life experiences shaped the leader's development, and the frames of reference he/she uses to interpret his/her roles" (p. 1563)? Thus, the purpose of this study was to investigate the relationship between educational leaders' antecedent experiences and transformational leadership.

Schell (2010) was the first to investigate this relationship with leaders from the business world. His study explored the relationships between the Lifetime Leadership Inventory (LLI) and transformational leadership as operationalized by the Multifactor Leadership Questionnaire (MLQ) of over 200 business leaders. Significant relationships were found in Schell's study between all LLI factors and transformational leadership. The largest relationship was found between The Nature of Key Relationships and transformational leadership ($r = .36$, $p < .01$). This study will be undertaken to determine if similar relationships are identified with educational leaders.

Research Questions

(1) Does a relationship exist between perceived transformational leadership skills and the lifespan factors of K-12 principals?

(2) Which life span factors investigated for this study have the most influence on perceived transformational leadership skills?

For the purposes of this study, principals' lifespan experiences were operationalized and assessed using the Lifetime Leadership Inventory (LLI) (Schell, 2010). The Multifactor Leadership Questionnaire (MLQ) (Avolio & Bass, 2004) was used to operationalize and assess the transformational leadership construct. The LLI factors and items were examined for relationships with the transformational leadership construct assessed by the MLQ. Studying these relationships offered greater understanding about the breadth of leader development experiences during leaders' lifetimes that may influence their displays of transformational leadership behavior. This research filled a gap in the literature that has been identified by the seminal researchers of Transformational Leadership theory.

Design

This correlational study used bivariate correlations and Structural Equation Modeling (SEM) to investigate the magnitude and significance of the relationships between principals' lifespan experiences and their transformational leadership skills (Gay & Airasian, 2003). Figure 2 provides a graphic representation of the conceptual model of the correlational aspects of this study. Structural Equation Modeling (SEM) is a

multivariate statistical technique. Structural Equation Modeling can be applied when investigating causal models, path analysis, confirmatory factor analysis, second order factor analysis, covariance structure models, and correlation analysis. Several advantages of incorporating SEM exist. Structural Equation Modeling allows for more flexible assumptions relative to other statistical techniques such as multiple-regression. Structural Equation Modeling incorporates confirmatory factor analysis to account for measurement error. Structural Equation Modeling allows the researcher to manipulate a graphic modeling interface, allowing visual inspection of data and corresponding relationships. The SEM technique analyzes holistic models as opposed to individual coefficients. Further, SEM is able to analyze multiple dependent variables within a model. Structural Equation Modeling is able to build a model of mediating variables. Structural Equation Modeling enables measurement of direct and indirect effects. Structural Equation Modeling gives the researcher the ability to model error terms and test coefficients across several between-subjects groups. Structural Equation Modeling has the multidimensional programming to handle difficult data such as time series with auto-correlated error, non-normal data, and incomplete data (Johnson & Wichern, 2002). These advantages allow a more complete understanding of the understanding of the relationship between development antecedents and transformational leadership than was found through the more simple Pearson correlation analysis.

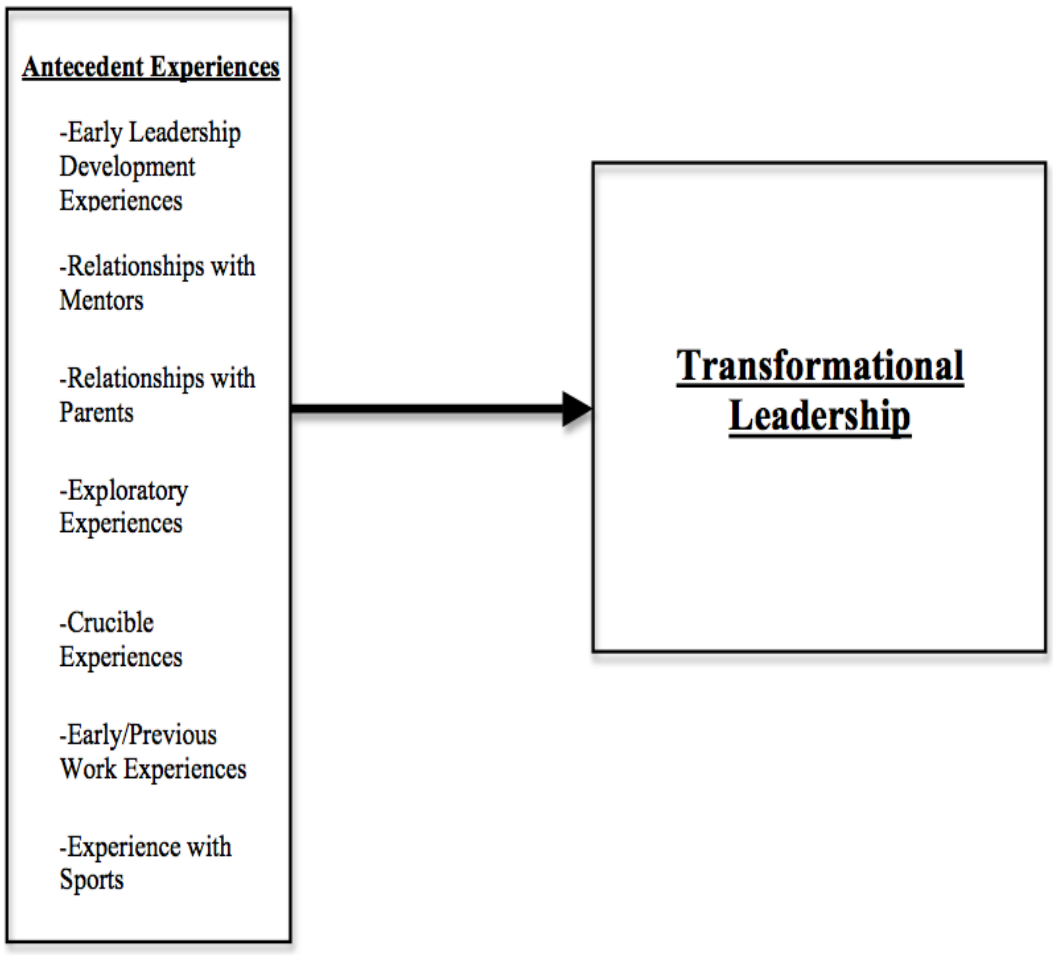


Figure 1. Visual demonstration of the LLI and MLQ variables to be correlated.

In light of previous research, the correlation analysis as described was expected to reveal a number of significant relationships between the transformational leadership factor of the MLQ and factors of the LLI. The utilization of correlation analysis is well supported by the literature for studies examining the relationship between social science constructs, such as the two investigated in this study. In addition to the correlation analysis, however, a complete Structural Equation Modeling (SEM) analysis was also conducted to gain a deeper understanding of the causal relationships that exist between antecedent experiences as defined by the LLI and the transformational leadership factor

of the MLQ. A SEM analysis conducted by Schell (2010) with the MLQ and the LLI revealed a greater number of relationships than was possible with his correlational analysis alone. One reason for this outcome is that SEM accounts or measurement error associated with the items defining constructs allowing for more precise outcomes for the relationships analyzed. (McCoach, 2003).

The study surveyed 400 K-12 education leaders from the Northwest region of the United States as defined by the NWAC. The NWAC was chosen as a target population for this study because the organization is interested in promoting research into the most effective methods of school leadership, and promotes a culture of continual growth through its peer review system. Principals serving schools accredited by the NWAC lead their schools through a fairly extensive peer review system. On a regular basis, the leadership teams from schools accredited by the NWAC of make peer visits to NWAC accredited schools of similar size to observe the effectiveness and implementation of seven key areas of school leadership: (1) Mission and Vision, (2) Academic Performance, (3) Professional Preparation, (4) Process of Schooling, (5) Transitions, (6) School Climate, and (7) Community Collaboration. The states that make up the NWAC membership are Alaska, Idaho, Montana, Nevada, Oregon, Utah, and Washington (NWAC, 2011). The results of this study can be generalized to principals of K-12 schools that are accredited members of the NWAC.

Population

The target population of participants lead schools listed as accredited by the NWAC and have their emails registered with the organization as well. Alaska, Idaho,

Montana, Nevada, Oregon, Utah, and Washington comprise the Northwestern states that participate in the NWAC accreditation review process. To date, the target population consists of 1,648 principals. Of those school leaders, 1,052 lead schools listed as public and 596 lead schools listed as independent. Of the total target population of participants, 131 are from Alaska, 210 are from Idaho, 73 are from Montana, 124 are from Nevada, 366 are from Oregon, 231 are from Utah, and 513 lead schools in state of Washington.

Sample

Appropriate sample size for this study can be determined a priori if the researcher knows the level of significance, power, and effect size (Gliner & Morgan, 2000). For this research, a significance level of .05 was used and is the commonly acceptable level of risk for making a Type I error in behavioral research (Gay & Airasian, 2003). The power level was set at .80, the minimum power level usually found to be acceptable in published research (Gliner & Morgan, 2000). Gliner & Morgan (2000) state a researcher can estimate effect size based upon previous studies in the area. The effect size of statistically significant relationships found in similar research has been found to range from small (r=.16) to medium (r=.36) with the average effect size being a coefficient of .24 (Avolio, 1994; Schell, 2010).

The minimum sample size required for the correlational aspects of this project was determined with the software program G*Power (Faul, Erdfelder, Buchner, and Lang, 2009). The program allows a researcher to compute exact sample sizes for projects with predetermined levels of significance, power, and effect size. Using the G*power software, specifying a power level of .80 and alpha of .05, it was

determined that a sample size of 183 is required to detect an average effect size of .24 for correlational analysis.

However, research conducted by MacCallum, Browne & Sugawara (1996) specific to sample size for structural equation modeling methods suggest that a sample size of 200 would be adequate for a "close" or "exact" fit to the data. The final number of participants for this research was 212 meeting the MacCallum et al. recommended sample size.

Sampling Procedure

For this study, 400 potential participants were randomly selected from the population. Oversampling was employed here as a strategy to increase the likelihood of obtaining 200 responses. This number of potential participants is approximately 25% of the target population, manageable to contact if need be, and twice the required minimum number of participants determined as necessary for this study as described above. Each member of the target population was assigned a number. Then, a random sample was drawn from the population using a random number table (Gay & Airasian, 2003). Each member of the target population was sent the MLQ assessment and the LLI. The actual sample is the "participants who complete the study" (Gliner & Morgan, 2000, p. 147).

Instruments

The Lifetime Leadership Inventory (LLI) was developed by Schell (2010) to assess antecedent life experiences and the relationship of these experiences to transformational leadership. The original 120 items of the LLI emerged from an

extensive review of the literature investigating the relationship between antecedent life experiences and transformational leadership skills. Items for the LLI are assessed using a five-point Likert scale. Results from exploratory and confirmatory factor analysis identified 57 items yielding five interpretable factors found to have an acceptable fit to the data. The five LLI factors that were found to have an acceptable fit in Schell's study were (1) Nature of Key Relationships ($\alpha = 0.73$), (2) Early Development Experiences ($\alpha = 0.72$), (3) Exploratory Experiences ($\alpha = 0.72$), (4) Early/ Previous Work Experiences ($\alpha = 0.62$), and (5) Formal Development Experiences ($\alpha = 0.67$).

The Multifactor Leadership Questionnaire (MLQ) was developed by Avolio and Bass (2004) and has been completed by more than fifteen thousand participants. In the past twenty years, the MLQ has been used to measure transformational leadership in American companies, Russian companies, Korean institutions, and organizations from New Zealand. The instrument has been used to measure transformational leadership in the military and the private sector. The instrument has been found to have several models that are valid and reliable. Some of common factor models for the MLQ include the four-factor model, nine-factor model, and three-factor model. According to Avolio and Bass (2004), five categories of behavior are related to transformational leadership and include Idealized Influence (Attributes), Idealized Influence (Behaviors), Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration. The Multifactor Leadership Questionnaire (MLQ) contains three categories that are related to transactional leadership. These transactional categories include behaviors defined as Contingent Reward, Management-by-Exception (Active), and Management-by-Exception (Passive). The MLQ measures one category of behavior that is so passive, it is

considered to demonstrate a total lack of leadership. This category of behavior is titled Laissez-Faire. The MLQ has a total of 45 items rated on a five point Likert scale. The Multifactor Leadership Questionnaire (MLQ) was validated during its original design (Bass, 2008) and has been revised and further validated over a span of more than 20 years (Avolio, Bass, & Young, 1999). Bass and Riggio (2006) state "the MLQ scales have demonstrated good to excellent internal consistency, with alpha coefficients above the .80 level for all MLQ scales" (p. 22). The correlation coefficients range in rate-rerate consistency across all MLQ scales from a high of .74 to a low of .45.

