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# Transformational Leadership: Is It a Factor for Improving Student Achievement in High Poverty Secondary Schools in Pennsylvania?

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TRANSFORMATIONAL LEADERSHIP: IS IT A FACTOR FOR  
IMPROVING STUDENT ACHIEVEMENT IN HIGH POVERTY SECONDARY  
SCHOOLS IN PENNSYLVANIA?

A Dissertation

Submitted to the School of Graduate Studies and Research

In Partial Fulfillment of the

Requirements for the Degree

Doctor of Education

Kathleen M. Gulbin

Indiana University of Pennsylvania

May, 2008

Indiana University of Pennsylvania  
The School of Graduate Studies and Research  
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Title: Transformational Leadership: Is It a Factor for Improving Student Achievement in High Poverty Secondary Schools in Pennsylvania?

Author: Kathleen M. Gulbin

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Dissertation Committee Member: Dr. Douglas Lare

This mixed-method study addressed the following problem: What type of leadership is most appropriate to guide schools through the process of continuous rapid change required by the No Child Left Behind legislation and the twenty-first century while still performing well? It investigated a possible relationship between improved student achievement on state assessments, improved four-year graduation rate for high schools, improved attendance for schools without graduating classes, and the Leithwood model of Transformational Leadership in principals of high-poverty secondary schools in Pennsylvania. Principals whose schools improved on at least one element of Adequate Yearly Progress self-reported their leadership styles on the Multifactor Leadership Questionnaire. The mean score for the Leithwood model of Transformational Leadership was 3.33 from a Likert scale ranging from zero to four. Six of the Transformational principals participated in interviews to triangulate data.

Pearson correlation coefficients indicated no relationship between the Leithwood model of Transformational Leadership and improvement in math, reading, attendance, or four-year graduation rate. Coefficients for the schools led by the six principals who participated in the interviews also found no correlation for any of the factors. Further examination resulted in a negative relationship at the two-star level between high

beginning scores and improvement indicating that as beginning scores increased, improvement decreased.

There was a significant presence of Transformational behaviors in the interviewed group. These principals strongly believed that their leadership was responsible for school improvement. They posited that demographics were the biggest challenge to meeting AYP. The research validated that concern.

This study could not find any statistically significant direct relationship between leadership style and student improvement in any of the variables. The researcher concluded that too many intervening variables existed to make a reliable conclusion regarding whether or not a particular leadership style is most appropriate for meeting the challenges of the twenty-first century.

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There is no doubt in my mind that without the persistence of Dr. Faith Waters, this dissertation would never have been completed. For three years I left the project untouched and only her gentle pressure—relentlessly applied—inspired and motivated me to proceed, and to cross the finish line. Dr. Waters taught me everything I know about being an administrator and a scholar from the time I began my studies in the principal preparation program at ESU through the dissertation process. She raised the bar, and never allowed me to settle. She retires next month with the knowledge that she prepared and influenced a multitude of successful twenty-first century leaders who, in turn, each influenced hundreds of others to provide the best possible learning environment for students. Her legacy to public education cannot be measured. With gratitude, I dedicate this dissertation to her. Thank you, Dr. Waters.

I must also acknowledge and thank Dr. Doug Lare for his role in building this doctoral program. As a member of the first cohort I saw him overcome many obstacles, and remove countless barriers so we could have this opportunity. As a teacher, he forced me to grow intellectually. He continually challenged me to think, to reexamine my assumptions, and to stretch my capacity for scholarly work. Thank you, Doug.

I owe my husband George a huge debt of love and gratitude for his support and encouragement, for his love and his patience, for his help stuffing envelopes and filling out forms, and for his endurance of long periods of take-out food and missed recreational opportunities. George is the love of my life and my best friend. Success in this process is actually “our” success because we are a team. Thank you, George.

I thank “the kids”—Dan, Randi, Tracy, Josh, Joe, Jen, Kate, Wayne, and Mike—for their encouragement and their humor, for their pride in me when I successfully defended, for keeping me grounded, and for their love. I can’t forget my sister, Judi Dilley. She is always the first to congratulate, the first to spread the good news of our little victories, and the first to say I’m proud of you. She was even the first to say she wants to read the dissertation! Thank you, family.

There are some wonderful people in my life who were there for me, who encouraged and supported me, who motivated and inspired me over the years. I have to thank them all: my wonderful Wallenpaupack friends—Karen Safko, Dr. Lorraine Kloss, and Anita Box—with whom I began my educational career; Dr. Jean Gool, a friend and role model; Dr. John R. Williams, my former Superintendent and my friend who gave me the gift of time to attend my doctoral classes, and who believed in me; Kathleen Sottile, a transformational leader who can motivate anyone to do just about anything; Pat DiSalvo, Cathy Davidson, Regina Agrusa, Dr. Vicki Tripodi, and Gloria O’Connor who raised my spirits and pushed me to go forward during some dark times; Dr. Rick and Fran Fox Ruby who have been planning my graduation party in Key West for years. Thanks to all of you.

No work of this magnitude can be claimed as the achievement of any one individual. Rather, it is a tapestry woven of thousands of interactions and experiences. Each thread depends upon the strength of those supporting it. My family, my friends, my advisors, and my teachers form those threads. Together, we achieved. I thank you.

## TABLE OF CONTENTS

CHAPTER		Page
I	THE PROBLEM.....	1
	Introduction.....	1
	Statement of the Problem .....	2
	Need for Study .....	2
	Development of the Leithwood Model.....	5
	Purpose of the Study.....	8
	Research Questions .....	9
	Definition of Terms .....	13
	Limitations of the Study .....	15
	Significance of the Study.....	18
	Summary.....	19
II	REVIEW OF THE LITERATURE.....	20
	Contemporary Leadership Evolution .....	21
	The Evolution of Transformational Leadership.....	25
	The Leithwood Model of Transformation Leadership.....	28
	Two Elements of Leadership across Models .....	37
	The Context: Standards, High Stakes Testing and the Need to Restructure .....	41
	Pennsylvania System of School Assessment (PSSA).....	42
	No Child Left Behind Act of 2002 .....	45
	The Changing Role of the Principal as School Leader .....	50
	Principal Leadership and Student Achievement .....	61
	Principals as Leaders in Schools with Economically Disadvantaged Student Populations.....	67
	Student Attendance and Student Achievement.....	80
	Graduation Rate/Dropout Percentage Improvement.....	84
	Summary.....	93
III	METHODOLOGY.....	97
	Introduction.....	97
	Research Questions .....	99
	Research Design.....	102
	Instrument .....	103
	Population .....	110
	Data Collection Procedures .....	111
	Data Analysis .....	113
	Quantitative.....	114
	Qualitative.....	117
	Summary.....	120
IV	FINDINGS.....	122



	Introduction.....	122
	Research Questions .....	123
	Quantitative Data .....	126
	Demographic Data.....	126
	Survey Data.....	129
	Summary of Quantitative Data.....	141
	Qualitative Data .....	143
	Analysis of Interview Questions in Relation to Setting Direction, Developing People, and Redesigning the Organization.....	146
	Comparing and Contrasting Survey Results with Interview Results .....	181
	Summary.....	214
V	CONCLUSIONS AND RECOMMENDATIONS .....	224
	Introduction.....	224
	Results of Data Analysis.....	227
	Discussion of Demographic Data and Survey Results .....	228
	Discussion of Research Questions .....	229
	Discussion of the Results for Research Question One .....	230
	Discussion of the Results for Research Question Two.....	236
	Discussion of the Results for Research Question Three.....	238
	Discussion of the Results for Research Question Four .....	240
	Implications .....	242
	Limitations of the Study .....	247
	Recommendations for Further Study .....	248
	Summary.....	252
	REFERENCES.....	255
	APPENDICES .....	265
	Appendix A. Multifactor Leadership Questionnaire, Leader Form .....	265
	Appendix B. School-level Principal Leadership .....	267
	Appendix C. Letter to Accompany Survey Forms .....	272
	Appendix D. Principal Interview Forms.....	274
	Appendix E. Consent Form for Interviews.....	276

## LIST OF TABLES

Table	Page
1. Average Percentage of Students Absent on a Typical School Day: School Year 1993-94 .....	82
2. Length of Time in this Principalship.....	127
3. Grade Levels in Building .....	128
4. Student Population of Building .....	129
5. Descriptive Statistics for the Factors of Transformational Leadership.....	133
6. Descriptive Statistics of the Factors of the Leithwood Model .....	136
7. Correlations of Leithwood Model and Reading, Math, and Points Change .....	138
8. Correlations of Leithwood Model and Attendance.....	139
9. Correlations of Leithwood Model and Graduation Rates .....	140
10. Behaviors Noted During Interviews Consistent with the Leithwood Model .....	180
11. Comparison of Means for Leithwood Model for the Group “All Survey Respondents” with Group “Interview Respondents” .....	182
12. Comparison of Means for Three Categories of Leithwood Model for Group “All Survey Respondents” with Group “Interview Respondents” .....	185
13. Score Change and Points for Interviewed Principals.....	189
14. Total Score Change Ranked by Leithwood Scores—Grouped by Halves.....	195
15. Total Score Change Ranked by Leithwood Scores—Grouped by Fourths.....	196
16. Correlations of Initial Scores and Reading Change.....	197
17. Correlations of Initial Scores and Math Change.....	198
18. Descriptive Statistics of Transformational Leadership—Interviewees .....	201
19. Correlations of Leithwood Model, Its Categories, and Attendance .....	204

20.	Descriptive Statistics of Attendance .....	206
21.	Descriptive Statistics of Transformational Leadership—High School Principals .....	208
22.	Correlations of Leithwood Model, Its Categories, and Graduation Rate.....	211
23.	Descriptive Statistics for Graduation Rate, 2006 .....	212
24.	Correlations of 2006 Graduation Rate with Percentage of Change.....	213

## LIST OF FIGURES

Figure	Page
1. Leithwood's model of school transformational leadership.....	7
2. Leithwood's model of transformational leadership in schools .....	35
3. Assessment plan .....	46
4. Adequate yearly progress—reading (% proficient by year).....	47
5. Adequate yearly progress—math (% proficient by year) .....	47
6. Percentage of students achieving AYP on 2003 PSSA .....	68
7. Training and education requirements for available jobs in the year 2000.....	88
8. Measurement and coding of factors of transformational leadership .....	109
9. Summary of factors of transformational leadership .....	132
10. Summary of factors of the Leithwood model of transformational leadership ....	135

## CHAPTER I

### THE PROBLEM

#### Introduction

On January 8, 2002, President George W. Bush signed into law the No Child Left Behind (NCLB) Act. A bipartisan effort to insert federal muscle into education, NCLB proposed to end the achievement gap in American schools. Its stated goal was to ensure that 100% of American school children are proficient in math and the language arts by the year 2014. This law was a reauthorization of the Elementary and Secondary Education Act of 1965, a landmark legislation that provided federal dollars to improve the academic performance of needy youngsters. The new law gave states greater flexibility in the use of those federal funds but attached many conditions. While those conditions applied only to schools who received the federal money known as “Title I” funds, states were mandated to develop a single accountability system that would eventually make the conditions applicable to all public schools. With the passage of the amended Comprehensive Application in May of 2003, Pennsylvania developed a single accountability system that made NCLB tenets applicable to all its public and charter schools (Phillips, 2003).

States were also required to develop a system of academic performance benchmarks to ensure that 100% of American students would be proficient in math and reading by the year 2014. The consequences to an individual school for failing to attain the benchmarks lie along a continuum that begins with mandated public school choice after two years of failing to meet standards and culminates with the closing or restructuring of the school after the 5th year of failure (U. S. Department of Education, 2002). Each state submitted

its own plan to the United States Department of Education that included a uniform definition of adequate yearly progress (AYP) based on the above-mentioned benchmarks and at least two other factors. Pennsylvania chose attendance for schools without graduating classes and four-year graduation rate for those with senior classes (Pennsylvania Department of Education, 2003).

#### Statement of the Problem

The Institute for School Leadership (2000) asserted that 60 to 80 percent of principals will retire over the next 10 years creating a leadership gap in public schools. In the face of a mandate to restructure and reform to build the kind of capacity needed to meet the demands of NCLB and the twenty-first century, school districts need guidance when looking for effective new leadership. Their primary problem is this: What type of leadership is most appropriate to guide schools through the process of continuous rapid change required by the No Child Left Behind legislation and the twenty-first century while still performing well? The knowledge is particularly important at the secondary level where school size and complexity and sophisticated content area knowledge make the careful classroom supervision required of instructional leaders all but impossible for a principal to implement and sustain (Leithwood, Jantzi, and Steinbach, 1999). There is little research on the principal as leader of change at the secondary level (Leithwood, Jantzi & Steinbach, 1999).

#### Need for Study

According to Ogawa and Bossert (cited in Osterman & Crow, 1997), actions of leaders determine the success or failure of an organization. At the school level, the principal's actions determine whether or not effective change happens (Brookover &

Lezotte, 1979; Edmonds, 1979; Teddlie & Stringfield, 1993; cited in Osterman & Crow, 1997). Indeed, Edmonds highlighted the critical role of the principal in school change: “There are some bad schools with good principals, but there are no good schools with bad principals” (Edmonds, 1979, cited in Stone, p. 2). This study focused on the intentionality, thinking and behaviors of administrators in the context of the type of large scale change set in motion by NCLB. There is a paucity of research that “explores relationships among external influences, internal states, and principals’ practices and such research would help us understand how effective practice develops, a crucial matter about which current research has little to say” (Leithwood et al., 1990, p. 22). The study provided useful information to those who are in a position to influence new or aspiring principals as they develop their practices in Pennsylvania.

The No Child Left Behind legislation put responsibility for student performance on high-stakes examinations squarely on the shoulders of school principals. This study provided data for further study in the matter of student achievement as it relates to school leadership. There is a paucity of research available to directly connect the leadership style of a principal at the secondary level with student achievement on such tests. In fact, there is little evidence that directly connects student achievement with any leadership style (Leithwood et al., 1999). Such data might be useful to restructuring districts in hiring new secondary principals, as well as in training and supporting them through mentoring programs and other means after they are appointed.

Furthermore, the majority of research on successful principal leadership behaviors in schools with high percentages of students who qualify for free and reduced lunch has been done at the elementary level. Serious work is required in Pennsylvania to determine

behaviors of principals who are successful at the task of improving academic achievement of students in schools with large numbers of economically disadvantaged students.

In a summary of more than ten years of research about school leadership, Leithwood (1992, 1994); Leithwood & Leonard (1998); Leithwood & Jantzi (1998, 1999a, 1999b, 1999c, 2000); Leithwood, Jantzi & Steinbach (1999); and Leithwood, Aitken & Jantzi (2001) discussed leadership factors that are effective in successful twenty-first century businesses and public organizations and their application to school settings. From that research Leithwood (1994) and Leithwood, Jantzi & Steinbach (1999) developed a model of Transformational Leadership that they believe is most appropriate for the challenges facing secondary principals today. This model focuses on sustainable large-scale cultural change based upon commitment of all stakeholders to achieve continuous progress in the organization. These researchers posit that schools must expect and support this type of Transformational Leadership from current leaders and that school leadership preparation programs must stress Transformational Leadership in their curricula.

This study examined a possible relationship between the Leithwood model of Transformational Leadership and student improvement on high-stakes tests in Pennsylvania secondary schools in the context of the No Child Left Behind Act. The schools in this study qualify for Title I funding and have more than 30% low-income enrollments. This information is located on the Pennsylvania Department of Education webpage under the section “Statistical Reports” (<http://www.pde.state.pa.us>).



### Development of the Leithwood Model

In response to globalization and a rapidly changing marketplace, major businesses sought the agility to quickly respond to the new demands. Using 25 years of collected data from corporations including British Petroleum, Chrysler, Dupont, Ford, General Electric, Harley-Davidson, Hewlett-Packard, Mitsubishi Electric, Royal Dutch/Shell, Shell Oil Company, Toyota, the United States Army, and Xerox, Senge (1994) and Senge et al. (1999) determined that to meet these demands, a company must engage in systems thinking and organizational learning. Leadership and decision-making must be participatory rather than top-down to harness the expertise and commitment of all members of the organization. The role of the leaders of these learning organizations would be to inspire and motivate others to commit to the good of the organization rather than to their own self interests. Individuals learn to work together and come to know each other's jobs. Both leaders and followers are transformed in the process as the organization increases its capacity to adapt to rapid change.

To assist schools in choosing and training leaders capable of managing large-scale change, Leithwood et al. applied to the schoolhouse these well-developed and researched tenets from the business world in development of their model of Transformational Leadership (1994, 1999). They began with the work of Bass and Avolio.

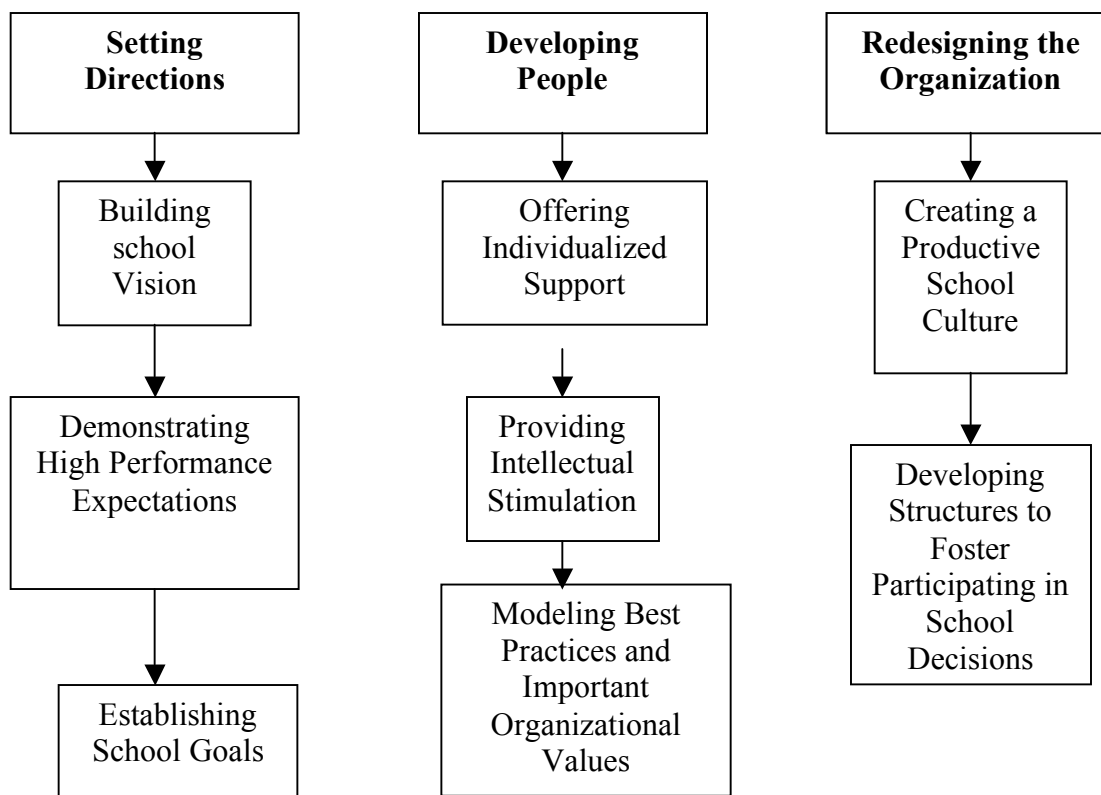
Bass (1985, 1988) began constructing a practical model of organizational leadership grounded in the earlier work of Burns (1979). Burns's Transformational Leaders were visionaries capable of communicating their vision and inspiring their followers to transcend their own needs for the good of the group. Both Burns's leaders and followers were transformed in the process (1979).

The dimensions identified as part of the Bass & Avolio (1994, 1995) Transformational Leadership model included Idealized Influence (both behavior and attributes), Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration. They also identified factors used to control followers' behaviors to eliminate problems that make up a style called Transactional Leadership. Those factors were Contingent Reward, Management-by-Exception, and Laissez-faire leadership.

While Burns contended that Transformational Leaders did not engage in transactions, Bass and Avolio disagreed. They averred that Transformational Leaders must engage to some degree in transactional behaviors to effectively manage the organization. Empirical support for this incorporation was determined by subsequent research (Avolio & Bass, 1998; Bass, 1997; Turner, et al., 2002). Bass (1988) and Bass & Avolio (1995) developed the Multifactor Leadership Questionnaire (MLQ) to measure leadership qualities and to develop training programs in Transformational Leadership for business and government leaders.

Using the MLQ and other instruments, Leithwood (1994), and Leithwood Jantzi & Steinbach (1999) conducted 34 large-scale studies examining each of the dimensions of the Bass & Avolio model. They aligned those dimensions with a set of Transformational behaviors identified by Podsakoff, MacKenzie, Moorman, and Fetter (1990) from a comprehensive review of organizational research. The Podsakoff behaviors include building a vision, demonstrating high performance expectations, establishing goals, offering individualized support, providing intellectual stimulation, modeling best practices and important organizational values, creating a culture, developing structures for participative decision-making, and management by exception. They are more fully

described in Appendix B. The dimensions and behaviors that proved effective in schools were grouped into three sets by Leithwood et al. (1994, 1999) to form their model:



*Figure 1.* Leithwood's model of school transformational leadership.

Of the 34 studies, 22 focused specifically on school principals. A portion of this work consisted of qualitative, grounded studies based on interviews and other data from restructuring schools. The remainder aimed at testing and/or modifying theories. The results indicated strong positive correlations across the five Transformational dimensions (.83) of the Bass and Avolio model. Positive and significant correlations (.71) were established between Contingent Reward (a Transactional factor in the Bass & Avolio model) and each of the five Transformational factors as well. Therefore, the Leithwood model now incorporates Contingent Reward as a factor in its Transformational model. While Contingent Reward does not in and of itself contribute to change, it is necessary to

the operation of the school, and it leads to other transforming behaviors. When applying the remaining factors to the school setting, the studies revealed no positive effects at all for Management-by-Exception or Laissez-faire Management, so they have been dropped from the model. The Leithwood model now differs from the Bass and Avolio model in that it no longer distinguishes between Transformational and Transactional leadership. This study employed the Bass & Avolio instrument described above to determine whether and to what extent the principals considered themselves to be Transformational leaders.

### Purpose of the Study

With the stated goal of eliminating the achievement gap among different groups of students, the No Child Left Behind Act of 2002 aimed responsibility for improved student performance at school principals. Improvement was measured by annually increasing goals known as adequate yearly progress (AYP). The goals included proficiency on standardized tests at increasing benchmarks, a 95% participation rate in those examinations, improved student attendance for schools without a graduating class, and a decrease in the number of students who drop out of school before graduation at the senior high school level. Compliance with these mandates requires restructuring to improve capacity to comply, particularly at the secondary level. The literature strongly suggests that the school principal is the key to successful restructuring. Further, the size and complexity of today's secondary schools changes the nature of the principal's job from strong instructional leader to a change agent who must increase the organization's capacity to adapt to continual change. Leithwood et al. (1999) state that Transformational Leadership is essential for principals involved in restructuring secondary schools.

In addition to whole-school improvement, principals and their schools are held accountable for the performance and participation of various subgroups including students who are economically disadvantaged. There is a large body of research about poor school performance by students with low socioeconomic status and its relationship to school factors and social capital (Coleman et al., 1966; Parcel and Dufur, 2001; Desimone, Finn-Stevenson & Henrich, 2000; Alaimo, Olson and Frongillo, 2001; Neuman and Celano, 2001; McLeod, 2000; Goldberg, 2001; Hoff, 1999; Johnson, 2000). It is important, therefore, to examine principal leadership in secondary schools with large groups of economically disadvantaged students.

The purpose of this study, therefore, was to collect and analyze data to examine the influence of Transformational Leadership in Pennsylvania principals of secondary schools with 30% or more students eligible for free or reduced lunch and improved student performance on the Pennsylvania System of State Assessments (PSSA). The study also looked for a relationship between Transformational principals, student attendance, and four-year graduation rate, the additional components of adequate yearly progress according to Pennsylvania's Comprehensive Application found on the Department of Education's website, <http://www.pde.state.pa.us>.

### Research Questions

A survey was administered to principals of Pennsylvania secondary schools with high percentages of economically disadvantaged students to establish their perceptions of their own professional practice as school leaders. Responses to the self-rater form of the Multifactor Leadership Questionnaire, Form 5x-Short (Bass & Avolio, 1995) measured the extent to which the principals perceived themselves to embody and exhibit 12

dimensions of leadership. It examined the effectiveness of that leadership in the context of the requirements of The No Child Left Behind Act of 2002 that mandate school improvement in at least three areas. To determine that effectiveness, it addressed the following questions.

Question 1: Is there a relationship between the Leithwood model of Transformational Leadership style in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments?

Subquestion 1a: Is there a relationship between Setting Direction, a dimension of the Leithwood Model of Transformational Leadership, in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments?

Subquestion 1b: Is there a relationship between Developing People, a dimension of the Leithwood Model of Transformational Leadership, in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments?

Subquestion 1c: Is there a relationship between Redesigning the Organization, a dimension of the Leithwood Model of Transformational Leadership, in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments?

Question 2: Is there a relationship between the Leithwood model of Transformational Leadership style in the same group of principals and improvement in attendance at the middle school level as mandated by NCLB?

Subquestion 2a: Is there a relationship between Setting Direction, a dimension of the Leithwood Model of Transformational Leadership, in principals of low socioeconomic secondary schools and improvement in attendance at the middle school level as mandated by NCLB?

Subquestion 2b: Is there a relationship between Developing People, a dimension of the Leithwood Model of Transformational Leadership, in principals of low socioeconomic secondary schools and improvement in attendance at the middle school level as mandated by NCLB?

Subquestion 2c: Is there a relationship between Redesigning the Organization, a dimension of the Leithwood Model of Transformational Leadership, in principals of low socioeconomic secondary schools and improvement in attendance at the middle school level as mandated by NCLB?

Question 3: Is there a relationship between the Leithwood model of Transformational Leadership style in the same group of principals and improvement in graduation rate at the high school level as mandated by NCLB?

Subquestion 3a: Is there a relationship between Setting Direction, a dimension of the Leithwood Model of Transformational Leadership, in principals of low socioeconomic secondary schools and improvement in graduation rate at the high school level as mandated by NCLB?

Subquestion 3b: Is there a relationship between Developing People, a dimension of the Leithwood Model of Transformational Leadership, in principals of low socioeconomic secondary schools and improvement in graduation rate at the high school level as mandated by NCLB?

Subquestion 3c: Is there a relationship between Redesigning the Organization, a dimension of the Leithwood Model of Transformational Leadership, in principals of low socioeconomic secondary schools and improvement in graduation at the high school level as mandated by NCLB?

As mentioned above, Transformational Leadership characteristics and behaviors have been grouped into three main categories: 1. Setting Directions (building school vision, establishing school goals, demonstrating high performance expectations); 2. Developing People (intellectual stimulation, individualized support, modeling best practices and organizational values); and 3. Redesigning the Organization (creating a productive school culture, developing structures to foster participation in school decisions). Subsequent to the completion of the survey, a selection of principals whose responses indicated that they were Transformational Leaders were interviewed to answer the following overarching question:

Question 4: Are the behaviors associated with the Leithwood model of Transformational Leadership common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress? The behaviors are fully described in Appendix B.

Subquestion 4a: Are the behaviors associated with Setting Direction, a dimension of the Leithwood model of Transformational Leadership common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress?

Subquestion 4b: Are the behaviors associated with Developing People, a dimension of the Leithwood model of Transformational Leadership common to principals



of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress?

Subquestion 4c: Are the behaviors associated with Redesigning the Organization, a dimension of the Leithwood model of Transformational Leadership common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress?

### Definition of Terms

The Leithwood model of Transformational Leadership, the independent variable and the conceptual framework of the study, is a style in which leaders exhibit the following dimensions identified by Bass & Avolio (1995): Idealized Influence (both behaviors and attributes), Inspirational Motivation, Intellectual Stimulation, Individualized Consideration, and Contingent Reward. Transformational Leadership was measured by principals' self-reported responses on the Multifactor Leadership Questionnaire.

Idealized Influence, a dimension of the Transformational Leadership model, is a characteristic whereby the leader instills pride in others through association with them. The leader regularly talks about his or her most important values and beliefs and models best practices and important organizational values, thereby influencing the followers to emulate the leader (Bass & Avolio, 1995). This was measured by four items on the MLQ.

Inspirational Motivation, a dimension of the Transformational Leadership model, is a characteristic in which the leader demonstrates high performance expectations, talks optimistically about a vision for the future, and inspires others to strive to attain related goals (Bass & Avolio, 1995). This was measured by four items on the MLQ.

Intellectual Stimulation, a dimension of the Transformational Leadership model, is a characteristic by which the leader develops structures to foster participation in school decisions, creates a productive school culture, seeks differing perspectives when solving problems, and guides others to believe in their competence (Bass & Avolio, 1995). This was measured by four items on the MLQ.

Individualized Consideration, a dimension of the Transformational Leadership model, is a characteristic in which the leader treats others as individuals rather than just as a member of the group and offers individualized support (Bass & Avolio, 1995). This was measured by four items on the MLQ.

Contingent Reward, a dimension of the Transformational Leadership model, is a characteristic in which the leader provides appropriate rewards when subordinates meet agreed-upon objectives. While this factor does not itself cause change, it helps to transform the behavior of others by building trust (Bass & Avolio, 1995). Contingent Reward was measured by four items on the MLQ.

Management-by-Exception, a dimension of Transactional leadership, focuses attention on irregularities, exceptions, and deviations from standards in monitoring behavior. A passive form of this dimension fails to intervene until problems become serious (Bass & Avolio, 1995). This was measured by four items on the MLQ.

Laissez-faire, a dimension of non-leadership, is the absence of leadership, the avoidance of intervention, or both (Bass & Avolio, 1995). This was measured by four items on the MLQ.

Student performance, a dependent variable of the study, was measured as a school wide average scaled score in both math and reading for school years 2006 and 2007.

Improvement will be measured by an increased score in either math or reading.

Attendance, a dependent variable of the study, was measured as a difference in the schoolwide score for school years 2006 and 2007.

Graduation rate, a dependent variable of the study, will be measured as a difference in the schoolwide scores for school years 2006 and 2007.

Secondary schools are those public schools housing the grade levels commonly known as middle, junior high, or high schools.

Economically Disadvantaged Students are those students whose family-income qualified them to receive free or reduced lunch. The schools in this study with high populations of economically disadvantaged students are schools that qualify for Title I funding and have more than 30% low-income enrollments. This information is located on the federal web site and was accessed on the Pennsylvania Department of Education webpage under the section “Statistical Reports” (<http://www.pde.state.pa.us>).

#### Limitations of the Study

The results of the survey portion of this study were predicated on self-perceptions of the principals regarding their leadership styles. It is possible that leaders might define themselves differently than their followers. In fact, Bass and Avolio (1995) recognized that there was a tendency among leaders to rate themselves as Transformational to a higher degree than their followers rated them—sometimes as high as a .5 difference on a 0 to 5 Likert Scale. Therefore, Bass and Avolio recommend that both versions of the survey be used whenever possible. The nature of this study requires the collection of data from many principals throughout the Commonwealth. While it would be beneficial to survey their teachers as well, it would be prohibitively costly in both dollars and in time

to collect survey data from that number of people. This study might then be viewed as a first step in the pursuit of fuller knowledge about leaders' self perceptions and the perceptions of their followers. Indeed, Podsakoff, MacKenzie and Bommer's 1996 studies offer intriguing possibilities that might potentially skew the perceptions of the followers about the actual practices of their leaders.

In actuality, most of what we know about educational leadership comes from perceptions, particularly the perceptions of teachers as they interpret a leader's actions. A 1996 study by Jantzi & Leithwood found that over 80% of variation in teachers perceptions about the leader were based on alterable conditions. Principals who visibly affected the school's mission, vision, goals, culture, instruction, policies, decision-making, and resources were more likely to be perceived as Transformational. The perceptions often depended on the number of opportunities the teachers had to experience the effects. Teachers who had experienced significant administrator turnover were likely to marginalize the influence of the principal.

Kerr and Jermier (1978 in Podsakoff, MacKenzie & Bommer, 1996) identified factors that might substitute for, neutralize, or enhance leadership effects on certain followers. Podsakoff, et al. (1996) applied this 'leadership substitute' theory to Transformational Leadership using survey data from 1,539 employees across many types of organizations. Examples of potentially moderating effects include the level of existing group cohesiveness on effects of individualized support, setting a vision, and establishing group goals. Independent followers who like to work alone might be affected negatively by intellectual stimulation and by acceptance of group goals. A leader's high performance expectations might be moderated by his or her ability to reward high

performance. Intrinsically-motivated individuals might respond negatively to intellectual stimulation, establishing group goals, setting a vision (different from that of the individual) Applying this theory to schools, teachers in high-performing schools might not be motivated to change in spite of the leader's urgency to move towards compliance with the No Child Left Behind Act. Teachers who are vested in the belief that they are already doing what is best for students might respond negatively to overtures of a change agent. The task of comparing perceptions of principals and their followers in the matter of school leadership is a subject for further study.

Many intervening variables might affect student performance on standardized tests, factors over which the principal and the school have no control. Finding a direct link between leadership and student performance is difficult at best. In fact, this researcher discovered only one study that determined a strong positive link between the two, and only 18 principals were the subjects of that study (Palmour, 2000). The majority of the large-scale work on leadership style and student performance established indirect effects. Any relationship or association determined by this or any study will not be an answer but rather an invitation to further study. The extensive Leithwood et al. studies are presently the only evidence available to link leadership with student achievement, but, as that author points out: "the evidence of direct effects on students of alternative leadership models, including those commonly used in schools at present, is also quite meager" (1999, p. 32).

Another limitation of the study is the extent to which the PSSA accurately measures student academic performance. In a white paper issued by Pennsylvania School Boards Association (2002), the validity of the assessments was questioned. Kohn (2007) points

out that the more a school engages in test preparation, the less valid and reliable the test becomes.