Strengths and Limitations of Self-Report Surveys

Gliner & Morgan (2000), in their text *Research Methods in Applied Settings: An Integrated Approach to Design and Analysis,* state, "most research in the applied social sciences and in education relies on the self-reports of the participants" (p. 8). That is the case with this study as well. The main strength of self-report instruments is they allow subjects to detail their experiences from their own perspective. Observer based data is filtered through the mental model of the observer and data must be inferred from their perspective. Secondly, self-report surveys allow a researcher to study large samples of participants with relative efficiency. Researchers are able to examine a large number of constructs while asking participants to describe real life experiences, as opposed to hypothetical experiences taking place in a laboratory.

Self-report methods also have limitations. Participants may not provide accurate responses. For example, they may not recall certain experiences as they actually happened, or participants may want to ensure they are presented in a manner that is

socially acceptable. Second, items on self-report instruments may be confusing to individual participants, bringing the reliability of the self-report data into question (Gliner & Morgan, 2000).

Data Collection Procedures

Many technical data collection aspects existed for this study. First, a database with the random sample members' names, emails, phone numbers, and addresses was created using the list of accredited members of the Northwest Accreditation Commission. Each member of the random sample was sent an electronic version of Institutional Review Board (IRB) approved consent letter, the LLI, and the MLQ through Survey Monkey to complete. Confidentiality was maintained by coding participants in the database of respondents so the researcher was able to determine who had completed the survey. Participants were sent a thank you via e-mail for their participation and an invitation to receive results of the completed study (Gliner & Morgan, 2000). Finally, participants were placed into a drawing for a $300.00 cash prize as an incentive.

Data collection began on July 22nd of 2011. Dr. David Steadman was contacted in an effort to gain his support for this research project. Dr. Steadman is the national director the Northwest Accreditation Commission (NWAC). He agreed to support the research by writing an email stating his support to each state director. After the state directors were contacted by Dr. Steadman, each head school principal with an email address listed in the NWAC directory was sent the required letter and instruments as described above. The initial participation invitations were sent out electronically in the first week of August of 2011. A follow-up invitation to participate was sent out to those

members of the random sample who had not completed the survey by the second week of September. This timeline and invitation strategy was based on the method utilized effectively by this researcher to collect data for the study conducted by Saunders (2008) researching principals' perceptions of the leadership skills gained through informal mentoring. Once data collection was completed, data analysis was conducted as follows.

Data Analysis

The first step to analyzing the data was to transfer the data into an Excel spreadsheet. The data was then physically examined by the researcher to detect possible irregularities and outliers (Gravetter & Wallnau, 2009). Then, the data was entered directly into the Statistical Software Program for the Social Sciences (SPSS) version 20. Correlational analysis was used to investigate life span variables that have the greatest association with K-12 leaders' transformational skills. In addition, Structural Equation Modeling (SEM) using LISREL 8.72 (Jöreskog & Sörbom, 2007) was used to test the model fit for the hypothesized relationship between the Lifetime Leadership Inventory (LLI) and the Multifactor Leadership Questionnaire (MLQ).

Methodology Summary

The purpose of this study was to investigate the relationships between educational leaders' antecedent life experiences and transformational leadership skills. The study utilized the MLQ to operationalize and assess frequency of transformational leadership behavior in the sample and used the LLI to define and assess antecedent experiences of the participants. The participants in this research all lead schools accredited by the

Northwest Accreditation Commission (NWAC) as principal. The number of participants for this study sample was 212. The data from the collected surveys was subjected to Pearson correlational analysis and Structural Equation Modeling (SEM) to investigate the magnitude of relationships existing between antecedent experiences and transformational leadership. Many aspects of transformational leadership have been studied and identified empirically (Bass, 2008). Few quantitative studies, however, exist that comprehensively explore the relationship between antecedent experiences and transformational leadership. Bass and Riggio (2006) state "we still need to learn a lot more about the roots of leadership, generally, and of transformational leadership in particular" (p. 232). Leithwood and Jantzi (2005) state, "few studies have examined the antecedents…of transformational school leadership" (p. 177). The design of this research effort will hopefully result in answering some aspects of these important questions as they relate to the field of educational leadership theory and practice.

CHAPTER 4

RESULTS

Introduction

Transformational leaders use empowering leadership to guide organizations and individuals in achieving their maximum potential (Sergiovanni, 2007). Many aspects of transformational leadership have been studied and identified empirically (Antonakis, Avolio, & Sivasubramaniam, 2003). These studies have demonstrated transformational leadership's effect on organizational vitality (Bass, 2008). Transformational leadership can be measured and is describable (Leithwood & Jantzi, 2005). Scant research, however, contributes to the body of knowledge investigating the development of transformational leaders (Avolio, 2010). Investigating the antecedent experiences of transformational educational leaders may highlight important aspects of their maturation as leaders (Bennis & Thomas, 2002), informing leadership development programs (Bass, 2008). The purpose of this study was to investigate the relationship between educational leaders' life experiences and their transformational leadership skill. This chapter presents results from the analysis of data collected in order to answer two research questions: (1) Does a relationship exist between perceived transformational leadership skills and the lifespan factors of K-12 principals? (2) Which life span factors investigated for this study have the most influence on perceived transformational leadership skills?

Preliminary Analysis

Prior to conducting exploratory and confirmatory factor analytic procedures the data were subjected to tests of normality and skewness. For the Lifetime Leadership Inventory (LLI), both the symmetry (skewness = -0.383, *SE* = .168) and the "flatness" (kurtosis = 0.681, *SE* = .307) were found to be significantly non-normal (W= .913, $p <$ .002). According to Fabrigar, Wenger, MacCallum, & Strahan (1999) factor analytic procedures that employ maximum likelihood extraction methods are not adversely affected when skewedness of the variables is less than 2.00 and kurtosis is not greater than 7.00. Coefficient Alphas for the final seven-factor LLI ranged from .602 to .877, indicating acceptable levels of internal reliability for constructs of this type (Field, 2005).

Tests of normality and skewness were also performed on data collected for the Multifactor Leadership Questionnaire (MLQ). For the MLQ, both the symmetry (skewness = -0.315, *SE* = .196) and the "flatness" (kurtosis = 01.22, *SE* = .336) were found to fall within standards of normality, (W =.755, $p <$ .001). As stated above, factor analytic procedures that employ maximum likelihood extraction methods are not adversely affected when skewness of the variables is less than 2.00 and kurtosis is not greater than 7.00 (Fabrigar, Wenger, MacCallum, & Strahan, 1999). Coefficient Alphas for the three MLQ factors ranged from .671 to .843, indicating acceptable levels of internal reliability for constructs of these types of constructs (Field, 2005).

Demographic data was collected on participant gender, experience as education leader, degree of education, and level of school led. A summary of demographic findings is displayed in Table 1. Female participants accounted for 39.2% of the sample (n=83).

Males made up 60.8% of participants in this study (*n*=129). Caucasians made up the largest ethnic/racial majority taking up 93.4% of the sample (*n*=198). One participant identified himself or herself as African American, making up the smallest identified ethnic/racial group of the sample at .5% of participants. Participants were asked to describe their experience as fitting into one of six categories: (a) New to 2 years; (b) 3 to 5 years; (c) 6 to 10 years; (d) 11 to 20 years; (e) 21 to 30 years; (f) 31+ years. The majority of participants described themselves as having 6 to 10 years of experience as an education leader. This group made up 30.7% of the sample (*n*=65). The group of participants least represented in this sample, making up 5.2% of leaders sampled, identified themselves as having 31+ years of experience as an education leader (*n*=11).

The majority of participants (70.3%) described themselves as having a Masters as their highest level of education (*n*=149). Fifteen participants described themselves as having a Bachelors degree as their highest level of education, making up 7.1% of the sample and the smallest represented group in this study. Leaders were asked in this study to describe the level of the school that they lead. The smallest percent of participants (1.9%) describe themselves as leading schools that are labeled only as Middle School (*n*=4). The majority of participants (47.6%) in this sample describe themselves as leading High Schools (*n*=101).

Table 1— Descriptive Statistics for Demographic Data

	n	Percent
Gender		
Male	129	60.8
Female	83	39.2
Ethnicity		
Caucasian	198	93.4

Table 1 Continued— Descriptive Statistics for Demographic Data

	n	Percent
Asian	3	1.4
African American	1	0.5
Native American	3	1.4
Latino or Hispanic	2	0.9
Ethnic Origin Not Listed	2	0.9
Decline to Answer	3	1.4
Administrative Experience		
New to 2 Years	12	5.7
3 to 5 Years	30	14.2
6 to 10 Years	65	30.7
11 to 20 Years	64	30.2
21 to 30 Years	30	14.2
31+ Years	11	5.2
Level of Education Earned		
Bachelor Degree	15	7.1
Master Degree	149	70.3
Educational Specialist Degree	20	9.4
Doctoral Degree	28	13.2
School Leadership Role		
Elementary School	10	4.7
Kindergarten through Middle School	23	10.8
Middle School	4	1.9
Middle School through High School	29	13.7
High School	101	47.6
K through High School	35	16.5
Other	10	4.9

Exploratory Factor Analysis of the Lifetime Leadership Inventory

A confirmatory factor analysis was attempted with Schell's original 5-factor Lifetime Leadership Inventory (LLI). However, the analysis failed to converge. Without fit statistics to guide the modification of the model to fit the data, an exploratory analysis was conducted to find the underlying dimensions of the data specific to this sample. The responses from the 212 participants were randomly split in half to form two separate

groups. One half of the data was used for the exploratory factor analysis while the other half was used to cross-validate the fit of the factor structure identified by the exploratory factor analysis. Guidelines suggested by Field (2005) and Fabrigar et al. (1999) were followed when conducting this analysis. Data screening procedures were also undertaken to evaluate the factorability of the correlation matrix. The data was found to be suitable to proceed with the exploratory factor analysis. The clearest factor pattern emerged from this analysis when using maximum likelihood extraction and oblique rotation methods. The seven identified factors for the LLI were evaluated against Kaiser's criterion and Cattell's Scree test (1966) and were found to best represent the underlying dimensions for the modified forty-five item scale. The rotated factor solution for the 45-item Lifetime Leadership Inventory (LLI) is presented in Table 2. Only partial items are included in Table 2 due to copyright restrictions. Please refer to Schell (2010) for further information on items. A minimum factor-loading criterion of .400 recommended by Stevens (2002) was adopted for including an item in the final interpretation. Factor I, interpreted as Early Leadership Development Experiences, captured nine items (28, 33, 32, 26, 24, 23, 27, 36, and 29 as listed in Appendix B) from Schell's (2010) original 57 item instrument. The second factor to emerge, Relationships with Mentors, contained eight items (11, 12, 14, 13, 15, 17, 18, and 16). The third factor, interpreted as Relationships with Parents, included seven items (7, 1, 6, 4, 3, 19, and 8). The fourth factor to emerge, Exploratory Experiences, captured eight items (47, 46, 41, 42, 44, 49, 45, and 43). The fifth factor identified, Crucible Experiences, captured three items (38, 37, and 52). The sixth factor identified, Early/Previous Work Experiences, contains seven of the items (20, 21, 35, 9, 55, 53, and 10). The final factor to emerge in the

exploratory factor analysis, identified as Experience with Sports, captured three items (25, 22, and 31). The factor loadings for all 45 retained LLI items are presented in Table 2. Descriptive statistics for the LLI are found in Table 3.

Table 2—Factor Structure for the LLI

Factors and Items	*Coefficient*
Factor I—Early Leadership Development Experiences	
23.	.477
24.	.566
26.	.584
27.	.465
28.	.706
29.	.400
32.	.685
33.	.705
36.	.447
Factor II—Relationships with Mentors	
11.	.805
12.	.804
13.	.729
14.	.772
15.	.725
16.	.630
17.	.715
18.	.658
Factor III—Relationships with Parents	
1.	.742
3.	.602
4.	.647
6.	.694
7.	.804
8.	.359
Factor IV—Exploratory Experiences	
41.	.595
42.	.571
43.	.462
44.	.567
45.	.508
46.	.652
47.	.751
49. exp	.520

Table 2 Continued —Factor Structure for the LLI

Factors and Items	*Coefficient*
Factor V—Crucible Experiences	
37.	.768
38.	.787
52.	.347
Factor VI—Early/Previous Work Experiences	
9.	.482
10.	.363
20.	.594
21.	.585
35.	.530
53.	.408
55.	.456
Factor VII—Experiences with Sports	
22.	.774
25.	.806
31.	.678

Table 3—Descriptive Statistics for the LLI

	M	*SD*
Factor I—Early Leadership Development Experiences		
23.	2.12	1.52
24.	2.33	1.29
26.	2.50	1.28
27.	1.72	1.38
28.	1.30	1.45
29.	.830	1.27
32.	1.30	1.49
33.	1.10	1.26
36.	1.43	1.43
Factor II—Relationships with Mentors		
11.	2.95	.968
12.	3.02	.923
13.	2.43	1.09
14.	2.56	1.01
15.	2.36	1.14

Table 3 Continued —Descriptive Statistics for the LLI

	M	*SD*
16.	2.83	1.13
17.	2.59	1.28
18.	2.54	1.18
Factor III—Relationships with Parents		
1.	3.36	.946
3.	2.11	1.21
4.	2.65	1.20
6.	2.69	1.25
7.	3.33	1.01
8.	.300	.946
Factor IV—Exploratory Experiences		
41.	2.45	1.22
42.	3.19	.962
43.	3.21	1.04
44.	3.00	1.12
45.	2.63	1.13
46. e	3.23	.751
47.	3.17	.839
49.	3.25	.577
Factor V—Crucible Experiences		
37.	.640	1.13
38.	.780	1.26
52.	.550	1.05
Factor VI—Early/Previous Work Experiences		
9. positi	3.34	.917
10.	3.43	.779
20.	3.38	.815
21.	3.49	.635
35.	3.03	1.32
53.	2.94	.906
55.	3.42	.870
Factor VII—Experiences with Sports		
22.	3.07	1.33
25.	2.05	1.70
31.	1.48	1.67

Confirmatory Factor Analysis of the Lifetime Leadership Inventory

Once the exploratory factor analysis was completed, a confirmatory factor analysis of the Lifetime Leadership Inventory (LLI) using LISREL 8.72 (Jorsekog & Sorbom, 2007) was completed with the collected data (n = 212) to test the stability and replicability of the latent model produced by the exploratory factor analysis as described above. Results from the confirmatory factor analysis indicated that the independence model that tests the hypothesis that all variables are uncorrelated was easily rejected (χ^2_{990}= 8,054, p< .001) indicating that the hypothesized seven-factor model was a superior fit to the data.

There is no clear consensus regarding the indices that are most appropriate for evaluating model fit. However, Byrne (2001) and others (e.g. Bentler, 1980, 1992; MacCallum, Browne & Sugarwara, 1996) have suggest that the Root Mean Square Error of Approximation (RMSEA), the Comparative Fit Index (CFI), and the Non-Normed Fit Index (NNFI) provide optimal information for evaluating model fit. The Root Mean Square Error of Approximation (RMSEA) has been recently recognized as an informative index of fit because it provides a value that describes the discrepancy or error between the hypothesized model and an estimated population model derived from the sample (Bryne, 2001). According to Bryne (2001) a RMSEA of .05 or less is indicative of a good fit, with values ranging from .08 to .10 indicating a mediocre fit. Both the CFI and the NNFI indexes developed by Bentler (1980) are advantageous for evaluating model fit because they consider both sample size and model complexity. CFI and NNFI values equal to or greater than .90 are indicative of good model fit (Byrne,2001).

The hypothesized seven-factor model for the Lifetime Leadership Inventory yielded a RMSEA of .062 with the sample for this study, describing an acceptable fit as stated above. The 90% confidence interval (.057 to .066) around the obtained RMSEA value provides additional evidence to support that the proposed model is a "close fit" to the estimated population model. Both CFI (.90) and NNFI (.89) values are acceptable values for those indices providing further evidence of good model fit. According to tables provided by MacCallum, Browne & Sugawara (1996), the power of the Chi Square test of fit for this model with 630 degrees of freedom and a sample size of 212 was found to exceed 1.00. According to Cohen (1988) power levels for statistical analyses that minimize the probability of Type II errors should exceed .80. Peterson (1994), influenced by Nunally's (1967) seminal work, suggests that alpha levels above .60 are minimally acceptable levels for exploratory research. Coefficient Alphas for the seven LLI factors defined by the hypothesized measurement model were as follows: Early Leadership Development Experiences (α= .785), Relationships with Mentors (α= .877), Relationships with Parents (α= .718), Exploratory Experiences (α= .744), Crucible Experiences (α= .683), Early/Previous Work Experiences (α= .602), and Experience with Sports (α= .774).

Confirmatory Factor Analysis of the Multifactor Leadership Questionnaire

The MLQ has undergone extensive research to validate its factor structure. Studies have shown the MLQ can be represented by model structures ranging from one to nine factors (Avolio & Bass, 2004). The four-factor model of the MLQ was found to be the best fit for the data collected in this study. Confirmatory factor analysis using

LISREL 8.72 (Jorsekog & Sorbom, 2001) was used to determine if the four-factor model of the Multifactor Leadership Questionnaire (MLQ) was valid for the MLQ responses for participants in this research study. Results from the confirmatory factor analysis indicated that the independence model that tests the hypothesis that all variables are uncorrelated was easily rejected, $\chi^2_{630} = 7,445.70, p < .001$. As stated in the above section, the literature does not provide clear guidance as to the indices that are most appropriate for evaluating model fit. As was the case for the LLI, the Root Mean Square Error of Approximation (RMSEA), the Comparative Fit Index (CFI), and the Non-Normed Fit Index (NNFI) were used to evaluate the model fit for the four-factor MLQ.

The hypothesized four-factor model of the MLQ yielded a RMSEA of .057 with the sample for this study, describing a good fit. The 90% confidence interval (.051 to .063) around the obtained RMSEA value provides additional evidence to support that the proposed model is a "close fit" to the estimated population model. Both CFI (.94) and NNFI (.94) values exceed acceptable values in relation to the recommended threshold of .90 for those indices providing further evidence of good model fit. According to tables provided by MacCallum, Browne & Sugawara (1996), the power of the Chi Square test of fit for this model with 630 degrees of freedom and a sample size of 212 was found to exceed 1.00. According to Cohen (1988) power levels for statistical analyses that minimize the probability of Type II errors should exceed .80. The internal consistency reliabilities for four-factor Multifactor Leadership Questionnaire (MLQ) factors range from .600 to .843. Coefficient Alphas for the four-factor model of the MLQ defined by the hypothesized measurement model were as follows: Transformational Leadership (α= .843), Contingent Reward Leadership (α= .600), Management by Exception-Active

Leadership (α= .710) and Passive/Avoidant Absence of Leadership (α= .670). The descriptive statistics and factor loadings for all 36 MLQ items are presented in Table 4. Only partial MLQ items are included here, demonstrating the central issues of the questions as interpreted by this researcher. The entire instrument cannot be included to protect the copyright of the instrument. Those interested in the full instrument should refer to the MLQ manual (Avolio & Bass, 2004). As was the case with the LLI, the lower reliability levels for the Contingent Reward Leadership, Passive/Avoidant Absence of Leadership and Management by Exception-Active Leadership factors were considered minimally acceptable based on Peterson's recommendations given the exploratory nature of the study and are similar to measures of internal reliability found in literature related to this study (e.g., Avolio, 1994; Schell, 2010).

Table 4—Means, Standard Deviations and Factor Loadings for Transformational Leadership and Contingent Reward MLQ Items

	Factor Loadings	*M*	*SD*
Factor I—Transformational Leadership			
2. Intellectual Stimulation	.47	3.02	.754
6. Idealized Influence (Behavior)	.50	3.28	.889
8. Intellectual Stimulation	.44	3.56	.552
9. Inspirational Motivation	.53	3.61	.560
10. Idealized Influence (Attributed)	.37	2.97	.908
13. Inspirational Motivation	.79	3.5	.588
14. Idealized Influence (Behavior)	.79	3.51	.657
15. Individualized Consideration	.41	2.98	.868
18. Idealized Influence (Attributed)	.51	3.82	.388
19. Individualized Consideration	.43	3.68	.516
21. Idealized Influence (Attributed)	.26	3.51	.588
23. Idealized Influence (Behavior)	.58	3.89	.312
25. Idealized Influence (Attributed)	.42	3.07	.800
26. Inspirational Motivation	.77	3.28	.730
29. Individualized Consideration	.44	3.71	.494
30. Intellectual Stimulation	.61	3.17	.602

Table 4 (*continued*)— Means, Standard Deviations for Management by Exception-Active Leadership and Passive/Avoidant Absence of Leadership MLQ Items

	Factor Loadings	*M*	*SD*
31. Individualized Consideration	.78	3.52	.604
32. Intellectual Stimulation	.66	3.15	.676
34. Idealized Influence (Behavior)	.76	3.62	.575
36. Inspirational Motivation	.79	3.6	.536
Factor II—Contingent Reward Leadership			
1. Contingent Reward	.40	2.95	.968
11. Contingent Reward	.82	3.02	.923
16. Contingent Reward	.77	2.43	1.09
35. Contingent Reward	.53	2.56	1.01
Factor III—Management by Exception-Active			
4. Management-by-Exception (Active)	.68	1.90	.961
22. Management-by-Exception (Active)	.75	1.58	1.02
24. Management-by-Exception (Active)	.49	1.08	1
27. Management-by-Exception (Active)	.72	1.51	1.10
Factor IV—Passive/Avoidant Absence of Leadership			
3. Management-by-Exception (Passive)	.64	.880	.934
5. Laissez-faire	.56	.320	.592
7. Laissez-faire	.31	.840	1.05
12. Management-by-Exception (Passive)	.87	.490	.712
17. Management-by-Exception (Passive)	.31	1.75	1.12
20. Management-by-Exception (Passive)	.62	.59	.739
28. Laissez-faire	.76	.380	.674
33. Laissez-faire	.56	.650	.909

Analysis of Correlations Between the MLQ and the LLI

The first analysis that provided results to help answer research questions one and two was to investigate the relationships between the Multifactor Leadership Questionnaire (MLQ) and the Lifetime Leadership Inventory (LLI) was completed by utilizing a series of Pearson correlation analyses. The goal of running these correlational tests was to describe the relationships between the factors and items of the instruments.

This type of analysis is commonly used in the literature, including research on relationships between various instruments and the MLQ (e.g., Avolio, 1994; Bono and Judge, 2003; Young, 2011).

The Statistical Package for Social Sciences version 20 (SPSS) was used to create a correlation matrix representing the relationships between the factors of the LLI and the MLQ used in this study. First, the seven factors of the LLI were correlated with the four-factor model of the MLQ. The comparison found highly significant relationships between three factors of the LLI and the Transformational Leadership factor of the MLQ ($p < 0.01$). The largest relationship was found between the Early/Previous Work Experiences factor of the LLI and the Transformational Leadership factor of the MLQ ($r = .318$). The statistically significant correlations for all comparisons ranged from .164 to .318. These coefficients are similar to those of other studies that compared the MLQ with another instrument (Avolio, 1994; Schell, 2010). A correlation matrix detailing the relationship between all factors of the LLI used for this study and the four-factor model of the MLQ is presented in Table 5.