### Significance of the Study

As established earlier, the effectiveness of the principal determines the effectiveness of the school (Brookover & Lezotte, 1979; Teddlie & Stringfield, 1993; cited in Osterman & Crow, 1997; Edmonds, 1979; Fullan, 1993, 1999). As also established earlier, leadership is contextual. According to the leadership model grounding this study, a leader with Transformational strategies is best suited to increase the secondary school's capacity to meet the challenges of the twenty-first century (Leithwood, 1994, and Leithwood et al., 1999). In the present context, the principal's effectiveness is determined by the school's compliance with the mandates of The No Child Left Behind Act of 2002.

Studies done by Bank Street College in the New York City School District revealed that principals develop their leadership style during the first few years of practice. (Osterman & Sullivan, 1994; Osterman & Crow, 1997). This study provides useful information to those who can influence new or aspiring principals as they develop their practices in Pennsylvania in the context of NCLB. It provides data for further study regarding the principal's connection with student achievement. Such data might be useful to restructuring districts in hiring new secondary principals, as well as in supporting them after they are appointed. Principal preparation programs will also find this information useful as they prepare the next generation of administrators.

## Summary

The No Child Left Behind Act of 2002 set the stage for large-scale change in public schools. It mandated that states set annually increasing benchmarks (AYP) for progress towards a goal of 100% proficiency in math and reading by the year 2014 as well as improved attendance and four-year graduation rate. Serious consequences are meted out to schools who fail to achieve AYP for two years in a row. Schools with high numbers of economically disadvantaged students are most vulnerable to the consequences set by NCLB.

It is well established that the principal is the key to successful school change (Brookover & Lezotte, 1979; Edmonds, 1979; Teddlie & Stringfield, 1993; cited in Osterman & Crow, 1997; Hallinger & Heck, 1996; Leithwood, 1994; Leithwood & Jantzi, 1994; Leithwood, Jantzi & Steinbach, 1999; Leithwood, Louis, Anderson & Wahlstrom, 2004). Leithwood et al. (1994, 1999) determined that leadership is contextual. They developed a model of Transformational Leadership that they posit to be the most effective leadership model in the current context of rapid change.

## CHAPTER II

### REVIEW OF THE LITERATURE

“To live is to change, and to live long is to change often,” wrote Augustine more than 1600 years ago (Orens, 2003). The thought remains applicable today to civilizations, to societies, to institutions and to individuals. Throughout history, events reordered civilizations, and those reordered civilizations drove subsequent events. Eras defined by changes enormous in scope alternated with eras of relative calm. In the realm of education, the current demand for large-scale change reflects modern circumstances.

This section traced changing leadership philosophy from the Industrial age to the present as a reflection of changing social norms. It addressed the challenges facing educators of the twenty-first century in the form of standards and accountability. The role of the principal in terms of its importance was discussed together with its evolution over the last several decades and its link to student achievement. The section also discussed changing school leadership in the context of modern challenges including education of the economically disadvantaged.

The theoretical framework of this study is based upon the Leithwood model of Transformational Leadership. Much of the literature points to constructs contained in this model that are similar to those proven effective in business and in schools undergoing large scale change. This type of principal leadership was examined relative to student achievement of adequate yearly progress as mandated by the No Child Left Behind Act of 2002.



### Contemporary Leadership Evolution

Northouse (1997) discussed the difficulty in defining leadership by any standard. Depending on the source, it might be defined as traits, acts, processes, interactions, personality, behaviors, power relationships, situations, and many other terms or characteristics. To encompass a broad array of these components, Northouse devised the following definition: “Leadership is a process whereby an individual influences a group of individuals to achieve a common goal” (Northouse, 1997, p. 3).

This is a far cry from the definition that might have been offered at the zenith of industrialization when ‘organize and control’ were the key descriptors of popular management theory. The evolution of leadership practices closely mirrors the path of industrialization, the aftereffects, and the progression of a maturing society.

In Taylor’s 1911 Principles of Scientific Management (in Hanson, 1996), workers were little more than cogs in the wheels of progress. Taylor believed that workers were essentially lazy and somewhat dishonest and required careful supervision. An effective leader developed and enforced performance goals to benefit the business. Efficiency, lower costs, and increased production determined the worth of the leader. While productivity was enhanced in an industrial society, workers eventually became alienated, and a virtual war between labor and leadership smoldered and, at times, erupted.

In the years just prior to World War I, Max Weber developed the concept of bureaucracy. Bureaucracy is defined by “...division of labor, hierarchy of authority, specified regulations, specified work procedures, minimal personal relations, rewards based on technical competence” (Carlson, 1996, p. 21). At that time, leadership was synonymous with power. Some school systems today remain organized around

bureaucratic principles. During this time period, some considered leadership to be a combination of personal traits which one either had or did not have. Leaders and non-leaders were polar positions (Stogdill, 1948). Later, divergent theories developed.

The Human Relations approach to leadership gained impetus when Mayo's experiments to determine the effects of illumination on productivity produced a curious side effect. From 1927 through 1932, researchers observed industrial workers operating under various lighting schemes at the Western Electric Company's Hawthorne Works. In every case, the experimental group increased productivity, no matter what other conditions existed. Inevitably, the researchers turned their attention to intervening variables that might explain the phenomenon. The results of these experiments, known as The Hawthorne Studies, indicated that recognition and attention increased productivity on the part of the workers. Attention to the needs of the individual eventually became an important component of the Human Relations approach (Richter, 2000).

Of equal importance, The Hawthorne Studies uncovered the power of informal groups over both the individual and productivity. Hanson (1996) describes this concept as "a system of interpersonal relations which forms within an organization to affect decisions of the formal organization, and this system is omitted from the formal scheme or is in opposition to it" (p. 45).

Inside the Hawthorne plant informal groups used subtle pressures to control individual effort in the belief that management would expect more from everyone for the same dollar if some workers produced faster or better. These groups controlled almost every aspect of the organization through social codes and psychological bonding.

This knowledge shattered previous management dogma that equated productivity only with financial rewards or punishment determined by a top-down hierarchy grounded in control. Further studies based on this new knowledge led to the Human Relations Movement that recognized the importance of workplace psychology. Good leadership in this approach inspires confidence and trust that motivates employees to move beyond personal needs for the good of the organization. Leaders appreciate and value employees' work thereby moving the employees to grow in competence and productivity. Employees participate in the company goals and value their own contributions (Hanson, 1996). Echoes of the Hawthorne findings will resurface later in this study when the research on Transformational Leadership is described.

Prior to World War II, an American, Dr. W. Edwards Deming, introduced continuous improvement and systems thinking with a strong emphasis on data and statistical analysis. After the war the Japanese successfully reinvented themselves as a major industrial power adopting Deming's Total Quality Management as their model (Jenkins, 2003). Deming removed the emphasis on individual competition and hierarchical leadership and replaced them with a systems view and quality products. Jenkins (2003) defined a system in the Deming model as "...a network of components within an organization that work together for the aim of the organization" (p. 23). In a Deming organization, the focus is on high quality work and reduction in variation. Statistical analysis of real data reveals trends and patterns that derive from customer feedback. Members work collaboratively to identify variation, collect data, propose and test theories, reflect and adjust constantly, and celebrate improvement. Continuous improvement is the trademark of the Deming system (Jenkins, 2003).

Glasser (1994, 1998) operationalized Deming's Total Quality Management model in schools. Leaders in quality schools, in harmony with the Transformational Leadership model, act on the premise that motivation is inherent. They posit that micromanagement and evaluation are counterproductive. They offer choice and settle for nothing less than quality. Students and teachers learn what quality work looks like and continually upgrade their own efforts as they strive to improve. Teams of educators meet to develop and test theories always focusing on improved student achievement.

Management theorists led the movement towards decentralization and democratization, the latter characterized by rule by the many instead of rule by the few (Siegrist, 1999). Bass and Avolio's Transformational Leadership model embraced this thinking while Fortune 500 companies, the military, and government agencies all moved closer to tenets of Transformational Leadership (Siegrist, 1999; Senge, 1994; Senge, Kleiner, Roberts, Ross, Roth & Smith, 1999). Siegrist (1999) stated in summary that "what leaders do is determined, in large part, by the nature of those being led and the culture of the organizations in which they work" (p. 1).

Some modern leadership theories describe leaders as visionaries (Bennis, 1989) and sometimes servant-leaders or stewards who consider the needs of others before their own self-interest in an almost biblical outlook (Sergiovanni, 1992; Block, 1993; Covey, 1989). Sergiovanni opined that leadership behaviors are driven by 'mindscapes' (1992; 1994) which he defines as an individual's internalized conception of the nature of leadership based on his or her internal system of values. Senge's (1994, 1995) 'mental models' differ from this idea only in terminology.

Currently, organizational theorists focus on the merits of Transformational leaders who along with their followers are forever changed by their interaction. Both leaders and followers in the Transformational model consider the needs of the organization over the needs of the individual (Burns, 1979; Avolio & Bass, 1998; Bass, 1985, 1988; Bass & Avolio, 1994, 1995; Leithwood, 1994; Leithwood et al., 1999). Because of its prominent role in this study, it was important to fully define Transformational Leadership. What is it? When choosing new leaders, how can we recognize those who possess it? Is it trait-based, or can we teach leaders to practice it?

#### The Evolution of Transformational Leadership

Burns (1979) married the roles of leader and follower in creating and facilitating organizational change. His Transformational leader is a goal-oriented humanist who interacts with followers to raise them to a new level of performance and motivation in pursuit of a mutually developed vision. Both the leader and the followers are forever changed in the process. There is a modicum of self-actualization and higher morality involved in Transformational Leadership in that the good of the group overrides self interest of the individual. Burns clearly separates the role of leader from that of manager declaring that Transactional and Transformational leaders are polar positions.

Later, House (in Northouse, 1997) expanded upon the theory and added charisma as a necessary component. His charismatic leader possesses specific traits such as dominance, confidence, excellent communication skills, and the desire to influence others to act in a particular manner. This individual motivates others to reach ever higher in the pursuit of excellence.

In the belief that leaders can be trained in Transformational Leadership, Bass (1985) and later Bass and Avolio (1994) structured a further model that defines the effect of the leader's actions upon the subordinates. A variety of public and private enterprises that took part in trainings indicated behavior changes that positively affected their organizations. To facilitate identification and training, Bass and Avolio developed a survey instrument, the Multifactor Leadership Questionnaire (MLQ), to measure characteristics associated with their model. That survey was the instrument used in this study. Continuous testing and revision of the MLQ resulted in an increasingly sophisticated understanding of the complex issues. From an original concept of six factors, the model and instrument evolved to nine factors of leadership, namely: Idealized Influence (attributes); Idealized Influence (behavior); Inspirational Motivation; Intellectual Stimulation; Individual Consideration; Contingent Reward; Management-by-Exception (active); Management-by-Exception (passive); and Laissez-faire Leadership. Three leadership outcomes, Extra Effort, Effectiveness, and Satisfaction, are included in the model. These changes increased precision at measuring and describing a full range of leadership (Bass and Avolio, 1995). The current version has been validated and cross validated with a broader range of models and used internationally in a variety of public and private business, military, government, education, and institutional settings. In sampling each leadership factor, the reliability scores were generally high and consistent with the total model ranging from .74 to .94. This range exceeds cut-off levels for internal consistency as acknowledged in the literature (Bass and Avolio, 1995).

After conducting and analyzing exhaustive factor analysis research, Bass and Avolio deduced that, to keep the organization running smoothly during the change process,

Transformational leaders must also practice Transactional behaviors, specifically, Contingent Reward. While Contingent Reward will not by itself cause change, its practice is necessary to successfully manage the organization and can have a transforming effect on the behavior of followers. This is contrary to Burns's position that transactional and transformational leadership were polar conditions.

Research studies using the MLQ to study Transformational Leadership abound. Lowe, Crock & Sivasubramaniam (in Bass & Avolio, 1995) performed 33 independent empirical studies using the MLQ in both public and private organizations. They found strong positive correlation between employee performance and all components of Transformational Leadership measured in the Multifactor Leadership Questionnaire.

Transformational Leadership has been examined qualitatively as well. Bennis and Nanus in 1985 identified Transformational characteristics by collecting data on 90 Chief Executive Officers of large corporations (Northouse, 1997). Through interviews and open-ended questions, they identified four common threads in management styles of leaders who transformed their organizations:

- (1) The leaders, by their actions, empowered the followers to buy into the collaboratively articulated vision. Working together to achieve something greater than themselves then caused members to grow to new heights;

- (2) The Transformational leaders maintained a direction, communicated it, and often moved individuals to adopt new organizational philosophies and new group identities;

- (3) Transformational leaders were forthcoming and honest thereby eliciting trust. They exhibited integrity, reliability, and consistency. They always moved in the direction of the articulated vision; and

(4) Transformational leaders knew their own strengths and weaknesses. This self-awareness resulted in an aura of competency that had a positive effect on their followers who, in turn, felt more confident to meet higher expectations. These leaders modeled contagious commitment to continuous education for themselves and others. This activity then permeated the entire organization.

The Bennis and Nanus threads align with the Transformational dimensions of Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration identified in the MLQ.

Leithwood (1999) applied the Transformational Leadership model to the school context in multiple investigations using the MLQ. He determined that school districts should strongly advocate Transformational practice to principals in restructuring secondary schools and that principal preparation programs should actively teach its strategies. He posited that Transformational Leadership is the best fit for success in accomplishing the demands of restructure and reform, particularly at the secondary level.

#### The Leithwood Model of Transformational Leadership

The theoretical framework of this dissertation is Leithwood's model of Transformational Leadership to restructure secondary schools. Therefore, this entire section will be devoted, almost exclusively, to the work of Leithwood and his colleagues in developing the model. Since 'restructuring' implies an eye to the future, these researchers envisioned an organization responsive to the frenetic pace of technological innovations that characterize the twenty-first century and beyond (2001). Based upon more than ten years of research on leadership, they determined that Transformational Leadership is the best starting point to tailor a model for restructuring schools.



The importance of choosing an instrument to measure Transformational Leadership in such a way that its findings could be aligned with the Leithwood model was paramount to this study. The Multifactor Leadership Questionnaire (MLQ) was chosen because of the extensive work Leithwood et al. had done with it in the development of their model. The literature revealed that Leithwood's adaptation of the Bass & Avolio model to the school setting was the most fully developed model and was highly suitable to the public mandate for school restructuring (Verona, 2001).

Leithwood and his colleagues extensively studied each of the factors of the Bass and Avolio model of Transformational Leadership to examine their relevancy to school settings. Statistics on MLQ factors reveal high, positive correlations (.83) across the five transformational scales, that is, Idealized Influence (both attributes and behaviors), Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration, as would be expected in the context of schools. In addition, positive and significant correlations (.71) existed between Contingent Reward (a Transactional factor) and each of the five Transformational factors.

According to the literature from the publishers of the Multifactor Leadership Questionnaire (Mind Garden, 2000), Transformational Leadership is about building highly effective relationships. The components listed above are exhibited by highly effective leaders. The publishers defined the behaviors associated with these dimensions as follows:

- Idealized Influence: Leaders display conviction; emphasize trust; take stands on difficult issues; present their most important values; and emphasize the importance of purpose, commitment, and the ethical consequences of

decisions. Such leaders are admired as role models. They generate pride, loyalty, confidence, and alignment around a shared purpose.

- Inspirational Motivation: Leaders articulate an appealing vision of the future; challenge followers with high standards; talk optimistically and with enthusiasm; and provide encouragement and meaning for what needs to be done.
- Intellectual Stimulation: Leaders question old assumptions, traditions, and beliefs; stimulate in others new perspectives and ways of doing things; and encourage the expression of ideas and reasons.
- Individualized Consideration: Leaders deal with others as individuals; consider their individual needs, abilities and aspirations; listen attentively; further their development; advise; teach; and coach.
- Contingent Reward: Leaders engage in a constructive path-goal transaction of reward for performance. They clarify expectations; exchange promises and resources; arrange mutually satisfactory agreements; negotiate for resources; exchange assistance for effort; and provide commendations for successful follower performance.

Leithwood determined that the secondary school principal must embody, at the minimum, the factors Idealized Influence (both Behaviors and Attributes), Individualized Consideration, Intellectual Stimulation, and Inspirational Motivation of the Bass and Avolio model (1997) if a secondary school is to be responsive to the changes required in a twenty-first century educational climate. If any one of them is absent, the restructuring

efforts are less likely to permeate the organization in any sustainable way (Leithwood et al., 1994, 1999).

Leithwood et al. conducted 34 large studies with this instrument, and 22 of them specifically involved school principals. Two types of studies were used. One was a series of qualitative, grounded approach studies in which the researchers examined data from interviews with teachers and principals of schools in the process of restructuring. The other was a series of studies aimed at testing and/or modifying theories. Both types began with the Bass & Avolio model (1995) modified to better reflect what actually occurs in school settings and with the behaviors of Transformational Leaders identified by Podsakoff extensive literature review of Bass, 1985; Bennis and Nanus, 1985; Bradford & Cohen, 1984; Conger & Knag, 1987; House, 1977; Oozes & Posner, 1987; Itchy & Deanna, 1986 (in Podsakoff, MacKenzie & Bommer, 1996). The Podsakoff identified behaviors are briefly defined below and fully described in Appendix B:

1. Identifies and articulates a vision: behavior on the part of the leader aimed at identifying new opportunities for his or her school and developing a vision (often collaboratively), articulating it, and inspiring others to adopt this vision of the future.
2. Fosters the acceptance of group goals: behavior on the part of the leader aimed at promoting cooperation among staff and assisting them to work together toward common goals;
3. Conveys high-performance expectations: behavior that demonstrates the leader's expectations for excellence, quality, and/or high performance on the part of the staff;
4. Provides appropriate models: behavior on the part of the leader that sets an example for staff to follow and that is consistent with the values espoused by the leader;

5. Provides intellectual stimulation: behavior on the part of the leader that challenges staff to reexamine some of the assumptions about their work and to rethink how it can be performed;

6. Provides individualized support: behavior on the part of the leader that indicates respect for individual members of staff and concern about their personal feelings and needs;

7. Contingent reward: behavior on the part of the leader in which he tells staff what to do to be rewarded for their efforts. Although this leadership dimension is viewed by some as Transactional, the theoretical possibility of providing informative feedback about performance to enhance teachers' capacity beliefs as well as emotional arousal processes makes this set of behaviors potentially transforming as well;

8. Management by exception: behaviors on the part of the leader in response to problems arising from the practices of others. These behaviors may include active monitoring to detect such problems or a more passive, laissez-faire posture in which leaders react only as problems are brought to their attention (Leithwood, 1994, p. 4).

As a result of these large-scale quantitative, qualitative, and case studies, Leithwood and associates altered the Bass & Avolio (1995) model and the identified behaviors (Podsakoff, et al., 1990) to include only those elements which extensive research identified most aligned with effectiveness in schools. Specifically, both the Leithwood school studies and those conducted in non-school settings by Bass and Avolio found positive and significant correlations (.71) between Contingent Reward (a Transactional factor) and each of the Transformational factors. Bass and Avolio interpret the results to indicate that Contingent Reward is not Transformational but Transactional. They describe

it as an augmentation effect and caution that it must be practiced by Transformational leaders during the change process:

First, both Transactional and Transformational leadership represents active, positive forms of leadership. Second, leaders have been shown in repeated investigations to be both Transactional and Transformational. Third, as Shamir (1995) argues, the consistent honoring of transactional agreements builds trust, dependability, and perceptions of consistency with leaders among followers, which are each a basis for transformational leadership (1995, p. 14).

Leithwood et al. (1994, 1999) took a different position. They determined that a small amount of Contingent Reward is an *essential component* of Transformational Leadership. People need both intrinsic and extrinsic motivation to work and learn well. Lashway's work supports this idea: "Whereas people will voluntarily engage in activities that are challenging and meaningful, they normally will not spend time on things that are boring, overly difficult, or distasteful, unless those activities can be "traded" for outcomes that *are rewarding*" (2001, p. 28).

McKenzie and Lee (1998) posited that personal agendas and school priorities are not always the same. They discussed the value of incentives in mobilizing initial participation by members. When the leadership attaches tangible incentives to its message, it clarifies the priority it places on stated goals and helps direct employee behavior. Once the group is focused on the same goals, motivation naturally becomes more intrinsic. There will be natural fluctuation in this process. No matter how clear the vision and goals might be in the mind of the principal at the outset of a restructuring effort, the teachers frequently

have other priorities. Without the technical expertise and knowledge of the content teachers who must actually implement given strategies, the effort is doomed to failure.

Contingent Reward must be practiced to ensure successful operation of a school during the process of change and can actually lead to other transforming behaviors. Leithwood, Jantzi and Steinbach now consider it to be part of the Transformational model. No study discovered any positive effects for the remaining Transactional factor, Management by Exception, for Non-leadership or for Laissez-faire leadership, in the school setting. Consequently, they have been dropped from the model as completely irrelevant. These researchers no longer distinguish between Transformational and Transactional Leadership (Leithwood, 1994; Leithwood, Jantzi & Steinbach, 1999).

In the new model the remaining Podsakoff behaviors fit into three groups: *Setting Directions*, *Developing People*, and *Redesigning the Organization*. These behaviors dovetail with the educational application of the Bass and Avolio Multifactor Leadership Questionnaire dimensions of Idealized Influence; Inspirational Motivation; Intellectual Stimulation; Individualized Consideration; and Contingent Reward. In Leithwood's model Contingent Reward was subsumed into Transformational Leadership, and management-by-exception was not considered in this study. The Leithwood Model is compared with the Bass and Avolio in the Figure below.

<i>LEITHWOOD MODEL (SCHOOLS)</i>	<i>BASS AND AVOLIO FACTORS</i>
<i>SETTING DIRECTIONS</i>	
1. Building School Vision	Inspirational Motivation
2. Establishing School Goals	Idealized Influence (Behavior) Idealized Influence (Attributes)
3. Demonstrating High Performance Expectations	Inspirational Motivation
<i>DEVELOPING PEOPLE</i>	Individualized Consideration
4. Offering Individualized Support	Contingent Reward (Transactional)
5. Providing Intellectual Stimulation	Intellectual Stimulation
6. Modeling Best Practices and Important Organizational Values	Idealized Influence (Attributes)
<i>REDESIGNING THE ORGANIZATION</i>	Idealized Influence (Behavior) Idealized Influence (Attributes) Inspirational Motivation Intellectual Stimulation Individualized Consideration Contingent Reward (Transactional)
8. Developing Structures to Foster Participation in School Decisions	Intellectual Stimulation

Figure 2. Leithwood's model of transformational leadership in schools.

Further support for this model was gleaned from a multitude of additional studies that were based on Bass and Avolio's Multifactor Leadership Questionnaire and other instruments that determine perceptions about Transformational Leaders, effects on behaviors of followers, effects on followers' psychological states, and organizational-level effects. Positive relationships were reported between Transformational and Transactional Leadership styles especially in charisma/vision/inspiration, intellectual stimulation, individual consideration, and contingent reward. Negative relationships were reported for management-by-exception and laissez-faire leadership in both leadership effectiveness and satisfaction with the leader (Bass, 1985; King, 1989; Kirby et al., 1992; Koh, 1990; Orr, 1990 cited in Leithwood et al., 1999).

Significant positive relationships were reported between Transformational Leadership and followers' extra effort on behalf of the organization (Bass, 1995; Orr, 1990 cited in Leithwood, et al., 1999). Leithwood's studies indicated that Transformational Leadership exercised significant direct and indirect effects on teacher commitment to change (1996). Skalbeck (cited in Leithwood, 1999) found significant influence of leadership practices including individual support, culture building and contingent reward on teachers' commitment to the organization. Delegation of leadership in the school improvement process was examined in a multi-case study. The researchers found that it always led to collaborative decision making, enhanced staff development, and organizational learning. In all cases, teachers' professional growth was improved (Leithwood 1992). Sagor (cited in Lontos, 1992, p. 2) found that "schools where



teachers and students reported a culture conducive to school success had a Transformational Leader as principal.”

Three studies (Leithwood et al., 1991; Leithwood and Jantzi, 1990; Skalbeck, 1991, cited in Leithwood, 1999) examined Transformational Leadership and its relationship to changes in teachers attitudes and classroom behavior, herein ‘developmental press.’ Results based on the MLQ found the Transformational dimensions vision building, developing consensus about group goals, individual consideration and intellectual stimulation to be significantly related to developmental press. Helms’ 1989 study (cited in Leithwood, et al., 1999) linked Transformational Leadership with teacher morale along the dimensions of individual consideration and structuring, which includes shared decision making and leadership. It now remains to apply this model to secondary principals in Pennsylvania to measure its success in the context of accountability. Influence is one of two elements of leadership that will be discussed next.

#### Two Elements of Leadership across the Models

Maxwell (1998, p. 11) defines the first element: “The true measure of leadership is influence—nothing more, nothing less.” An intensive review of 121 international journal articles on leadership from 1988 to the present supports that assessment. The common denominator in all leadership types is influence. The models differ primarily in “...who exerts influence, the nature of that influence, the purpose for the exercise of influence and its outcomes” (Leithwood, Jantzi & Steinbach, 1999, p. 6). This exhaustive study led those researchers to identify 20 concepts for school leadership. They assigned these to six broad leadership approaches to develop models.

1. In the Instructional Leadership model, principals exert influence based on positional power. The purpose of the influence is to enhance teachers' classroom practices towards an anticipated outcome of increased student growth.
2. The second model is Transformational Leadership where influence is exerted by principals but not restricted to them. The source of the influence is inspiration towards higher levels of commitment and capacity in members. The influence is aimed at greater effort and productivity and the development of more skilled practice. The outcome is increased capacity of the organization to continuously improve.
3. In the Moral Leadership model, the principal is the influencer. The influence is based on moral values to guide organizational decision-making. The purpose is to increase trust in decisions and participation in decisions towards the outcome of morally justified courses of actions and a culture of democratic schools.
4. The Participative Leadership model is influenced by the group including non-administrative members. The source of the influence is interpersonal communication, and the purpose is to increase participation in decisions. The expected outcome is an increased capacity in the organization to respond to internal and external demands for change and a move towards greater democracy.
5. The Managerial Leadership Model is influenced by the principal. The source of the influence is positional power, policies, and procedures. The purpose for the influence is to ensure efficient completion of specified tasks by members towards the expected goal of achieving the formal goals of the organization.
6. Finally, the Contingent Leadership Model is influenced by the principal. The source of the influence is matching leader behavior to the organizational context and expert

problem-solving processes. The purpose for the influence is to better meet needs of members and more effectively respond to the organization's challenges. The anticipated outcome is the achievement of the formal goals of the organization and an increased capacity to respond to internal and external demands for change (Leithwood, Jantzi & Steinbach, 1999).

These models cover a wide range of situations that occur over time in schools. They are driven by who exerts influence and why influence is exerted. The determination of which model is most effective at a given time can be determined by the second element.

The second element is context. The idea that no single leadership style is always effective began around 1938 with Barnard and gained support. Barnard argued that actual leadership occurs at the lower and middle rungs of the hierarchy rather than at the top. The lower levels in effect delegate authority to the top (in Hanson, 1996). This supports the findings of the Hawthorne studies in the early part of the last century (Hanson, 1996). Contemporary leadership ideas focus on the context in which leadership is practiced and on the nature of the relationship between the leader and the followers.

From a school perspective, researchers agree that leadership is contextual in nature, and the current context is defined by change. Leithwood (1994) wrote: "Leadership only manifests itself in the context of change, and the nature of that change is a crucial determinant of the forms of leadership that will prove to be helpful...School restructuring will dominate the change agenda for school leaders for some time to come" (Leithwood, 1994, p. 498).

Hallinger & Heck's (1996) review of empirical research on principal leadership supports the contextual nature of leadership style. Context strongly influences the way a

principal leads. That finding was confirmed in studies by Hallinger, Bickman and Davis (1996).

Hersey and Blanchard theorized that “leadership styles change according to the situation at hand and the maturity of followers” (Richter, 2000, p. 8). Fiedler’s Contingency theory suggests that “a leader’s effectiveness depends on how well the leader’s style fits the context” (Northouse, 1997, p. 74). Argyris and Schon (1978) concluded that both the needs of the organization and the needs of the individual dictate the type of leadership that will be effective.

Yukl and Howell (1999) examined contextual organizational influences and their effects on charismatic leadership. They concluded that: “Charismatic leadership principles and processes potentially apply across a wide variety of situations; however, there are situations in which they apply more than in others...both the emergence and effectiveness of charismatic leadership may be facilitated by some contexts and inhibited by others” (p. 2). They cite organizational influences and characteristics of the leader that might influence its effectiveness. They caution that such conditions might add or subtract from the effectiveness of charismatic leadership but not nullify its benefits.

Context is an essential component of the Leithwood model that serves as the theoretical framework of this study (Leithwood, 1992, 1994, 2001; Leithwood & Leonard, 1998; Leithwood & Jantzi, 1998, 1999a, 1999b, 1999c, 2000, Leithwood, Jantzi & Steinbach, 1999; Leithwood, Aitken & Jantzi, 2001). The model is said to best serve schools in the context of accountability-driven school reform. Leithwood (2001) framed an exploration of accountability-driven policy contexts and their implications for school leaders through four models: market, decentralization, professionalization, and

management approaches. His review of the theory and empirical literature links leadership practices to each of the accountability models. While there were similarities in practice, the context determined the approach. Leithwood wrote that Transformational behaviors work well in each environment. He cautioned school leaders to be aware of the nuances of the contexts in which they govern and adapt accordingly (2001).

To this point, this chapter recounted the evolution of contemporary leadership ideas from the beginning of the 20<sup>th</sup> century. It traced its philosophical underpinnings from scientific, sometimes known as “Man as Machine” models, to current theories based on relationships. It discussed the symbiotic nature of leadership models with the economic and social culture of a given era. It fully described the Transformational Leadership developed by Leithwood et al., the theoretical framework of this study. It concluded with the ideas that leadership is based upon who exerts influence and that the best leadership model is the one that fits the context in which it operates. As the twenty-first century opened, the context for education was change and accountability. The next sections describe that context.

#### The Context: Standards, High Stakes Testing, and the Need to Restructure

At this particular place and time, public education faces greater challenges than ever before (Institute for Educational Leadership, 2000). After nearly a century of inertia, the schooling establishment must undergo rapid transition with scant guidance and increasingly scarce resources. Standards and testing punctuated with rewards and sanctions provide fertile ground for debate. Horace Mann himself argued in favor of standards:

All children like all men, rise easily to the common level. There, the mass stops; strong minds only ascent higher. But raise the standard, and, by a spontaneous movement, the mass will rise again and reach it (in Lashway, 2001, p. 74).

Marzano and Kendall, on the other hand, characterized public schools as “awash in a sea of standards” (in Lashway, 2001 p. 47). Their comprehensive examination of state and national standards projects uncovered 200 standards with 3,093 specific benchmarks. They concluded that “adequately addressing all these standards would require students to attend school through grade 22” (p. 47).

Joseph Murphy, President of the Principals Leadership Academy at Ohio State University, remarked that standards and accountability, and the accompanying impetus towards site-based education, home schooling, vouchers, and charter schools did not derive from the education industry. Rather, they were driven by changing economics, changing social forces, and a changing political environment demanding the demise of the old public monopoly and its replacement by structures more responsive to an involved public. These forces unite to reshape the very essence of American public education (National Press Club, 2000). Specific to this study was Pennsylvania’s high-stakes testing discussed next.

#### *Pennsylvania System of School Assessment (PSSA)*

During the 1970s, the Commonwealth of Pennsylvania began testing student achievement in its schools. The Educational Quality Assessments of that decade evolved into the Testing for Essential Learning and Literacy Skills (TELLS) in 1984. The current Pennsylvania System of School Assessment (PSSA) replaced TELLs in 1991; however,

it was not until 1995 that every district in the Commonwealth was required to test its students in reading and math.

With the adoption in January 1999 of Chapter 4 regulations, the legislature dramatically shifted the focus of state assessments from providing information to teachers and schools about student progress to judging and comparing the effectiveness of the schools themselves. Financial rewards for schools and districts that succeeded and dire consequences for those who failed to achieve drove schools and districts to improve performance on the tests (Pennsylvania School Boards Association, 2002).

Chapter 4 of the Pennsylvania School Code mandated that every public and charter school student in the Commonwealth of Pennsylvania must participate in a criterion-referenced assessment of his or her progress towards achieving proficiency in the state's academic standards at specific grade levels. Only those students whose parents objected on religious grounds and students with extended absences could be excused from the assessment. Pupils with exceptionally low ability, less than 1% of the state's school population, were allowed to take a different version of the test (State Board of Education of Pennsylvania, 1999).

Some months after test administration, schools received a report of individual progress, as well as an aggregate school score in reading, writing, and math. Disaggregated results provided information about the achievement of various subgroups that had 10 or more members completing the test. This "Rule of Ten" applied to protect the identity of individual test-takers, since group results are public information. Subgroups were sorted by gender, race and ethnicity, IEP status, socioeconomic status, migrant status, and English language proficiency. This information was intended to

identify those students or groups of students who needed additional assistance to achieve the state academic standards, to aid districts in making data-driven curriculum and instructional decisions, and to inform the public as to the progress of each school and district as a whole. Local newspapers and internet websites published results for each school as a basis for public comparison (Pennsylvania Department of Education, 2002).

Chapter 4 also mandated that graduation requirements must include proficiency on the 11<sup>th</sup> grade assessments in reading and math or on a locally-designed standards-based assessment in the same disciplines. Students who do not achieve proficiency in 11<sup>th</sup> grade are permitted to retake the test during their senior year. PSSA scores are listed on student transcripts, and students who achieve proficiency receive certificates.

School districts that do not measure up to what the state deems proficient face sanctions under Act 16 of 2000, known as the School Empowerment Act. Specifically, if 50% or more of the students in a district perform below basic for two consecutive years, the district becomes empowered. Conditions such as student ability or disability, poverty, homelessness, migratory status, or inability to understand or speak English do not lower expectations for that student's progress. If specific levels of improvement do not occur over three additional years, the district can be taken over by the state. For example, the School District of the City of Philadelphia suffered that fate in the 2002 school year. The majority of empowered Pennsylvania districts are urban districts (State Board of Education of Pennsylvania, 1999). Expansion of empowerment sanctions from districts to individual schools took effect with the 2002-03 state budget. With the advent of the No Child Left Behind Act of 2002, Act 16 became superfluous because the same penalties meted out to schools that fail to measure up also apply to districts.



*No Child Left Behind Act of 2002*

On January 8, 2002, President Bush signed into law the No Child Left Behind Act (NCLB), a bi-partisan reallocation of The Elementary and Secondary Education Act of 1965. This law nationalized the high-stakes testing of states like Pennsylvania and mandated even more testing to make certain that every school building performed at the proficient level for every subgroup. In order to receive federal money, each state had to develop a uniform accountability system that defined adequate yearly progress (herein AYP) towards the goal of 100% student proficiency by the year 2014 in reading and math. The system had to include annual rigorous assessment of students in grades three through eight and once in high school. In the year 2007, students would be tested in science once in elementary school, once in middle school, and once in high school. AYP, as defined by each state, had to be documented for four separate sub-groups as well as for the entire school. The Application must also spell out rewards, supports, and sanctions that would be uniformly applied across all schools and school districts.

The subgroups under NCLB are similar but not identical to those previously required by Pennsylvania law. They include students with individualized education plans, students from poverty, students from major racial or ethnic groups, and students with limited or no English proficiency. Presently, gender and migrant status are not considered subgroups at the federal level. For the purposes of NCLB, each state determined the number of students that make up each subgroup. Pennsylvania's revised Consolidated Application set that number at 40. In the case of small schools, subgroup data would be combined for two to three years to make sure that all students would be counted (Phillips,

2003). All of these subgroups historically perform at the low end of the achievement gap, according to language in the law (U. S. Department of Education, 2002).

To facilitate the goal of closing that achievement gap, the law mandated stringent consequences for schools that do not meet the annual state-established benchmark. These sanctions range from targeting the school for improvement and requiring the school to offer school choice at its own expense, up to and including firing staff and closing or otherwise restructuring the school.




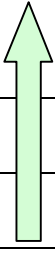
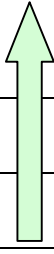
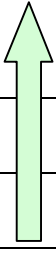
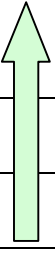
Pennsylvania's Application included components for assessment, annual performance targets, and growth in participation and attendance. Figure 4 depicts the assessment plan (Pennsylvania Department of Education, 2003). The goal of this plan is that all students will be tested, with appropriate accommodations, using one statewide test at each subject and grade level from grade three to grade eight and once in high school.

YEAR	GRADES	SUBJECTS
2002	5, 8, and 11	Reading and Math
2003	3, 5, 8 and 11	Reading and Math
2005	3, 4, 5, 6, 7, 8 and 11	Reading and Math
2007	4, 7 and 10	Science added




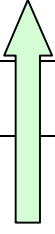
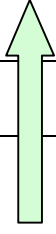
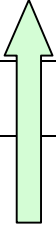
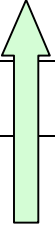
*Figure 3. Assessment plan.*

The performance targets for adequate yearly progress are separate for reading and math. They start out at a baseline determined by actual results compiled over several years of testing, that is, 35% of students must be proficient or advanced in math and 45% in reading at the outset. The target rises gradually for the next few years and then by steep increases over the remaining years. This plan allows time for implementation of

scientifically-based programs in the schools to have an effect. The annual objectives are shown below (Pennsylvania Department of Education, 2003, pp. 15, 16):

45%	54%	63%	72%	81%	91%	100%
Proficient	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient
						
2004	2007	2010				
2003	2006	2009				
2002	2005	2008	2011	2012	2013	2014

*Figure 4. Adequate yearly progress – reading (% proficient by year).*

35%	45%	56%	67%	78%	89%	100%
Proficient	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient
						
2004	2007	2010				
2003	2006	2009				
2002	2005	2008	2011	2012	2013	2014

*Figure 5. Adequate yearly progress – math (% proficient by year).*

The targets for the additional AYP measures described previously include immediate mandatory participation of 95% of each tested grade level and subgroup, improvement towards a goal of 95% in attendance for schools without graduating classes, and improvement towards 95% in four-year graduation rate for schools with senior classes. In summary, AYP means that each school and each of its subgroups will meet the annual

proficiency target in math, reading, and science with at least 95% of eligible students participating in the assessments, and show growth in either attendance or graduation rate depending on the school level. The Academic Achievement Report located on the Pennsylvania Department of Education website (<http://www.pde.state.us.gov>) listed 41 possible targets for achieving AYP in any given year. AYP would be calculated either by averaging grade spans for two years, or by using current year data, whichever is higher, in order to increase reliability and validity.

One variation from the above is known as ‘safe harbor.’ That means that if a school or subgroup reduces the proportion of students below proficient by 10% or more, it will be considered to have met AYP. The school and its subgroups, however, are still bound by the 2014 deadline. Pennsylvania proposed an indexing system in which levels below proficiency will be split to help low-performing schools meet annual AYP objectives and reward progress, but the federal government has not yet approved this plan. NCLB makes districts and states accountable for the same goals as individual schools with accompanying sanctions.

To a structure unaccustomed to dealing with rapid change, the mandates are frightening and frequently overwhelming. Yet Lashway (2001) reminds us that “schools are public institutions in a democratic society, required to subject policy decisions to public scrutiny and electoral discipline...Much of the current push for accountability has been generated by political processes” (p. 4). Schools must, therefore, adhere to the dictates from democratically elected officials and undergo the kind of rapid change needed to meet the challenge. Fullan (2001) writes that appropriate leadership in the form of a change agent is necessary to focus and direct change and to reinvent institutions that

are more responsive to the public. Using a ‘ready, fire, aim’ approach (Fullan, 1999), schools and districts must undergo systemic fundamental change with virtually no time to plan, prepare, perform or retool. They must dramatically restructure curriculum, instructional methods, staff development, budgeting, data management and analyses, and practices.

Linda Darling-Hammond et al. (2002) reports that schools do not know how to do the kind of large-scale restructuring demanded of them. They need to become learning organizations similar to structures found in non-school organizations. Elmore (2002b) agreed: “Low-performing schools, and the people who work in them, don’t know what to do. If they did, they would be doing it already...Without substantial investments in capacity, [high-stakes testing] is likely to aggravate the existing inequalities between low-performing and high-performing schools and students” (p. 4).

As schools across the nation rush to retool, restructure, and adapt to rapid-fire change or face dire consequences, the role of the principal takes on more significance than before. “Perhaps the most consistent finding in the large body of school effectiveness research is that the success of school improvement efforts is dependent upon leadership. Effective schools have effective principals” (Fullan, 1993, cited in Bloom, 1999, p. 15). Without appropriate leadership for the enormous task of increasing school capacity to improve student performance, more and more public schools will falter and ultimately fail (Elmore, 2002a, 2002b).

Systemic change, then, will not happen without a change agent, and it will not be successful unless those closest to the problems play integral roles in the change process (Fullan, 2001). The research is clear that the most effective change agents in education

are school principals (Edmonds, 1979; Hallinger & Heck, 1996; Osterman & Crowe, 1997; Leithwood, 1994; Leithwood, Jantzi & Steinbach, 1999). Leithwood (1994) tells us that Transformational principals are best equipped to serve secondary schools as they encounter perhaps their greatest challenge to date.

Leithwood writes that leadership emerges in times of change (1994; 1999).

Therefore, it is essential to identify appropriate leadership characteristics to guide twenty-first century schools through large-scale change mandated by state and federal legislation and public opinion. The next sections will examine the role of the principal and its direct and indirect relationship to student achievement.

#### The Changing Role of the Principal as School Leader

At the school level the principal's actions determine whether or not effective change happens (Brookover & Lezotte, 1979; Edmonds, 1979; Teddlie & Stringfield, 1993; cited in Osterman & Crow, 1997). Indeed, Edmonds highlights the critical role of the principal in school change: "There are some bad schools with good principals, but there are no good schools with bad principals" (cited in Stone, 1992, p. 2).

With that in mind, it must be noted that 60% to 80% of American school superintendents and principals will retire over the next ten years, according to the Institute for Principal Leadership (cited in National Press Club, 2000). Additionally, while there are more certified principal and superintendent candidates than ever before in school systems, few are willing to accept those positions. Reasons include low differential between teacher and principal salaries, time commitments, and increasing demands and responsibilities (National Press Club, 2000). Clearly, the education

establishment will be guided by a new generation of leaders, and it is of national concern that effective leaders fill this void.

The Task Force on the Principalship of The School Leadership for the twenty-first Century Initiative addressed these critical issues in its October 2000 report. Jointly funded by public and private sectors, the Task Force membership included K-16 practitioners, national business alliances, and government participants. Because of the national importance of education and the salience of leadership as an issue, the Task Force focused on the importance of restructuring American schools under twenty-first century leadership with input from the business and political communities (National Press Club, 2000). The research is consistent that the quality of school leadership is paramount to the effectiveness of our schools. (Institute for Educational Leadership, Inc., 2000).

At the time when many veteran principals received their training, the main requirements of the job were managerial. The instructional leadership paradigm prevalent in the 1980s increased principals' awareness in matters of curriculum and teacher evaluations, but the realities of building management dominated then just as they often do today (Institute for Educational Leadership, Inc., 2000).

Instructional Leadership, born of the Effective Schools research in the 1970s, was a step on the evolutionary path to twenty-first century leadership. Instructional leaders endeavored to improve a teacher's classroom practices and thus, student scores; but the type of change required today is larger than that. In order for change to take root and flourish in schools, the culture itself must simultaneously change. This is a different mission from that which principals faced in the last several decades. Nevertheless, its

continued prominence in the field of educational administration cannot be overlooked. Traditional Instructional Leadership, therefore, deserves some discussion here.

Reanalyzing data from the 1966 Equal Educational Opportunity Survey, Edmonds removed the relationship of family background on student achievement and was then able to identify schools that were effective in educating children from poverty. Research findings linked schools where student achievement improved to principals who reflected the Instructional Leadership paradigm advocated by the Effective Schools researchers.

The model developed by Edmonds was based on control, with the principal as the “expert” carefully supervising instructional practices of teachers with businesslike efficiency. Behaviors of effective school principals identified by the research included the ability to maintain an orderly environment; to monitor student progress; to observe and evaluate teachers frequently on their effectiveness; to set clear goals and objectives; to improve reading and math instruction; and to demonstrate strong leadership including managerial and instructional aspects. This leader would oversee curriculum and instruction in every classroom, evaluate teachers, and select each particular change upon which the school would focus at any given time. It might be the adoption of a particular textbook series or an instructional innovation. Success was marked by improvement in reading and math scores, particularly when students came from a background of family poverty (Edmonds, 1979). Applying a metaphor used by Marshall (1995), one might compare the model cited above to a clock moving inexorably from one initiative to another in a linear, predictable pattern.

Hallinger and Heck (1996) provided confirmation as to the effectiveness of Instructional Leadership. They reviewed empirical studies done in a variety of settings



and international locations to determine the effects of principal leadership and other factors on student achievement. In one case analysis of data from 98 elementary schools presented a statistically significant positive relationship between the leadership of the principal and school climate.

In another case, 23 elementary schools and 17 high schools provided the sample to determine whether the principal's leadership style could predict student performance. Student scores on the state assessments of these schools had been stable for three or more years. The principal and several teachers from each school responded to a questionnaire to measure the principal's Instructional Leadership. Responses indicated a predictive link between student performance and perceived actions of the principal, such as quality and quantity of classroom observations, a focus on educational issues, and use of test data to improve the program.

A different study reported in the same work surveyed 168 teachers and 30 principals in 30 elementary schools to determine a relationship between the behavior of the principals and student achievement. These results showed a clear demarcation between the perceived leadership behaviors of principals in high performing schools and the perceived leadership behaviors of principals in low performing schools. The high performing schools had principals who engaged in more direct supervision of teachers and of instructional strategies and activities. They provided needed resources, and worked with teachers to help them improve. Principals of low performing schools did not present these behaviors.

On the other hand, Lontos (1993) determined that there must be a change from strong Instructional Leadership to a Transformational model that is less hierarchical and

more inclusive. Elmore (2000a) agreed and faulted the top-down model as being instrumental in the failure of today's schools. He declared that school people engage in practices that deny learning as a cumulative process. They sort and select students and teach discrete bits of knowledge in assembly line fashion. "The complex nature of instructional practice requires people to operate in networks of shared and complementary expertise rather than in hierarchies that have a clearly defined division of labor" (2002, p. 23). Poplin (1992) views Instructional Leadership as a theory of the past. She asserts that for school improvement to occur, principals should change their focus from student test scores to teacher improvement and growth.

Leithwood termed the changes in basic tooling and methodology grounding the Instructional Leadership model first-order changes. While these are essential pieces to improvement of the educational experience at the student level, the changes they wrought were never institutionalized and thus, not sustained (Leithwood, 1992, 1994; Leithwood, et al., 1999). A Transformational principal takes leadership to the next level in that "it aspires, more generally, to increase members' efforts on behalf of the organization, as well as to develop more skilled practice" (Leithwood et al., 1999, p. 20).

Weber (cited in Lashway, 1995) argued that the functions inherent in Instructional Leadership are still essential to student achievement. He averred, however, that responsibility for those functions would be best met by a group of professionals working collaboratively. The comprehensive report from the National Institute for School Leadership (2000) cited earlier also recommended a collaborative form of leadership utilizing talents throughout the organization as a way of reinventing the principalship.

Lambert agreed on the importance of building capacity of all stakeholder groups, i.e., teachers, parents, students, school board members, superintendents, principals, etc. in a shared sense of leadership: “As long as improvement is dependent on a single person or a few people or outside directions and forces, it will fail” (Lambert, 1998, p. 3).

Lashway (2002) determined that the top-down expert leader should be replaced with an ‘Instructional Leader’ whose job description matches what we now call Transformational. That implied two things: (1) that the difference between the two philosophies is now one of semantics; and (2) leadership is contextual as posited by Leithwood et al. in numerous works

Leithwood wrote that it is no longer enough for a principal to be the Instructional Leader identified by Edmonds, particularly at the secondary level. The size and the complexity of modern institutions prevent the administrator from directly supervising instruction in every classroom on a regular basis. The specialized knowledge and various kinds of pedagogy specific to each discipline present additional barriers to a principal in directly influencing classroom practices at that level. And yet the principal is accountable for student achievement.

For any school to expand its capacity for continuous improvement—a necessary component of school restructuring--teachers and staff must be inspired to higher levels of commitment through a collectively established mission for the future, must exude confidence in their collective ability to overcome obstacles, must exert greater effort and greater productivity, and must engage in best practices in the classroom (Verona, 2001). In short, the school must become a learning organization (Senge, 1995; Senge et al., 1999). This is defined as “an organization skilled at creating, acquiring, and transferring

knowledge, and at modifying its behavior to reflect new knowledge and insights” (Garvin, 1993, p. 80, cited in McREL, 2000, p. 7). Modern thinkers in educational leadership, for example, Fullan (1999, 2001), Darling-Hammond (1996), Leithwood and Leonard (1998), and others view learning organizations as a necessary component to effect large-scale change. The concept plays a role in Leithwood’s model of Transformational Leadership in secondary schools.

Fullan’s (1999, 2001) case study research examined organizations undergoing large-scale change. He determined that to successfully reculture a school in a sustainable manner, the principal and teachers must collaborate in learning communities. The focus must be on improving student learning for all in an equitable manner. He concluded that: “The single factor common to successful change is that relationships improve. If relationships improve, schools get better” (Sparks, 2003, p. 57). Others agree: “The postmodern era suggests a conception of organizations as processes and relationships rather than as structures and rules” (Mitchell, Sackney, & Walker, 1996, cited in Leithwood & Leonard, 1998). This idea is reminiscent of Mayo’s results on the power of informal groups (Hanson, 1996) and takes it one step further.

It follows that to succeed in reculturing, effective school leaders must focus on relationships. Relationships are key to the success of learning communities. The utility of the organizational learning concept is well documented in non-school settings; however, its documentation is sparse in the educational establishment. Leithwood and Leonard (1998) synthesized three studies to examine leadership and other conditions that fostered or inhibited organizational learning in schools. These three qualitative studies

used the same theoretical framework and methodology, but were conducted in different contexts.

This was a qualitative, cross-case analysis of data from three studies. The sample of 111 teachers represented 14 elementary and secondary schools. Responses to 28 questions covering all components of the framework set the stage for subsequent interviews. Principals responded to the same instrument and participated in interviews. Across contexts, teacher interviews revealed that the district, school leadership, and school culture most influenced the school's capacity to act as a learning organization. The district conditions most often cited were its mission, culture, structure, policies and resources, and strategies for change. As expected, all dimensions of Transformational Leadership practices revealed strong associations with school conditions fostering organizational learning.

Marks and Louis (1999) linked the capacity of schools for organizational learning with leadership that encouraged teacher empowerment. They hypothesized that in schools with a strong capacity for organizational learning, leaders greatly empowered their teachers. They studied 24 site-based public elementary, middle and high schools in the process of restructuring. The mixed method study utilized a variety of data-gathering instruments and means. A survey was administered to which 910 teachers responded. The researchers spent two weeks at each school observing and conducting interviews with school staff and administration. Multi-level analyses demonstrated a strong and consistent relationship between the capacity for organizational learning and teacher empowerment. However, that capacity varied considerably among the schools. High schools, in particular, struggled with the capacity. Scatter plots revealed that even among

these restructuring high schools the capacity for organizational learning was weaker than in the lower grades. In those cases the empowerment of teachers was equally weak. The same authors found in their earlier work that teacher empowerment is associated strongly in schools with characteristics that lead to increased student performance. Building the capacity for organizational learning requires facilitative leaders that empower leadership at all levels of the organization.

Additional quantitative and qualitative studies by other researchers linked Transformational Leadership--especially vision building, individual support, intellectual stimulation, modeling, culture building, and holding high performance expectations—to organizational learning as well as to organizational effectiveness and improvement (Leithwood et al., 1991a, 1992b, 1993b, c; Silins, 1992, 1994a, and Kendricks, 1988 cited in Leithwood et al., 1999). Other studies using different measures and methods all found Transformational Leadership practices positively related to desirable climate and culture in schools (Kendrick, 1988; Helm, 1989; King, 1989, Sashkin and Sashkin, 1990; Darling, 1990, Leithwood and Jantzi, 1990, Vandenburghe and Staessens, 1991 cited in Leithwood & Jantzi, 1999).

These studies reveal both the importance of principal leadership and the effectiveness of relationships developed through schools as learning organizations. They also identify the leader in a learning organization as a Transformational Leader. He or she presents a high quality mission and goals that everyone in the organization understands and shares. He or she develops a culture of collaboration and continuous problem solving, striving always to improve the quality of services. The Transformational Leader facilitates teams and declines to supervise or manage them from

above. He or she inspires individuals across the organization to improve their own leadership capacities (Senge, 1996; Senge, et al., 1999).

Therefore, the successful secondary principal in the climate of No Child Left Behind and other challenges of the twenty-first century must be a Transformational Leader who envisions the need for change and facilitates its implementation in a learning organization. He or she must strive to motivate all members of the organization to a higher commitment thereby increasing organizational capacity. Effective Transformational principals must actually permeate the school's culture with energy and motivate others to come together to meet new challenges. A pervasive spirit of cooperation must help to change previous behaviors as participants define the building's mission and work together to meet its goals while adapting to the changing culture (Leithwood, 1992, 1994; Leithwood & Leonard, 1998).

Elmore supports collaborative practices. His leaders engage their followers in "the kind of inquiry that can result in agreement on the organization's work and its purposes" (2002a, p. 25). This concept parallels the conclusions of Mayo and the Human Relations Approach that began with the Hawthorne Studies. Findings of the Mayo group detailed the power of the informal group to influence success or failure of the organization (Hanson, 1996).

Stone (1992) used the Multifactor Leadership Questionnaire to survey 482 teachers from schools governed by principals who had previously been identified as top-performing by supervisors, colleagues, and teachers. The schools chosen for the study represented urban, suburban, and rural locations. The principals responded to the leader version of the survey. Descriptive data revealed that these principals practiced the

Transformational Leadership qualities Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration to a high level (approximately three or “fairly often” on the Likert Scale in which four was the highest score). Although the principals rated themselves somewhat higher on each Transformational scale than their teachers rated them, this group of high-performing principals clearly engaged in Transformational Leadership behaviors.

A monograph published by McREL (2000) described some leadership characteristics culled from the literature on business that would stimulate and sustain worthwhile reform in twenty-first century schools. It described effective leaders who make decisions based largely upon the long-term impact on the climate of the organization and on the individuals who make up that organization. Those leaders foster respectful interaction and a caring culture in which the members feel valued. They motivate and trust followers to participate in decision-making and thus lighten their management load in order to strengthen the leader role.

...school leaders who become too focused on managing day-to-day problems can unwittingly neglect the important role they can play in helping to create a shared vision for change. That is, they can become myopically focused on managing small, incremental changes, rather than encouraging their schools to take a broader, longer term view, one that is essential to beginning and maintaining fundamental change (McREL, 2000, p. 5).

Conversely, principals still need the power to make quick decisions on all sorts of daily occurrences. Prager (cited in Lashway, 1995) argues that “while instructional



excellence is most likely to be achieved through faculty ownership, collegiality does not automatically lead to improved student learning. School leaders must be able to translate the ambiguities of collaboration into the clarity of tangible goals” (p. 2).

As detailed above, the role of the secondary principal is marked by enormous challenges and contradictions. It is bounded by the pressures of high stakes accountability to improve academic proficiency for all students. Recognizing that leadership is very different in a stable institution than it is in a changing one, successful change agents might look for new models to help them replace those better suited to another time and place. The researchers enumerated above recommend the practices consistent with Transformational Leadership.

#### Principal Leadership and Student Achievement

The Effective Schools research focused school improvement efforts squarely on the leadership ability of the school principal (Edmonds, 1979). It focused attention on school change with clear purposes, clear goals, and clear initiatives (Edmonds, 1979). The success of the model “crystallized a particular image of leadership, one emphasizing top-down decision-making by a strong, technically adept leader” (Lashway, 1995, p. 1). Based on these results, it would seem that Instructional Leadership as detailed by Effective Schools research would be an excellent model for the new leaders to emulate. But is it?

Times have changed and so have many of the challenges facing school leaders, particularly at the secondary level. One might note that the vast majority of confirmatory studies on the effectiveness of the top-down model were done in elementary schools. Today’s secondary schools are frequently so large and complex that operation of the

classroom-based leadership model described earlier becomes a Herculean task.

Complexity of content area subject matter reduces the principal's ability to act as an expert, and the sheer numbers of teachers inhibit his or her ability to be present in the classrooms to any meaningful extent. "The size of the secondary schools challenges the feasibility of principals exercising the sort of direct influence on classroom practice envisaged in early views of Instructional Leadership" (Leithwood, Jantzi & Steinbach, 1999, p. 25).

The question then arises: In what ways, if at all, does principal leadership affect schools relative to student achievement? Synthesizing 15 years of research on how principals affect their schools, Hallinger and Heck (1998) reported that principals make a difference, although indirect, on student achievement. Through setting goals, providing structure and organization, guiding policy, procedures, and practices, principals impact learning. Another study reported by the Task Force on the Principalship concluded: "good school principals are the keystone of good schools. Without the principal's leadership, efforts to raise student achievement cannot succeed" (Institute for Educational Leadership, Inc., 2000, p. 6).

Richter (2000) examined Hersey and Blanchard's Situational Leadership model and its relationship to student achievement in exemplary Texas schools based on the Texas state assessment results. Using a causal-comparative research design, she surveyed 247 principals to determine whether they used a "telling," "selling," "participating," or "delegating" style of leadership and whether the socioeconomic status of the school affected which style was used. The instrument in this study was the *Leadership Effectiveness and Adaptability Descriptor*. The results showed that, in both high and low

socioeconomic exemplary schools, the principals used the high relationship styles of “selling” and “participating.” Principals in the low SES schools had a marginal use of the “telling” style, but that was not the case in any of the high socioeconomic status schools.

Verona (2001) used the Multifactor Leadership Questionnaire to determine a relationship between a Transformational Leader and student performance on the New Jersey High School Proficiency Test in both comprehensive and vocational high schools in New Jersey. She employed a statistical regression model to analyze quantitative data from the MLQ. Her results indicated significant effects on passing rates; however, the presence of Transformational Leadership was in shorter supply in the vocational schools than in the comprehensive high schools, and where it was not present, the scores were lower.

Hallinger, Bickman & Davis (1996) explored the effects of the principal’s leadership on reading achievement in 87 elementary schools. Student test scores and teacher survey results were analyzed with school context variables of socioeconomic status, parent involvement, principal gender, and teachers’ years of experience. Other variables were principal’s Instructional Leadership and school climate. When the results were analyzed, there was only an indirect link between the principal’s leadership style and student achievement. The principal was effective in shaping the school climate and that, in turn, affected student achievement.

In an extensive review of 40 empirical studies on the principal’s leadership in school effectiveness, Hallinger & Heck (1996) found that the principal was able to influence student learning, but that the type of principal leadership was mediated by the socioeconomic status of the environment.

Wong (1996) examined improved student achievement of at-risk students in the context of school and classroom attributes. Data from “Prospects: The Congressionally Mandated Study of Educational Growth and Opportunity,” a six-year longitudinal study on the effects of Chapter 1, was analyzed. Among other findings, he reported that greater autonomy in decision-making at the school level alone did not influence longitudinal achievement, but, in some cases, schools with collaborative principal/teacher leadership and a clear, shared mission, showed improvement in student learning rates.

In British Columbia, Silins (1992) used the MLQ and found significant positive school effects of Transformational Leadership. In his research on secondary schools, Philbin (1997) used the MLQ and found that the effectiveness of the principal had a strong, positive relationship with Transformational Leadership. In the Philbin study, followers reported more satisfaction and more willingness to exert extra effort.

Leithwood & Jantzi (1998, 1999, 2000) designed several studies to ascertain whether Transformational Leadership practices contributed to the development of capacity and commitment and, if so, what were the effects on the organization. One of the factors under study was student engagement in school. Student engagement is an indirect measure of achievement in that students who are more engaged in school usually perform better.

The first study involved surveys of 2,727 teachers and 9,025 students in 110 elementary and secondary schools in Ontario, Canada to examine the effects of all leadership types from both teachers and principals. The questions addressed were: What is the relative influence of leadership provided by teachers and by principals? How much variation in school conditions and student outcomes is accounted for by teacher

leadership compared to principal leadership? Does the total amount of leadership in the school account for significant variation in school conditions and student outcomes?

Which school and classroom conditions mediate the effects of leadership on student outcomes? In this study, the effects of both teacher and principal leadership were modest and indirect. However variation in the presence or absence of student engagement was related to different types of teacher and principal leadership. Both Transformational and Transactional forms of leadership resulted indirectly in student engagement.

A second study also addressed the relative effects of teacher and principal Transformational Leadership on several organizational conditions and student engagement with school. This study included family educational culture, a substitute for socioeconomic status, that the researchers believed would give a more accurate portrayal. Two survey instruments were completed by 1,762 teachers and 9,941 students in a large Canadian school district with 58,000 students. This district was attempting to deal with accountability mandates that required substantial change. Results indicated that Transformational Leadership showed weak but significant effects on the affective and behavioral dimensions of student engagement. These effects were the same as those found in two prior studies. Teacher leadership had statistically insignificant effects on student engagement, but principal leadership showed a weak but statistically significant effect. Leadership in both cases was substantially moderated by family educational culture and by other school conditions. Family educational culture performed statistically the same way that socioeconomic status had in prior studies and had a much larger effect on student engagement than leadership showed.

An achieved sample of 1,818 teachers and 6,490 students from 94 elementary schools in one large district were surveyed to replicate the Leithwood & Jantzi studies described above. Teachers were surveyed about organizational conditions in the school, as well as the influences of both teacher and principal leadership. The student survey examined information about student participation in and identification with the school. Results of the two studies differed as follows: (1) Family educational culture again largely explained student engagement but to a lesser degree in the second study; (2) School conditions but not classroom conditions significantly affected student engagement in the first study. In the replicated study, conditions did not separate into two variables; (3) Transformational Leadership had strong effects on organizational conditions as a whole in the earlier study, but only on school conditions in the second study; and (4) Transformational Leadership had weak but significant total effects on student identification in both studies but had significant effects on participation only in the earlier study. Again, family educational culture was strongly related to student engagement (Leithwood & Jantzi, 1999, p. 468).

Because of the complexity of the issue and intervening issues, there is only modest evidence of Transformational Leadership's effects on students. Leithwood and his colleagues contend that theoretical evidence is so high and the needs of the schools so urgent, that the application of Transformational Leadership should be immediate while researchers gather further evidence of its direct effects on students. This should not be an issue because no other leadership models have been strongly linked to student effects at this time at the secondary level.

Whether or not there is a direct link between student achievement and principal leadership, the principal's role is central to restructuring the school. As discussed above, restructuring a large, complex secondary school requires more than a top-down leader. The school's capacity to effect change must be increased by sharing leadership. Leadership behaviors appropriate to that context must be adopted.

It is one matter to restructure a school to improve student performance in locations that are little impacted by demographic differences. It is quite another to improve achievement in schools heavily populated by student groups recognized in research as difficult to educate. The situation is further complicated when one attempts to disentangle one demographic group from another. In particular, the economically disadvantaged subgroup has a strong presence across all of the other groups specified by the federal law (Armor, 1992; Kaufman et al., 1992; Lippman et al., 1996; Duke, 2000). It is far from unusual for a single student to belong to multiple subgroups often punctuated with economic disadvantage. For that reason this study focused on the economically disadvantaged subgroup in determining its population of principals. Secondary principals from high poverty schools that have shown growth in any aspect of adequate yearly progress were surveyed to determine a pattern of Transformational behaviors in their professional practice.

#### Principals as Leaders in Schools with Economically Disadvantaged Student Populations

All children can learn. The mantra leaps inexorably from pages of state standards, from mission statements of public school districts, from the lips of politicians, and from statements of public policy. Yet disaggregate scores across America, and one finds

glaring discrepancies between the group scores of students who are classified as low income and the group scores of their more affluent peers. This situation prevails with such frequency that it is considered an anomaly when children from poverty actually succeed. The Pennsylvania State Report Card that was issued January 27, 2004 provides data that supports that contention. In the 2003 PSSA, there was a significant disparity when the results of students who are economically disadvantaged were compared with the category “All Students.” The Figure below shows a greater than 40% difference between the groups when comparing percentages of students who achieved AYP with a combined Advanced and Proficient score. Perhaps even more telling is the difference of approximately 60% in students who achieved advanced status on the test.

All Students Math	Economically Disadvantaged Math	Difference Math	All Students Reading	Economically Disadvantaged Reading	Difference Reading
29.5%	-22.8%	60.3%	36.0%	-24.3%	52.3%
8.8%	-14.5%	24.6%	9.5%	-15.1%	23.3%

*Figure 6.* Percentage of students achieving AYP on 2003 PSSA.

Even more informative would be the difference between ‘passing’ rates of the economically disadvantaged (ED) and the non-economically disadvantaged (NED). The state does not yet provide that information, but it can be calculated. Of the 407,115 students who took the math test 212,921 (52.3%) passed. Of that number, 115,879 were ED and 34,184 (29.5%) of that group passed the math. When you divide the number of



ED students who passed math by the total number of students who passed math (34,184/212,921) you learn that 84% of the Pennsylvania students who passed math were not economically disadvantaged and only 16% of the children who achieved AYP in math were economically disadvantaged. Using the same formula, one finds that 17% of the children who achieved AYP in reading were economically disadvantaged.

State and federal legislation mandates that schools close the achievement gap among all groups of students or face serious consequences. Schools across districts, states, and even nations are compared without regard to the fact that schools operate with vastly different circumstances and cultures. In its annual report of testing data for Northeastern Pennsylvania public schools, Times-Shamrock newspapers stated:

“For the past three years, a Times-Shamrock newspaper’s statistical analysis of test scores has shown a direct correlation between poor test scores and high percentages of low-income students. Conversely, schools with low percentages of low-income students have higher test scores. National studies back the findings” (Deacle, 2003, p. S7).

Considerable differences exist in the educational outcomes of students from different backgrounds both economically and culturally. The mathematical difference between those results is the achievement gap. Some conditions that contribute to that gap can be altered by a principal. These are school environment factors, and they include class size, curriculum, technology, safety, attendance, resource allocation, and teacher assignments (Barton, 2003). Others are outside the realm of the school. Barton (2003) sorts the latter conditions into categories labeled early childhood development issues and home environment. In the matter of teacher assignments, Katie Haycock of the Educational

Trust discussed the impact on students of an inexperienced or poor teacher. She writes from research that two poor teachers in a row could mean the difference between a gifted label and a remedial one. She blames the achievement gap for poor and minority students on the fact that they are assigned inexperienced teachers at a greater rate than more affluent students (Haycock, 1998). In Pennsylvania, teachers with emergency certificates (meaning that they are not highly qualified) serve low poverty schools at the rate of 0.68%. They are present in high poverty schools at a rate of 4.88%.

As a principal seeks to implement those changes in the school culture which would be most beneficial to improved student learning, he or she must work within the social conditions that impact the school and the student. “Policy makers, educational leaders, and community groups are beginning to realize that student achievement is a function of variables other than just per-pupil allocations of funds, and they are searching for variables that can predict and therefore impact the levels of achievement of students in public schools” (Okpala, 2002, p. 2).