Table 5—Correlations Between the MLQ and LLI Factors

Items	*Factor I Early Leadership Development Experiences*	*Factor II Relationships with Mentors*	*Factor III Relationships with Parents*	*Factor IV Exploratory Experiences*	*Factor V Crucible Experiences*	*Factor VI Early Work Experiences*	*Factor VII Experiences with Sports*
Factor I Transformational	.118	.224**	.119	.199**	-.031	.318**	-.066
Factor II Contingent Reward	.028	.164*	.089	.165*	.027	.232**	-.054
Factor III Management by Exception-Active	-.051	.003	-.068	-.013	.058	-.075	.074
Factor IV Passive/Avoidant	.011	-.075	.033	.105	.039	.015	.066

*Note. *(p< .05) **(p< .01)*

Correlation Analysis Between LLI Items and the MLQ

The exploration of relationships between the individual LLI items and the four-factor MLQ was completed with a Pearson correlation analysis. Statistical Package for the Social Sciences version 20 (SPSS) was used to create a correlation table of these relationships. The analysis discovered a total of nineteen LLI items having a significant relationship with the Transformational Leadership factor of the MLQ ($\alpha = .05$). Results of this analysis are shown in Table 6 below. The largest relationship occurs between item 20 of LLI (*In my career*.....) and the Transformational Leadership factor of the MLQ ($r = .331$, $p < .01$). Other correlations of note are items 9, 10, 12, 21, and 47, as listed in Table 6. Only partial items are listed here to protect the instrument's copyright. Please refer Schell (2010) for further information on the instrument's items. Each of these items has a correlation coefficient above .200. The smallest relationship is found between item 6 (*My parents*.....*)* and the Transformational Leadership factor of the MLQ ($r = .139$, $p < .05$). The next smallest relationship if found between item 42 (*I enjoy* .....) and the Transformational Leadership factor ($r = .146$, $p < .05$). Although the correlations reported were significant, most were small in magnitude when interpreted in light of the criteria proposed by Cohen (1988). These findings provide much information in answering the research questions for this study. However, a more in-depth understanding of the relationship between Transformational Leadership and antecedent experiences of participants can be found by analyzing the collected data using Structural Equation Modeling (SEM) to investigate causal

relationships (Johnson & Wichern 2002; Schell, 2010) between factors of the LLI and the Transformational Leadership factor of the MLQ.

Table 6—LLI Items Significantly Correlated to MLQ Factors

LLI Items	*MLQ I*	*MLQ II*	*MLQ III*	*MLQ IV*
4.	.168*	.124	-.036	-.038
6.	.139*	.071	-.087	.073
9.	.251**	.153*	-.143*	-.081
10.	.246**	.147*	.020	-.100
11.	.165*	.122	.049	-.098
12.	.229**	.151*	.046	-.096
14.	.170*	.083	.009	.004
15.	.200*	.045	.066	-.006
16.	.166*	.106	-.080	-.036
17.	.171*	.223**	-.013	-.068
18.	.175*	.204**	-.046	-.097
20.	.331**	.196**	-.089	-.068
21.	.239**	.095	-.063	-.060
24.	.154*	.011	-.115	-.016
27.	.066	.155*	.117	.066
41.	.185**	.152*	.029	-.024
42.	.146*	.079	-.016	.078
43.	.087	-.007	-.043	.148*
44.	.054	.045	-.019	.109
45.	.009	.014	.002	.113
46.	.200**	.131	-.018	.018
47.	.212**	.246**	.012	.020
49.	.132	.254**	-.024	.022
53.	.200**	.134	-.060	.058

Note. * ($p<.05$) ** ($p<.01$)

Structural Equation Modeling Analysis

Lisrel 8.72 (Joreskog & Sorborm, 2005) was used to examine the structural relationship between the seven-factor LLI and the Transformational Leadership factor of the MLQ. The proposed path model is presented in Appendix G. The SEM analysis indicated the hypothesized model fit the data well with an RMSEA value of 0.050. The 90% confidence interval (.047 to .054) around the obtained RMSEA value provides additional evidence to support that the proposed model is a "close fit" to the estimated population model. In addition to the RMSEA, the Standardized Root Mean Residual (SRMR) was found to be .096. According to Hu and Bentler (1999), SRMR values close to .09 represent a reasonable fit to the data. The Comparative Fit Index (CFI) was .43 while the Non-Normed fit index was .40. These values are considerably lower than the .95 values recommended by Hu & Bentler. However, Kenney (2011) suggests that comparative fit indices may not be very informative when the RMSEA for the null model is less than .158. The RMSEA for the null model for this analysis was .045 suggesting that both the CFI and NNFI do not provide good information about model fit for this data. Table 7 presents the unstandardized (β) and standardized (B) path coefficients, standard errors and the correlations between the seven LLI factors and the transformational leadership factor. These results show that the paths from Relationships with Mentors and Previous/Early Work Experiences to the Transformational factor were significant indicating significant relationships between these two LLI factors and Transformational Leadership.

Table 7— SEM Relationships Between the Seven-Factor LLI and Transformational Leadership Factor

	β	SE	B	95% CI		Correlation To Transformational Leadership
Factor				Upper Bound	Lower Bound	
Early Leadership Development	-.05	.13	-.04	-.26	.16	.09
Mentoring Relationships	.17*	.10	.14	.01	.34	.30*
Relationships with Parents	-.02	.09	-.02	-.17	.17	.13
Exploratory Experiences	.16	.12	.14	-.04	.36	.31
Crucible Experiences	.15	.13	.13	-.06	.36	.01
Early Work Experiences	.48*	.16	.41	.22	.74	.46*
Experiences with Sports	-.17	.11	-.14	-.35	.01	-.07

Note. β = unstandardized regression coefficient, SE = standard Error, B = standardized regression coefficient, CI= confidence interval.
*p <.05, one tailed test

The coefficient of determination (R^2) for this analysis was .28 indicating the seven LLI factors explained 28% of the variance of items comprising the Transformational Leadership construct. Cohen (1988) suggests that R^2 values of .13 to .25 are considered to have moderate effects on a dependent variable while R^2 values of .26 or greater would be considered large. Those values of R^2 falling below .13 would be considered as having small effects on the dependent variable, which in this case is Transformational Leadership as defined by the Multifactor Leadership Questionnaire (MLQ). For this analysis, the seven LLI factors, in particular Relationships with Mentors and

Previous/Early Work Experiences factors, accounted for a "large" proportion of the Transformational Leadership construct.

Summary

The results from this study demonstrate the reliability and validity of the LLI and MLQ for this research. They also reveal relationships between the instruments' factors and between the individual items of the LLI and the Transformational Leadership factor of the MLQ through correlational analysis. Finally, Structural Equation Modeling is utilized to demonstrate a more robust understanding of the relationships between transformational leadership, as defined and assessed by the MLQ, and antecedent experiences. Each of these is summarized below in order.

For this study, an examination of the psychometric properties and factor structures was performed for two instruments: the Lifetime Leadership Inventory (LLI) and the Multifactor Leadership Questionnaire (MLQ). The original 57-item LLI scale was developed by Schell (2010) to assess antecedent experiences of a sample of over 200 business leaders. However, results from the exploratory factor analysis of the LLI found that 45 of the 57 LLI items best represented seven distinct lifespan experience factors for participants in this study. Results from a confirmatory factor analysis further supported the use of the seven-factor LLI instrument for this study. The responses for the 212 principals from the MLQ were also subjected to a confirmatory factor analysis. The MLQ model found to fit the data best was the four-factor model represented by Transformational Leadership, Contingent Reward Leadership, Management by Exception-Active Leadership, and Passive/Avoidant absence of leadership.

The correlation analysis between the seven-factor Lifetime Leadership Inventory (LLI) and the four-factor Multifactor Leadership Questionnaire (MLQ) identified three significant relationships of interest to this study. The Transformational Leadership factor was found to be significantly correlated with three LLI factors: (1) Early/Previous Work Experiences, (2) Relationships With Mentors, and (3) Exploratory Experiences as displayed in Table 5.

For this study, nineteen significant relationships were found to exist between the Transformational Leadership factor of the MLQ and the individual LLI items. Nine of those relationships have coefficients that Gliner and Morgan (2000) describe as approaching, or surpassing, medium effect sizes. Those coefficients range from .200 ($p<$ .01) to .331 ($p<$ .01). The largest coefficient in this range exists between LLI item number 20 (*In my career.....)* and Transformational Leadership as defined by the MLQ ($r=$ .331, $p<$ .01).

The Structural Equation Modeling (SEM) analysis found two significant relationships between the seven-factor LLI and the Transformational Leadership factor of the MLQ. The largest of these relationships exists between Early/Previous Work Experience and Transformational Leadership ($r=$ .46, $p<$ .05). Finally, structural equation modeling was used to determine how well the relationships between the seven LLI factors and Transformational Leadership fit the data for this study. Results from this analysis found significant path coefficients from (1) Relationships with Mentors and (2) Early/Previous Experiences to the Transformational Leadership factor of the MLQ. Overall, the seven-factor LLI model explained 28% of the variance for the Transformational Leadership construct measured by its 20 items.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

Transformational leaders engage in specific behaviors to guide organizations and individuals in achieving self-actualization (Burns, 1978; Sergiovanni, 2007). Transformational leadership theory has been extensively studied and many aspects of it are accessible in the current body of knowledge on leadership (Antonakis, Avolio, & Sivasubramaniam, 2003). Studies have demonstrated that transformational leaders have positive effects on organizational vitality (Bass, 2008). Because of transformational leadership's influence on the strength of organizations, efforts been made to assess and describe the characteristics that define this leadership style, (Leithwood & Jantzi, 2005). Few studies, however, exist that explore the development of transformational leaders (Avolio, 2010). Investigating the antecedent experiences of transformational educational leaders highlights important aspects of their maturation as leaders as has been displayed in this study.

The purpose of this study was to explore the effect of antecedent experiences on transformational leadership skill for a sample of K-12 education leaders from the Northwest region of the United States. This research is a seminal effort that provides insights about the life experiences that influence the development of transformational leaders. Although, much as been written about the characteristics that define transformational leaders, there is almost no research that investigates the relationship

between antecedent life experiences and the behaviors that characterize transformational leadership. An extensive review of the many identified empirical studies that describe the characteristics of transformational leaders supports the positive effects that transformational leaders have on the vitality of organizations and investigates methods for assessing leadership behaviors that typify transformational leaders (Leithwood & Jantzi, 2005). However, few studies have investigated the development of transformational leaders (Avolio, 2010). The results of this dissertation begin to address this gap in the body of knowledge with a sample of regional education leaders.

The Lifetime Leadership Inventory (LLI) developed by Schell (2010) was chosen to define antecedent experiences for this dissertation, and the Multifactor Leadership Questionnaire (MLQ) was chosen to operationalize the transformational leadership construct. The two instruments were distributed to a sample of regional K-12 school principals from the Northwest region of the United States. The data collected from these leaders was analyzed for relationships between the seven-factor LLI and the four-factor MLQ. Results from this research found significant relationships between factors representing seven major types of life experiences and the behaviors that characterize transformational leaders.

Answers to Research Questions and Contributions to the Literature

The study investigated two research questions related to the development of transformational leadership skill as described in the previous chapters of this study. The first research question explores the correlation between the antecedent experience and displays of transformational leadership behavior:

(1) Does a relationship exist between perceived transformational leadership skills and the lifespan factors of K-12 principals?

A two-fold analysis of the collected data for this sample demonstrates that relationships do exist between perceived transformational leadership skills and antecedent experiences. Specifically, in order from most influential to least influential, the Early/Previous Work Experience factor and the Relationship with Mentors factor had statistically significant relationships to transformational leadership. However (appearing in descending order), the Exploratory Experiences, Relationships with Parents, Early Leadership Development Experiences, Experience with Sports, and Crucible Experiences factors appeared in this study to have limited and tangent influence upon transformational leadership. The MLQ has been researched extensively and through the use of confirmatory factor analysis was found to be a good fit to the data. The LLI has only recently been developed and has very little in the way of established validity evidence. To address the validity issue an exploratory and confirmatory factor analysis was conducted with responses to the LLI from the respondents participating in this study. The exploratory analysis identified seven LLI factors that were further supported by results from a confirmatory factor analysis. The LLI was found to be a good fit to the responses of participants for this study. Once the reliability and validity analysis for the instruments used in this study were completed, correlational analysis of the seven LLI factors against the Transformational Leadership factor of the MLQ found a number of significant correlations. Specifically, the Relationships with Mentors factor, Exploratory Experiences Factor, and Early/Previous Work Experiences Factor of the LLI each demonstrated a significant relationship with the Transformational Leadership factor of

the four-factor MLQ. Interestingly, each of these factors had small, but significant relationships with the Contingent Reward factor of the MLQ. This finding supports the research of Avolio and Bass (2004) that Contingent Reward leadership is an effective form of leadership if used consistently. The correlation coefficients found through this analysis were strikingly similar to other research investigating relationships between school leadership and development experiences (e.g., Avolio, 1994; Schell, 2010), and between school leadership and student success (e.g., Marzano, et al., 2005).