This section traces the relationship between student achievement and socioeconomic status by examining what the research has to say on the topic. While it appears that there is an association between poverty and low school achievement, there are schools with high poverty concentrations that score well on high-stakes tests. What role, if any, does the school principal play in that success?

In the introduction to A Framework for Understanding Poverty, Dr. Ruby K. Payne writes that native intelligence of higher socioeconomic status children is no greater than that of youngsters from economically disadvantaged backgrounds. Furthermore, she notes that achievement levels of affluent minority students do not differ from that of

white students of similar socioeconomic status (2001). Why then does it appear that low socioeconomic status equates with low test scores? First, it is essential to define poverty and discuss its prevalence in America.

The federal government defines poverty by how much income a family needs to provide a minimum diet at current prices for each of its members. The formula is based on the assumption that one third of an average family's income purchases food. That number is multiplied by the number of family members. The resulting figure determines the poverty level of the family (Eisenhower National Clearinghouse, 2002). Poverty thresholds adjust each year based on the Consumer Price Index. For a family of five, the U.S. poverty line in the year 2003 was \$21,540. The number of people in poverty rose by 1.7 million from 2001 to 2002. Approximately 12 million children under 18 years old belong to these families—one out of every six American children. In fact, children represent the largest population group living in poverty (Dickson, 2003). From 1979 to 1998, the percentage of Pennsylvania children living in poverty rose by 49.4% compared to a 15.1% increase for the nation as a whole (National Center for Children in Poverty, 2003). Student poverty is frequently defined as the qualification for free or reduced lunch.

In 1964, Section 402 of the Civil Rights Act directed the federal government to ascertain the extent to which equal educational opportunity existed for all American children. A sociologist at Johns Hopkins University, James S. Coleman, led the effort to obtain this information by quantitatively and qualitatively studying 600,000 children at 4,000 schools. Surprisingly to those who expected to find a strong relationship between the quality of school and academic achievement, the study revealed that the quality of the

school does not matter much (Coleman et al., 1966). Rather, "...a child's family background and the school's socioeconomic makeup are the best predictors of academic success" (Hoff, 1999, p. 1). This blockbuster study subsequently came to be called The Coleman Report.

"The most shocking and important lesson of this report is that the indicators that we focus our educational policy debate upon—per pupil expenditures and student-to-teacher ratios—did not appear to matter much" (NYU Center for Advanced Social Science Research & The Jerome Levy Economics Institute of Bard College, 2001, p. 1). As that is a difficult concept to accept, it continues to be debated by educational researchers.

Gershoff (2003) studied low income's impact on the development of young children. Her longitudinal study of 21,255 nationally representative students of kindergarten age from 1998 to the present found a strong correlation between school readiness and the income of the family: "By the time they begin formal schooling, children in low-income families already lag significantly behind their more affluent peers academically, socially, and physically" (p. 2). Conversely, the wealthier the family, the better the children do along the same dimensions. In the matter of standardized test scores, the results proved consistent:

Children in families whose incomes fall below 200 percent of FPL [Federal Poverty Level] are well below average on their reading, math, and general knowledge test scores compared to the well-above-average scores of children living in families with incomes over 300 percent of FPL (\$55,250 for a family of four). Only 16 percent of the children in officially poor families

but 50 percent of the children from the most affluent families scored in the same upper range (p. 5).

Ruby Payne (2001) discussed years of work on the culture of poverty. The hidden rules of two diverging cultures, poverty and middle class, keep middle class educators from understanding what poor children and their families value, what motivates them, and what behaviors get reinforced at home. She wrote that “schools and businesses operate from middle-class norms and use the hidden rules of middle class” (p. 11). These norms can be incomprehensible to those on the outside. Families from generational poverty use language differently than middle class families and store information in a way that is not compatible with school success. According to Payne, they lack organization, study skills, and the resources and tools that are prerequisites for success in a typical public school.

In addition, economically disadvantaged children come to school in poorer health, drop out of school at a greater rate, and give birth at a younger age than their wealthier counterparts. They are likely to be from single parent families, to have adult responsibilities, and to be victims of abuse or violence (Payne, 2001).

Alaimo, Olson, and Frongillo’s 2001 study measured school performance in students who had inadequate food. Subjects ranged from six to 16 years old. After controlling for other variables, they found that children who received insufficient food had significantly lower math scores, repeated grades at a greater frequency than others their age, and had greater social difficulties in school. They also experienced more school suspensions and more social agency involvement. The researchers concluded that: “negative academic and psychosocial outcomes are associated with family-level food insufficiency” (p. 21).

Studies by Johnson (2000), and Alaimo, Olson & Frongillo (2001) support Payne's findings, adding malnutrition, low birth weights, poor health care, and accompanying psychological issues as significant factors to overcome if they are to reap the benefits of public education.

Utne (2001) surveyed 108 fifth grade students of high and low socioeconomic status in 14 schools in a Midwestern city to establish a relationship between student socioeconomic status, perceptions of the school environment, academic achievement, and school attendance. School poverty level was measured by the percentage of free and reduced lunch among the students. Student achievement was measured by Stanford Achievement Test scores. This quantitative study found that students in high socioeconomic schools were more satisfied about their school experience regardless of their individual poverty status. On the other hand, students in low socioeconomic status schools reported more friction in their schools. The results were the same regardless of the individual student's socioeconomic status. There was a statistically significant difference in achievement in both school poverty level and individual student poverty level. High socioeconomic students in wealthier schools scored higher on all measures of the achievement test, but there was no interaction effect between socioeconomic school type (high or low) and poverty level of the individual students. This study supports the Coleman Report findings that family and neighborhood affect student achievement more than class size, teaching innovations or anything else the school might do. It could not support effective schools research that schools could change the family effects on student achievement. "The degree to which schools are able to alter family dynamics is basically unclear, but the potential certainly seems rather limited" (McNeal, 2001, p. 51).

Verona's (2001) mixed method study on the effects of Transformational Leadership on student performance at the high school level also found a significant poverty effect on passing rates of the New Jersey High School Proficiency Tests. White (2000) studied 537 Louisiana elementary schools to examine the effects of school and class size, teacher certification, and socioeconomic status of the students on school performance on the Louisiana high-stakes test. She found a significant negative relationship between school performance and the socioeconomic status of the students. The latter studies also support Coleman's findings.

Feuerstein (2000) extensively studied the relationship between student achievement and parent involvement. He discussed Bourdieu's model that is based on cultural capital. This model supports Payne's premise that public schools are based on the rules of the middle and upper classes. Bias towards non-members discourages parents of low socioeconomic status from participation.

Lareau's 1987 findings (cited in Feuerstein, 2000) support this model. Lower income parents are less clear about school processes, have less contact with teachers, and have poorer communication skills than their wealthier counterparts. This significantly affects their involvement in the school and influences the achievement of their children.

McNeal (2001), however, quantitatively examined NELS data from 8<sup>th</sup> grade public school students to support his theory that achievement is cognitive and not affected by parent involvement, but that parental involvement does affect student behavior. He concluded that parental involvement does indeed affect both achievement and behavior, but only at the middle and high socioeconomic levels. He writes that the negative

experiences with education suffered by the poor over time have the strongest effects on student achievement and behavior.

McLeod (2000) quantitatively examined NELS data to determine whether lower achievement often associated with poverty was related more to a concentration of poverty in a school than to the individual's socioeconomic status. He controlled for race, gender, English proficiency, and size of classes and school, determining that the socioeconomic status of the school correlated significantly with low achievement over and above the individual's level of income. There was a strong negative association between the achievement of low SES students and the school's poverty level. As the school's level of poverty rises, the achievement of its economically disadvantaged students decreases creating a smaller achievement gap between all students. On the other hand, low socioeconomic status students' performance was significantly higher in higher SES schools. A study by Lippman, Burns & McArthur (1996) supported McLeod's findings. High poverty concentrations negatively affected student performance. This supports Coleman Report findings that family and neighborhood were key indicators of student performance. Johnson's (2000) study results were in agreement. Johnson concluded that the poor simply go to schools that have fewer resources to support their needs.

That debate is relevant to this study because Pennsylvania has a serious funding gap between its high poverty and low poverty districts: "...districts with the highest child poverty rates have \$1,248.48 fewer state and local dollars to spend per student compared with the lowest poverty districts. That translates into a total of \$31,313.00 for a typical classroom of 25 students" (Education Trust, Inc., 2002; p. 9). The situation appears to be getting worse: "In 1997 the gap between high and low poverty districts was \$1,059; by



2000 it had grown to \$1,248” (The Education Trust, 2002, p. 4). At the same time, upon disaggregating student performance statewide on the 2001 PSSA, it became clear that the achievement gap between students of disparate socioeconomic status is alarming. Only 27.1% of the economically disadvantaged subgroup achieved proficiency while 58.3% of the non-disadvantaged group achieved proficiency—an achievement gap of 31.2%. This gap is similar among other tests such as Scholastic Aptitude Test and Advanced Placement examinations (Standard & Poor’s, 2003). Of the 50 states, Pennsylvania ranks 43<sup>rd</sup> in funding of its schools (Education Trust, 2002). According to Frank Marburger from Pennsylvania Department of Education, Pennsylvania also has one of the largest achievement gaps between socioeconomic groups, and the gap has not improved in more than 12 years (2004).

Alleksaht & Hart (2001) reported that school resources are critical in schools serving poverty children because resources affect class size, professional development, technology, curriculum, and recruitment and retention of high quality teachers. A major report from the Education Trust estimated that it takes approximately 40% more money to equalize educational opportunities for students from low socioeconomic backgrounds (in Chute, 2003).

Greenwald, Hedges, and Laine (1994) studied the relationship between per pupil expenditure and student achievement, after controlling for student socioeconomic status, and found a positive relationship. Schools that spent more money per pupil generally reported higher student achievement. The same researchers (1996) cited a meta-analysis demonstrating that student achievement is related to the availability of resources.

While it cannot be denied that aggregate scores on state testing reflect unfavorably on schools with a high percentage of poverty as determined by free and reduced lunch populations, there are high poverty schools that perform well. Susan Trimble (2002) reports practices and results among such schools at the middle level. This is significant because student achievement frequently declines in the middle school (Linn, Lewis, Tsuchids, & Songer cited in Trimble, 2002). Five case studies over a three-year period examined the phenomenon of low socioeconomic status and high performance. The purpose of these studies was to identify strategies that made a difference. The researchers examined policies, practices, and procedures of five high poverty middle schools whose scores exceeded those of like schools. Commonalities in these schools included: (1) the ability of multiple individuals to successfully win grants to provide the ‘extras’ such as good staff development, help for non-achieving students, and chunks of time to implement programs; (2) A focus on teamwork and collaboration thereby utilizing the talents of individuals at all levels; and (3) Using data to develop goals aimed at improving student achievement, developing specific strategies to meet the goals, and focusing on their implementation. All of the schools had principals who were effective and visible. These principals united the group around the collaboratively developed goals supported by the grants. Principals reallocated money whenever possible to support learning opportunities for the students. Other common factors included shared decision making among teachers and principals and higher expectations for students (Trimble, 2002). These are characteristics that are present in Transformational principals.

The Education Trust published a nationwide analysis of high poverty schools that achieve at a very high level. Using a massive new database developed by American

Institutes for Research, they identified 4,577 schools with 50% or more low income students who ranked in the top third of their grade in reading and/or math (Jerald, 2001). A survey of principals of the successful schools identified shared behaviors: a focus on state standards for curriculum, instruction, assessment, and teacher evaluation; increased instructional time for math and reading; a focus on high-quality staff development to improve performance of students; systems to monitor individual students and remediate before the student falls behind; involvement of parents; accountability at the state level with accompanying consequences for school personnel; assessments imbedded in instruction (Education Trust, 2001).

It should be noted that the vast majority of these were elementary schools. Upon further research it was determined that, in Pennsylvania, only nine high schools with high poverty student populations met the achievement criteria in that report (Education Trust, Inc., 2001). With that in mind, leadership behaviors of secondary principals in Pennsylvania with high poverty student populations who show improvement in student performance warrant close examination.

As noted earlier, results on high-stakes tests are not the only measure that determines whether or not a school achieves adequate yearly progress. The No Child Left Behind Act of 2002 directs states to include four-year graduation rate and one other factor and to ensure that 95% of the students in the school and in each subgroup participate in the tests. Pennsylvania chose improved attendance for schools that do not have graduating classes as the second factor. The population for this study included principals in both middle and high schools. Even though attendance is not a factor for AYP at the high school level, it still affects the 95% participation rate that the law requires as well as academic

achievement. Therefore, the discussion will include attendance for high schools along with graduation rate. The next sections will address attendance and graduation rate.

### Student Attendance and Student Achievement

By definition, attendance rate is the proportion of students reporting to school over the school year. This is calculated as the school district's average daily attendance divided by its average daily membership. The resultant figure is found in the School Profiles on the Pennsylvania Department of Education website, <http://www.pde.state.pa.us>. The Pennsylvania Report Card released to the website on January 27, 2004 indicated a baseline attendance rate for all students in grades K through 8 of 94.7%. The attendance rate for Economically Disadvantaged students was 93%. Schools and districts are mandated to show annual growth from their individual baselines towards 90% but only at the whole school level. Common wisdom dictates that there is a connection between attendance and student achievement. If students spend more time in school, they will learn more. This section will look at research to examine that idea.

Borland and Howsen (1998) developed a model to examine student performance similar to one used by D. Lambdin in an earlier study. Lambdin's study had determined that student attendance had a positive and significant effect on student performance (cited in Borland & Howsen, 1998). Borland and Howsen disagreed with Lambdin's results and claimed that his model was faulty. When they included student innate ability and competition into their own model to measure the effect of attendance on student performance, they had quite different results. With the presence of these two variables, attendance had an insignificant effect on student achievement. Moos (1979) found that a highly competitive atmosphere was related to high absenteeism.

In a literature review for their study of gender, ethnicity, socioeconomic status, and basic skills performance on grade failure, course failure, Texas Assessment of Academic Skills (TASS) test scores, and attendance of middle school students assigned to behavioral classrooms, Dixon-Floyd & Johnson (1997) examined attendance issues from previous studies. They found that poor attendance in elementary school was a predictor for problems in middle and high school (Carruthers, in Dixon-Floyd & Johnson). Vornberg and Ramsey's study found that poor attendance was the major predictor for dropping out of school (cited in Dixon-Floyd & Johnson). In their own study, Dixon-Floyd & Johnson examined data over a two-year period from two El Paso school districts each of which had two middle schools with behavioral classrooms containing at-risk students. The eight variables analyzed were gender, ethnicity, socioeconomic status, basic skill performance, grade failure, course failure, TAAS test scores, and attendance. Participants were 85 middle school students assigned to those behavioral classrooms during the 1992-93 and the 1993-94 school years. Results indicated significant relationships among low socioeconomic status, course failure, TAAS performance, and attendance. Low basic skills performance had a significant relationship with course failure, TAAS performance, and attendance.

The work of many other researchers resulted in positive and significant relationships between school attendance and school grades or achievement on standardized tests. Among them were Ziegler (1928), Finch and Nemzek (1940), Levine (1984), Ford & Sutphen (1996), Utne (1989), and Caldas (1993). More important to this study was the principal's affect on attendance and achievement, particularly in schools with high percentages of free and reduced lunch students. Data from the National Center for

Education Statistics indicated that on average, approximately six per cent of students are absent from school on any given day. However, according to data from the National Center for Education Statistics (1996), that percentage increases relative to the presence of free and reduced lunch students in a school.

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Table 1

*Average Percentages of Students Absent on a Typical School Day: School Year 1993-94*

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Eligibility for Free and Reduced Lunch	Percent Absent
0-5%	4.4%
6-20%	4.6%
21-40%	4.7%
41-100%	5.8%

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If it is accurate as shown in the previous section that students who qualify for free and reduced lunch are less likely to achieve adequate yearly progress than their more affluent peers, and that the same group of students is more likely to be absent from school as indicated above, then it is incumbent upon principals to find ways to reduce absences as an important step in school improvement planning.

Ziegler's 1928 study found that students were more likely to attend school when the homeroom teacher exhibited a caring and concerned attitude (in Utne, 2001). Barth discussed reasons for nonattendance including learning difficulties, monetary costs for school clothing, supplies and social functions, child-care issues, and peer influence

(1984). Another report ranked the most common reasons for absenteeism: Illness; dislike of or boredom with school; social adjustment problems; family or personal business; influence of friends; academic problems; perceptions that school authorities and others lack concern and/or authority for enforcing attendance laws; lack of parent concern or control; factors such as learning difficulties, gang and peer pressure; and classroom environment (Linn-Benton Education Service District, 1992). That report concluded: “Absenteeism has a direct, negative effect on student achievement, promotion, graduation, self-esteem, and employment potential. Poor grades and being retained are two likely consequences of nonattendance, and both can be used to predict dropout potential” (p. 5). Many of the general traits of truants listed in the Linn-Benton report are similar to traits of children from generational poverty. They include having parents with little education; living in a family where education is not a priority; experiencing a history of family problems; living in a family with severely limited finances; having parent or parents who are overly dependent on children; getting little nurturing at home; having siblings who have dropped out; having poor eating habits; suffering from abuse or neglect; being pregnant or having a child; being a recent immigrant; and being the oldest child in a very poor family (p. 8).

Students who are disengaged from school and do not perceive any personal reward for attendance will stay home. Poor attendance leads to gaps in both academic and social skills that eventually make school an even more negative experience. In several studies discussed earlier, a positive school climate featuring caring, concerned adults appeared to increase student attendance. School climate is certainly an area that can be influenced by a Transformational principal as reported in many Leithwood studies.

Palmour's dissertation (2000) examined the behavior orientation of 18 principals relative to student achievement and attendance. Results indicated a strong correlation between the principal's behaviors and student achievement. Furthermore, the principal's leadership orientation was effective in manipulating variables that were in his control and related to student achievement, specifically attendance.

The next section illustrates that poor attendance in the early school years is a strong predictor for failure to graduate from high school in later years. Specifically, in a study by Robbins and Ratcliff (1980), elementary school truancy strongly predicted high school truancy. Further, of truants who began the practice in elementary school and continued it through high school, 75% did not graduate. By grade three, attendance patterns have often been established. It is, therefore, important that schools address school attendance from the earliest years as a first step to drop out prevention.

#### Graduation Rate/Dropout Percentage Improvement

Graduation rate is defined as the percentage of students who graduate from high school each year with a regular high school diploma. To reach the state and federal goal that "All students will graduate from high school," the number of Pennsylvania students who drop out of school prior to graduation must decrease annually by 1,653 through the year 2012. Baseline data was taken in 2001-02. As a state, Pennsylvania achieved a graduation rate of 86.4% for All Students and 74.9% for Economically Disadvantaged Students (Pennsylvania Department of Education website, <http://www.pde.state.pa.us>).

Each high school and district is charged with showing annual improvement towards a goal of 80% as part of achieving adequate yearly progress. In today's workplace, finding gainful employment in almost any industry depends upon the individual having



finished high school. “Because the high school diploma serves as a social sorting mechanism, students who fail to earn one are effectively condemned to the lower tiers of the economy” (Lashway, 2001, p. 134).

The No Child Left Behind legislation charges only high schools with graduating classes with improving graduation rate as a condition of achieving AYP. However, Massachusetts Department of Education reported nine years of statistics on Boston’s middle school dropouts with accompanying demographic information. From a decline in the middle of the decade, the numbers rose steadily and quadrupled from 1996 to 2001. In the report, African Americans made up a disproportionate share of Boston’s middle school dropouts at 57.2%. The actual number also quadrupled over the last four years. Latino dropouts doubled during that period. Together, African-Americans and Latinos comprised 86.8% of all Boston middle school dropouts. An important idea of this report is the fact that students who drop out in middle school are not included in official statistics on dropout rates. This results in inaccurate reports of the total problem (CAREMass, 2002).

Since the end of World War II, overall dropout statistics dramatically improved (Kantor, 2000). In 1980, for example, 69% of Americans over 24 years old possessed high school diplomas. By 1994, that percentage had grown to 81% (Rodgers, 1997). Based on this considerable improvement, should dropping out really be considered a matter of public concern? What are the ramifications for an individual and for society when a student leaves school without a diploma?

Dorn (in Kantor, 2000) examined the problem of dropping out from a historical perspective. He pointed out that until the middle of the last century the issue was rarely

considered at all. While people recognized that youngsters who graduated did better in life, they appeared to believe that lack of a diploma affected only the dropout. Not until the 1960s, when school attendance and graduation became the norm for young people, did school dropouts become an issue of public concern. Interestingly, this concern increased at the same time that the actual graduation rate markedly increased. The percentage of students graduating from high school continues to rise.

The public became convinced that a connection existed between youth who failed to graduate and delinquency, unemployment, and crime. They feared a "...form of disaffiliation that threatened society itself and thus merited public attention" (Kantor, p. 2). Dropping out clearly became an issue of public concern. Reflecting that concern, Congress passed the Hawkins-Stafford Elementary and Secondary School Improvement Amendments of 1988, Public Law 100-297, requiring annual national reporting of dropout data to Congress (National Center for Education Statistics, 1993).

The National Center for Education Statistics used NELS: 88 data to track two groups of sophomores ten years apart to examine dropout patterns. Data from the sophomore classes scheduled to graduate in 1982 and in 1992 revealed a 43% reduction in dropout rate decreased from 35% in 1982 to 20% in 1992.

The Pennsylvania Department of Education ([www.state.pa.us/k12.statistics](http://www.state.pa.us/k12.statistics)) provides the following information:

- Since the passage of Act 49 of 1987, the annual dropout rate has ranged from a high of 3.4% in 1988-89 to a low of 2.2% in 2001-02.
- For the second consecutive year, the dropout rate decreased by 0.2 percentage point to 2.2% while secondary enrollments continued to increase.

- The annual dropout rates and their one year changes by racial/ethnic category were:

2.1% (-1.5)	-	American Indian/Alaskan Natives
2.0% (unchanged)	-	Asian/Pacific Islanders
4.5% (-0.1%)	-	Blacks
5.6% (unchanged)	-	Hispanics
1.6% (-0.2)	-	Whites.

- Of the 570 local education agencies (LEAs) surveyed, about 37% had an annual dropout rate that was less than 1.0%.
- Only 99 of the 570 LEAs had a dropout rate equal to, or higher than, the state average of 2.2%
- On a county basis, dropout rates ranged from a low of 0.7% in Cameron and Pike Counties to a high of 6.1% in Philadelphia County

The U. S. Department of Labor published figures based on the value of the dollar in 1996 on both unemployment rate and average annual earnings for individuals with varied levels of education beginning with one to three years of high school (9.3% unemployment; average annual earnings of approximately \$20,000) to doctorate degree (1.5% unemployment; average annual earnings of approximately \$90,000). According to this report, high school dropouts are 72% more likely to be unemployed and earn 27% less than high school graduates (U. S. Department of Labor, 2003).

“Every time a student leaves school without completing a high school education, the nation runs the risk of adding another unskilled worker to the rolls of the American workforce” (National Center for Education Statistics, 1993, p. 1). In 1997, it was

reported that 1,868 dropouts occurred every school day in the United States (Rodgers, 1997). The research previously mentioned established the social nature of the dropout problem. Rodgers underscores the potential cost to society. She points out that available jobs in the year 2000 reflect an unprecedented need for training and education as detailed below.

Training and Education Requirements for Available Jobs in the Year 2000 (Rodgers)	Percent of All Available Jobs
College degree	25%
Post HS/Technical Training	65%
High School Diploma	10%

*Figure 7.* Training and education requirements for available jobs in the year 2000.

The research on dropping out of school is clear that a great deal of attention has been paid to causes and results, but little attention has been paid to plausible solutions. Audas & Willms (2001) performed an extensive review of the literature in an attempt to structure a meaningful longitudinal study on the phenomenon. Not surprisingly, this review consistently showed a strong negative correlation between high school dropouts and socioeconomic status. These authors reported that most of the studies stopped there without further examining processes that led up to the action. Due to this lack, the base is not appropriate to inform policy revisions or intervention design. They hypothesized that dropping out is a lifelong process that actually begins at birth. The researchers identified six broad life-course factors that help or impede a child's chances for school success. They are: individual effects, family effects, engagement, peers, schools and communities.

A longitudinal study by Alexander, Entwisle & Kabbani (2001) supported the life-course idea. Using data from a representative group of Baltimore students (N=790) who were monitored from the beginning of first grade through completion of high school, the researchers found that “high school dropout culminates a long-term process of disengagement from school...what happens in high school often is rooted in formative experiences that predate high school” (p. 1). Results of this study and the Audas and Willms work revealed that:

- (1) Dropping out is a complex social issue that is the result of the interaction of a variety of lifelong factors;
- (2) Any legitimate study of the dropout problem must be a longitudinal one;
- (3) The likelihood of dropping out increases as the number of risk factors increase;
- (4) The school has no control over many of the identified risk factors including social background and socioeconomic status, family stress levels, single parent households, parental supports, peers, and family expectations.

While that may be true, there are conditions that the school does control. The evidence indicated that one of the most crucial indicators for predicting school success is student engagement in school. Engagement is defined as “the extent to which young people identify with their school and derive a sense of well-being from their academic work” (Audas & Willms, 2001, p. iii). Leithwood and colleagues isolated student engagement as a strong predictor in students who achieve (Leithwood & Jantzi, 1998, 1999a, 1999b, 1999c, 2000).

McNeal (2001) reminded us that parent involvement in the form of PTA membership, discussions with children, and monitoring of school work can be beneficial

in reducing truancy and drop outs. This information should prompt schools to pay attention to the requirements of NCLB regarding parent involvement in policies and procedures. The results from McNeal's study is that positive benefits of social capital in the form of parent involvement are only significant in higher socioeconomic families. Parent involvement appears to disappear as a positive factor on attendance and school dropping out when socioeconomic status is one standard deviation below the mean. "The degree to which schools are able to alter family dynamics is basically unclear, but the potential certainly seems rather limited" (McNeal, 2001, p. 51).

A factor that the leader can address is grade failure. Grade retention strongly contributes to the drop-out risk: "...repeating 1<sup>st</sup> grade, grade repetition in the later elementary years, and retention in middle school all elevate dropout risk" (Alexander, Entwisle & Kabbani, 2001, p. 2).

The Massachusetts study mentioned earlier supported this finding. In that state, students must be 16 years old to leave school. During the 2000-01 school year, sixth graders who were 16 years old comprised the largest group of middle school dropouts. In 1999-00, seventh graders who were 16 years old led that group. This begs the question: Should students attain the age of 16 in middle school? The paper calls for policies and practices at the middle level that address the question of school retention; that eliminate school policies that promote student disengagement especially in minority groups; and that target overage students for intensive assistance to improve attendance, academics, and social skills (CAREMass, 2002).

Many dropout prevention programs have been developed to address these concerns but most detailed in the literature appeared to be more or less ineffective. Like many

urban school districts, New York City schools were riddled by dropouts. The New York City Board of Education developed multiple programs to cut the rate of students who leave school without diplomas (Gerics & Westheimer, 1998). Early identification, attendance outreach services, counseling and health care, and alternative programs were made available beginning at the intermediate and junior high school level. While it appeared on paper to be a comprehensive attack on the drop-out problem, issues of bureaucracy eventually rendered it ineffective. The Board failed to recognize that circumstances of individual school populations might differ. In order to receive funding to put the program in place, the individual school had to agree to implement all facets of the packaged program even if that particular school's issues were not consistent with the model. The model was further complicated by a lack of attention to individual reasons for dropping out. "Quite different would be an approach that questioned the social organization of schooling as the source of the problem instead of presuming deficiencies endemic to at-risk populations who must be targeted for special motivational activities to help them conform to the demands of school" (Gerics & Westheimer, 1998, p. 44).

Unfortunately, most of the dropout-prevention services found in the literature reflect some of the same problems evident in the New York model. While many schools offer interventions to at-risk students aimed at 'fixing' their problems, these problems are often "symptoms of a deep seated social problem reflected in the school behavior of students targeted as at risk of dropping out" (Gerics & Westheimer, 1998, p. 42).

Dorn (1996) wrote that drop-out prevention programs fail to address the real issues of policies and practices that push students out of the schools including suspensions, expulsions, grade retentions, placements in special education programs, and removal of

pregnant girls from the schools. These are issues that a relationship-oriented principal might directly address. On the other hand, Kantor (2000) critiques Dorn's statements and adds that, in spite of his own evidence, Dorn fails to address the issue that a disconnect exists between national and local policies on this subject. Perhaps that is why No Child Left Behind made drop-out prevention a national priority and developed consequences for failing to address the problem.

Can a Transformational Leader effectively address the dropout problem, at least from the standpoint of issues under the control of the school? Leithwood and Jantzi's (1999) study in 110 elementary and secondary Canadian schools revealed that both Transformational and Transactional forms of leadership resulted in small amounts of student engagement—a characteristic previously noted as absent in students who are at risk of dropping out of school. Both teacher and principal leadership effects were modest, indirect, and were responsible for variation in student engagement.

A second large study by the same researchers substituted family educational culture for socioeconomic status. The results indicated that Transformational Leadership showed weak but significant effect on the affective and behavioral dimensions of student engagement. Two additional studies gave similar results to the latter study. In all cases, leadership was substantially moderated by family educational culture and other school conditions (Leithwood & Jantzi, 1999, p. 468). This reinforces the fact that dropping out of school is symptomatic of larger societal issues. While the school can mediate social effects to some degree, a Transformational Leader can, perhaps, energize the whole community to attack the problem.



## Summary

This literature review recounted the evolution of contemporary leadership ideas from the beginning of the twentieth century to the present time. It suggested a symbiosis between appropriate leadership and the political, economic, and social culture of a given era. Additional literature supported the conclusion that the best leadership model fits the context in which it operates and that the current context in schools is accountability-driven change.

An emphasis on high-stakes tests supported by consequences up to and including closing or otherwise restructuring the school makes the stakes for public education leaders very high indeed. Pennsylvania's Chapter Four regulations dictate standards-based accountability and spell out the consequences to the districts and the schools for failing to measure up to stringent standards.

On the national level, bi-partisan enactment of the No Child Left Behind Act of 2002 nationalized the stakes and mandated still more testing. By 2014, every student must be proficient in reading and math without regard to socioeconomic status, special needs status, or the student's ability to understand and speak the English language. The law requires annual measurable objectives, or adequate yearly progress (AYP), towards the 2014 goal. AYP also includes annual improvement in attendance and in graduation rate. The importance of appropriate leadership to move a school towards successful improvement cannot be overstated.

The literature indicates that the appropriate change agent to meet the challenges of the twenty-first century is the school principal. At the same time, many principals are ready to retire, and there is a shortage of candidates willing to take the job.

Instructional Leadership, a hierarchical model of control, was the preferred model for the principalship in the recent past. The principal was the expert who introduced changes and saw them through. In the current climate, the principal's job is different than before. He or she must be capable of changing the school's culture, building and sustaining the building's capacity to improve while, at the same time, performing well. While Instructional Leadership was an important evolutionary step, secondary schools today are too large and complex for such directive leadership. Leadership must, then, be taken to the next level.

The theoretical framework of this study was the Leithwood model of Transformational Leadership. Much of the literature points to this type of leadership as the most effective in both business and education in the context of large-scale change.

The concept of Transformational Leadership began with Burns, and continues with the heavily researched model of Bass & Avolio. The Leithwood model incorporates the Bass & Avolio dimensions of Idealized Influence, Inspirational Motivation, Intellectual Stimulation, Individualized Consideration, and Contingent Reward with specific behaviors developed by organizational researchers, Podsakoff, MacKenzie and Bommer. Both large and small scale studies contributed to the validity of the model.

The Leithwood model was examined relative to student achievement in the context of the No Child Left Behind Act of 2002. Large scale studies found a weak but statistically significant relationships between Transformational principals and student engagement, a quality that is highly correlated with student achievement on standardized tests. Leithwood and colleagues contended that there is no evidence directly linking principal leadership to student achievement because of the multitudinous effect of

intervening variables. The additional factors of adequate yearly progress namely, attendance and graduation rate were studied as well with a focus on the type of principal leadership needed to steadily improve the outcome.

The quantitative portion of this study examined the relationship between Pennsylvania secondary school principals who, from their own points of view, operationalized the Transformational Leadership model of Leithwood, Jantzi and Steinbach (1992, 1994, and 1999) and the success of their respective schools in reaching adequate yearly progress as mandated by the No Child Left Behind Act. Adequate yearly progress includes attainment of specified annual targets of proficiency in reading and math on the Pennsylvania System of School Assessment (PSSA), as set forth in Figures three, four, and five, and improvement in four-year graduation rate for schools with a graduating class, and in student attendance for schools without a graduating class.

The qualitative portion consisted of interviews with principals who are Transformational Leaders according to their responses on the survey. The purpose of the interview was to look for and describe a pattern of behaviors that had been aligned with Transformational Leadership by Podsakoff et al. (1990) and by Leithwood (1994; 2001), Leithwood and Jantzi (1999a; 1999c), and Leithwood, Jantzi and Steinbach (1999).

This study was not based on proving cause and effect. Rather, it was intended to seek a pattern of Transformational behaviors in secondary school principals of high poverty schools who achieved improvement in some aspect of the adequate yearly progress. The study was important for three reasons. First, it provided information to principal preparation institutions about the kind of leadership needed for twenty-first century schools. Second, it assisted districts seeking to replace secondary principals in the

hiring process and in the continuing education of current principals. Third, it placed a new emphasis on appropriate leadership for schools classified as high poverty schools. If it is true that “a school’s effectiveness should be determined by the performance of its most vulnerable students” (Forlenza, 2002, p. 11), then schools must be aligned with the most effective leadership possible to achieve that purpose.

## CHAPTER III

### METHODOLOGY

#### Introduction

The No Child Left Behind Act of 2002 (NCLB), a reauthorization and reform of the Elementary and Secondary Education Act of 1965, redefines the role of the federal government in education. The four guiding principles, as defined by the U. S. Department of Education, are: “accountability, flexibility in use of funding, research-based reforms, and parental options” (Gingerich, 2003, p.1). Its ambitious goal mandates that by the year 2014, all students will be proficient in math and reading as measured by rigorous state assessments. Each state will develop its own definition of proficiency and its own definition of adequate yearly progress towards achieving that goal. Adequate yearly progress (AYP) consists of measurable benchmarks leading towards full academic proficiency in reading and math, plus two other measures of school improvement one of which must be four-year graduation rate at the high school level. (U. S. Department of Education, 2003). Pennsylvania assesses student proficiency in reading and math by its criterion-referenced Pennsylvania System of School Assessments (PSSA). It chose attendance at the elementary and middle school level as the remaining component (Pennsylvania Department of Education, 2002). The attendance goal in Pennsylvania is to reach a target of 90% or any improvement towards that goal for schools without a high school graduating class. High schools must achieve a target four-year graduation rate of 80% or show any improvement from the prior year towards that target (<http://www.paayp.com>).

Compliance with NCLB at the school level requires restructuring to achieve the kind of capacity needed to meet the increasing annual goals, particularly in complex secondary schools. The literature strongly suggests that the school principal is the key to successful restructuring (Brookover & Lezotte, 1979; Edmonds, 1979; Teddlie & Stringfield, 1993; cited in Osterman & Crow, 1997; Hallinger & Heck, 1996; Leithwood, 1994; Leithwood, Jantzi & Steinbach, 1999). Research from the private sector indicates similarities of leadership style in those who successfully restructured businesses and other institutions (Senge, 1994; Senge, et al., 1999; Fullan, 1999, 2001; Darling-Hammond, 1996; Bass & Avolio, 1985, 1997; Lowe, Kroeck & Sivasubramaniam, 1996; Koh, 1990; Silins, 1992; Philbin, 1997 cited in Bass & Avolio, 1995; Bennis & Nanus cited in Northouse, 1997; Tichy & DeVanna cited in Northouse, 1997; and Yukl & Howell, 1999). Leithwood, Jantzi & Steinbach (1999) applied this research to education to develop and refine a model of Transformational Leadership for secondary principals that could be an effective leadership model in the context of restructuring secondary schools.

The purpose of this study, therefore, was to collect and analyze data to examine the effectiveness of that leadership model in Pennsylvania schools in the context of the No Child Left Behind legislation. The study examined the relationship between the Leithwood model of Transformational Leadership in Pennsylvania secondary school principals and student achievement of adequate yearly progress on the Pennsylvania System of State Assessments (PSSA) in math and reading. It also examined the relationship between Transformational principals based on the Leithwood model, student attendance at the middle or junior high school level, and graduation percentages, the

additional components of AYP according to its Comprehensive Application located on the Pennsylvania Department of Education's website <http://www.pde.state.pa.us>.

Further, since the No Child Left Behind legislation is a reauthorization of the Elementary and Secondary Education Act of 1965—an act whose stated purpose was closing the achievement gap between groups of students from low and high socioeconomic backgrounds—this study focused on schools with high populations of economically disadvantaged students that have improved their overall performance in any component of adequate yearly progress.

### Research Questions

The Multifactor Leadership Questionnaire, Form 5x-Short (Bass & Avoili, 1995) was mailed to principals of Pennsylvania secondary schools to establish their perceptions of their own professional practice as leaders. It measured the extent to which they perceive themselves to embody and exhibit 12 dimensions of leadership. The purpose was to establish relevance between leadership style and achievement of each of the components of AYP in schools that have shown any improvement over the most recent two-year period for which data is available. To determine that relevance, it addressed the following questions:

Question 1: Is there a relationship between the Leithwood Model of Transformational Leadership in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments?

Subquestion 1a: Is there a relationship between Setting Direction in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments?

Subquestion 1b: Is there a relationship between Developing People in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments?

Subquestion 1c: Is there a relationship between Redesigning the Organization in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments?

Question 2: Is there a relationship between the Leithwood Model of Transformational Leadership in principals of low socioeconomic middle or junior high schools and improvement in attendance?

Subquestion 2a: Is there a relationship between Setting Direction in principals of low socioeconomic middle or junior high schools and improvement in attendance?

Subquestion 2b: Is there a relationship between Developing People in principals of low socioeconomic middle or junior high schools and improvement in attendance?

Subquestion 2c: Is there a relationship between Redesigning the Organization in principals of low socioeconomic middle or junior high schools and improvement in attendance?

Question 3: Is there a relationship between the Leithwood Model of Transformational Leadership in the principals of low socioeconomic high schools and improvement in four-year graduation rate?

Subquestion 3a: Is there a relationship between Setting Direction in principals of low socioeconomic high schools and improvement in four-year graduation rate?

Subquestion 3b: Is there a relationship between Developing People in principals of low socioeconomic high schools and improvement in four-year graduation rate?



Subquestion 3c: Is there a relationship between Redesigning the Organization in principals of low socioeconomic high schools and improvement in four-year graduation rate?

As described earlier, Transformational Leadership characteristics and behaviors have been grouped into three main categories:

- Setting Direction that includes building school vision, establishing school goals, and demonstrating high performance expectations;
- Developing People that includes intellectual stimulation, individualized support, and modeling best practices and organizational values; and
- Redesigning the Organization that includes creating a productive school culture, and developing structures to foster participation in school decisions.

Subsequent to the completion of the survey, a random selection of six survey respondents was interviewed to answer the following overarching question:

Question 4: Are the behaviors associated with the Leithwood Model of Transformational Leadership common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress? The behaviors are fully described in Appendix B.

Subquestion 4a: Are the behaviors associated with Setting Direction common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress?

Subquestion 4b: Are the behaviors associated with Developing People common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress?

Subquestion 4c: Are the behaviors associated with Redesigning the Organization common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress?

#### Research Design

The population for this study was all Pennsylvania secondary school principals whose schools are located in a district that qualifies for Title I funding and have more than 30% low-income enrollments. This information is located on the federal web site and was accessed on the Pennsylvania Department of Education webpage under the section “Statistical Reports” (<http://www.pde.state.pa.us>). The quantitative portion examined the relationship between the principals from that group who, from their own points of view, operationalize the Transformational Leadership model of Leithwood, Jantzi & Steinbach (1992, 1994, and 1999) and student improvement towards achievement of adequate yearly progress as mandated by the No Child Left Behind Act of 2002. As stated above, adequate yearly progress in Pennsylvania includes attainment of specified annual targets of proficiency in reading and math on the Pennsylvania System of School Assessment (PSSA) for the school as a whole and for designated subgroups, and improvement in student attendance rate at the middle or junior high school level and in four-year graduation rate at the high school level.

The qualitative portion consisted of interviews with a random selection of principals who agreed on the survey document to participate in an interview to examine and describe behaviors previously aligned with Transformational Leadership as described by Podsakoff, et al. (1990) and by Leithwood (1994; 2001) and Leithwood & Jantzi (1999a; 1999c); and Leithwood, Jantzi & Steinbach (1999).

In her doctoral dissertation Verona (2001) examined Transformational Leadership in New Jersey comprehensive and technical high schools. She developed a set of interview questions within the framework of the Leithwood Model. Those questions were modified for use in this Pennsylvania study to augment the data obtained from the survey. A copy of the questions can be found in Appendix D.

### *Instrument*

Transformational Leadership was measured by the Multifactor Leadership Questionnaire, Form 5x-Short (Bass & Avolio, 1995), which was mailed to a selected population of secondary school principals. The principals rated themselves on nine dimensions of leadership and three outcomes. Results were measured based on the Leithwood model for Transformational Leadership in schools.

“Coorough and Nelson (1991), in a content analysis of 1,007 Ph.D. and 960 Ed.D dissertations, concluded that the Ed.D. dissertation includes more survey research and a substantial portion of this research (42 percent) is done on the local level (institution, state, or region)” (Watson, cited in Jalongo, Gerlach & Yan, Eds., p. 149).

While a survey is not useful in measuring actual behavior, it is a useful tool to determine perceptions of behavior (Sherblom, Sullivan & Sherblom, cited in Jalongo, Gerlach & Yan, Eds., 2002). It provides information from a sample population that allows the researcher to make inferences about the population. A well-designed survey provides timely data from a large number of participants in a relatively inexpensive and efficient manner. When the survey is administered by mail, anonymity and confidentiality are protected (Cresswell, 1994).

The self-rater form of the Multifactor Leadership Questionnaire (MLQ), Form 5x-Short (Bass & Avolio, 1995) measured the extent to which principals perceive themselves to embody and exhibit twelve factors of leadership. Selected response items were included to ascertain what grade levels are included in the school, the size of the school and the principal's years of service in this building. A copy of the instrument is included in Appendix A. Other selected response items asked the responder to circle which areas have shown improvement as follows:

- whole school math, reading, participation rate, attendance and graduation rate;
- subgroup math, reading, and participation rate.

The MLQ was used in this study because it precisely measures both perceived behaviors and attributes in a full range of leadership factors associated with Transformational Leadership. It measures both inspiration and intrinsic motivation, higher order levels of Transformational Leadership that are almost a prerequisite to motivating and facilitating sustainable change: "...the old paradigms of task-oriented or relations-oriented leadership, directive or participative leadership, and autocratic or democratic leadership and related exchange theories ignored effects on leader-follower relations of the sharing of vision, symbolism, imaging, and sacrifice" (Bass, 1995, p. 133). In addition, the MLQ has been studied extensively and applied to the school context in the formation of the theoretical framework of this study (Leithwood, 1994, Leithwood, Jantzi & Steinbach, 1999).

The leadership style described by Leithwood (1994), Senge (1994; 1999), Fullan (2001) and others as being most compatible with sustained, systemic change in secondary schools is Transformational Leadership. The Multifactor Leadership Questionnaire

(MLQ), Form 5X-Short (Bass & Avolio, 1995) examines a full range of characteristics encompassing Transformational, Transactional, laissez-faire, and non-leadership.

The Leader Form contains 45 questions that describe the leadership style of the respondent from his or her own perspective. A Likert scale measures how frequently the leader engages in a given behavior with a range described below:

0 – Not At All

1 – Once In Awhile

2 – Sometimes

3 – Fairly Often

4 – Frequently, If Not Always

On the scoring key for the MLQ (Bass & Avolio, 1995, 2000 and 2004), responses are averaged by frequency. Four items correspond to each of the nine leadership style scales: Idealized Influence (attributes); Idealized Influence (behavior); Inspirational Motivation; Intellectual Stimulation; Individual Consideration; Contingent Reward; Management-by-Exception (active); Management-by-Exception (passive); and Laissez-faire Leadership . Three outcomes are assessed as follows: Extra Effort – 3 items; Effectiveness – 4 items; Satisfaction – 2 items.

The original survey developed in 1985 by Bass measured six leadership factors and three outcomes, but leadership is more complex than the authors initially envisioned. Continuous testing and research led to revisions and refinements by increasing the factors to nine and retaining the three outcomes. This modification increased the precision with which a full range of leadership could be measured in a continuum ranging from higher-

order Transformational at one end of the spectrum and complete avoidance at the other (Bass & Avolio, 1995). The current version has been validated and cross validated with a broader range of models.

A confirmatory factor analysis on items from the older version provided the basis for item selection for the current survey. Only those items that exhibited the best convergent and discriminant validities were chosen. Next, new items were developed from recent literature on Transformational Leadership. Experts in the leadership field examined the items and made recommendations that were incorporated into the instrument (Bass & Avolio, 1995).

When testing each item to ascertain internal consistency, there were high intercorrelations. Nine samples with 2,154 respondents found high, positive correlations among the five Transformational dimensions for an average of .83. In addition, Contingent Reward (a Transactional component) also correlated significantly (.71) with each of the Transformational factors. Bass and Avolio explain this correlation:

First, both Transactional and Transformational Leadership represents active, positive forms of leadership. Second, leaders have been shown in repeated investigations to be both transactional and transformational. Third, as Shamir (1995) argues, the consistent honoring of transactional agreements builds trust, dependability, and perceptions of consistency with leaders among followers, which are each a basis for Transformational Leadership (1995, p. 14).

Since 1995, the instrument has been used internationally across a broad spectrum of fields including business, the military, healthcare, government, and education. Numerous investigations and field studies of leaders in both public and private organizations

resulted in reliability scores ranging from .74 to .94 when totaling all items, as well as when totaling each of the factors of leadership. In sampling each leadership factor, the reliability scores were high and consistent with the total.

While there is some evidence that females practice Transformational Leadership to a greater extent than men, Bass and Avolio wanted to ascertain that the instrument itself did not contribute to that assumption. Additional testing was done to insure that gender was not a factor in determination of leadership style when using this instrument. Gender equality of factors was tested from 4,724 respondents from the United States. Of that number, 1,382 were female, 2,766 were male, and 566 did not indicate gender. The male responses were randomly split into two subgroups and both subgroups were compared separately against the female sample. The results were identical in both cases both for the composite and for each individual factor leading the researchers to conclude that “the instrument can be expected to function quite similarly for both genders at least in the United States context” (Bass & Avolio, 1995, p. 43).

The MLQ played an important role in the development of the model that serves as the theoretical framework and independent variable for this study. The work of Leithwood and his associates led them to conclude that only a Transformational leader can be effective in the context of restructuring large, complex secondary schools to meet the demands of the twenty-first century (1992, 1994, 2001; Leithwood & Leonard, 1998, and Leithwood, Jantzi & Steinbach, 1999). Since the No Child Left Behind Act mandates that every American child will achieve proficiency by the year 2014, it can be logically assumed that all American schools are—or should be—in a state of restructuring to some degree to achieve that goal.

Leithwood et al. extensively studied each of the factors of the Bass and Avolio model of Transformational and Transactional leadership using the MLQ and other instruments to examine their relevancy to school settings. The results showed strong positive correlations with all but Management-by-Exception and Laissez-faire management. In addition, positive and significant correlations (.71) existed between Contingent Reward (a Transactional factor) and each of the five Transformational factors. Leithwood, Jantzi and Steinbach concluded that Contingent Reward, while it does not stimulate change, is a necessary component for the successful operation of a school and can actually lead to other transforming behaviors. Without Contingent Reward to initially generate staff buy-in, organizational change initiatives are considered far less likely to succeed. They now consider Contingent Reward to be Transformational. No study discovered any positive effects for Management-by-Exception (the remaining transactional factor in the Bass and Avolio model) or Non-leadership in schools. Therefore, they have been dropped from the model as completely irrelevant (Leithwood, 1994; Leithwood, Jantzi & Steinbach, 1999).

The Figure below shows the dimensions of Transformational Leadership as measured by the MLQ (Bass & Avolio, 1995), the leadership type to which each dimension belongs from two different perspectives, the number of items that will measure each, and the coding that was used in this study to enter the data into the SPSS 13 software.



<i>Leadership Type – Bass &amp; Avolio</i>	<i>Factors</i>	<i>Leadership Type – Leithwood</i>	<i>No. of Items</i>	<i>Codes for this Study</i>
Transformational	Idealized Influence (Behavior)	Transformational  (all required to some degree)	4	<i>INFLB</i>
	Idealized Influence (Attributes)		4	<i>INFLA</i>
	Inspirational Motivation		4	<i>INSPR</i>
	Intellectual Stimulation		4	<i>INTEL</i>
	Individualized Consideration		4	<i>INDIV</i>
<i>Transactional (Constructive)</i>	Contingent Reward	<i>Transformational</i>	4	<i>RWRD</i>
<i>Transactional (Corrective)</i>	Management-by-exception (active)	Not in the model	4	<i>MBEA</i>
	Management-by-exception (passive)		4	<i>MBEP</i>
Non-Leadership	Laissez-Faire	Not in the model	4	<i>LF</i>
Outcome Factors	Satisfaction	Not in the model	2	<i>SAT</i>
	Effectiveness –		4	<i>EFFEC</i>
	Individual/Group/Organization		3	<i>EXTRA</i>

*Figure 8.* Measurement and coding of factors of transformational leadership.

Incorporated into a body of large-scale studies, 22 specifically examined school principals to further define the Transformational Leadership model for twenty-first century schools. Additionally, 12 studies examined Transformational Leadership in other types of school leaders, primarily central office personnel. Two types of studies were used. One was a series of qualitative, grounded approach studies in which the researchers examined data from interviews with teachers and principals of schools in the process of

restructuring. The other was a series of studies aimed at testing and/or modifying theories. Both types began with the Bass and Avolio model (1995) detailed earlier in this section and with behaviors of Transformational leaders identified by organizational researcher Podsakoff's extensive literature review of the work of Bass, 1985; Bennis & Nanus, 1985; Bradford & Cohen, 1984; Conger & Knungo, 1987; House, 1977; Kouzes & Posner, 1987; Tichy & DeVanna, 1986 (Podsakoff, MacKenzie & Bommer, 1996). The identified behaviors include building a vision, expecting high performance, establishing goals, offering individualized support, providing intellectual stimulation, modeling best practices and important organizational values, creating a culture, developing structures for participative decision-making, and management by exception. The Podsakoff behaviors are more fully described in Appendix B. Leithwood subsequently grouped the behaviors into three categories, namely, setting direction, developing people, and redesigning the organization aligning them with the components in the Bass and Avolio survey (1995). The resultant model reflects those attributes most suitable to schools. This model can be readily assessed using the MLQ.

### *Population*

The population for this study was all Pennsylvania secondary school principals whose schools are located in a district that qualifies for Title I funding and have more than 30% low-income enrollments. This information is located on the Pennsylvania Department of Education webpage, "Statistical Reports" (<http://www.pde.state.pa.us>).

Of the respondents, only those principals whose schools demonstrated improvement in at least one of the components of adequate yearly progress were included. The components were: a higher percentage of student scores that fall in the combined

proficient and advanced area in either math or reading than in the previous year at either the whole school level or the subgroup level; improved participation rate of students in the assessments at either the whole school level or the subgroup level; improved attendance at the junior high/middle school level (or a school without a graduating class), or improved four-year graduation rate at the high school level.

For the purposes of this study, a principal is a building-level administrator with principal's certification in the Commonwealth of Pennsylvania who is the supervisor of the school in question. These principals were identified through the statistics section on the Pennsylvania Department of Education website as indicated earlier.

#### Data Collection Procedures

Upon receipt of approval from the Institutional Review Board of East Stroudsburg University, survey packets were prepared for mailing. The packets included a cover letter, a copy of the Multifactor Leadership Questionnaire, Self-Rater Form 5x (Bass & Avolio, 1995), a prepared fax cover sheet addressed to the researcher, and a self-addressed, stamped envelope.

The cover letter explained the purpose of the study and its anticipated contribution to the field of educational leadership; the method for selection of participants; and information about protection of the rights of human subjects, confidentiality, and the voluntary nature of the study. It informed the participant that he or she may be asked to participate in a voluntary follow-up interview subsequent to data analysis.

The letter requested that the survey be completed and returned within two weeks of receipt. The recipients were instructed to complete the survey and either Fax it to the researcher's office where no individual other than the researcher could access it or to

return it in the enclosed, self-addressed stamped envelope. Finally, it offered a copy of the study results to those who wished to provide their e-mail addresses for that purpose. A copy of the cover letter is attached in Appendix C.

Each survey was numbered to match the number on the spreadsheet of eligible schools obtained from the Department of Education website. The purpose of the list was to provide for subsequent mailings or phone calls to increase the rate of response. It was also used subsequent to data analysis to contact the principals who agreed to participate in the qualitative portion of this study. The original list was kept in a secure location which was only available to the researcher.

A weakness of the mailed survey lies in the tendency of busy principals to either throw it away or relegate it to the bottom of a pile to be addressed sometime in the future. Its urgency exists only in the mind of the researcher. Return rates can often be improved by keeping the survey short and interesting, reducing any monetary or physical cost to the recipient, or rewarding the subject in some way (Dillman cited in Jalongo, Gerlach and Yan, 2002). This survey matched that description. Also, participants were offered the benefit of receiving survey results about leadership and its influence on student success.

As the completed surveys arrived, the matching code was checked off on the mailing list. Data was then entered into the previously-prepared SPSS 13 for Graduate Studies statistical software. After data entry, the coded and dated surveys were stored in a secure cabinet in the researcher's home office.

Three weeks after the initial mailing, a follow-up mailing was sent to those who did not respond, and the same procedure was followed with returns from that attempt. A third mailing was subsequently done to increase rate of return. An additional attempt to

increase the number of respondents was made by telephoning a random selection of principals who still had not responded. Of the 265 packets mailed, 132 were returned for a return rate of almost 50%. The researcher then verified responses to the selected response items related to improvement in math, reading, subgroup math and reading, attendance, graduation, and level by accessing the website

[http://www.paayp.com/1559\\_data\\_table.html](http://www.paayp.com/1559_data_table.html). Actual figures describing student performance for both 2006 and 2007 were matched with the surveys from the tables on that site. Using simple addition or subtraction, improvement or decline was computed for each factor. That became the basis for determining improvement because schools are expected to show improvement every year towards adequate yearly progress as determined by the No Child Left Behind Act of 2002. From the 132 surveys returned, 20 respondents were deleted from the study because their schools had shown no improvement in any aspect of AYP according to the above verification procedure. School size was expanded from a three-level selected response item to actual student numbers by accessing the Statistical Reports section of the Pennsylvania Department of Education website (<http://www.pde.state.pa.us>). At that point, the descriptive analysis of all dependent and independent variables began.

### Data Analysis

This was a mixed method study. The first section of this study was quantitative because quantitative research is useful to investigate a large number of respondents. It objectively measures an existing reality to establish its predictive or explanatory value.

A quantitative study, consistent with the quantitative paradigm, is an inquiry into a social or human problem, based on testing a theory composed of variables,

measured with numbers, and analyzed with statistical procedures, in order to determine whether the predictive generalizations of the theory hold true (Cresswell, 1994, p. 2).

It can be best described as causal-comparative ex post facto research because it is non-experimental. The independent variable, Leithwood model of Transformational Leadership, was compared to the dependent variable, improvement in AYP goals, to determine whether and to what degree a statistical relationship existed (Gay & Airasian, 2000). No variables were manipulated in this study. In such non-experimental designs, the inability to manipulate variables and the weak techniques for controlling for other variables erode the researcher's ability to determine a cause-and-effect scenario. Nonetheless, non-experimental research is necessary to answer important questions and set the stage for further research. Therefore, this study examined data to find relationship rather than cause and effect (Johnson & Christensen, 2000; Gay & Airasian, 2000). Ex post facto means that both the leadership style (independent variable) and AYP achievement (dependent variable) have already occurred (Gay & Airasian, 2000).

### *Quantitative*

Descriptive statistics, including frequencies and central tendencies, were used to analyze mean scores for the Transformational Leadership concept as a whole and for improvement in reading, math, attendance, graduation rate, and total improvement points as described below.

According to the scoring key supplied with the survey, four items correspond to each of the nine leadership style scales: Idealized Influence (attributes); Idealized Influence (behavior); Inspirational Motivation; Intellectual Stimulation; Individual Consideration;

Contingent Reward; Management-by-Exception (active); Management-by-Exception (passive); and Laissez-faire Leadership. Three outcomes are assessed as follows: Extra Effort – 3 items; Effectiveness – 4 items; Satisfaction – 2 items.

The Leithwood model of Transformational Leadership was determined by a leadership score on the composite of the components aforementioned. Individual score sheets were prepared for each respondent. Item numbers were grouped under the component of the model to which they referred and responses were averaged under each component. The Transformational score was then determined by averaging the scores of the five components that are considered Transformational, that is: Idealized Influence (attributes); Idealized Influence (behavior); Inspirational Motivation; Intellectual Stimulation; Individual Consideration. To extend the scoring to the model that frames this study, an additional averaging was done. The second averaging included Contingent Reward with the previously-mentioned five dimensions to result in the score labeled Leithwood Model.

Data was coded as shown in Table 6 and entered into SPSS Graduate Pack 13.0 for Windows. Descriptive statistics provided frequencies, measures of central tendency, and standard deviation. “Descriptive research is the most common form of research used in adult education, and the survey is the most common technique used for gathering data in descriptive research” (Watson, cited in Jalongo, Gerlach & Yan, Eds., p. 149).

The researcher copied data to Excel spreadsheets to further enhance the quantitative examination. Surveys results were sorted and re-sorted on Microsoft Excel according to rank order by percentage of improvement in each aspect of adequate yearly progress, by scores on the Leithwood Model, and by the following point system: Each percentage

point of improvement in reading and in math counts as 1 or the appropriate decimal.

Improvement in graduation rate or attendance earned points in the same way. Only schools whose grade level populations indicated that they had no graduating class earned points for attendance. Schools that have a grade 12 earned points for graduation rate.

One point each was awarded for an affirmative response in participation increase and subgroup improvement providing the opportunity for six possible single points, that is, overall participation rate in math and in reading, subgroup improvement in math and in reading performance and subgroup participation rate in each of those subjects. Even though a single school can have multiple subgroups, that will be considered one group for the purpose of this study. School size and location usually determine the number of subgroups in the attendance area. If each were considered separately, large or urban schools would have the opportunity to earn more points for the same population. Small schools would not be eligible to earn those points.

Visual examination of the rows labeled Reading Growth, Math Growth, Points, Subgroup Reading Growth, Subgroup Math Growth, Participation Reading, Participation Math, Participation Subgroup Reading, Participation Subgroup Math, Attendance, and Graduation determined if any of the 132 cases did not show improvement in any category. The 20 cases showing no area of improvement were removed from the study. A total of 112 cases remained.

Of that number, 100 are principals of schools in which grade 12 is the highest grade level, and 12 are middle or junior high school principals. Thirty-five schools can be described as small with student populations less than 500. Forty-six principals led medium-sized schools described as between 500 and 999 students. Thirty-one



respondents represented schools with populations larger than 1,000 students. In the experience category, 21 principals held their present position for two years or less, 46 held the position for two to five years, and 45 were principals of the school in question for more than five years.

### *Qualitative*

Combining a qualitative and quantitative approach enhances the value of the study because it allows individuals to elaborate on the choices they made on the questionnaire. As established earlier in this chapter, a survey is not useful in measuring actual behavior. It determines instead people's perceptions of behavior (Sherblom, Sullivan & Sherblom, cited in Jalongo, Gerlach & Yan, Eds., 2002) so that the researcher can make inferences about the population. The elaborations elicited during personal interviews with the random selection of principals provided richer insight into actual behaviors. The interviews helped the researcher to gain a better understanding of leadership style in high poverty secondary schools in the context of No Child Left Behind Act of 2002.

Subjects for the interviews were randomly chosen from the whole group of respondents using three criteria:

1. They were principals whose scores on the survey described them as Transformational leaders by a mean score of at least three. The scoring key describes three as "Fairly Often" on a Likert scale of zero to four;
2. They were principals of schools that showed improvement in any aspect of AYP; and
3. They agreed to participate in the interview on the survey.

Questions were derived from the seven specific behaviors identified by Podsakoff et al. (1990) and fully described in Appendix B. As discussed previously, Leithwood aligned the behaviors with the concepts of the Multifactor Leadership Questionnaire and organized them into three categories with behaviors that broadly include the following:

1. Setting Direction - developing and articulating a school vision; identifying new opportunities for the school; inspiring others with vision of the future; demonstrating high performance expectations; and establishing school goals.;
2. Developing People - offering individualized support; demonstrating concern about feelings and needs of others; providing intellectual stimulation; challenging staff to re-examine some assumptions about their work; challenging staff to rethink how their work can be performed; modeling best practices and important organizational values; setting examples; and providing appropriate role models; and
3. Redesigning the Organization - creating a productive school culture; reinforcing beliefs, norms and values concerning primacy of service to students; promoting the value of continuous professional learning; promoting collaborative problem solving; developing structures to foster participating in school decisions; promoting cooperation among staff; assisting them to work together toward common goals; and fostering acceptance of group goals.

The researcher telephoned the principals who met the aforementioned criteria to arrange a phone appointment. Upon agreement, a consent slip was faxed to his or her office with the following information:

1. The conversation would be taped but only the researcher would have access to the tape;

2. This was a doctoral study under the supervision of Dr. Faith Waters and Dr. Sue Rieg, Co-Chairpersons, and the doctoral committee at East Stroudsburg University and Indiana University of Pennsylvania;
3. The purpose of this study was to investigate the relationship between Transformational Leadership in secondary principals of schools with more than 30% of the students qualifying for free and reduced lunch and improvement on one or more aspects of adequate yearly progress as mandated by the No Child Left Behind Act of 2002;
4. The interviews would take approximately one half hour each and would consist of open-ended questions regarding principal leadership style in the particular school;
5. Participation in this study was voluntary and they were free to withdraw from the study at any time;
6. They were free to ask questions about the study at any time, and their names would not be associated with the research findings in any way;
7. Their comments would be strictly confidential in that they would not be associated with themselves or their schools in my reporting. Even though every effort would be made to maintain confidentiality, there is always a minimal risk that confidentiality of the data could be compromised due to unforeseen circumstances beyond the control of the researcher.

The researcher then conducted the interviews. The transcribed interviews became the source of data for this section of the study and were kept by the researcher in a secure place. The six principals interviewed represented urban, rural, and suburban settings.

School size ranged from under 500 to over 2,000 students. Two were middle school principals and the remainder led high schools. Regarding multi-site analysis, Miles and Huberman point out: “The aim is to increase generalizability, reassuring oneself that the events and processes in one well-described setting are not wholly idiosyncratic” (cited in Alexander, 1992, p. 4).

The data was coded based on the three categories of the Leithwood Model of Transformational Leadership. For example, responses that fit into the description of the category “Setting Direction” were coded with sd. Those responses included discussion of a school vision, high performance expectations, and establishment of school goals.

If the responses fit into the category “Developing People,” the text was coded as dp. Those responses indicated that the principal offered individualized support, intellectual stimulation, modeled best practices and discussed organizational values.

Finally, if the response best matched the description of “Redesigning the Organization,” it was coded rd. That element dealt with creating a productive school culture based on continuous learning and collaborative problem solving; developing a participatory culture for decisions; promoting cooperation among the staff; and assisting them to work together toward common goals.

The researcher examined the transcriptions and looked for patterns that either coincided with or varied from the quantitative data. The two types of responses were compared and contrasted.

### Summary

This was a mixed method study designed to examine the relationship between the Leithwood Model of Transformational Leadership, the independent variable of the study,

and improvement in any aspect of the adequate yearly progress mandate of the No Child Left Behind Act of 2002.

The quantitative portion was based on results of a survey that measured the extent to which principals of secondary schools with high percentages of students qualifying for free and reduced lunch perceived themselves to embody Idealized Influence, Inspirational Motivation, Intellectual Stimulation, Individual Consideration and Contingent Reward, the components that make up the model. In order to be included in the study, the principal's school must have improved in any aspect of adequate yearly progress. Results of the study were compared with the extent of school improvement to determine if a relationship existed.

In the qualitative portion of the study, Transformational principals who agreed to participate in an interview were contacted. These individuals discussed 18 open-ended questions with the researcher that further clarified and deepened their responses to the survey questions. The information from the interviews was compared and contrasted with the survey results.

## CHAPTER IV

### FINDINGS

#### Introduction

This study examined the relationship between principals' perceptions of themselves as transformational leaders measured by the Multifactor Leadership Questionnaire, Short Form 5x (Bass & Avolio, 1995) and improvement in student achievement as defined by the No Child Left Behind legislation. The subjects of the study were Pennsylvania principals of high poverty secondary schools who achieved growth in any aspect of adequate yearly progress measured by the Pennsylvania System of School Assessment as mandated by that legislation. The independent variable and framework for the study is the model of Transformational Leadership developed by Leithwood et al. (1994, 1999). This model includes the component, Contingent Reward, within the original definition of Transformational Leadership described by Bass and Avolio (1995). Behaviors defined by Podsakoff (1990) as consistent with Transformational Leadership were later organized by Leithwood et al. (1994, 1999) into three categories, Setting Direction, Developing People, and Redesigning the Organization.

The data for the quantitative portion of this study came from two sources. The subjects responded to the survey as well as three demographic questions added by the researcher. These questions asked how long the responder had been principal of this school, what grade levels were included in the school, and how many students populated the school. Two additional questions asked in what areas the school had shown improvement and whether the individual was willing to participate in a follow-up interview. Completed surveys were matched with data from the Pennsylvania

Department of Education website, <http://www.paayp.com>, detailing assessment results, both aggregated and disaggregated, for 2006 and 2007.

All information from the surveys was entered into SPSS 13 Graduate pack for analysis. Following the analysis of the survey returns, a random selection of six respondents from diverse settings was interviewed to further discuss their leadership styles and their experiences in the context of No Child Left Behind accountability. The qualitative data was compared and contrasted with the quantitative data to obtain a deeper and richer explanation and understanding of the concept and to attempt to answer the research questions that frame this study.

### Research Questions

This combination of methodology examined the following research questions:

Question 1: Is there a relationship between the Leithwood Model of Transformational Leadership in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments?

Subquestion 1a: Is there a relationship between Setting Direction in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments?

Subquestion 1b: Is there a relationship between Developing People in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments?

Subquestion 1c: Is there a relationship between Redesigning the Organization in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments?

Question 2: Is there a relationship between the Leithwood Model of Transformational Leadership in principals of low socioeconomic middle or junior high schools and improvement in attendance?

Subquestion 2a: Is there a relationship between Setting Direction in principals of low socioeconomic middle or junior high schools and improvement in attendance?

Subquestion 2b: Is there a relationship between Developing People in principals of low socioeconomic middle or junior high schools and improvement in attendance?

Subquestion 2c: Is there a relationship between Redesigning the Organization in principals of low socioeconomic middle or junior high schools and improvement in attendance?

Question 3: Is there a relationship between the Leithwood Model of Transformational Leadership in the principals of low socioeconomic high schools and improvement in four-year graduation rate?

Subquestion 3a: Is there a relationship between Setting Direction in principals of low socioeconomic high schools and improvement in four-year graduation rate?

Subquestion 3b: Is there a relationship between Developing People in principals of low socioeconomic high schools and improvement in four-year graduation rate?