Second, a more in-depth Structured Equation Modeling (SEM) analysis of the seven LLI factors against the Transformational Leadership factor of the MLQ found two significant correlations. The advantage of using structural equation modeling over other techniques such a multiple regression is that this type of analysis takes measurement error into account producing a more robust result related to the relationships that exist or do not exist between the LLI and MLQ factors. The Relationships with Mentors factor and the Early/Previous Work Experiences Factor each demonstrated a significant effect on the Transformational Leadership factor of the Multifactor Leadership Questionnaire (MLQ), and displayed a much larger effect size than was found with a Pearson correlation analysis (Johnson & Wichern, 2002).

The second research question sought to explore the effects of individual LLI items on the Transformational Leadership factor of the MLQ:

> (2) Which life span factors investigated for this study have the most influence on perceived transformational leadership skills?

The results of the sample data analysis allowed this question to be answered as well. Analysis of the seven-factor LLI items against the Transformational Leadership

factor of the MLQ found nineteen significant correlations. The largest relationship exists between Item 20 of the LLI (*In my career,*

.....) and the Transformational Leadership factor of the MLQ. The smallest significant relationship exists between LLI item 6 (*My parents*.....) and the Transformational Leadership factor of the MLQ.

Implications for Theory

Avolio (1994) theorized transformational leaders go through experiences during their lifetimes that help form them in their effectiveness. The motivation for conducting this study was to begin bridging the gap between the effect of transformational leaders and their development as first theorized by Avolio. To investigate this relationship, an instrument needed to be identified or created that could address a large breadth of life experiences for educational leaders (Avolio, Personal Communication, February 21st, 2010). Although, instruments such as the MLQ purport to assess transformational leadership behaviors, the sample of educational leaders used in their validation sample was limited to school administrators from South Africa (Avolio & Bass, 2004). The appropriateness of using the MLQ with US educational leaders was of paramount importance when considering the use of the MLQ for this study. To ensure that the MLQ was a valid and reliable instrument for assessing educational leaders in the United States, a confirmatory factor analysis of respondents participating in this study was conducted. The first model of the MLQ to be analyzed in this study with a confirmatory factor analysis was the nine-factor model. Schell (2010) found the nine-factor model of the MLQ fit his responses well. However, it was found through confirmatory factor analysis

that the four-factor model of the MLQ fit the responses for this study best. The four-factor model is supported by results from validity studies reported in the MLQ technical manual (Avolio & Bass, 2004). One reason offered to explain why the four-factor model fits best with this study is although many differences exist between leadership of various categories of organizations (e.g., business and education organizations), the foundational dimensions of transformational leadership generally transcend across organizations and cultures (Bass, 1997).

Few if any studies have examined the validity of the MLQ for use with U.S. school leaders. Once the MLQ was judged to be appropriate, an instrument was identified to assess individuals' life experiences. The five-factor LLI developed by Schell (2010) was chosen to assess principals' antecedent life experiences. The LLI, however, was validated using a sample of business leaders. Schell's Lifetime Leadership Inventory (LLI), provided a new quantitative survey for understanding the antecedent experiences of leaders as opposed to relying solely on the lengthy qualitative methods of earlier studies (Bennis and Thomas 2002; Howard & Bray, 1988). Through this current study, a seven-factor LLI was validated and found to be a reliable instrument for studying the antecedent experiences education leaders go through that may be related to their display of transformational behaviors.

One reason offered to explain why seven rather than five factors emerged from this analysis is the dimensions of antecedent experiences developed by Schell (2010) were interpreted somewhat differently by the population of Northwest Accreditation Commission (NWAC) leaders than they were by Schell's sample of business leaders. Contextual influences such as differences in licensure, required professional

development, and the moral purpose of schooling (Fullan, 1999) may lead education leaders of the NWAC to see the latent constructs associated with Schell's (2010) LLI items differently than business leaders see them.

Results from this study found that the MLQ and the LLI could be used to investigate the relationship between antecedent experiences and transformational leadership behaviors for educational leaders practicing in the United States. The correlation analysis between the factors of the seven-factor LLI and the Transformational Leadership factor of the MLQ, shown in table 5, also has theoretical implications for Avolio's (1994) theory of a connection between antecedent experiences and transformational leadership. The correlational analysis and the Structural Equation Modeling (SEM) analysis found significant relationships between the Relationships with Mentors and Early/Previous Work Experiences factors of the seven-factor LLI and the Transformational Leadership factor of the MLQ.

The Relationships with Mentors factor and the Early/Previous Work Experiences factor have the largest effect on transformational leadership. These factors are directly connected to experiences related to the work the leader is currently engaged in. For example, the two items that had the highest loadings on the Relationships with Mentors factor state, "During my career....." and "My mentor(s)....." Both of these items suggest ongoing and present sources of support in the participant's current position or career path. Interestingly, a negative relationship was produced between Absent/Avoidant leadership and the Relationship with Mentors factor in this study. Although the relationship was small and statistically insignificant, it appears to support

the theory demonstrated here; that as mentorship is increased with leaders, effective leadership behaviors also increases.

The item with the highest loading for the Early/Previous Work Experience factor of the LLI factor was “In my career.....” The second highest loading for the Early/Previous Work experience factor was, “I served .....” Both of these reference the participant’s career, implying the work the participants have devoted their entire lives to including their current position. These items discuss experiences directly related to the participants’ lifelong work, or career. All of the other factors discuss experiences that are not related to the participant’s career in a linear fashion, and as a result the other factors showed no significant relationship to transformational leadership with one exception. The Exploratory Experiences factor of the seven-factor LLI showed a small, but significant, relationship to the Transformational Leadership factor of the MLQ with a Pearson correlation analysis only. The SEM analysis did not find a significant relationship between the Exploratory Experiences factor and transformational leadership as defined by the MLQ. The reason for this is that the SEM analysis accounts for measurement error that may have caused the Exploratory Experiences factor to show up as significant in the Pearson correlation. The implications for theory are two-fold. First, transformational education leaders become transformational through work experiences in education leadership, providing multiple opportunities to exercise transformational leadership behaviors. Secondly, experienced transformational education leaders mentor protégés in becoming transformational education leaders. Tangent life experiences are just that, tangent. They do not appear, through the analysis of the data collected in this

study, to have a significant effect on becoming a better school level education leader. A figure showing the theoretical implications discovered through Structural Equation Modeling (SEM) is displayed in Figure 3 below.

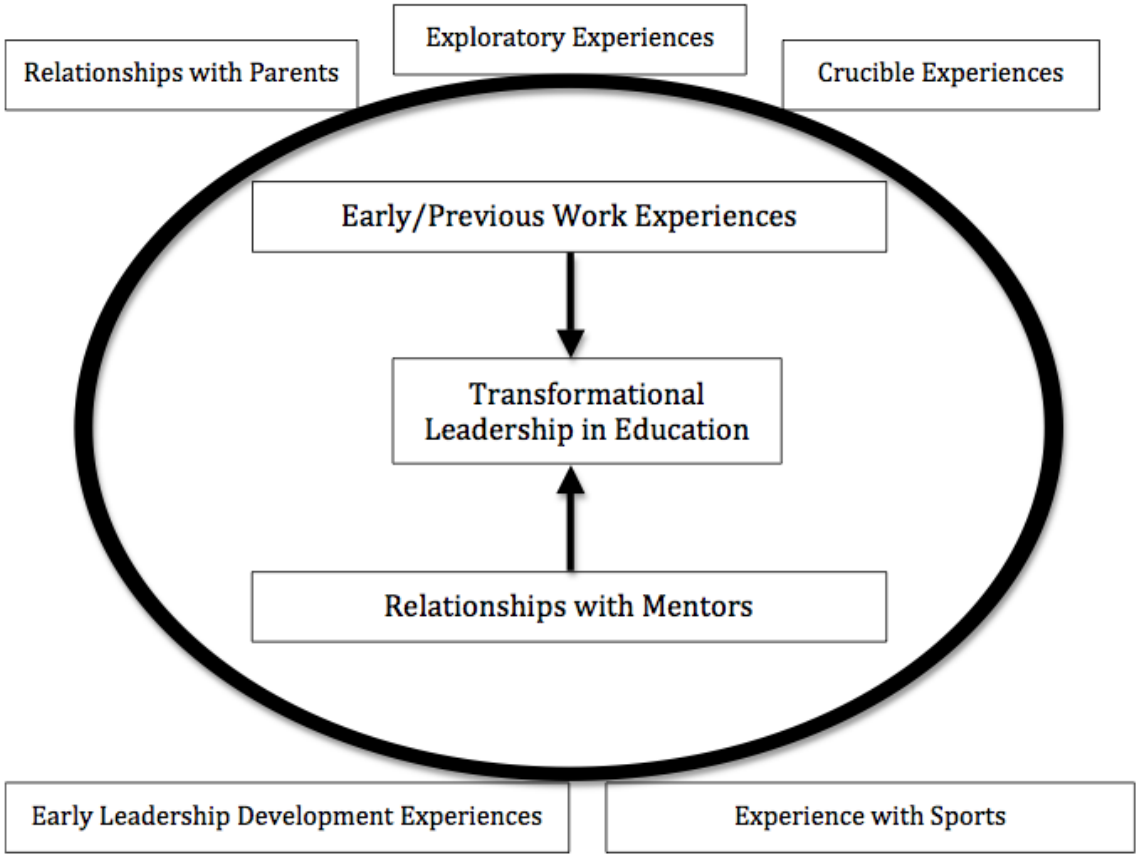


Figure 2—Graphic demonstration of tangent and direct effects as found through SEM

These theoretical implications are intriguing and provide a path for drilling deeper into the concepts of Mentorship and Early/Previous Work Experience and their relationship to high quality leadership. But how can an education leader turn this knowledge into action?

Implications for the Education Leader

This is the first study to quantitatively examine the relationship between antecedent life experiences and k-12 principals using the LLI and the MLQ. These results, particularly for educational leaders, have not been validated by prior studies. However, results from this study may help inform individuals responsible for providing K-12 principals with professional development and in leading the principal hiring process.

The first implication for the education leader comes in the area of hiring school principals. The Relationships with Mentors factor and the Early/Previous Work Experiences factor of the seven-factor LLI suggest general categories to be aware of and their relationship to transformational leadership. Drilling down into those constructs, into the specific items of each factor, gives the practitioner a window into using the knowledge gained from this study in the real world. Avolio and Bass (2004) state the MLQ has been used to assist in leader recruitment, selection and training in studied populations. The LLI items that comprise the Relationships with Mentors and Previous/Early Work Experiences factors have a significant correlation to the Transformational Leadership factor of the MLQ can be used in interviewing and recruiting. Seven items within the Relationships with Mentors factor were found to have significant correlations with the Transformational Leadership factor of the MLQ. These items were reformulated, and combined in some instances, to create an example of interview questions that could help identify transformational education leaders. The

example interview questions related to the Relationships with Mentors factor and transformational leadership are listed below:

- Please describe the mentors that have been influential to your educational leadership (formal or informal), how you developed those mentoring relationships, your interaction with them, and how they have provided guidance on developing your leadership skill.
- Have you often worked for leaders who really understood you, your strengths, and your weaknesses? How did this affect your development as a leader?
- Have you reported directly to a leader who modeled the leadership behaviors you consider to be ideal?
- Please describe an instance when you were able to seek the advice of a prior supervisor of mentor about a workplace issue?
- Early in your career, did you have a strong role model of the leader you wanted to be? If so, please describe why this person was a role model.