Subquestion 3c: Is there a relationship between Redesigning the Organization in principals of low socioeconomic high schools and improvement in four-year graduation rate?

As described earlier, Transformational Leadership characteristics and behaviors have been grouped into three main categories:



- Setting Direction that includes building school vision, establishing school goals, and demonstrating high performance expectations;
- Developing People that includes intellectual stimulation, individualized support, and modeling best practices and organizational values; and
- Redesigning the Organization that includes creating a productive school culture and developing structures to foster participation in school decisions.

Subsequent to the completion of the survey, a random selection of six respondents was interviewed to answer the following overarching question:

Question 4: Are the behaviors associated with the Leithwood Model of Transformational Leadership common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress? The behaviors are fully described in Appendix B.

Subquestion 4a: Are the behaviors associated with Setting Direction common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress?

Subquestion 4b: Are the behaviors associated with Developing People common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress?

Subquestion 4c: Are the behaviors associated with Redesigning the Organization common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress?

### Quantitative Data

Copies of the Multifactor Leadership Questionnaire (Bass & Avolio, 1995) were sent to 265 principals of Pennsylvania secondary schools serving economically disadvantaged populations of students according to statistical tables on the Pennsylvania Department of Education website (<http://www.pde.state.pa.us>). After multiple attempts by the researcher to improve the return rate, 132 surveys were returned. Data was coded and entered into SPSS 13 and then copied onto an Excel spreadsheet.

In order to be considered for this study, the school had to have shown improvement in at least one aspect of AYP. Therefore, the spreadsheet was sorted and rows labeled Reading Growth, Math Growth, Points, Subgroup Reading Growth, Subgroup Math Growth, Participation Reading, Participation Math, Participation Subgroup Reading, Participation Subgroup Math, Attendance, and Graduation were visually scanned to determine if any of the 132 cases did not show improvement in any category. Through that process, 20 surveys were eliminated leaving 112 cases to be considered.

### *Demographic Data*

On the survey principals were asked three demographic questions. The first was a selected response item asking the individual to circle one of three choices that most closely matched his or her time of service at the school. The responses follow.

Table 2

*Length of Time in this Principalship*

Response	Frequency	Percent	Valid Percent	Cumulative Percent	Mode
Less than 2 yrs	21.00	18.80	18.80	18.80	
2 to 5 yrs	46.00	41.10	41.10	59.80	2
5 years +	45.00	40.20	40.20	100.00	
Total	112.00	100.00	100.00	18.8	

Note: n=112

Table 2 indicates that of the 112 subjects, 81.3% have served in the building in question for 2 years or more. The responses were coded as (1) less than 2 yrs.; (2) 2 to 5 yrs.; and (3) 5 years +. The modal choice was 2 indicating 2 to 5 years as principal in the building as the most frequent response.

The second question was a selected response item to determine the highest grade level that was enrolled at this building. That information was important because AYP attainment is dependent upon improving either attendance for middle or junior high schools or graduation rate for high schools with a graduating class. The original item was entered into SPSS 13 as three divisions, namely, high school for grades 9 through 12, junior high/middle school for grades ending at 8<sup>th</sup>, and both for schools that were organized to include both 8<sup>th</sup> and 12<sup>th</sup> grade. After perusing the data from the state report card, the researcher decided to cluster it in two categories—schools that were responsible

for attendance improvement and schools that were accountable for graduation rate improvement. The statistics for that item appear below.

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Table 3

*Grade Levels in Building*

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Response	Frequency	Percent	Valid Percent	Cumulative Percent	Mode
HS	100.00	90.20	90.20	90.20	1
JH/MS	12.00	9.80	9.80	100.00	
Total	112.00	100.00	100.00		

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High school principals returned 100 of the 112 surveys included in this study. Only 12 respondents were principals of schools without graduating classes.

The third question was a selected response item to determine the size of the school in question. The principals were asked to circle one of three groupings that most closely matched their schools' populations. From the statistical reports on the Pennsylvania Department of Education's website (<http://www.pde.state.pa.us>), the researcher then ascertained the actual school population to develop a mean score for this study. The response to the third item is as follows.

Table 4

*Student Population of Building*

Response	Frequency	Percent	Valid Percent	Cumulative
Less than 500	35.00	31.30	31.30	31.30
500-599	46.00	41.10	41.10	72.30
1000 +	31.00	27.70	27.70	100.00
Total	112.00	100.00	100.00	

Note. n = 112

The most common student population ranged in the 500-999 area. There were 35 respondents who chose this category. Small schools with fewer than 500 students ranked next at 35 schools. The smallest group, that is, 31 schools, was comprised of principals of large schools with over 1,000 students.

*Survey Data*

The survey questions of the MLQ developed by Bass and Avolio (1995) precisely measured both perceived behaviors and attributes in a full range of leadership factors associated with Transformational Leadership. Four items corresponded to each of the nine leadership style scales: Idealized Influence Attributes; Idealized Influence Behaviors; Inspirational Motivation; Intellectual Stimulation; Individual Consideration; Contingent Reward; Management-by-Exception (active); Management-by-Exception (passive); and Laissez-faire Leadership. Three outcomes were assessed as follows: Extra Effort – three items; Effectiveness – four items; Satisfaction – two items.

Leithwood (1994) and Leithwood et al. (1994, 1999) extensively studied each of the factors of the Bass and Avolio model of Transformational and Transactional Leadership using the MLQ and other instruments to examine their relevancy to school settings. The results showed strong positive correlations with all but Management-by-Exception and Laissez-faire management. Positive and significant correlations (.71) existed between Contingent Reward (a Transactional factor) and each of the five Transformational factors. The researchers concluded that Contingent Reward, while it does not stimulate change, is a necessary component for the successful operation of a school and can actually lead to other transforming behaviors. Without Contingent Reward to initially generate staff buy-in, organizational change initiatives are considered far less likely to succeed. They now consider Contingent Reward to be Transformational. No study discovered any positive effects for Management-by-Exception (the remaining transactional factor in the Bass & Avolio model) or Non-leadership in schools. Therefore, they have been dropped from the model as irrelevant (Leithwood, 1994; Leithwood et al., 1999).

The scoring key for the MLQ, which can be found in Appendix F of this document, (Bass & Avolio, 1995) describes how to score the surveys. The scale scores are simply the mean scores for the items that measure each component of the model. All of the leadership style scales have four items.

As the completed surveys arrived at the researcher's office, the responses were entered on a scoring sheet prepared by the researcher. Using addition and division, the mean score for each component was determined. If an item was left blank, the total was divided by the number of items answered. The extent to which the respondent considered himself or herself to be Transformational was determined by averaging the means of

Idealized Influence Attributes, Idealized Influence Behaviors, Inspirational Motivation, Intellectual Stimulation, and Individual Consideration. For the purposes of this study, a subject was considered to be Transformational if the latter score was three or higher. A score of three is described in the Likert Scale as “Fairly Often” on a scale of zero to four. On such a five-point scale, two would be the average score. Therefore, three and above would be considered above average. As explained earlier in this chapter, no study discovered any positive effects for Management-by-Exception (the remaining transactional factor in the Bass & Avolio model) or Non-leadership in schools, and they have been dropped from the model (Leithwood, 1994; Leithwood et al., 1999). Figure 9 below is a summary of the factors that make up the Transformational Leadership model as defined by the manual for the survey (Bass & Avolio, 2004, p. 96) and the coding used for the factor in this data analysis.

Leadership Factor	Description (Bass and Avolio, 2004, p. 96)	Coding
Idealized Influence Attributes	Items: Instill pride in others for being associated with me; Go beyond self-interest for the good of the group; Act in ways that build others' respect for me; Display a sense of power and confidence.	IDINFLAT
Behaviors	Items: Talk about my most important values and beliefs; Specify the importance of having a strong sense of purpose; Consider the moral and ethical consequences of decisions; Emphasize the importance of having a collective sense of mission.	IDINFLBE
Inspirational Motivation	Items: Talk optimistically about the future; Talk enthusiastically about what needs to be accomplished; Articulate a compelling vision of the future; Express confidence that goals will be achieved.	INSPMOT
Intellectual Stimulation	Items: Re-examine critical assumptions to question whether they are appropriate; Seek differing perspectives when solving problems; Get others to look at problems from many different angles; Suggest new ways of looking at how to complete assignments.	INTELSTIM
Individual Consideration	Items: Spend time teaching and coaching; Treat others as individuals rather than just as a member of the group; Consider each individual as having different needs, abilities and aspirations from others; Help others to develop their strengths.	INDVCONS
Transformational Leadership	Transformational leadership is a process of influencing in which leaders change their associates' awareness of what is important and move them to see themselves and the opportunities and challenges of their environment in a new way. Transformational Leaders are proactive: they seek to optimize individual, group and organizational development and innovation, not just achieve performance "at expectations." They convince their associates to strive for higher levels of potential as well as higher levels of moral and ethical behaviors.	TRANSFR

*Figure 9.* Summary of factors of transformational leadership.

Each of the factors described above that make up the Transformational Leadership composite is statistically described in Table 5.



Table 5

*Descriptive Statistics for the Factors of Transformational Leadership*

Factors	Mean	Median	Mode	Std. Dev.	Min	Max
IDINFLAT	3.27	3.25	3.25a	.54	1.75	4.00
IDINFLBE	3.42	3.50	3.75	.46	2.00	4.00
INSPMOT	3.53	3.75	4.00	.43	2.50	4.00
INTELSTIM	3.23	3.25	3.50	.49	2.00	4.00
INDVCONS	3.26	3.25	3.25	.46	1.75	4.00
TRANSFR	3.34	3.35	3.30	.35	2.50	4.00

Note. n = 112

a. Multiple modes exist. The smallest value is shown.

Table 5 describes the extent to which 112 principals of low-socioeconomic secondary schools perceived themselves to embody the five components that make up the Transformational Leadership model described by Bass and Avolio (1995). Using SPSS 13, the researcher computed measures of central tendency and variability for each component and for Transformational Leadership. Mean scores indicated the average response category on the Likert Scale measuring from zero to four with zero being described as “not at all” and four being described as “frequently, if not always.” The standard deviation was also computed for each variable.

When the data for the six listed variables was analyzed, it showed that the participants, as a group, were strongly transformational in every category. Inspirational Motivation (INSPMOT) had the highest scores with a standard deviation of only .43. The modal score for Inspirational Motivation was four. The range for this dimension was narrow differing by only 1.5 total points.

The dimensions Idealized Influence Attributes (IDINFLAT) and Individualized Consideration (INDVCONS) had the widest range of responses each differing by 2.25 points. In each case, one individual scored 1.75 on the items that made up the dimensions. In every case, the maximum was four. Standard deviations were similar ranging from .35 to a high of .54.

A summary of these descriptive statistics indicates that the group perceived themselves to embody and exhibit all dimensions of Transformational Leadership to a significant degree. The mean scores for each of the factors of the Transformational Leadership do not vary significantly from the mean score of the leadership style (TRANSFR) itself. The researcher expected this to be the case, since to be Transformational, one must exhibit all factors to some degree (Leithwood et al., 2001).

The Leithwood Model of Transformational Leadership subsumes the factor Contingent Reward, so the composite score includes that dimension. The model aligns the transformational factors with the specific behaviors identified by Podsakoff (1990) and fully described in Appendix B. The Leithwood model organizes the behaviors and factors into three categories.

<b>CATEGORY</b>	<b>DESCRIPTION</b>	<b>CODE</b>
Contingent Reward	Items: Provide others with assistance in exchange for their efforts; Discuss in specific terms who is responsible for achieving performance targets; Make clear what one can expect to receive when performance goals are achieved; Express satisfaction when others meet expectations.	CONTREW
Leithwood Model	Leithwood et al. concluded that Contingent Reward, while it does not stimulate change, is a necessary component for the successful operation of a school and can actually lead to other transforming behaviors. Without Contingent Reward to initially generate staff buy-in, organizational change initiatives are considered far less likely to succeed. The researchers now consider Contingent Reward to be transformational. This model incorporates Contingent Reward.	LEITHWD
Setting Direction	The specific behaviors associated with this category are identified through the items associated with Inspirational Motivation, Idealized Influence (Behaviors and Attributes), and Inspirational Motivation. They can be briefly described as follows: developing and articulating a school vision; demonstrating high performance expectations; and establishing school goals.	SETDIR
Developing People	The specific behaviors associated with this category are identified through the items associated with Individualized Consideration, Contingent Reward, Intellectual Stimulation, and Idealized Influence Attributes. They can be briefly described as follows: offering individualized support; providing intellectual stimulation; and modeling best practices and important organizational values.	DEVEL
Redesigning the Organization	The specific behaviors associated with this category are identified through the items associated with all six factors that are included in the Leithwood Model. They can be briefly described as follows: creating a productive school culture; and developing structures to foster participation in school decisions.	REDESIGN

*Figure 10.* Summary of factors of the Leithwood model of transformational leadership.

Each of the factors described above that make up the Leithwood Model of Transformational Leadership is statistically described below.

Table 6

*Descriptive Statistics of the Factors of the Leithwood Model—Interviewees*

Factors	Mean	Median	Mode	Std. Dev.	Min	Max
TRANSFR	3.34	3.35	3.30	.35	2.50	4.00
CONTREW	3.25	3.50	3.50	.59	1.25	4.00
LEITHWD	3.33	3.38	3.00a	.36	2.50	4.00
SETDIR	3.37	3.40	3.18a	.36	2.28	4.00
DEVEL	3.29	3.35	3.70	.38	2.26	4.00
REDESIGN	3.33	3.38	3.00a	.36	2.50	4.00

Note. n = 112

a. Multiple modes exist. The smallest value is shown.

The mean score for CONTREW when factored in with TRANSFR slightly lowers the mean for the model from 3.34 to 3.33. As expected, the mean scores of LEITHWD and TRANSFR do not vary significantly. The means for each of the three categories, SETDIR, DEVEL, and REDESIGN, are consistent with both TRANSFR and LEITHWD.

Interestingly, the standard deviations vary little with the exception of CONTREW. Scores for that dimension range from 1.25 to 4.00. In re-examining the surveys, the researcher noted that five people, whose scores indicated that they were highly transformational, scored survey question one much lower than the other factors. That item read: *I provide others with assistance in exchange for their efforts*. Some wrote in

comments next to that item such as “not in exchange for” or crossed out that phrase completely. The same individuals gave high scores to the other items that dealt with Contingent Reward. The researcher interpreted that to mean that some principals believed the item implied that they did not assist everyone who needed it.

To examine whether there is a relationship between the Leithwood Model of Transformational Leadership style in principals of low socioeconomic secondary schools and improvement in math and/or reading and on total points of improvement measured by the Pennsylvania state assessments, the researcher calculated three Pearson correlation coefficients using SPSS 13 to determine the degree of linear relationship between the variables. Pearson correlation coefficients were also calculated for each of the three categories of the model, Setting Direction, Developing People, and Redesigning the Organization. Together, these make up question one and each of the corresponding subquestions of this study.

Table 7

*Correlations of Leithwood Model and Reading, Math, and Points Change*

	LEITHWD	SETDIR	DEVEL	REDESIGN
READ CHANGE				
r	.01	-.01	.02	.01
p-value	.96	.94	.87	.96
MATH CHANGE				
r	.01	.03	.02	.01
p-value	.96	.75	.83	.96
POINTS				
r	.02	.04	.03	.02
p-value	.84	.68	.74	.84

*Note.* n = 112

The Pearson Product Moment Correlation (r) is based on a correlation of +1 or -1. If the correlation is equal to either of these values, there is a perfect correlation. High correlations have a predictive value, but there is no cause and effect relationship implied. The correlation coefficients (r) in Table 7 indicate little if any correlation. There was a slight negative correlation between READ CHANGE and Setting Direction (SETDIR). A negative correlation means that as one variable increases, the other decreases. None of the correlations (p-value) were statistically significant.

To examine the relationship between the Leithwood Model of Transformational Leadership in middle or junior high school principals of low socioeconomic schools and improvement in attendance, the researcher calculated a Pearson correlation coefficient using SPSS 13 to determine the degree of linear relationship between the variables. Pearson correlation coefficients were also calculated for each of the three categories of the model, Setting Direction, Developing People, and Redesigning the Organization. Together, these make up question two and each of the corresponding subquestions of this study.

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Table 8

*Correlations of Leithwood Model and Attendance*

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	LEITHWD	SETDIR	DEVEL	REDESIGN
<hr/>				
ATTENDANCE				
r	-.46	-.38	-.51	-.46
p-value	.13	.25	.09	.13

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*Note.* n = 12

The correlation coefficient (r) was not statistically significant and showed a negative direction with the Leithwood model. There was also a negative direction for SETDIR, DEVEL and REDESIGN. A correlation coefficient that is negative indicates an inverse

relationship between two variables. As one variable increases, the other decreases. The p-values were not statistically significant. In the case of the attendance variable, the number of respondents was only 12. This is too small a sample for the correlation to have any predictive value.

To examine the relationship between the Leithwood Model of Transformational Leadership in high school principals of low socioeconomic schools and improvement in four-year graduation rate, the researcher calculated a Pearson correlation coefficient using SPSS 13 to determine the degree of linear relationship between the variables. Pearson correlation coefficients were also calculated for each of the three categories of the model, Setting Direction, Developing People, and Redesigning the Organization. Together, these make up question three of this study.

Table 9

*Correlations of Leithwood Model and Graduation Rates*

	LEITHWD	SETDIR	DEVEL	REDESIGN
GRADUATION				
r	.07	.12	.15	.15
p-value	.48	.24	.14	.14

*Note.* n = 100

The correlation coefficients (r) in Table 9 indicate no statistically significant correlation between The Leithwood Model, its three categories, and improvement in four-year graduation rate.



### *Summary of Quantitative Data*

This study examined a possible relationship between the Leithwood Model of Transformational Leadership, the three categories that comprise it, and improvement in components of adequate yearly progress in Pennsylvania. The Multifactor Leadership Questionnaire, Short Form 5x, (Bass and Avolio, 1995) was completed by 132 principals of high poverty secondary schools in Pennsylvania to determine their perceptions of themselves as transformational leaders.

Surveys were matched with statistics from the Pennsylvania Department of Education (<http://www.pde.state.us.gov>) to ascertain whether the schools in question had shown improvement in any aspect of AYP. Improvement was defined as growth in any one of the following from 2006 to 2007: reading, math, participation reading, participation math, subgroup reading, subgroup math, subgroup participation reading, subgroup participation math, and attendance if the school had no graduating class or graduation rate if the highest grade in the building was 12. If no improvement occurred, the school would not be included in this study. As a result, 20 respondents were dropped from the study. The population for the study then numbered 112.

Descriptive statistics showed that the majority of these principals led high schools with populations ranging from 500 to 999 students. Respondents reported that the majority had been in their role as building principal at the school in question for an average of two to five years.

Using the scoring key provided with the Multifactor Leadership Questionnaire, the researcher calculated a mean score for each leadership factor. Assuming that a mean

score of three on a scale of zero to four indicated that the individual was

Transformational, an overall mean score for the leadership style was calculated.

Descriptive statistics indicated that this group of respondents perceived themselves to exhibit the five factors that comprised the Transformational Leadership style. Mean scores ranged from a low of 3.23 to a high of 3.53 among the five factors. The mean score for Transformational Leadership was 3.34. The standard deviation was .35.

Next, the researcher included the mean score for Contingent Reward, the dimension that Leithwood (1994) and Leithwood et al. (1999) included in their Leadership Model, and developed a new leadership score, that is, the Leithwood Model. The mean score was 3.33 and the standard deviation was .36. Mean scores were calculated for each of the grouping categories that Leithwood developed from the leadership behaviors identified by Podsakoff et al. (1990) and by Leithwood (1994; 2001) and Leithwood and Jantzi (1999a; 1999c); and Leithwood et al. (1999). *Setting Direction* incorporates Inspirational Motivation, Idealized Influence (behaviors and attributes), and Inspirational Motivation. The mean score for *Setting Direction* was 3.37 with a standard deviation of .36. The second category, *Developing People*, incorporates Individualized Consideration, Contingent Reward, Intellectual Stimulation, and Idealized Influence Attributes. The mean score for *Developing People* was 3.29 with a standard deviation of .38. The third category, *Redesigning the Organization*, incorporates all six factors so it shares the mean of 3.33 and standard deviation of .36 with the Leithwood Model.

To examine whether there is a statistical relationship between the Leithwood Model and improvement in math, reading, or total improvement points, the researcher calculated three Pearson correlation coefficients using SPSS 13 for the model itself and for each of

the three categories of behaviors described above. In no case was there a statistically significant relationship.

The researcher performed the same statistical analysis using the scores of middle or junior high school principals to determine a statistical relationship between the Leithwood Model and improvement in attendance. There was no statistically significant relationship with either the model or any of the three categories. It was noted that this group was very small, numbering only 12. Therefore, any statistical relationship was not likely to be predictive.

Finally, the researcher calculated correlation coefficients for high school principals and four-year graduation rate improvement. Again, there was no statistical relationship with the model or any of its categories. The next section of this chapter will present and analyze the qualitative information obtained from interviewing six of the principals who responded to the survey and agreed to participate in an interview. That information will be compared and contrasted with the quantitative data.

### Qualitative Data

The researcher conducted interviews with six of the respondents to the MLQ who described themselves as Transformational Leaders. These individuals discussed 18 open-ended questions that further clarified and deepened their responses to the survey and complemented the statistical results reported in the quantitative section. The qualitative portion relied on these interviews to address the following research question:

Research Question 4: Are the behaviors associated with the Leithwood Model of Transformational Leadership common to principals of low socioeconomic secondary

schools that improve on any aspect of adequate yearly progress? The behaviors are fully described in Appendix B.

Subquestion 4a: Are the behaviors associated with Setting Direction common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress?

Subquestion 4b: Are the behaviors associated with Developing People common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress?

Subquestion 4c: Are the behaviors associated with Redesigning the Organization, common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress?

Interview questions were derived from the specific behaviors identified by Podsakoff et al. (1990). The behaviors were aligned with the factors of the MLQ and organized by Leithwood (1994) and Leithwood et al. (1999) into three categories: Setting Direction, Developing People, and Redesigning the Organization. The original questions were developed by Verona (2001) for her study of New Jersey principals and adapted for use with Pennsylvania leaders by this researcher. These questions clearly aligned with the survey questions and the behaviors categorized under Setting Direction, Developing People, and Redesigning the Organization. The interview questions can be found in Appendix D.

The interviews allowed the principals to further elaborate on the choices they made on the questionnaire. These elaborations provided richer insight into actual behaviors

and helped the researcher to gain a better understanding of leadership style in high poverty secondary schools in the context of the No Child Left Behind Act of 2002.

The interviewees were randomly chosen from the group of respondents who agreed to participate in an interview by a selected response item on the questionnaire, and whose survey responses described them as Transformational Leaders by a mean score of at least three on a scale of zero to four. From this group, the researcher attempted to represent diverse settings to the greatest extent possible. Two of the principals led middle or junior high schools. Four were high school principals. School size ranged from under 500 to more than 2,000 students. One participant was female, and the others were male. To maintain confidentiality of the female participant, male pronouns were used in all discussions. Four of the principals held the position at the school for more than five years. One individual had two and one half years experience and had also served as an assistant on the administrative team before assuming the principalship. Prior to his appointment as principal, he served as acting principal.

The remaining individual was in his first year at the current building but had been a long-time principal of another school of similar size and level. At the first school, he succeeded in facilitating the school to reach AYP for several years in a row after faltering initially. He was brought to the new site because the school was in corrective action and the superintendent hoped he could turn things around. This individual discussed questions from the perspective of both schools so the researcher concluded that his responses would be informative. Quantitative and qualitative comparisons in this case used the data from the first school.

Two of the principals described their schools as “very rural.” Three schools were purely urban. Only one participant led a suburban school and even that was on the fringe of an urban area and had some issues commonly attributed to urban schools, specifically, diversity, poverty and crime. Two schools are located in the western portion of the state, two are in central Pennsylvania, and two are located in the eastern part of the state.

The transcribed interviews comprised the data set for this section. The information from the interviews was compared and contrasted with the survey results and with the three categories that make up the Leithwood Model in the context of No Child Left Behind to discover the extent of the behaviors in their professional practice.

*Analysis of Interview Questions in Relation to Setting Direction, Developing People, and Redesigning the Organization*

This section summarizes responses to each of the 18 questions and relates the responses to the three categories of behaviors: Setting Direction, Developing People, and Redesigning the Organization.

**Question 1: How would you describe your leadership style?**

Each of the six principals described himself as a collaborative leader. One used the term “collaborative” followed by: “We vision together and make decisions that way.”

A second individual used the adjective “democratic” and continued: “I seek input from staff members to try to make the best decisions for the school. If we’re talking about PSSA plans and strategies that we use, we try to use committee work to get that accomplished by departments.” Another called himself “...motivational. I try to get everybody on board knowing that everyone has different agendas...I’m visible and go to everything. They know that I care about what is going on.”

A fourth leader talked about guiding people but not dictating to them. He gives people the opportunity to communicate.

The fifth principal thinks of himself as a servant leader who provides an environment where teachers can fulfill their maximum capacities.

The sixth principal relies on shared decision making to describe his leadership style. He empowers committees to share in the decision-making process. "I am a listener first and I like to steal as many ideas and thoughts from as many people as possible before I make a final decision."

Collaborative leadership overarches all three categories. The responses indicate *Setting Direction* when the principals initiate processes that engage staff in the collective development of a shared vision. They *Develop People* when they are approachable, accessible and welcoming; take individual teachers' opinions into consideration when initiating actions that may affect their work; instill in staff a sense of belonging to the school; stimulate the search for a discussion of new ideas and information relevant to school directions; become involved in all aspects of school activity; and demonstrate through school decision-making processes the value of examining problems from multiple perspectives.

The behaviors described by the six principals clearly match several of those delineated in *Redesigning the Organization*, especially: sharing power and responsibility with others; working to eliminate boundaries between administrators and teachers; distributing the responsibility and power for leadership widely throughout the school; sharing decision-making power with staff; and taking staff opinion into account when making decisions (Podsakoff, 1990; and Leithwood (1994).

**Question 2: How important do you think your leadership style is in achieving adequate yearly progress in your school?**

The first principal believes that the style is crucial to making the school move forward. “When you get people involved and they share in the responsibility of what needs to happen, then you show growth.”

The second principal talks about the need for the staff to understand that it is a team effort and that includes subject areas that are not tested. The leader makes certain that ALL staff have a share in the effort to improve scores.

Both of these responses reflect the behaviors listed under *Redesigning the Organization* including: sharing power and responsibility with others; working to eliminate boundaries between administrators and teachers; distributing the responsibility and power for leadership widely throughout the school; sharing decision-making power with staff; and taking staff opinion into account when making decisions. They also align with *Setting Direction* when they help provide colleagues with an overall sense of purpose and with *Developing People* when they instill in staff a sense of belonging to the school (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

The third principal believed his leadership style helped him make his staff finally understand that NCLB was not going to go away like so many other initiatives had. He convinced them that it was going to stay and was proactive about it. He found a way to convince his staff that they were excellent teachers but that they needed to change their delivery system a little bit by working collaboratively rather than in isolation.

This principal’s actions align closely with behaviors associated with *Developing People* when he: directly challenges the basic assumptions of staff about their work;



encourages staff to evaluate their practices and refine them as needed; encourages staff to re-examine some of their basic assumptions about their work; and determines the problems inherent in the way things are (Podsakoff, 1990; Leithwood, 1994, and Leithwood et al., 1999).

The fourth principal stated that his leadership was very important because he was “steering the ship.” He believes that to make scores rise, the leader must keep pushing people to constantly work towards the benchmarks and goals. “The more you are involved with the faculty and show you understand what they do in the classroom; the more you support them and show enthusiasm about meeting AYP, the better your scores will be.” This principal exhibits all three categories in this response. The exhibited behaviors under *Setting Direction* include: expressing one’s own views about school goals and priorities; expecting staff to be innovative, hard working and professional; and being clear about one’s own views of what is right and good.

Some of the behaviors exhibited by this principal under *Developing People* include: demonstrating confidence in colleagues’ ability to perform at their best; becoming involved in all aspects of school activity; and displaying energy and enthusiasm for his own work. Under *Redesigning the Organization*, he works to eliminate boundaries between administrators and teachers (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

Principal Five replaced a leader who was dictatorial and a micro-manager. It took some time for staff to understand that he regarded them as professionals who had the capacity to succeed. Turning around a disgruntled faculty by empowering the teachers reduced their resentment and paid high dividends with improving scores. They came to

know that he would never ask them to do anything that he would not do himself. He continually referred to himself as a servant leader and credits that type of style with eventually winning the trust of the faculty. He focused them on the belief that "...there is nothing that we can't achieve together and if we are going to go down, we're going to go down together."

This principal exhibited *Setting Direction* by: helping to provide staff with an overall sense of purpose; exciting staff with visions of what they may be able to accomplish if they work together; treating colleagues in an equitable, humane, and considerate way; respecting the basic values of others; and trusting in the judgment of his colleagues (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al, 1999).

The sixth principal also believed his leadership style was very important. He said that "...five years ago, we were in warning and then we went into school improvement. Working with my people, we put a lot of initiatives into place. Then we began to reach AYP and have done it for the last three years." This principal used a coaching analogy: "It is a lot of hard work by a lot of people. I just put the right players in the right positions at the right time to win. That's what I try to do."

His response most closely aligned with *Redesigning the Organization* when he shared power and responsibility with others; worked to eliminate boundaries between administrators and teachers; distributed the responsibility and power for leadership widely throughout the school; and took staff opinion into account when making decisions (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

**Question 3: As a principal of a (middle, high) school, what specific challenges do you face regarding adequate yearly progress?**

This question dealt specifically with AYP and PSSA scores rather than with leadership behaviors. Therefore, it will be discussed under a different subheading in this chapter.

**Question 4: Regarding PSSA results, do you believe your leadership style impacts mainly students, teachers, or both? Why and how?**

The first principal responded that both were impacted. The principal focuses on using data and collaborating on decisions. Collaboration implies not only sharing in decisions but sharing in responsibility for results as well. “This helped us become loyal to each other and build up almost a sports team. Everybody is counting on each other.” The school put in place a positive program called STARS (Students and Teachers Achieving Real Success). Through the program they developed benchmarks. Students set goals at the beginning of the year. The adults talked to the students about goal setting and success. Each quarter, they took benchmark tests and developed STAR levels similar to PSSA levels. Recognition was given to achievers at an assembly. “This positively impacts students,” said the principal.

The second principal said that both groups look to him as someone charged with improving PSSA. They believe that he has the vision to focus them on what needs to be done to improve overall achievement.

The third principal believes his leadership style impacts both students and teachers. He talks to both groups as he did when he coached a sports team motivating them to work together and take this seriously. He used motivational activities including rewards and bribery when necessary. The students worked on ways they could be successful and so did the teachers. The principal provided a lot of input but teachers and students had to

come together to make it work. “I made the big game plan, but they broke it down into quarters to see how they could achieve it.”

The fourth principal counted on his leadership to motivate both groups. “You have to be enthusiastic and let them know you understand that this is a big test for them. The more they hear it from the higher level administration, the more they will be motivated.” He spoke about a rewards system for both teachers and students if they reach certain goals including prizes, release time after the test, and free time instead of study hall for those who passed the test. “The more the principal is involved, the better for the kids, the school, the teachers, the district, everything.”

The fifth principal simply replied that his leadership style impacts both. He did not elaborate.

The sixth principal also believed that both groups were impacted. He spoke about pushing for a climate change for faculty and students. Part of the push was incorporating the motto “raise the bar” which staff and students use constantly in the halls, on bulletin boards, on announcements, and in sports meetings. He talked about the effects of the climate change and the improved attitudes of the students enabling him to push teachers to utilize different instructional methods and to improve overall behavior in the building. He praised the expertise of teachers and their willingness to incorporate data into their instruction and use benchmark assessments. “A total paradigm shift occurred since I took office.”

The five principals who elaborated on this question displayed all three categories of the Leithwood Model of Transformational Leadership. Under *Setting Direction*, they:

- helped provide colleagues with an overall sense of purpose;

- initiated processes that engaged staff in the collective development of a shared vision;
- excited colleagues with visions of what they may be able to accomplish if they work together to exchange their practices;
- helped clarify the meaning of the school's vision in terms of its practical implications for programs and instruction;
- expected individuals to regularly engage in goal setting and reviewing progress towards those goals;
- expressed their own views about school goals and priorities; and
- acted as an important resource in helping colleagues achieve their individual and school goals.

The principals' actions and beliefs also demonstrated behaviors listed under

*Developing People*, including:

- encouraging staff to try new practices;
- responding positively;
- having the 'pulse' of the school and building on it often as the starting point for school change;
- providing recognition for work in the form of individual praise but being specific about what is being praised;
- offering personal encouragement to individuals for good performance;
- demonstrating confidence in people's ability to perform at their best;
- instilling in staff and students a sense of belonging to the school;

- assuring staff and students that they can get what they want personally in exchange for their efforts;
- paying personal compliments when they do outstanding work;
- frequently acknowledging good performance;
- providing public recognition for good work;
- changing those school norms that might constrain thinking of staff;
- encouraging staff to try new practices without using pressure;
- helping staff to make personal sense of change;
- becoming involved in all aspects of school activity;
- working alongside teachers to plan; and
- displaying energy and enthusiasm for their own work.

Under the category *Redesigning the Organization*, the principals:

- reinforced norms of excellence for the work of staff and students;
  - used every opportunity to focus on and to publicly communicate the school's vision and goals;
  - used slogans and motivational phrases repeatedly;
  - shared power and responsibility with others;
  - worked to eliminate boundaries between administrators and teachers;
  - distributed responsibility and power for leadership widely throughout the school;
- and
- shared decision-making power with staff ( Podsakoff, 1990; Leithwood et al., 1994, 1999).

**Question 5: How do you believe teachers perceive you as a leader in this school?**

According to Edward L. Flom, CEO of Florida Steel, “One of the hardest tasks of leadership is understanding that you are not what you are, but what you’re perceived to be by others.” All of the respondents seemed to understand this and opened with the phrase: “That’s a good question.” After they thought for a few seconds, they responded as follows.

The first principal believes that he developed a respect level with his teachers. Regardless of whether they agree or not, he has led them through some difficult challenges. They worked together to establish a school vision and core beliefs, and they constantly remind each other of those. Normally there is agreement, but then again, there are always some who perceive things differently. “I would love to do a survey on their perceptions of my strengths and weaknesses but I don’t know if I am courageous enough to do that.” He also wondered about the validity of such a survey, since leadership can never be a popularity contest. At any given time the same teacher might rate you very differently. He gave the example of a teacher who recently needed to be disciplined for not performing and participating as expected. All you can do is develop and use those avenues of communication and try to be as honest with them as you can so they know you are committed to the same cause.

This principal engages in *Setting Direction* when he uses all available opportunities to communicate the school’s vision; provides staff with a process through which to establish school goals and to regularly review those goals; works towards the development of consensus about school and group goals and the priority to be awarded

such goals; discusses professional growth with individual teachers; expects staff to be innovative, hard working and professional; and does not accept second-rate performance from anyone.

He engages in *Developing People* when he consistently seeks out and communicates productive activities taking place within the school; provides information helpful to staff; and works alongside teachers to plan special events.

He engages in the behaviors from *Redesigning the Organization* when he uses every opportunity to focus on and to publicly communicate the school's vision and goals; assists staff to clarify shared beliefs and to act in accordance with such beliefs and values; shares power and responsibility with others; and shares decision-making power with staff ( Podsakoff, 1990; Leithwood, 1994; and Leithwood et al.,1999).

The second principal is confident that they see him as leading the charge to improve scores. They believe in him and in his vision and are willing to follow him because they know where they have been and where they need to go.

This response indicates that he helps provide colleagues with an overall sense of purpose, helps clarify the meaning of the school's vision in terms of its practical implications for programs and instruction; expresses his views about school goals and priorities; expresses his own views about school goals and priorities; acts as an important resource in helping colleagues achieve their individual and school goals; and is clear about his own views of what is right and good. These are behaviors categorized under *Setting Direction* (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

The third principal spent a few minutes discussing how he modeled a strong work ethic and how the students and teachers learned to emulate him. They think of him as



someone who ‘talks the talk and walks the walk.’ He then told me of the love and support he received from his faculty when his wife developed a terminal disease. Although he was absent a lot, they kept on task and continued to display that fine work ethic. He has always treated them well and helped them out whenever they needed it. For example, if a teacher on occasion has a valid reason for leaving early or coming in late such as medical or child care needs, he grants it to them. In his time of need, they responded in kind.

This response indicated that the principal practiced behaviors consistent with *Developing People* when he engaged in equitable, humane, and considerate treatment of his staff; was approachable, accessible and welcoming; was thoughtful about the personal needs of staff; assures staff that they can get what they want personally in exchange for their efforts; models best practices and important organizational values; and engages in the basic values or respect for others ( Podsakoff, 1990; Leithwood, 1994; and Leithwood et al.,1999).

The fourth principal talked about the changing leadership paradigm in his building before he arrived. Over a four-year period, the school experienced an abrupt transition from a principal who could be characterized as an iconic and beloved leader to one who was a complete dictator. The latter principal was relieved of duty after three years and his assistant became acting principal. Later, he was appointed to the position of school principal. The faculty and students eventually developed a sense of trust and harmony with him after he made two things very clear to them: “You’d better be doing your job because if you don’t, you know what the consequences will be;” and “I’m willing to

listen to see what's going on and will adjust my practices if you show me what you need."

This principal engaged in behaviors consistent with *Setting Direction* when he expresses his own views about school goals and priorities; expects staff to be innovative, hard working and professional; espouses norms of excellence and quality of service; does not accept second-rate performance from anyone; and is clear about his own views of what is right and good.

He *Develops People* when he has an open-door policy; is approachable, accessible and welcoming; listens carefully to staff's ideas; assures staff members that they can get what they want personally in exchange for their efforts; requests feedback from staff about his own work; and demonstrates a willingness to change his practices in light of new understandings.

He engages in behaviors consistent with *Redesigning the Organization* when he reinforces with staff norms of excellence for their own work; and takes staff opinion into account when making decisions (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

The fifth principal was confident that he was perceived as a student-centered leader. As evidence he mentioned that he asked his entire staff to write letters of recommendation for him and mail them directly to the school board of a district that was interviewing him for a new position. "They perceived me as a tireless worker who doesn't just 'talk the talk,' but he 'walks the walk.'" He chose a career in education because he believes it to be a higher calling "...the most important work one can do on this planet." He successfully conveys that message to his teachers: "We teach

youngsters how to be good people so that they can learn history—not the other way around.”

This gentleman practiced *Setting Direction* when he assists staff in understanding the larger social mission of which their vision of the school is a part; expresses his own views about school goals and priorities; and demonstrates an unflagging commitment to the welfare of students. He demonstrates *Developing People* when he encourages colleagues to re-examine some of their basic assumptions about their work; stimulates colleagues to think more deeply about what they are doing for their students; helps staff to make personal sense of change; and requests feedback from staff about his own work. He demonstrates *Redesigning the Organization* when he clarifies the school’s vision regarding the care and respect with which students are to be treated (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

Principal Six believes that he is perceived as a very strong leader and a supportive one. He posits that his faculty would “...willingly follow me almost blindly because of what we have accomplished together in the last couple of years.” Earlier, it was hard to sell his faculty on new initiatives, but that has all changed since they came out of school improvement together. At the same time, faculty members know they are free to walk into his office and suggest a better way to do something. They know that he will listen and probably try it. He gave the example of a teacher-conceived new attendance policy. They implemented it and enforced it and use the data from it. “For a large high school, I am proud to say we have a 92% attendance rate. Kind of strange for a high school like ours to be able to brag like this.”

This principal *Sets Direction* when he helps provide staff with an overall sense of purpose; assists staff in understanding the relationship between external initiatives for change and the school vision; and acts as an important resource in helping colleagues achieve their individual and school goals. He *Develops People* when he has an open-door policy; is approachable, accessible and welcoming; encourages staff members to try new practices consistent with their interests; as often as possible, responds positively to staff members' initiatives for change; follows through on decisions made jointly with teachers; instills in staff a sense of belonging to the school; and stimulates the search for and discussion of new ideas and information relevant to school directions. He engages in *Redesigning the Organization* when he takes staff opinion into account when making decisions (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al.,1999).

**Question 6: Do you express your satisfaction to teachers when they meet your expectations regarding classroom instruction and student achievement? In what way?**

The first principal uses many techniques to express satisfaction. He leaves notes in their mailboxes. He puts positive comments on observations. He personally compliments them when they do something that he likes. He believes that recognition motivates.

The second principal takes every opportunity to celebrate success. He provides a cake if the scores come back higher. He praises through email or at faculty meetings.

The third principal utilizes notes and sayings. He sends them notes and little gifts if he catches them doing something good.

The fourth participant recognized when he became principal that people really needed to be lifted and told that they were doing a good job. Each week in his update memo, he makes it a point to mention things that are going well and to specifically congratulate by name teachers who are doing something extra. “I’m constantly trying to motivate them to do better because if you don’t recognize people—and though they may say otherwise, you know that deep down they want that pat on the back—if you don’t do that, you’re going to find yourself really turning people off.”

In his former school, the fifth principal expressed appreciation on a regular basis through department and faculty meetings. He provided an environment that was caring and that encouraged teachers to take risks without fear of reprisal. In that kind of environment, he turned the school around and raised scores. He has been in his present position for less than a year in a school that is in the final year of restructuring prior to state takeover. Interestingly, he said: “I don’t have time to do that in X district because X is in dire straits”.

The sixth principal begins to express satisfaction at the beginning of each year when he does five-minute observations. He writes out a little index card for each teacher with comments giving positive reinforcement. He makes sure they know that he is appreciative for what they do. “I thank them all the time.”

All six principals express satisfaction when teachers meet their expectations in similar ways. They thank teachers and recognize them both publicly and privately. They celebrate success. These principals are *Setting Direction* in the following ways:

- by clearly acknowledging the compatibility of teachers’ and school’s goals when such is the case;

- by expressing their views about school goals and priorities;
- by espousing norms of excellence and quality of service; and by being clear about their own views of what is right and good.

*They Develop People* when they:

- offer individualized support;
- are thoughtful about the personal needs of staff;
- encourage individual staff members to try new practices and respond positively to staff members' initiatives;
- provide recognition for staff work in the form of individual praise or 'pats on the back;'
- are specific about what is being praised as 'good work;'
- offer personal encouragement to individuals for good performance;
- pay personal compliments to staff when they do outstanding work;
- frequently acknowledge good performance; and
- provide public recognition for good work.

They engage in behaviors consistent with *Redesigning the Organization* by reinforcing with staff norms of excellence for their own work (Podsakoff, 1990; Leithwood et al., 1994, 1999).

**Question 7: Do you facilitate teachers examining student achievement issues in the school from different angles?**

All of the principals talked about teachers and administrators using data to examine student work and providing appropriate staff development. Four of them discussed 4-Sight in detail. This is a diagnostic benchmark test developed by Johns Hopkins

University that directly correlates with PSSA. It identifies student strengths and weaknesses at a particular point in time so teachers can adjust instruction accordingly. They use data from 4-Sight to plan and individualize instruction to meet the needs of the students by setting goals for the individual learner. One principal said that prior to data study, students either passed or failed the PSSA and nobody knew the reason. “We now encourage the teachers to look at students from different angles and reflect on that information to determine how they can help kids. We’re finding kids who are one or two questions away from passing, so we can now give them that extra help that they wouldn’t have gotten.”

Staff development on using data to improve instruction was key to this discussion. In fact staff development was mentioned frequently in several ways. Shared reading, teachers sharing with teachers, departmental discussions, attending conferences, and bringing in outside experts were the most frequent staff development opportunities discussed.

Another principal mentioned that he and his teachers read a lot. His school is very rural and the students are very poor. They come from uneducated families with primarily single parents. They lack the social skills that middle class students bring to school. Under the principal’s guidance, the teachers read from the work of Ruby Payne to help them understand and deal with students from poverty. This principal focuses on personalizing attention to deprived children to make sure teachers understand that they have to teach differently in this school to meet the needs of these students. He tells teachers: “These kids don’t want it (education)—you have to sell it to them...It’s not about you. It’s about the kids.”

This principal *Sets Direction* by assisting staff in understanding the large social mission of which their vision of the school is a part, a social mission that may include such important end values as equality, justice and integrity and when he demonstrates an unflagging commitment to the welfare of students.

He and the others are *Setting Direction* when they expect teams of teachers (for example departments) and individuals to regularly engage in goal setting and reviewing progress towards those goals. They are *Developing People* when they provide money for professional development and other needed resources in support of changes agreed upon by staff; when they stimulate colleagues to think more deeply about what they are doing for their students; when they provide the necessary resources to support staff participation in change initiatives; when they stimulate the search for and discussion of new ideas and information relevant to school directions; when they provide information helpful to staff in thinking of ways to implement new practices; and when they demonstrate the value of examining problems from multiple perspectives (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al.,1999).

**Question 8: Do you generally believe that “if it ain’t broke, don’t fix it”?**

The first principal does not go looking to tear things apart, but he does not want the school to reach a status quo. “We do long-range things and try to implement segments each year and we continually re-examine them. Some we keep; some we improve.”

The second principal said: “You’ve got to tinker with things to make sure you maintain what you have and keep the emphasis on student achievement and skill building activities we need for the PSSA.” He used a sports analogy to talk about “...scrimmaging



for the real thing.” He believes that you constantly have to add different twists to keep pace.

The third principal also used a sports analogy. “Coaches watch film and evaluate every night. You’ve got to go home and evaluate every day... Teachers have to keep up with the kids.”

The fourth principal believes you can’t afford to stay the same because the bar rises each year. “Just to be content with what we are doing isn’t going to be good enough... Three years ago if we hadn’t changed and started giving the 4-Sight test and using the data, we would never have made the numbers last year. We would be in school improvement by now. Now we are constantly looking to get our scores even higher.”

Principal five did not ascribe to the statement but did not elaborate.

The sixth principal is always looking for ways to improve because everything is always evolving. “Keep that open mindset that everything—even if it is working—can be better.”

As a group, the principals constantly strive for their schools to be better. They *Set Direction* by initiating processes that engage staff in the collective development of a shared vision; by assisting staff to understand the relationship between external initiatives for change and the school’s vision; by providing staff with a process through which to establish school goals and regularly review those goals; and by expecting teams of teachers and individuals to regularly engage in goal setting and reviewing progress towards those goals;.

They *Develop People* by encouraging individual staff members to try new practices; by changing those school norms that might constrain thinking of staff; by encouraging

staff to evaluate their practices and refine them as needed; by encouraging colleagues to re-examine some of their basic assumptions about their work determining the problems inherent in the way things are; by stimulating colleagues to think more deeply about what they are doing for their students; and by encouraging staff to try new practices (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al.,1999).

**Question 9: Do you focus your attention on teachers failing to meet the standards you have set for them?**

The first and second principals both responded that they do focus attention on teachers failing to meet the standards that have been set for them, especially when someone is not doing his or her job. The third principal simply responded that “failure is not an option.”

Principal number four does this as well. “If they are not cutting it in the classroom and not doing what we are asking, I think it is very important to move those people on out.” He explained what a negative effect it has on the whole faculty if a teacher appears to be getting away with not doing his or her job. He gave an example of a math teacher who fit that description ending with: “She’s no longer here.” He continued that the entire math department became energized by that and developed a new attitude.

The fifth principal disagreed with the others. He does not focus on teachers failing to meet his standards, while the sixth focuses on all of his teachers all of the time in everything they do. His focus is not punitive. Rather, it focuses on helping the professional become a better teacher.

Except for number five, these principals demonstrate high performance expectations in responding to this question. They expect staff to be hard working and professional and

often espouse norms of excellence. They do not accept second-rate performance from anyone. They are clear about one's own views of what is right and good. These are behaviors associated with *Setting Direction* (Podsakoff, 1990; Leithwood et al., 1994).

**Question 10: Do you keep track of mistakes?**

The principals were thoughtful about this question and answered carefully as if they did not want to be misinterpreted. Principals one, two, three and six keep track of mistakes but not to catch people doing something wrong. They document mistakes in case there is a problem later in the person's employment; however, in most cases, they use them to mentor teachers and help them to improve. This exemplifies removing penalties for making mistakes as part of an effort toward professional and school improvement from the category *Developing People* (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

The fourth principal kept returning to the subject of his own mistakes. He spoke about keeping track of them so that he could learn from them. He believed that sharing the decision making with his assistants helped him to minimize his mistakes.

“Obviously, it is your decision in the long run, but it is good to get buy-in from people that you trust.” This principal engages in *Developing People* when he requests feedback from staff about his work. He practices *Redesigning the Organization* when he shares power and responsibility with others; provides opportunities and resources for collaborative work; shares decision-making with staff; and takes staff opinion into account when making decisions (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

Number five posited that there was no purpose to keeping track of mistakes because teachers are human. “We don’t keep track but we work with teachers who need improvement—always behind closed doors. This principal engages in *Developing People* when he removes penalties from making mistakes as part of his effort toward professional and school improvement (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

**Question 11: Do you feel that you avoid getting involved when important issues arise?**

In all six cases, this question was met with quick negative responses, such as: “Absolutely not!” and “I dive right in.” They practice *Developing People* when they become involved in all aspects of school activity (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

**Question 12: Do you emphasize the importance of having a collective mission in your school?**

All principals emphasize the importance of having a collective mission in their schools on a regular basis. Three of the principals were specific that their schools’ missions were to get out of school improvement, to improve reading, writing and math, and to make AYP. They concurred that all teachers would agree that this is their mission as well.

One principal uses annual themes and mottos each year to focus attention on the mission. They then spend the year working on the theme. Using slogans and motivational phrases repeatedly is a behavior consistent with *Redesigning the Organization* (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

All of the principals engage in *Setting Direction* when they help provide colleagues with an overall sense of purpose; help clarify the meaning of the school's vision in terms of its practical implications for programs and instruction; and assist staff in understanding the relationship between external initiatives for change and the school's mission. They engage in *Redesigning the Organization* when they use every opportunity to focus on the school's vision and goals (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

Principal number four stated unequivocally that: "Obviously, we want—we need—to pass the test, but our mission is to help students achieve success when they leave here. Whether the kid wants to be a musician, an artist, a math teacher or an engineer, we have to do what is right for that kid." He said that to do right by students, a faculty can't get so wrapped up in thinking about the test that they forget to think about the individual student. "Helping the kid as an individual is very important and it is very hard to do in a school this big, but I think we do a pretty good job of knowing all of our kids." This response exemplifies *Setting Direction* when the principal assists staff in understanding the larger social mission of which their mission is a part, a social mission that may include such important end values as equality, justice and integrity (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

**Question 13: Do you speak enthusiastically with teachers about raising student achievement on PSSA?**

The first principal does this everyday. The second believes he is like a cheerleader. He tries to pump up the students and teachers so they recognize the importance of doing well on the PSSA. He recognizes best practices in the classroom all through the year and

holds up the teachers who use them as good examples. He encourages his teachers to work together and exchange ideas. He encourages his students to go for their personal best.

The third principal expands on this. “You don’t talk about being undefeated. You just keep working at it and slowly but surely it will happen.” He knows that everyone in his school wants to get better, and he enthusiastically supports them with feedback, rewards, and recognition. He instills an excitement and a sense that everyone is in this together. He encourages teachers to look at reasons for student failure from all angles. Is the student having problems at home? Did his grandmother die?

Principal four talks enthusiastically to all constituents. “The more you show them that you are involved and understand what is going on; the more you are enthusiastic about the tests, meeting AYP and the importance of working together toward a common goal, the better your scores will be.” He equates this with being enthusiastic about a football game or a chorus concert. He does ‘whatever it takes’ to build their enthusiasm.

Principal five believes that teachers have been beaten down by society for years and have a low professional self esteem. He talks enthusiastically about teaching and its importance. He tells them that what they do is not trivial. It is the most important job on the planet. This support helps them be more enthusiastic in the classroom and ultimately improves PSSA scores.

These principals *Set Direction* when they help to provide colleagues with an overall sense of purpose; and excite colleagues with visions of what they may be able to accomplish if they work together to exchange their practices. They *Develop People* when they provide recognition for staff work in the form of individual praise or “pats on the

back;” when they offer personal encouragement to individuals for good performance; when they instill in staff a sense of belonging to the school; when they pay personal compliments to staff when they do outstanding work; when they provide public recognition for good work; when they stimulate colleagues to think more deeply about what they are doing for their students; when they invite teachers to share their expertise with their colleagues; and when they display energy and enthusiasm for their own work.

They engage in *Redesigning the Organization* when they clarify the school’s vision in relation to collaborative work and the care and respect with which students are to be treated; and when they use motivational phrases repeatedly (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

**Question 14: Do you instill pride in teachers for working with you to raise students’ PSSA scores?**

Principals one, two, three and five simply agreed that they do that. Throughout the interviews they constantly spoke of the excellence of their respective faculties. “I would put my people up against any team in the country,” said one principal. “My faculty is second to none and they have proven it over and over,” said another. “They’ve proven their mettle while getting us from where we were a couple of years ago to where we are now,” replied another proud leader.

The fourth principal recognizes people who go the extra mile. He calls their names in faculty meetings and relates their accomplishments. He celebrates successes at luncheons and impromptu parties to build pride. He believes that inwardly the praised teachers say: “This guy knows that I’m doing a good job so I want to keep it up.” He

believes they have a lot to be proud of if they look back at where they were a few years ago.

Principal six promotes his teachers all the time at school board meetings, at PTA meetings and faculty meetings and talks about their different activities. He continually expresses his pride in his faculty. He augmented the state-mandated one year mentoring program into one that lasts three years so the new people can share and collaborate with their excellent peers. “They deserve recognition, and they should be proud of their accomplishments.”

These principals are *Setting Direction* when they often espouse norms of excellence and quality of service, and are clear about their own views of what is right and good.

They are *Developing People* when they provide recognition for staff work in the form of individual praise or “pats on the back;” are specific about what is being praised as good work; offer personal encouragement to individuals for good performance; demonstrate confidence in colleagues’ abilities to perform at their best; pay personal compliments to staff when they do outstanding work; frequently acknowledge good performance; and provide public recognition for good work.

The principals are *Redesigning the Organization* when they reinforce with staff norms of excellence for their own work (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

**Question 15: Do you spend time coaching teachers regarding ways to improve student scores?**

The first principal personally works with reading, math, special education and ESL. He holds monthly meetings to review data and examine progress. He arranges



workshops at every opportunity by bringing somebody in to help the teachers get better in some area. “Staff development was one of our biggest weaknesses, and we really got good at that.”

The second principal directs the coaching of the teachers by using both internal and external experts. They work collectively as teams on this. The principal believes his role is to direct the coaching and see that teachers work with the right people who can help them improve.

Principal three believes that coaching is key to improvement. Teachers have to remain current and keep up with what is happening in their students’ world. Coaching helps them to do that.

The fourth principal relies on teachers who are strong in their disciplines. He arranges to have them work with other teachers who could benefit from their expertise. “There are certain subjects that I personally know little about so it makes sense to pair the teachers who want to learn with successful teachers from their own departments.” He works through the department chair people asking them to observe a particular weak teacher to see if they have the same reactions as he did. If they do, he and the chair discuss how they can best help the teacher. This empowers the department head: “It’s my department, and I don’t want to have a weak link.” The focus is then on ‘us’ rather than on ‘me.’

Principal five stated that he was hired to do that. He coaches the teachers on interpreting data and using it to improve instruction. Together, they set goals to determine what should be taught and when it should be taught.

The sixth principal responded that he coaches “all the time.”

These principals *Set Direction* when they help to provide colleagues with an overall sense of purpose; when they initiate processes that engage staff in the collective development of a shared vision; when they refuse to accept second-rate performance from anyone; and when they act as important resources in helping colleagues achieve their individual and school goals.

They *Develop People* when they provide money for professional development and other needed resources to support staff; when they provide coaching for those staff members who need it; and when they invite teachers to share their expertise with colleagues.

The principals *Redesign the Organization* when they reinforce with staff norms of excellence for their work; when they share power and responsibility with others; when they provide opportunities and resources for collaborative staff work; and when they create opportunities for staff development (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

**Question 16: Do you believe that you get teachers to do more than they are expected to do regarding preparing students for the PSSA?**

The first principal believes that he has a knack for doing that and that the teachers respond positively. He recounted an incident at a building committee meeting at which the principal and the union representatives were discussing various occurrences in the school that relate to the teachers' contract. The union representative remarked: "You expect an awful lot of your teachers." The principal replied in the affirmative and asked if that was a problem. The union person responded that it was not an issue.

The second principal's teachers were doing a lot more than they used to do. Of course, there were a few who were doing less. He handles that by holding up the good workers as exemplars. The third principal had a similar response.

Principal four talked about people offering up free periods to help kids. He said that they never did that before. They have come so far that nobody wants to slide back. This district has a very strong union and the contract is up this year. "People are disgruntled about taking on additional health care costs, but they still seem to say—I want to help the kids."

The fifth principal spoke about two districts. In the first district, he was always able to get teachers to go over and above what was required. He was concerned when he moved to his current position because the teachers have been working for two years and nine weeks without a contract. To his relief, the teachers do not let the contract dispute interfere with doing what needs to be done. This district is in corrective action because of poor performance. If the administrators ask for volunteers to work with kids, there is never a problem. "Walk by any room anytime and see great teaching taking place—regardless of no pay raise and no contract. Nobody is dogging it because these teachers cherish education." If the teachers need to leave early because something important comes up, the administrators tell them to go ahead and take the time that is needed. In exchange, the teachers always make themselves available for extra help and participation in school activities. "You give and take—servant leadership."

In the sixth school, the faculty does more with less. The principal said that he couldn't even describe all the teachers do to help the kids without thought of benefits to themselves.

Responses to this question indicate that these principals *Set Direction* when they help provide colleagues with an overall sense of purpose; and when they clearly acknowledge the compatibility of teachers' and school's goals when such is the case. They engage in *Developing People* when they assure staff members that they can get what they want personally in exchange for their efforts; and when they challenge the status quo by stimulating colleagues to think more deeply about what they are doing for their students (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

**Question 17: Do you believe that you are effective in meeting school and district requirements regarding AYP?**

All six principals believe that they are effective. One principal remarked: "Coming from where we were a couple of years ago, we have shown progress. Each year is a different year of competition, so you can't tell from one year to the next what is going to happen." Another principal agreed that they all work hard together, but the obstacles keep getting harder to overcome. "Districtwide—yes, we are meeting the requirements. But will we meet state requirements this year? Who knows? I have a good feeling. We work as hard as we can, but ultimately, the kid has got to perform."

None of the principals discussed specific behaviors and methods when addressing this question. They quickly opined that they and their teachers were effective. Those who elaborated did so more in the vein of reflection about what the future will hold. The interviewer noted some anxiety in their voices when they spoke about the outcomes for this year and further as the goals become higher.

**Question 18: Do you believe that you use methods of leadership that are satisfying to your teachers?**

All six principals believe that they do use methods of leadership that are satisfying to their teachers. Two did not elaborate. The remaining four went further:

Principal two answered in the affirmative. He spoke about making certain the teachers understood that NCLB was here to stay and that everyone had to perform to the best of his or her ability if they were to reach their goals. At points, he had to step in to enforce what he believed needed to be done. “Sometimes people need to understand that this is reality, and there are things that need to be done; but overall, yes, they are satisfied.”

This principal *Sets Direction* when he expresses his own views about school goals and priorities; when he is clear about his own views of what is right and good; and when he refuses to accept second-rate performance from anyone (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

Principal three discussed his open door policy and his practice of listening to his faculty. When they don’t like something that he does, he changes it if he is given a good reason and he believes it is in the best interest of the students. This enables him to bring the teachers on board to get everything taken care of for the good of the students.

This principal *Sets Direction* when he demonstrates an unflagging commitment to the welfare of the students. He *Develops People* when he is approachable and accessible; when he has an open-door policy; when he responds positively to staff members’ initiatives for change; when he changes those school norms that might constrain thinking of staff; when he responds constructively to feedback about his own leadership practices; when he requests feedback from staff about his work; and when he demonstrates a willingness to change his practices in light of new understandings. He *Redesigns the*

*Organization* when he works to eliminate boundaries between administrators and teachers and when he takes staff opinion into account when making decisions (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

The fourth principal described himself to be fair, consistent, and tough, and he believes these characteristics are satisfying to his faculty. “You have to be tough in this job. You don’t have many friends. But you also have to be fair and consistent. If you do that, people are happy.” He spoke about the need to keep only those faculty members who were pulling their weight to insure improved student achievement. This principal *Sets Direction* when he expects staff to be innovative, hard working and professional; when he espouses norms of excellence; refuses to accept second-rate performance from anyone; and when he is clear about his own views of what is right and good. He *Develops People* when he treats everyone equally, not showing favoritism towards individuals or groups; and when he reinforces the key value of integrity. He *Redesigns the Organization* when he reinforces with staff norms of excellence for their own work; and when he acts in a manner consistent with those beliefs and values shared within the school (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al., 1999).

The sixth principal is also confident that his people are satisfied with his leadership. He spoke of his warm relationship with his teachers that he attributes to his ten years as a faculty member at the same school. He referred to the bond they formed as they climbed from the depths of school improvement to their current status of making AYP. During that time, they developed the kind of relationship that a coach has with his team. He spoke frequently about shared decision-making and taking teachers’ suggestions into account when formulating policy. “My teachers compliment me all the time and not for

brown nosing. They are pleased with my leadership. I have many interns from my faculty that want to move up. That is the best proof of all that they are pleased with my leadership.”

This principal *Develops People* when he offers individualized support; when he is approachable, accessible and welcoming; when he encourages individual staff members to try new practices consistent with their interests; when he provides coaching for those staff members who need it; when he encourages staff to pursue their own goals for professional learning; and when he helps staff to make personal sense of change (Podsakoff, 1990; Leithwood, 1994; and Leithwood et al.,1999).

In the process of comparing and contrasting the principal responses to each question to the *School-level Principal Leadership Practices According to Leithwood Model (1994) of School Transformational Leadership* as detailed in Appendix B, it became clear that these six individuals exemplify the behaviors of Transformational Leaders to the extent that the questions focused the discussion. The interviews gave the researcher valuable insight into the challenges faced by schools that have many students of a low socioeconomic status across the state.

As a group these six principals’ discussions were similar in many ways. Each of them pointed at growing numbers of students in various subgroups as a major challenge, but none seemed daunted by this. While they were cautious and obviously concerned about test results for the upcoming year, they nevertheless portrayed positive attitudes almost as if they were anxious to see if their initiatives would prove successful.

The principals spoke, often passionately, of their work. They all described their unequivocal focus on hard work and continuous improvement with every decision based

on what they believe is right for students. They were equally passionate about praising staff and rewarding both staff and students when their efforts were successful.

All of them used coaching and sports metaphors and references to building a team atmosphere with all members working towards the common goal of improving student achievement. All of them spoke enthusiastically about empowering their faculties and participating in cultures of shared decision-making. All of them encouraged teachers to take measured risks without fear of reprisal. One of the strongest points of agreement was a focus on students. Several of them spoke at length about individualizing student interactions and looking beyond test scores to a higher purpose. As a group, they engaged in behaviors consistent with the categories of the model as follows.

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Table 10

*Behaviors Noted During Interviews Consistent with the Leithwood Model*

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Behavior Category	Number Noted
SETTING DIRECTION	81
DEVELOPING PEOPLE	118
REDESIGNING THE ORGANIZATION	53
LEITHWOOD MODEL TOTAL	252

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*Note. n = 6*

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This consistency resulted in a positive response to Research Question Four as described later in this chapter. The next section will compare survey results for all



respondents with survey results for the interviewed group. It will also compare interview results for the six principals who participated in the qualitative portion of this study to their own survey results.

#### Comparing and Contrasting Survey Results with Interview Results

When comparing interview responses with the behaviors associated with the three categories of the Leithwood Model of Transformational Leadership, it appeared that all six respondents exhibited many of the behaviors in each of the three categories, *Setting Direction*, *Developing People*, and *Redesigning the Organization*. This section will compare survey responses under each of the factors that make up each category in three ways:

1. For all survey respondents the quantitative results will be reported by factor and category;
2. Quantitative results by factor and category will be depicted for survey respondents and compared to the large group results; and
3. Quantitative results by factor and category will be discussed in comparison to interview responses for the six principals who participated in the interviews.

Table 11

*Comparison of Means for Leithwood Model for the Group “All Survey Respondents”  
with Group “Interview Respondents”*

Factors	<u>All Survey Respondents</u>		<u>Interview Respondents</u>		<u>Difference</u>
	N	Mean	N	Mean	
IDINFLAT	112	3.27	6	3.75	.48
IDINFLBE	112	3.41	6	3.88	.47
INSPMOT	112	3.53	6	3.83	.30
INTELSTIM	112	3.23	6	3.46	.23
INDVCONS	112	3.26	6	3.33	.07
CONTREW	112	3.25	6	3.92	.67

The above Table clearly indicates that the group of principals who participated in the interview scored higher means in every factor of the Leithwood Model of Transformational Leadership than the larger group of principals who participated in the survey. The most significant difference was in the dimension Contingent Reward (CONTREW). The smaller group averaged .67 points more than the group as a whole. Even more interesting is the difference in range. The group All Survey Respondents ranged from a low of 1.25 to a high of 4.00. The principals who participated in the interview ranged from 3.75 to 4.00 confirming the interview responses during which each of the six principals spoke frequently about rewarding faculty and students for behaviors and celebrating successes.

The difference in Idealized Influence, both Attributes and Behaviors, (IDINFLAT and IDINFLBE) was significant as well at .48 and .47 respectively. Leaders that score high in these dimensions are admired, respected and trusted. Among the actions taken by the leader to earn credit with followers is to consider followers' needs over his or her personal needs. The leader shares risks with followers and is consistent in conduct with underlying ethics, principles, and values. Each leader spoke about loyalty and trust between himself and his faculty and about taking a personal interest in the welfare of his staff. They discussed working side by side and sharing ideas. They spoke about consistency and integrity.

For the factor Inspirational Motivation (INSPMOT), the difference between the means of the two groups was .30. Leaders with strong scores in Inspirational Motivation behave in ways that motivate those around them by providing meaning and challenge to their followers' work. Individual and team spirit is aroused and both the principals and the staff display a great deal of enthusiasm and optimism. The leader encourages followers to envision attractive future states, which they can ultimately envision for themselves. During the interviews, each principal referred to himself as a coach on more than one occasion and frequently used the term "enthusiasm" when discussing interactions between himself and his faculty or between faculty members themselves. All of them described a spirit of "team" and "unity." Their responses are consistent with Inspirational Motivation.

The mean difference for Intellectual Stimulation (INTELSTIM) was .23. These leaders stimulate their followers' effort to be innovative and creative by questioning assumptions, reframing problems, and approaching old situations in new ways. There is

no ridicule or public criticism of individual members' mistakes. New ideas and creative solutions to problems are solicited from followers, who are included in the process of addressing problems and finding solutions. Every interviewed principal looked to his faculty for ideas, solutions, and interventions. All of them were willing to listen to new ideas and to implement them if appropriate. While they looked at mistakes, discussions of them were conducted in private and always with the intent of helping the individual to grow from the mistakes. All of them spoke about looking at data from multiple angles.

The mean difference for Individualized Consideration (INDVCONS) was only .07 indicating a similarity of response between both groups. These leaders pay attention to each individual's need for achievement and growth by acting as coach or mentor. Followers are developed to successively higher levels of potential. New learning opportunities are created along with a supportive climate in which to grow. The interviewed principals discussed coaching and increased mentoring for teachers. They provided staff development to help staff to grow professionally in supportive environments.