Five items within the Early/Previous Work Experiences factor were found to have significant correlations with transformational leadership as defined by the MLQ. These items were also restructured into interview questions that could possibly be included in the recruitment of transformational education leaders. The example interview questions related to the Early/Previous Work Experiences and transformational leadership are listed below:

- In your career, has it been common for you to lead people older than yourself?
- Did you serve in leadership positions early in your career?
- Please describe the functional areas in which you have held positions in your career?
- What have been the most important lessons you have learned in each of your functional positions in your career?
- Please describe an important goal you attained in your career and what you had to go through to attain that goal? Please describe why this goal was so important to you.

These items may be developed further and incorporated into interviews and recruitment of potential education leaders. For example, a potential leader could be asked to describe who they consider to be a mentor, to describe that relationship, to describe opportunities they have had to lead others older than themselves, etc.

The second implication for the educational leader is the creation of in-house leadership development programs. The data analysis discussed previously indicates an organized leadership development program incorporating mentoring and opportunities to lead experienced colleagues in a variety of functional areas (finance, school leadership, etc.) can influence potential leaders in displaying transformational behaviors. Developing an in-house leadership academy, as suggested by Collins (2001) and Bower (2008), can utilize the information gleaned from this study. The effects of mentorship and work experience can be included into the leadership development program. It would seem logical that the design of a program such as the one describe above would begin by reviewing the items under each of the LLI categories that are most highly related to transformational leadership. Results from this study suggest that the items tapping experiences mostly highly associated with Mentoring and Early/Previous work experiences would be the most important to consider when developing a leadership academy. The first item under the Relationships with Mentors factor states, "My mentor(s)....." It seems that a logical first step may be in developing a leadership program that incorporates mentoring where seasoned educational leaders are trained to use the most recent empirical and practical knowledge when advising novice or less experienced colleagues (Alsbury & Hackmann, 2006). This mentoring would serve as a long-term, career centered relationship effectively

incorporating each of the other items under the Relationships with Mentors factor. Specifically, the in-house mentoring program would have potential leaders meeting with mentors on a regular basis, creating a relationship of understanding, leadership observation, open communication, and role modeling in a formal and organized manner (Searby, 2010).

The above described mentorship program would ideally be integrated with creating functional opportunities that included central constructs included in the items under the factor Early/Previous Work Experiences. The item with the largest correlation coefficient under this factor states, "In my career....." A school district can use this knowledge to create an organized leadership academy charged with recruiting potential candidates, matching them with skilled mentors (as described above), and providing organized opportunities to lead early in their career. This method would incorporate the other four significant items related to transformational leadership under the Early/Previous Work Experiences factor of the LLI. It would allow leadership candidates an opportunity to serve in leadership positions early, serve in a variety of functional areas in their formation, provide opportunities for intense learning, and would promote a culture where it is understood that becoming a good leader in education takes personal sacrifice in order to attain educational greatness.

Limitation of the Study

The knowledge gathered from this research has limitations that restrict it from being generalizable to populations other than the one included in this study. First, the research targets a regional population of school principals. As such, the findings from

this study are not generalizable to education leaders in other populations or levels of leadership (e.g., superintendents, teacher leaders, school board trustees, principals from the Northeast, etc.).

Second, this study incorporated self-report leader data, allowing for possible bias such as participants providing less than accurate responses for various reasons. For example, participants may not have recalled certain experiences as they happened in objective reality, or participants may want to ensure they are represented in a socially acceptable manner. Also, items on self-report instruments may be confusing to individual participants, bringing the reliability of the self-report data into question (Gliner & Morgan, 2000). It is possible the participants' self-assessment of their own leadership behavior may differ from the evaluation of followers, colleagues, and superior personnel. Data collected from followers, superiors and other stakeholders with a 360° leadership assessment instrument on the behavior of a school leader could possibly correlate with different antecedent experiences than were found in this study, or possibly differ in direction and strength. This style of assessment would allow for triangulation of results, lending more trust to the study than is found with self-report data analysis alone.

Third, the instruments used in this study were found to be valid and reliable, but further development is needed. The version of Schell's (2010) Lifetime Leadership Inventory (LLI) used for this study was found to have a valid and reliable model with the population of this study. The instrument highlighted strong effect sizes between its factors and Transformational Leadership as defined by the MLQ when subjected to Structural Equation Modeling (SEM). However, the LLI is a relatively new instrument that has been used in only one previous study that examined the antecedent experiences

of leaders from the corporate world and their perceptions of engagement in transformational leadership behaviors. Its reliability and validity is still being tested over a variety of populations to confirm its usefulness in exploring the antecedent experiences of leaders and their relationship to high quality leadership behavior. Additionally, it is possible that studies with other populations of education leaders would identify more appropriate questions related to areas of life-span experience that could be incorporated into the LLI, strengthening its validity, reliability, and usefulness in educational research on transformational education leader development.

The four-factor model of the MLQ (Avolio & Bass, 2004) was found to be a reliable and valid model for this study as well. The advantage of using the MLQ for studies in educational leadership is the instrument allows the researcher to assess transformational leadership, as well as transactional leadership and absent/avoidant lack of leadership — providing an avenue for very comprehensive research into leadership behaviors against a variety of other independent variables. However, only the self-report form of the MLQ was used for this study. More validity in using the MLQ for educational leadership studies can be established by incorporating the 360° method of studying leadership behavior in populations of educators. Having surveys completed on leadership behavior by the participants, the participants' superiors, and the participants' followers will allow for a more robust view of the leaders' behavior and how it relates to other independent variables. Finally, the sample size for this study is relatively small. Most statisticians agree that large sample sizes are required for analyses that use structural equation modeling (Kline, 2005). According to Kline (2005), the 212 participants surveyed in this study make up a moderate sample size for SEM purposes.

Although, the sample size is sufficient to meet power requirements for correlational studies as previously discussed, and is in line with similar research (Avolio, 1994; Blatt, 2002; Schell, 2010), the complexity of the model suggested that the number of participants should be substantially larger.

Recommendations for Future Research

This study has shown lifespan experiences of a sample of education leaders can be grouped into specific factors. This project has also shown specific relationships between categories of antecedent experiences and transformational leadership behavior can be identified. However, many questions still exist in this line of research and many avenues for expanding on this study can be identified. Some of these avenues for future research include the continuing development of the LLI for use in educational leadership studies. The LLI seems to have value in this line of research, but refinement and validation through use in various populations of educational leaders is needed.

Another avenue for research includes investigating the relationship between antecedent experiences and transformational leadership behavior as rated by superiors, followers, and peers of school principals. As discussed earlier, it is possible for self-report data to be biased and a more diversified scope may produce differing results that add important information to the body of knowledge addressed in this project. As mentioned previously, more robust findings may be discoverable in similar research using a substantially larger sample of education leaders. Finally, this research was strictly quantitative. A mixed-methods study or a qualitative study may produce robust data giving insight into how the concepts of Relationships with Mentors and

Early/Previous Work Experiences add to transformational leadership from the subjective point of view.

Summary

Transformational leadership is powerful, positive, and sustains organizational change. In this study, three major findings were discovered concerning transformational leadership and its relationship to antecedent experiences in education leaders. First, the Lifetime Leadership Inventory (LLI) was found to be a valid and reliable instrument for exploring the antecedent experiences of educational leaders from the Northwest Accreditation Commission (NWAC). The second major achievement of this study was the validation of the MLQ as a reliable instrument for assessing transformational leadership behavior in education leaders of the NWAC, and possibly other populations of education leaders in the U.S. The advantage in using the MLQ over other instruments measuring transformational leadership (e.g., Leadership Practices Inventory) is the ability of the MLQ to measure leadership behaviors other than transformational such as Contingent Reward leadership, Management by Exception-Active leadership, and Passive/Avoidant absence of leadership. These characteristics of the MLQ provide the education researcher with the ability to investigate variables related to many styles of leadership.

Finally, this study answered the proposed research questions. First, relationships do exist between perceived transformational leadership skills and the life span experiences of K-12 principals. Specifically, two factors describing antecedent experiences were found to have a substantial relationship with transformational

leadership as defined by the MLQ. The first antecedent experience factor being Early/Previous Work Experiences and the second being Relationships with Mentors. Secondly, relationships between individual items of the LLI and the Transformational Leadership factor of the MLQ were analyzed and identified as described in Chapter 4. The correlation coefficients found in this study were very similar to the findings of Schell (2010) and Avolio's (1994) studies investigating relationships between antecedent experiences and transformational leadership in different populations than the one of interest here.

These discoveries have implications for educational research and for practitioners of educational leadership. For researchers, the LLI can supply those interested in developing the literature on the relationship between leadership and antecedent experience with valuable information. The seven LLI factors offer one path to gleaning insights into education leaders' life experience. The individual factors are reliable for examining the latent constructs. This study demonstrated that the LLI provides educational researchers with a quantifiable instrument in examining antecedent experiences of participants. However, further research efforts should be focused on studying the validity of the seven-factor structure of the Lifetime Leadership Inventory on other populations of leaders in education. These validation studies could also include qualitative data designed at capturing narrative information describing each factor of the LLI in a concrete manner. These validation studies and qualitative data may lead researchers to discovering an even better instrument for assessing the antecedent experiences education leaders go through in becoming more transformational in their practice. For the practitioner, this study gives leaders insight into areas of experience that

can be used for selection, recruitment, and training. The Early/Previous Work Experiences factor and the Relationships with Mentors factor can be explored to create in-house leadership development programs. The individual items of the LLI related to transformational leadership can be manipulated to assist in selection and recruitment of transformational leaders.

Concluding Statement

Burns (1978) asks in his original theoretical text on transformational leadership *"*Can *leadership* be taught" (p. 448)? He goes on to theorize that transformational leadership is learned through:

> the total teaching and learning process operating in homes, schools, gangs, temples, churches, garages, streets, armies, corporations, bars, and unions conducted by both teachers and learners, engaging with the total environment, and involving influence over persons' *selves* and their opportunities and destinies, not simply their minds. (Burns, 1978, p. 448)

This study supports, in specific detail, Burns' theory that transformational leadership can be taught and learned. Leaders can learn how to influence the core being of followers, their "selves" as Burns puts it, to produce change with motivation grounded in moral imperative. This study sheds light on the importance of Relationships with Mentors and Early/Previous Work Experiences in helping form the transformational behaviors of education leaders. A small bridge has been formed between experience and development of transformational leadership. The door is now open to future, more robust research in this area of Transformational Leadership theory.

REFERENCES CITED

Alsbury, T. L., & Hackmann, D. G. (2006). Learning from experience: Initial findings of a mentoring/induction program for novice principals and superintendents. *Planning and Change, 37*(3 & 4), 169-189.

Antonakis, J., Avolio, B., and Sivasubramaniam, N. (2003). Context and leadership: An examination of the nine-factor full-range leadership theory using the multifactor leadership questionnaire. *The Leadership Quarterly*, 14: 261–295.

Antonakis, J., Cianciolo, A. T., & Sternberg, R. J. (2004). Leadership: Past, present and future. In J. Antonakis, A. T. Cianciolo, & R. J. Sternberg, R. J. (Eds.), *The Nature of Leadership* (pp. 3-15). Thousand Oaks, CA: Sage.

Atwater, L. E., Dionne, S. D., Avolio, B., Camobreco, J. F., & Lau, A. W. (1999). A longitudinal study of the leadership development process: Individual differences predicting leader effectiveness. *Human Relations, 52*(12), 1543–1562.

Avolio, B. J. (1994). The "natural": Some antecedents to transformational leadership. *International Journal of Public Administration, 17*(9), 1559-1581.

Avolio, B. J. (2010). In N. Nohria & R. Khurana (Eds.), *Handbook of leadership theory and practice* (pp. 739-768). Boston, MA: Harvard Business School Publishing.

Avolio, B. J., & Bass, B. M. (2002). *Developing Potential Across a Full Range of Leadership: Cases On Transactional and Transformational Leadership*. Marwah, NJ: Lawrence Erlbaum Associates.

Avolio, B. J., & Bass, B. M. (2004). *Multifactor leadership questionnaire: Third edition manual and sampler set*. Menlo Park, CA: Mind Garden.

Avolio B.J., Bass, B. M., & Young, D. (1999). Re-examining the components of transformational and transactional leadership using the multifactor leadership questionnaire. *Journal of Occupational and Organizational Psychology*, 72: 441 – 462.

Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, 18: 19 – 31.

Bass, B. M. (1995). Transformational leadership: Looking at other possible antecedents and consequences. *Journal of Management Inquiry, 4,* 293-297.

Bass, B. M. (1997). Does the transactional-transformational leadership paradigm transcend organizational and national boundaries? *American Psychologist, 52*(2), 130-139.

Bass, B. M. (2008). *The bass handbook of leadership: Theory, research, and managerial applications.* (4th Ed). New York: Free Press

Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2nd ed.). Mahwah, NJ:Lawrence Erlbaum Associates.

Bennis, W. G. (2004). The crucibles of authentic leadership. In J. Antonakis, A. T. Cianciolo, & R. J. Sternberg, R. J. (Eds.), *The nature of leadership* (pp. 331-343). Thousand Oaks, CA: Sage.

Bennis, W. G., & Thomas, R. J. (2002). *Geeks and geezers: How era, values and defining moments shape leaders*. Boston: Harvard Business School Press.

Bentler, P.M. (1992). On the fit of models to covariances and methodology to the *Bulletin*. *Psychological Bulletin, 112*, 400-404.

Bentler, P.M. (1980). Multivariate analysis with latent variables: Causal modeling. *Annual Review of Psychology, 31*, 419-456.

Blatt, D.A. (2002). *A study to determine the relationship between the leadership styles of career technical directors and school climate as perceived by teachers.* Dissertation in Education Leadership. West Virginia University.

Bono, J.E., & Judge, T.A. (2003). Self-concordance at work: Toward understanding the motivational effects of transformational leaders. *Academy of Management Journal*, 46, 554-571.

Bower, J. L. (2008). The leader within. *Directorship, 34,* 55-57.

Burns, J. (1978). *Leadership*. New York: Harper & Row.

Byrne. B. M. (2001). Structural equation modeling with AMOS:: Basic concepts, applications and programming. Mahwah, NJ: Erlbaum.

Cattell, R.B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research*, *1*, 245-276.

Chin, J. (2007). Meta-analysis of transformational school leadership effects on school outcomes in Taiwan and the USA. *Asia Pacific Education Review,* 8(2), 166-177.

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

Collins, J. (2001). *Good to great.* New York: HarperCollins.

Epstein, J., & Hollifield, J. (1996). Title I and school-family-community partnerships: Using research to realize the potential. *Journal of Education for Students Placed At Risk, 1,* 263- 278.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. (2009). Statistical power analyses using g*power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*(4), 1149-1160.

Fabrigar, L.R., Wenger, D.T., MacCallum, R.C., & Strahan, E.J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods, 4*(3), 272-299.

Field, A. (2005). Discovering statistics using SPSS for windows. Thousand Oaks, CA: Sage.

Fullan, M. (1997). *What's worth fighting for in the principalship?* New York: Teachers College Press.

Fullan, M. (1999). *Change forces: The sequel*. Philadelphia, PA: Falmer Press.

Fullan, M. (2006). *Turnaround leadership.* San Francisco, CA: Jossey-Bass.

Gay, L. R., & Airasian, P. (2003). *Educational research: Competencies for analysis and applications* (7th ed.). Upper Saddle River, NJ: Pearson Education, Inc.

George, B., & McLean, A. (2007). Why leaders lose their way. *Strategy and Leadership,* 35(4), 4–11.

Gliner, J. A., & Morgan, G. A. (2000). *Research methods in applied settings: An integrated approach to design and analysis*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Gladwell, M. (2008). *Outliers: The story of success.* Boston, MA: Little, Brown and Company.

Gravetter, F. J., & Wallnau, L. B. (2009). *Statistics for the behavioral sciences* (8th ed.). Belmont, CA: Wadsworth.

Hall, G. E., & Hord, S. M. (2001). *Implementing change: Patterns, principles, and potholes.* Needham Heights, MA: Allyn and Bacon.

Hallinger, P. (2003). Leading educational change: Reflections on the practice of instructional and transformational leadership. *Cambridge Journal of Education, 33*(3), 329-352.

Herzberg, F. (1968). One more time: How do you motivate employees? *Harvard Business Review*, (Jan / Feb): 53-62.

Howard, A. & Bray, D. W. (1988). *Managerial lives in transition: Advancing age and changing times*. New York: Guilford.

Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structural analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1-55

Hunt, J. G. (2007). A reaction to guru of gurus. *Journal of Management Inquiry, 16*, 18-25.

Johnson, R. A., & Wichern, D. W. (2002). *Applied multivariate statistical analysis* (5th ed.). Upper Saddle River, NJ: Prentice-Hall.

Jolson, M. A., Dubinsky, A. J., Yammarino, F. J., & Comer, L. B. (1993). Transforming the sales force with leadership. *Sloan Management Review, 34*(3), 95–106.

Jöreskob, K. G., & Sörbom, D. (2007). LISREL (version 8.72) [Computer software]. Chicago: Scientific Software, Inc.

Kenny, D (2011, September).Measuring model fit. Retrieved from http://davidakenny.net/cm/fit.htm

Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York: Guilford Press.

Kotter,J. P. (1990). *A force for change: How leadership differs from management.* New York: Free Press.

Kouzes, J., & Posner, B. (1988). Development and validation of the leadership practices inventory. *Educational and psychological measurement, 48,* 483-496.

Kouzes, J. & Posner, B. (2001). *Leadership practices inventory (LPI)* (2nd ed.). San Francisco, CA: Jossey-Bass.

Kouzes, J., & Posner, B. (2007). *The leadership challenge* (4th ed.). San Francisco, CA: Jossey-Bass.

Kruger, M. L., Witziers, B., & Sleegers, P. (2007). The impact of school leadership on school level factors: Validation of a causal model. *School Effectiveness and School Improvement, 18,* 1-20.

Leithwood, K. (1992). The move toward transformational leadership. *Educational Leadership, 49*(5), 8-12.

Leithwood, K., & Jantzi, D. (1990). Transformational leadership: How principals can help reform school cultures. *School Effectiveness and School Improvement*, *1*(4), 249-280.

Leithwood, K., & Jantzi, D. (1997). Explaining variation in teachers' perceptions of principals' leadership: A replication. *Journal of Educational Administration, 35*(4), 312-331.

Leithwood, K. & Jantzi, D. (1999). The effects of transformational leadership on organizational conditions and student engagement with school. *Journal of Educational Administration 38*(2) 112-129.

Leithwood, K., & Jantzi, D. (2005). A review of transformational school leadership research 1996-2005. *Leadership and Policy in Schools, 4*(3), 177-199.

Leithwood, K., & Jantzi, D. (2008). Linking leadership to student learning: The contributions of leader efficacy. *Educational Administration Quarterly, 44,* 496-528.

Leithwood, K., Louis, K. S., Anderson, S., & Wahlstrom, K. (2004). How leadership influences student learning. *Education*. The Wallace Foundation.

Leithwood, K., Menzies, T., Jantzi., D., & Leithwood, J. (1996). School restructuring, transformational leadership and the amelioration of teacher burnout. *Anxiety, Stress & Coping, 9*(3), 199-215.

Leithwood, K. & Riehl, C. (2003), *What we know about successful school leadership*. Philadelphia, PA: Laboratory for Student Success, Temple University.

Levine, A. (2005). *Educating school leaders*. Retrieved January 18, 2006 from www.wallacefoundation.org.

Maak, T., & Pless, N. M. (2009). Business leaders as citizens of the world. Advancing humanism on a global scale. *Journal of Business Ethics, 88,* 537 – 550.

MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, *1*, 130-149.

Marzano, R. J., Waters, T., & McNulty, B. A. (2005). *School leadership that works: From research to results.* Alexandra, VA: Association for Supervision and Curriculum Development.

Maslow, A. H., & Stephens, D. C. (2000) *The maslow business reader*. New York, NY: John Wiley & Sons.

Maslow, A. H. (1950). A theory of human motivation. *Psychological Review*, 50, 370 – 396.

Mayo, E. (1960). *The human problems of an industrial civilization.* New York, NY: Viking Press.

McCauley, C. D., Moxley, R. S. & Van Velsor, E. (1998). *Centre for creative leadership handbook of leadership development*. San Francisco: Jossey-Bass.

McCoach, D.B. (2003). SEM isn't just the schoolwide enrichment model anymore: Structural equation modeling (SEM) in gifted education. *Journal for the Education of the Gifted,27,* 36-61.

McGregor, D. M. (1957). The human side of enterprise. *Management Review,* (Nov), 41-49.

Mintzberg, H. (2009). Debunking management myths: A brief interview with Henry Mintzberg. Interview by Martha Mangelsdorf. *MIT Sloan Management Review,* 51, 1 (Fall): 12.

Muldoon, S. D., & Miller, S. (2005). Leadership: Interpreting life patterns and their managerial significance. *The Journal of Management Development*, *24*(1/2), 132 144.

Northouse, P.G. (2007). *Leadership: Theory and practice* (4th ed.). Thousand Oaks, CA: Sage Publications.

Northwest Accreditation Commission (2011, February 10). *Accredited schools listing*. Retrieved from http://www.northwestaccreditation.org

Nunnaly, J. C. (1967). *Psychometric Theory (1st Ed.)*. New York: McGraw-Hill.

Peterson, R. A. (1994). A meta-analysis of cronbach's coefficient alpha. *Journal of Consumer Research,* 21, (2), 381-391.

Posner, B. Z. (2007). A leadership development instrument for students: Updated. *Journal of College Student Development, 45*(4), 443-456.

Posner, B. (2009, August). *What the latest data shows: The leadership practices inventory (LPI) continues to be a reliable and valid instrument.* Paper presented at the Leadership Challenge Forum, Chicago, IL.

Saunders, G. (2008). *Principals' perceptions of mentoring in Montana's AA, A and B high schools.* Dissertation, Montana State University, United States -- Montana. Retrieved April 5, 2011, from Dissertations & Theses @ Montana State University. (Publication No. AAT 3304484).

Schell, W. J. (2010). *What makes a transformational leader: An investigation into the antecedent experiences of transformational leaders.* Unpublished doctoral dissertation, University of Alabama—Huntsville.

Searby, L. J. (2010): Preparing future principals: Facilitating the development of a mentoring mindset through graduate coursework. *Mentoring & Tutoring: Partnership in Learning, 18* (1), 5-22.

Sergiovanni, T.J. (2001). *The principalship: A reflective practice perspective. (4th ed.).*Needham Heights, MA: Allyn and Bacon.

Sergiovanni, T.J. (2007). *Rethinking leadership: A collection of articles. (2nd ed.).*Thousand Oaks, CA: Corwin Press.

Stevens, J.P. (2002). *Applied multivariate statistics for the social sciences* (4th ed.). Mahwah, NJ: Erlbaum.

Stewart, J. (2006). Transformational leadership: An evolving concept examined through the works of Burns, Bass, Avolio, and Leithwood. *Canadian Journal of Educational Administration and Policy, 54*, 1-29.

Taylor, F. W. (1911). *The principles of scientific management.* New York: Harper Bros.

Thoms, P., & Greenberger, D. B. (1995). The relationship between leadership and time orientation. *Journal of Management Inquiry, 4,* 272-292.

Towler, A. (2005). Charismatic leadership development: Role of parental attachment style and parental control. *Journal of Leadership and Organizational Studies,11*(4), 15- 25.

Wong, L. (2004, July). *Developing adaptive leaders: The crucible experience of Operation Iraqi Freedom*. Report published by the Strategic Studies Institute at the U.S. Army War College. Retrieved from www.carlisle.army.mil

Young, J. (2011). Leadership styles and gender role: Internalizing among female managers in the United States. *Advancing Women in Leadership, 31,* 102-112.

APPENDICES

APPENDIX A

MULTIFACTOR LEADER QUESTIONAIRE

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Multifactor Leadership Questionnaire
Leader Form

My Name: _____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 (0) Once in a while (1) Sometimes (2) Fairly often (3) Frequently, if not always (4)

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APPENDIX B

LIFETIME LEADERSHIP INVENTORY

LIFETIME LEADERSHIP INVENTORY

All Questions use a Five Point Likert Scale Where 4 = strongly agree, 3= agree, 2= neutral, 1 = disagree, and 0= strongly disagree. Only partial items are included here to protect the instrument's copyright.

APPENDIX C

SUBJECT CONSENT LETTER

SUBJECT CONSENT FORM
FOR
PARTICIPATION IN HUMAN RESEARCH AT
MONTANA STATE UNIVERSITY

What Makes a Transformational Education Leader?: An Investigation into the Antecedent Experiences of Transformational K-12 Leaders of the Northwest Accreditation Commission

Dear Education Leader:

You are being asked to participate in a research study that explores the relationship between lifetime experiences and transformational leadership of education leaders.

Rationale of Research

The purpose of this study is to explore the relationship between basic lifetime experiences of education leaders and transformational leadership. Knowledge gained from this study may lead to understanding how transformational leaders develop over a lifetime of experience. Information from the study may improve hiring practices and school district leadership development programs.

Your Selection for Participation

Currently, a total of 1,648 principals lead schools listed as accredited by the Northwest Accreditation Commission (NWAC). You are one of 400 possible participants that have been randomly selected from the NWAC's list of accredited schools. This study employs a correlational design. All participants in this study will receive the exact same survey.

Procedures

Participation is voluntary and you can choose to not answer any questions you do not want to answer and/or you can stop at anytime. If you agree to participate in this study you will be asked to participate in 1 survey that consists of 107 short questions. The survey is distributed through the online survey company Survey Monkey. The first set of questions for the survey is demographic in nature. You will be asked about your years of experience, your race, gender, education level, and level of school at which you currently lead (elementary, middle school, high school, K-12, or other). The rest of the questions were developed from two surveys. The first survey is titled the Multifactor Leader Questionnaire (MLQ). It is designed to assess the frequency of transformational, transactional, and laissez-faire leader behaviors. The second survey is titled the Lifetime Leadership Inventory (LLI). The LLI was developed to measure frequency of basic lifetime experiences. Completion of the survey should take about 15 minutes or less.

Risks

There are no foreseen risks.

Benefits

The study is of no direct benefit to you.

Alternatives Available

If you do not wish to participate in this study, please simply delete this email. No data will be collected from you or disseminated.

Source of Funding
NA

Cost to Participate
None

Questions?
If you have any questions regarding this research project you may contact me, Steven D. Nash, at home (406-556-0774) or on my cellular (406-579-0598) at any time. Any additional questions about the rights of human subjects can be answered by the chairman of my doctoral committee Dr. Art Bangert (406-994-7424; abangert@montana.edu) or by the chair of the MSU Human Subjects Committee, Dr. Mark Quinn, (406) 994-4707 (mquinn@montana.edu).

Confidentiality
Results from participation in this survey are coded and are confidential. No identification of participants (i.e. email addresses) will be used in analyzing data. Published results from this study will not include email addresses or any other information that may be used to identify participants.

The Survey Monkey program keeps track of email addresses that have completed the survey. If you choose to participate, you will be contacted by email to thank you for your participation and to ask if you would like the results of the study upon project completion.

Your Participation in this Research is Voluntary
You are free to stop participating in this study at any time. You may simply stop taking the survey. Any incomplete surveys will be dropped from collected data. You may ask me about the research procedures and I will answer your questions to the best of my ability.

Incentive
All participants will have their email address placed into a lottery for a single $300.00 cash prize. The drawing will take place immediately upon study completion and the winner will be notified by email.

_____

AUTHORIZATION: I have read the above and understand the discomforts, inconvenience and risk of this study. By pressing the "I Agree" button at the bottom of this page, I agree to participate in this research. I understand that I may later refuse to participate, and that I may withdraw from the study at any time.

Please print a copy of this consent from for your own records.

APPENDIX D

INSTITUTIONAL REVIEW BOARD APPROVAL

MONTANA
STATE UNIVERSITY

INSTITUTIONAL REVIEW BOARD
For the Protection of Human Subjects
FWA 00000165

960 Technology Blvd. Room 127
Immunology & Infectious Diseases
Montana State University
Bozeman, MT 59718
Telephone: 406-994-6783
FAX: 406-994-4303
E-mail: cherylj@montana.edu

Chair: Mark Quinn
406-994-4707
mquinn@montana.edu
Administrator:
Cheryl Johnson
406-994-4706 or 6783
cherylj@montana.edu

MEMORANDUM

TO: Steve Nash

FROM: Mark Quinn, Ph.D. Chair Mark Quinn Chj
Institutional Review Board for the Protection of Human Subjects

DATE: March 23, 2011

SUBJECT: *What Makes a Transformational Education Leader? (An Investigation into the Antecedent Experiences of Transformational K-12 Leaders of the Northwest Accreditation Commission)* [SN032411-EX]

The above research, described in your submission of March 22, 2011, is exempt from the requirement of review by the Institutional Review Board in accordance with the Code of Federal Regulations, Part 46, section 101. The specific paragraph which applies to your research is:

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

_X_ (b)(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

___ (b)(3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if: (i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) federal statute(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

___ (b)(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available, or if the information is recorded by the investigator in such a manner that the subjects cannot be identified, directly or through identifiers linked to the subjects.

___ (b)(5) Research and demonstration projects, which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.

___ (b)(6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed, or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the FDA, or approved by the EPA, or the Food Safety and Inspection Service of the USDA.

Although review by the Institutional Review Board is not required for the above research, the Committee will be glad

APPENDIX E

CONSENT FROM DR BILL SCHELL TO USE THE LLI

Steve -

Congratulations on getting things moving forward!
My apologies for ignoring your earlier request. As I mentioned, things have been swamped.
Here is my thought for the LLI, which I am basically basing off the MLQ pricing, with a discounted entry, since there is not as much supporting data around the LLI. $100 to get started, that will get you the instrument and "user's guide." Since I have not taken the time to write a guide at this point, that will include up to two hours of consultation with me to explain the development of the instrument, walk through the data sets etc. Any time beyond that, I'll charge a highly discounted consulting rate of $50 / hour for help with writing, data analysis, etc.
I'll also include the first 25 copies of the instrument for that price, in case you want to do a pilot study, etc. Anything beyond that will be the $1 / copy that we have discussed earlier.
As far as meeting, I am in my office in 403 Roberts hall, full days TR with a lecture from 12:45 - 2. Grabbing some time one of those two afternoons would be the easiest for me. MWF, I am home-ish with my seven month old. SO, we could find a time one of those days, but that time will be subject to infant interruptions, which I know you are familiar with. I'd prefer not to meet evenings, as I try to keep that time free for family and volunteer obligations.
Best,
-- Bill

William J. Schell, PhD, PE
Adjunct Assistant Professor
Industrial Engineering
Montana State University

APPENDIX F

LETTER OF SUPPORT FROM THE NORTHWEST ACCEDITATION COMMISSION

Dear Colleagues of the Northwest Accreditation Commission,

I am writing in support of research being conducted by a doctoral student from Montana State University at Bozeman, MT. The student's name is Steve Nash, and he is completing his graduate degree in educational leadership with a dissertation titled: *What Makes a Transformational Education Leader?: An Investigation into the Antecedent Experiences of Transformational K-12 Leaders.*

On August 10th, Mr. Nash will be surveying a sample of 400 leaders from the Northwest Accreditation Commission by email. The purpose of the survey is to investigate the relationships between life experiences of education leaders and leadership ability. The survey will take approximately 10 minutes to complete. Findings from Mr. Nash's research will provide insight into how high quality leaders develop and could be used to develop in-district leadership training programs designed to increase transformational leadership ability.

Mr. Nash understands that your time is extremely valuable. He has offered to make a presentation on his findings to the Northwest Accreditation Commission at the completion of his project in return for our help.

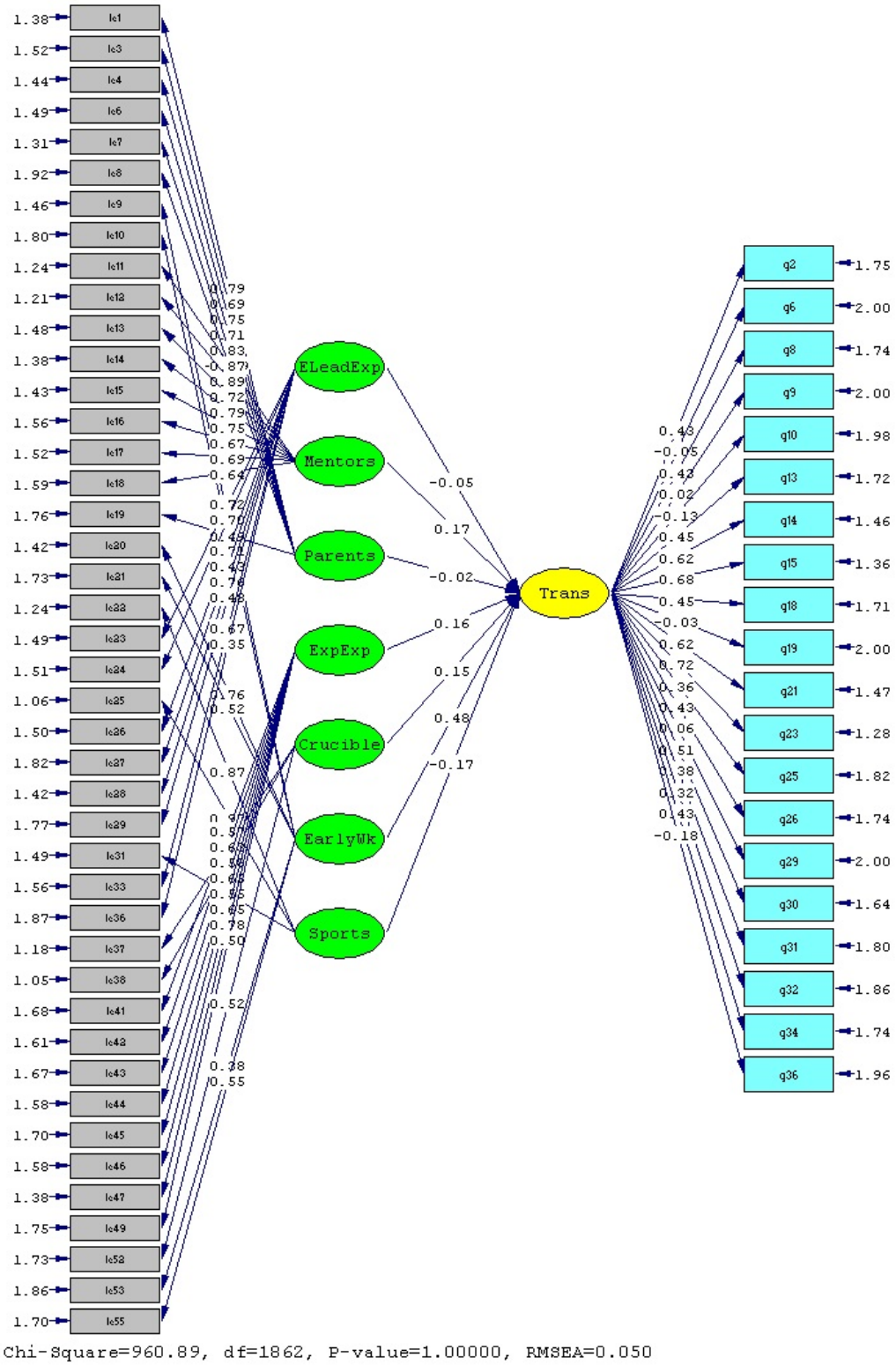
If you have any questions or concerns, you may contact me at anytime or Steve Nash at 1-406-579-0598 (c), 1-406-556-0774 (h), or steve.nash@bsd7.org (e). If you would like to contact Mr. Nash's doctoral committee Chairperson, Dr. Art Bangert, he may be reached at abangert@montana.edu or 1-406-994-7424.

Sincerely,

Dr. David Steadman

APPENDIX G

PATH DIAGRAM FOR THE RELATIONSHIP BETWEEN THE LLI AND MLQ


ELeadExp
Mentors
Parents
ExpExp
Crucible
EarlyWk
Sports
Trans
-0.05
0.17
-0.02
0.16
0.15
0.48
-0.17
Chi-Square=960.89, df=1862, P-value=1.00000, RMSEA=0.050