Table 12

*Comparison of Means for Three Categories of Leithwood Model for Group “All Survey Respondents” with Group “Interview Respondents”*

Factors	<u>All Survey Respondents</u>		<u>Interview Respondents</u>		Difference
	N	Mean	N	Mean	
SETDIREC	112	3.37	6	3.73	.36
DEVEL	112	3.29	6	3.67	.38
REDESIGN	112	3.33	6	3.70	.37

In comparing means between the two groups ‘All Survey Respondents’ and ‘Interview Respondents,’ it is again noted that the latter group has higher means in each of the three categories, *Setting Direction*, *Developing People* and *Redesigning the Organization*. That difference was expected because of the results of the comparison of means for each of the factors of the Model. The factors are combined into the three categories, so it makes sense that the means would be different in the same direction as the earlier comparison.

During the analysis of the interviews, it was clear that the six principals exhibited the behaviors associated with each of the three categories. That is consistent with their survey results. The survey results indicate that the group ‘All Survey Respondents’ also practice behaviors consistent with the three categories of the Leithwood Model of Transformational Leadership.

This section compared the survey results of the principals who participated in the interviews with the group of all principals who participated in the survey. The researcher found that the interviewees as a group scored higher than the larger group in every factor of the Leithwood Model and in the three categories that comprise it.

A comparison was then made between the interviewees' survey results and the analysis of the interview questions. The researcher concluded that the survey data was consistent with the interview analysis. The six principals who participated in the qualitative portion of this study exemplify the behaviors consistent with the Leithwood Model of Transformational Leadership. The convergence of both types of data results in an affirmative answer to Question 4 of this study and its subquestions as follows:

Question 4: The behaviors associated with the Leithwood Model of Transformational Leadership and its three categories are common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress. The behaviors are fully described in Appendix B.

The next section will compare the leadership results determined above from both a quantitative and qualitative standpoint with the improvements in reading and math, attendance for middle and junior high schools, and graduation rate for high schools to answer Research Questions One, Two, and Three of this study.

To gather statistical information to address each of the research questions, the researcher conducted a survey of principals from Pennsylvania secondary schools who were considered to have higher than average poverty among their student bodies. The valid responses numbered 112. Data was entered into SPSS 13 and analyzed to determine to what extent they exemplified the Leithwood Model of Transformational

Leadership. Respondents who averaged a score of three in each of the six factors that make up the model were considered to embody the model. Leithwood (1994) and Leithwood et al. (1999) defined each factor and associated it with behaviors that were previously identified by organizational psychologist Podsakoff (1990) as consistent with Transformational Leadership. The behaviors were then assigned to three categories, Setting Direction, Developing People, and Redesigning the Organization. Each of the first three research questions in this study looked for a relationship between improvement in a component of adequate yearly progress as defined by the No Child Left Behind Act of 2002 and the Leithwood Model of Transformational Leadership and each of the three categories.

#### Research Question One

Question 1 asked: Is there a relationship between the Leithwood Model of Transformational Leadership in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments?

Pearson Product Moment correlations determined that there was no statistical relationship between improvement in math and/or reading and the Leithwood Model of Transformational Leadership or any of its three categories. The correlation coefficient between the Leithwood Model and Reading Change was .01. Between the Leithwood Model and Math change, the correlation coefficient was also .01. The Pearson Product Moment Correlation is based on a correlation of +1 or -1. Correlations equal to or close to 1 have a predictive value but do not predict cause or effect.

The coefficient between Reading Change and Setting Direction was -.01; between Reading Change and Developing People was .02; and between Reading Change and

Redesigning the Organization was .01. In all cases, there was no statistical significance. The relationship between each of the three categories and Math Change was similar and there was no statistical significance. The coefficient between Math Change and Setting Direction was .03; between Math Change and Developing People was .02; and between Math Change and Redesigning the Organization was .01.

After comparing survey results with interview results, it was clear that the six principals who participated in the interview exemplified the Leithwood Model of Transformational Leadership and each of the three categories. The Table below lists the Reading Change and Math Change for each of the six principals. For the principal who had recently changed schools, the data will represent his previous school. The researcher made this decision because the principal had presided over improving scores for several years in that location. He has only been at his current school for a matter of months. Therefore, his actions would have no scores that could be attributable to his presence.



Table 13

## Score Change and Points for Interviewed Principals

Principal	Reading Change	Math Change	Improvement Points (including 1 point each for Subgroups and participation)	AYP Status
1	- 5.90	- 1.40	- 3.56	No (Warning)
2	- 5.70	+ 5.20	+ 2.32	Yes (Progress)
3	+3.00	- 3.80	- 4.80	Yes
4	+5.60	+10.90	+21.64	Yes
5.	+2.50	- 1.50	+ 9.25	Yes
6	+6.60	+ 6.30	+13.65	Yes

Note. n = 6

The interviewed principals as a group showed an improvement in reading of 6.1 points. In math, they showed a larger growth of 15.7 points. The improvement points category includes the point values in reading, math, attendance, graduation, and one point each for subgroup improvement in math and in reading, for whole school participation improvement in math and in reading, and for subgroup participation in math and in reading. As a group, these six schools earned 38.50 improvement points. The two schools that suffered slight declines already had scores that were significantly higher than the target scores set by the Commonwealth. Slight fluctuations in scores can be attributed to chance alone, particularly when the scores are initially high. The interview

data and the information in Table 22 above does not completely align with the quantitative data which finds no statistically significant relationship between Transformational Leadership and improving scores; however, six is a very small group.

At this point, the third of the *interview* questions will be discussed, since it is pertinent to this question. The participants were asked:

*As a principal of a middle/high school, what specific challenges do you face regarding AYP?*

The first principal unhesitatingly replied: “Demographic makeup of the school. It is unfair to compare different buildings because they all drew different demographic straws. We have subgroups across the board.”

This particular urban building declined 5.9 points in reading and 1.4 points in math in the group All Students after working its way out of school improvement the previous year. The school tested 99.3% of the students and 100% of the subgroups. The following official subgroups are included in the population: Black, Latino/Hispanic, IEP, English Language Learners, and Economically Disadvantaged. The All Students’ scores in both math and reading are well above the target required by the Commonwealth for the 2006-07 testing year. The target score for reading was 54%. The target math score was 45%. The All Students group scored 72.1% in reading and 69.7% in math. Yet the school did not make AYP and their status is ‘Warning.’ The subgroups comprised of white students and black students both achieved their targets. The Latino/Hispanic group barely missed the target in reading with 53.3%. However, the IEP Special Education subgroup scored only 34.8% in reading and 36.2% in math. The English Language Learners subgroup reached the target in math, but scored only 29% proficient in reading. The scores of the

students in the subgroups can affect multiple subgroups and always affects the group All Students. This principal noted that the school continues to attract English Language Learners and IEP students at a rapid pace, a fact that causes the yearly scores to fluctuate more than would happen with a more stable population.

The second principal leads a school that is currently in school improvement. The group All Students regularly surpasses AYP in both reading and math at 66.2% and 70.8% and makes steady progress except for last year when they slightly declined in reading but increased in math. This school tested 98.3% of the All Students group and at least 97% of each subgroup.

“Our chief barrier is IEP students. Reading is the main problem.” That subgroup scored only 16.7% proficient in reading and 25.7% in math. During the past year, the group increased scores and earned the status of Making Progress. In addition to the IEP subgroup, the school has the Economically Disadvantaged subgroup. That group hit the target exactly in reading and surpassed it in math.

Principal three represents a school that he describes as “very rural.” The families are uneducated and poor, and many of them are single parent households. The principal proudly announced that his school made AYP every time. His scores surpass the targets in both subjects. The reading score was 74.4% and the math score was 66.5%. Reading increased slightly by the same margin that math declined, 3%. He stated that his biggest challenge is subgroups; however, this particular year, he had none at the 11<sup>th</sup> grade level. In a small high school where only one grade level is tested, the subgroup numbers fluctuate regularly. To improve the student performance in special education, the school

operates a total inclusion program, and the principal believes that it works. This school tested 99.1% of its students.

The fourth principal leads a large urban high school with more than 2,000 students. He reports that his challenge is the sheer number of subgroups that makes improvement so difficult. It is especially problematic for teacher morale because the district's other high school has no subgroups. He has to keep his teachers focused on the idea that: "This is us. This is our identity and don't pay attention to what the other school has." He reported that four years ago, the school had 65 English Language Learners and now they have 280. Those students' scores also affect several other subgroups. "Subgroups are our biggest challenge in meeting AYP, but there are a lot of really good teachers out there who are willing to go the extra mile to help the kids achieve the goal... Whatever it takes."

This school tested 99% of the group All Students. The majority of the subgroups had 100% participation rate. As a whole, the reading score was 73.7%, significantly above the target. The math score also exceeds the target at 65.2%. The scores increased significantly this year especially in math. Subgroups include Latino/Hispanic, IEP Special Education, English Language Learner and Economically Disadvantaged. The school opened this year facing the specter of a school improvement designation, but the majority of the subgroups achieved AYP as well as the All Students group to keep the school in good standing. The Black subgroup, however, scored only 41.2% in reading and 39.7% in math and did not achieve AYP. The English Language Learner subgroup did not receive a score because of data error.

The fifth principal spoke for two schools. At the first school, he was able to keep the scores in line with AYP. He was hired at his current school to bring it out of corrective action because they are one step away from being taken over by the state. Since he was at school number one for the entire testing time, it is their scores that are reported here. The school tested 98.2% of its students. Reading rose by 2.5 points to 74.1% and math declined by 1.5 to 55.7%. Notably, the Economically Disadvantaged group, the only official subgroup at the school for the year in question, raised reading scores by 15.2% and math by 8.9%. In all cases, the school made AYP. He reports that his biggest challenge at his current school is subgroups. This principal has an upward climb because the three subgroups at his new school, Black, IEP Special Education, and Economically Disadvantaged are all far below the target.

The sixth principal brought his school out of school improvement a few years ago through a concerted effort by dedicated staff. The school is suburban but lies on the fringe of a large city and deals with urban issues including poverty and crime. His biggest challenge is his special education group. The poverty rate for his feeder schools is over 65%, but his students do not like to fill out the paperwork for free and reduced lunches so the percentage appears to be lower than the actuality. The principal continued that this is a common problem in high schools. He also said that 18% of the students in his school have IEPs. However, the school has no official subgroups this year at the 11<sup>th</sup> grade level even though it is a relatively large high school. That yearly variation occurs because Pennsylvania only tests one grade level in high school. The school tested 98% of its students. The reading score was 57.1% which is above the target of 54%. The school scored 46.9% proficient in math which is slightly higher than the target of 45%.

All of the principals cited subgroup performance as their greatest challenge, and that is no surprise. The February 2008 issue of Title I Report cited data from the National Assessment of Title I, a study of the effects of No Child Left Behind. This study derived from a 2004-05 implementation study based on a nationally representative sample of 300 districts and 1,483 schools. The report stated that “Only about 21 percent of schools who missed AYP did so because of a single student subgroup. Nevertheless, among schools that were held accountable for the top five subgroups, more than one-fifth missed AYP targets for those subgroups. And, among both high and low poverty schools, the likelihood of a school missing AYP increased as the number of subgroups increased” (p. 10).

The six principals who participated in the interviews were chosen solely by transformational scores and demographics. Whether or not the school had shown improvement was not a consideration and, in fact, was not computed prior to the development of Table 22.

To explore Research Question One from still another perspective, the researcher rank-ordered all 112 cases on Excel spreadsheets according to leadership score (LEITHWD). The scores ranged from 4.00 to 2.50. The spreadsheet was then sorted separately by math change, by reading change, and by points. In separate calculations, score changes were summed and compared to the mean of the Leithwood Model to see if higher leadership scores could be related to higher scores in each of the three categories named above in a different way. The results follow.

For the first comparison, the group of 112 cases ranked by leadership score was divided into two equal groups. Math, reading, and improvement points were totaled for

each of the two halves and compared to the range of leadership scores that fell within the group represented.

Table 14

*Total Score Change Ranked by Leithwood Scores – Grouped by Halves*

	Top Half	Bottom Half
MATH	270.50	204.9
READ	113.40	22.90
POINTS	536.97	383.54
<i>TOTAL</i>	<i>920.87</i>	<i>611.34</i>
RANGE LEITH MATH	4.00 – 3.38	3.38 – 2.50
RANGE LEITH READ	4.00 – 3.38	3.38 – 2.50
RANGE LEITH POINTS	4.00 – 3.38	3.38 – 2.50

Note. n = 112

On Table 14, the higher total improvement is highlighted. It shows that Transformational Leaders from this group of principals with mean leadership scores ranging from 3.38 to 4.00 improved on the state test by a total of 920.87 points while the bottom half of the leaders improved by 611.34. The gap in math is significantly narrower than in reading and total points.

In this case, the higher scoring Transformational Leaders achieved 309.53 points more than principals with lower Transformational scores. Five of the six interviewed principals scored in the top range on their surveys. To investigate this phenomenon

further, the researcher performed the same calculations for the 112 cases further divided into four groups.

Table 15

*Total Score Change Ranked by Leithwood Scores – Grouped by Fourths*

	Group 1	Group II	Group III	Group IV
MATH	177.60	92.90	103.20	101.70
READ	115.90	-2.50	7.90	15.00
POINTS	368.74	168.23	193.87	189.67
<i>TOTAL</i>	<i>662.34</i>	<i>258.63</i>	<i>304.97</i>	<i>306.37</i>
RANGE LEITH MATH	4.00–3.63	3.63–3.38	3.38–3.08	3.08–2.50
RANGE LEITH READ	4.00–3.63	3.63–3.38	3.38–3.08	3.08–2.50
RANGE LEITH POINTS	4.00–3.63	3.63–3.38	3.38–3.08	3.08–2.50

Note.  $n = 112$

Table 15 clearly shows that Transformational Leaders with leadership scores in the range of 4.0 to 3.63 had significantly higher total improvement than those with lower leadership scores. The top leadership group achieved 662.34 improvement points while the second one-fourth achieved 258.63 points for a difference of 403.71. As expected



from the previous Table, the difference in math was less than the difference in reading and points, but it was still significant.

Interestingly, the difference between the two bottom groups was negligible but both of them outsourced Group II. Nevertheless, those with the highest mean leadership scores achieved the highest number of improvement points in this calculation. Visual inspection of the spreadsheets revealed that schools that had higher starting scores in 2006 appeared to have less improvement than schools with initial low scores. This inspired the researcher to calculate one more set of correlation coefficients to address the difference between the findings of Table 8 which found no statistically significant relationship between leadership style and improvement in math and reading, and the results discussed in Tables 15 and 16. Correlation coefficients were calculated to look for a possible relationship between starting score and improvement for both reading and math.

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Table 16

*Correlations of Initial Scores and Reading Change*

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	READ06
READ CHANGE	
r	-.517**
p-value	.000
N	112

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\*\* . Correlation is significant at the .01 level (2-tailed).

This Table indicates that there is a statistically significant negative relationship between Reading 06, which is the starting point for the comparison, and Read Change, which reflects the number of points of improvement between 2006 and 2007. This means that as the beginning reading score increases, the number of improvement points decrease.

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Table 17

*Correlations of Initial Scores and Math Change*

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	MATH06
<hr/>	
MATH CHANGE	
r	-.439**
p-value	.000
N	112

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\*\* . Correlation is significant at the .01 level (2-tailed)

Table 17 indicates that there is a statistically significant negative relationship between Math 06, the starting point for the comparison, and Math Change, which reflects the number of points of improvement between 2006 and 2007. This means that as the beginning math score increases, the number of improvement points declines. The results shown in Tables 15 and 16 point to a weakness in this study. Starting scores were very different for the participating schools. Like the law of diminishing returns in the field of economics, the number of improvement points diminishes as the starting point rises.

The first research question asks if there is a relationship between the Leithwood Model of Transformational Leadership and each of its three categories in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments. The answer is unclear. Correlational coefficients clearly indicate that there is no statistically significant linear relationship between the two conditions. As leadership scores increase, we cannot say with confidence that performance scores improve in the same direction. Tables 15 and 16 above show that in this particular group of 112 Pennsylvania principals, those whose survey results rank them as highly Transformational on the Leithwood scale clearly outscore those with lower Transformational scores in reading, in math, and in total improvement points.

While it appears from those calculations that there is a relationship between the principals with high leadership scores and AYP improvement, it cannot be overlooked that both the third and fourth quarters of Transformational Leaders outscored the second quarter. Perhaps chance alone related the highly transformational group with the highest improvement scores for this particular population or perhaps one cannot say that leadership is a factor in student improvement.

The interviewees as a group improved in math, reading and improvement points, but not every one of the six schools improved and starting point was a factor here as well. The responses to the third interview question discussed above make it clear that improvement is not static nor is the make up of a student population in any given year. The principals spoke about the negative effect the subgroups had on their scores, and that opinion received support from the National Assessment of Title I cited in the February 2008 issue of Title I Report.

Finally, it became clear from Tables 17 and 18 that the starting score matters a great deal when counting improvement points. The researcher concluded that there are more factors than leadership alone that contribute to improving or declining scores. These results cannot be generalized to any other group nor can we say with confidence that Transformational Leadership is related to improving scores.

#### Research Question Two

Research Question Two asked: Is there a relationship between the Leithwood Model of Transformational Leadership and each of its three categories in principals of low socioeconomic middle or junior high schools and improvement in attendance? To investigate this phenomenon, the researcher split cases from the data set by grade level using SPSS 13. Respondents to the survey who indicated that their highest grade was not a graduating class were included in examining this question. There were 12 principals who met this criterion. The Table below describes them statistically.

Table 18

*Descriptive Statistics of Transformational Leadership—Interviewees*

Factors	Mean	Median	Mode	Std. Dev.	Min	Max	Range
IDINFLAT	3.21	3.13	2.75	.44	2.75	4.00	1.25
IDINFLBE	3.42	3.50	3.50(a)	.58	2.25	4.00	1.75
INSPMOT	3.59	3.50	4.00	.38	2.75	3.75	1.00
INTELSTIM	3.35	3.50	3.75	.41	2.75	3.75	1.00
INDVCONS	3.40	3.25	3.25	.46	2.75	4.00	1.25
CONTREW	3.60	3.75	4.00	.41	3.00	4.00	1.00
LEITHWD	3.43	3.52	2.83(a)	.34	2.83	3.83	1.00
SETDIR	3.49	3.58	3.39(a)	.35	2.88	3.85	.97
DEVEL	3.40	3.48	2.75(a)	.37	2.75	3.80	1.05
REDESIGN	3.43	3.52	2.83(a)	.34	2.83(a)	3.83	1.00

Note: n = 12

a. Multiple modes exist. The smallest value is shown.

Table 18 describes the extent to which 12 principals of low-socioeconomic secondary schools whose highest grade is eight perceive themselves to embody the six factors that make up the Leithwood Model of Transformational Leadership and its three categories. The principals responded to 45 questions by means of a five-point Likert scale ranging from zero to four. A selection of zero was described as “not at all” while a

score of four means “frequently, if not always.” Scores for each item fully described in Table 9 were averaged to result in a mean score for each factor of the Model. Those scores were then averaged to get a composite score for the Leithwood Model of Transformational Leadership. Leithwood (1994) and Leithwood et al. (1999) organized Transformational Leadership behaviors described by Podsakoff (1990) and fully described in Appendix B into three categories, Setting Direction, Developing People, and Redesigning the Organization as shown in Table 16. A mean score of three, “fairly often,” indicated that the principal was Transformational and perceived himself to exhibit the behaviors consistent with the three categories.

Using SPSS 13, measures of central tendency and variability were computed for each factor, for the Leithwood Model, and for each of its three categories. Standard deviations were also computed for each variable.

Data analysis confirmed that the 12 participants were transformational in each of the six factors with one exception. The modal score for Idealized Influence Attributes (IDINFLAT) was 2.75, which is below the score of 3 that indicates adherence to the Model. In all three measures of central tendency, IDINFLAT was lower than the remaining factors. The Attributes of Idealized Influence describe leaders who are admired, respected and trusted. They consider followers’ needs over their own and share risks with followers. They operate with underlying ethics, principles, and values.

This group strongly embodied the factor of Contingent Reward (CONTREW) with a mean score of 3.60, a median of 3.75, and a modal score of 4.00. This group of principals relied heavily on rewards that were attached to performance to elicit buy-in from their faculties. Scores for Inspirational Motivation (INSPMOT) were high as well. The

median for INSPMOT was 3.60, the median score was 3.50, and the modal score was 4.00. Leaders who exhibit Inspirational Motivation are motivators who tend to arouse team spirit in their teachers. They display enthusiasm and optimism and frequently talk about visions of what can happen if everyone works together.

How strongly do these 12 principles embody the Leithwood Model and its three categories? The mean score was 3.43 and the median score was 3.52 indicating strong adherence to the Model. The modal score was 2.83. However, multiple modes existed and the score shown, 2.83, is the smallest of them. Scores ranged from a high of 3.83 to a low of 2.83. As expected, the scores for each of the three categories did not vary significantly from the scores for the Model itself except for Setting Direction. Scores were highest for this category. The mean was 3.49, the median was 3.58, and the mode was 3.40. Again, the modal score shown is the smallest of multiple modes. The category Developing People was lower than the other categories and the Model, but with a mean of 3.40 and a median of 3.48, it strongly indicates that this group of principals embodied the behaviors associated with Developing People. Table 11 attributes 118 instances of behaviors from Developing People mentioned in the interviews.

This information reflects a very small group of principals, and the interviewed group was representative of that fact. Two principals who led middle or junior high schools were interviewed to ascertain whether they embodied the attributes of the Leithwood Model. As described earlier in this chapter, all six interviewed principals did reflect the Model. The two individuals representing the middle level had scores of 3.5 and 4.0 on their surveys. They both scored four on the factors Contingent Reward and Inspirational Motivation which is consistent with the data above. During the interviews, each of them

spoke about creating a team spirit and motivating their faculties with sports metaphors. They used rewards systems for high performance for both students and teachers. Again, this is consistent with the quantitative data presented above.

The above information establishes that this small group of 12 principals exhibits and embodies the characteristics of Transformational Leadership described by Leithwood et al. (1994, 1999). To examine whether there is a relationship between the Leithwood Model of Transformational Leadership in middle or junior high school principals of low socioeconomic schools and improvement in attendance, the researcher calculated Pearson correlation coefficients using SPSS 13 to determine the degree of linear relationship between the variables Leithwood Model (LEITHWD), Setting Direction (SETDIR), Redesigning the Organization (REDESIGN), and Attendance. Together, these make up question two and each of the corresponding subquestions of this study.

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Table 19

*Correlations of Leithwood Model, Its Categories, and Attendance*

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	LEITHWD	SETDIR	DEVEL	REDESIGN
<hr/>				
ATTENDANCE				
r	-.46	-.38	-.51	-.46
p-value	.13	.23	.09	.13

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*Note.* n = 12



The Pearson Product Moment Correlation ( $r$ ) is based on a relationship of +1 or -1. If the relationship is equal to either of these values, there is a perfect correlation. High correlations have predictive values, but there is no cause and effect relationship implied. The correlation coefficients ( $r$ ) in Table 20 above indicate a negative correlation. That means that as one variable increases, the other decreases. None of the  $p$ -values were statistically significant. It would appear then that for this group of 12 Transformational Leaders, there is no relationship between the Leithwood Model, its three categories, and attendance improvement in schools whose highest grade is eight. As stated earlier, this is a very small sample, and results cannot be generalized to any other population.

Data from the website <http://www.paayp.com> that provides AYP data from the Pennsylvania Department of Education indicates that both of the schools led by the principals from the middle level who participated in the interviews experienced slight declines in attendance. School one declined by .23 and the second school declined by .15. It must be noted that both schools achieved very high attendance rates of 93.14 and 94.23 respectively. At such high attendance levels, small variations can be explained by chance alone. To further develop this concept, descriptive statistics were run for 2006 Attendance, the starting point for this study. Table 21 below fully describes the attendance at the 12 schools in question.

Table 20

*Descriptive Statistics of Attendance*

Variable	Mean	Median	Mode	Std. Dev.	Min	Max	Range
Attendance 2006	94.12	94.18	92.92	.81	92.92	95.84	2.92

Note. n = 11

Table 20 corroborates the idea that scores were high at the starting point. A minimum attendance rate of 92.92. leaves little room for improvement. Normal fluctuations are expected and cannot be attributed to leadership style. Data from the Pennsylvania Department of Education listed NA for both attendance and AYP for one of the schools in 2006. Therefore, the data above is derived from only 11 schools. This is too small a sample from which to develop any other conclusions. These results cannot be generalized to any other population.

Through data analysis, the researcher determined that the 12 principals who are in charge of schools without graduating classes embody the characteristics of the Leithwood Model of Transformational Leadership and each of its three categories. The two principals from this group who participated in the interviews exhibit the Model at a rate that is similar to the whole group. Analysis of data that looked for a relationship between these 12 principals as Transformational Leaders and improvement in attendance in response to Research Question Two of the study showed that no such relationship existed. It also showed that attendance was high to begin with allowing little room for improvement no matter what leadership style was practiced at the schools. It was also

noted that the group was very small, so the results of this section of the study could not be generalized to any other population and cannot provide a clear answer to the research question.

### Research Question Three

Research Question Three asked: Is there a relationship between the Leithwood Model of Transformational Leadership and each of its three categories in principals of low socioeconomic high schools and improvement in four-year graduation rate? To investigate this phenomenon, the researcher split cases from the data set by school level using SPSS 13. Respondents to the survey whose schools had a graduating class were included in examining this question. There were 100 principals included in this section. Table 21 describes them statistically.

Table 21

*Descriptive Statistics of Transformational Leadership—High School Principals*

Factors	Mean	Median	Mode	Std. Dev.	Min	Max	Range
IDINFLAT	3.28	3.25	3.25(a)	.55	1.75	4.00	2.25
IDINFLBE	3.42	3.50	3.75	.45	2.00	4.00	2.00
INSPMOT	3.52	3.25	3.50	.50	2.00	4.00	2.00
INTELSTIM	3.22	3.25	3.50	.50	2.00	4.00	2.00
INDVCONS	3.25	3.25	3.25	.46	1.75	4.00	2.25
CONTREW	3.21	3.25	3.50	.58	1.25	4.00	2.75
LEITHWD	3.32	3.33	3.00(a)	.36	2.50	4.00	1.50
SETDIR	3.35	3.39	3.44	.36	2.28	4.00	1.72
DEVEL	3.28	3.35	3.70	.38	2.26	4.00	1.74
REDESIGN	3.32	3.33	3.00(a)	.36	2.50	4.00	1.50

Note. n = 100

a. Multiple modes exist. The smallest value is shown.

Table 21 describes the extent to which 100 principals of low-socioeconomic high schools perceive themselves to embody the six factors that make up the Leithwood Model of Transformational Leadership and its three categories. The principals responded to 45 questions using a five-point Likert scale ranging from zero “not at all,” to four “frequently, if not always.” Scores for each item fully described in Table 14 were

averaged to result in a mean score for each factor of the Model. Those scores were then averaged to get a composite score for the Leithwood Model of Transformational Leadership. Leithwood et al. (1994, 1999) organized Transformational Leadership behaviors described by Podsakoff (1990) and fully described in Appendix B into three categories, Setting Direction, Developing People, and Redesigning the Organization as shown in Table 16. A mean score of three, “fairly often,” indicated that the principal was Transformational and perceived himself to exhibit the behaviors consistent with its three categories.

Using SPSS 13, the researcher computed measures of central tendency and variability for each factor, for the Model as a whole, and for each of the three categories. Data analysis revealed that the 100 principals in this group were Transformational Leaders. Across the six factors, means ranged from a low of 3.21 for Contingent Reward (CONTREW) to a high of 3.53 for Inspirational Motivation (INSPMOT). The means were fairly consistent across the factors except for INSPMOT. Median scores ranged from 3.75 for INSPMOT and 3.50 for Idealized Influence Behaviors (IDINFLBE) to a score of 3.25 for the remaining four factors. Modal scores ranged from a low of 3.25 for Idealized Influence Attributes (IDINFLA) and Individualized Consideration (INDVCONS) to a high of 4.00 for INSPMOT. For the Model itself, the mean score was 3.32, the median was 3.33 and the mode was 3.00 (the lowest of multiple modes). The means and medians for each of the three categories were consistent. The modes ranged from 3.00 (the lowest of multiple modes) to a high of 3.70.

The range in scores was significant for IDINFLAT, INDVCONS, and especially for CONTREW. Participants’ responses ranged from a mean score of 1.25 to 4.00 for the

items that measured CONTREW. The particular item that elicited several low scores was “I provide others with assistance in exchange for their efforts.” Several individuals wrote in comments such as “not in exchange for” indicating that there were some who may have interpreted that item to mean that they did not assist everyone who needed it. The other two factors with notable difference of responses, IDINFLAT and INDVCONS, ranged from 1.75 to 4.00 for a range of 2.25.

The Table above gives evidence that this group of 100 high school principals perceive themselves to embody the behaviors and attributes consistent with the Leithwood Model of Transformational Leadership.

This information was compared to identical data for the four high school principals who participated in interviews to ascertain whether they practiced behaviors consistent with the Model. As described earlier in this chapter, all of the interviewed principals did exemplify the Model. Their leadership scores were 3.21, 3.71, 3.88 and 4.00. Oddly, the principal whose responses most readily corresponded with behaviors associated with the Model responded to the questionnaire in such a way that he achieved the lowest score of the sample. He also achieved the most growth in AYP. While his plethora of subgroups have his school on the brink of sanctions, his scores in the All Students group are well above the goal set by the state in all three areas (math, reading, and graduation rate). The principal who received a 4.00 improved by nearly as many points as the school mentioned above, but his All Students scores are only slightly above the state goal. This principal also described behaviors and practices that were clearly transformational.

The above information establishes that this group of 100 principals exhibits and embodies the characteristics of Transformational Leadership described by Leithwood

(1994) and Leithwood et al. (1999). To examine whether there is a relationship between the Leithwood Model of Transformational Leadership in high school principals from schools with low socioeconomic student populations and improvement in four-year graduation rate as mandated by the No Child Left Behind Act of 2002, the researcher next calculated Pearson correlation coefficients using SPSS 13 to determine the degree of linear relationship between the variables Leithwood Model (LEITHWD), Setting Direction (SETDIR), Redesigning the Organization (REDESIGN), and Graduation Rate. Together, these make up question three and each of the corresponding subquestions of this study.

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Table 22

*Correlations of Leithwood Model, Its Categories, and Graduation Rate*

	LEITHWD	SETDIR	DEVEL	REDESIGN
<hr/>				
GRADUATION				
r	.07	.12	.08	.07
p-value	.48	.24	.44	.48

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*Note.* n = 100

The Pearson Product Moment Correlation (r) is based on a relationship of +1 or -1. If the relationship is equal to either of these values, there is a perfect correlation. High correlations have predictive value, but there is no cause and effect relationship implied. The correlation coefficients in Table 23 above indicate that there is no statistically

significant relationship. None of the p-values were statistically significant. For this group of 100 Transformational Leaders, there is no relationship between the Leithwood Model of Transformational Leadership, its three categories, and four-year graduation rate in schools that have a graduation class. To generalize these results to a larger population of low socioeconomic schools, a much larger sample would be required.

Data from the website <http://www.paayp.com> that provides AYP data from the Pennsylvania Department of Education indicates that each of the four schools represented in the interviews experienced declines in four-year graduation rate. This decline ranged from a low of .83 to a high of 3.97. It should be noted that the school with the largest decline achieved a graduation rate of 92.86%, a figure well above the state goal of 80%. Such declines in high performing schools can occur by chance alone. This fact is supported by one of the schools that declined by 2.25. That school's graduation rate was 94.52%. To investigate this phenomenon further, descriptive statistics were run for Graduation 2006. Table 23 describes graduation rates for 2006.

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Table 23

*Descriptive Statistics for Graduation Rate 2006*

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Variable	Mean	Median	Mode	Std. Dev.	Min	Max	Range
Graduation 2006	88.71	89.13	78.77	7.83	47.66	100	52.34

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*Note.* n = 100



Table 23 shows 2006 graduation rates for 100 schools. The mean was 88.71 which is relatively high. The modal score of 78.77 indicates the need for improvement since it is below the state goal of 80%. The minimum percentage of 47.66 and the maximum of 100 show great disparity. To further examine this concept relative to improvement in graduation rate, the researcher calculated correlation coefficients to see if improvement was related to beginning scores.

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Table 24

*Correlations of 2006 Graduation Rate with Percentage of Change*

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GRADUATION 2006	
GRADUATION CHANGE	
r	-.383**
p-value	.000
N	100

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\*\* . Correlation is significant at the .01 level (2-tailed)

Table 24 indicates that there is a statistically significant negative relationship at the .01 level between the beginning graduation rate in 2006 and the rate of change between 2006 and 2007. That means that as the beginning point rises the rate of improvement declines. As indicated earlier, this points to a weakness in this study. One notes from the descriptive information that starting points varied greatly for these 100 schools. This

prevents the researcher from determining whether or not there is a relationship with the Transformational Leadership model which is the focus of this study.

The data discussed above indicates that the 100 principals who lead high schools embody the characteristics of the Leithwood Model of Transformational Leadership and each of its three categories. The four principals who participated in the interview process exhibited the Model as well. Analysis of data that looked for a relationship between this group of principals as Transformational Leaders and improvement in four-year graduation rate in order to respond to Research Question Three of this study shows that no such relationship existed. Descriptive data and correlation coefficients for the 2006 school year proved that starting points varied significantly for this group of principals and that as the beginning score increased, the rate of improvement decreased. Therefore, one cannot say with confidence that Transformational Leadership is or is not related to improved four-year graduation rate. This is a matter for further study. These results cannot be generalized to any other group.

### Summary

This chapter attempted to answer the four research questions that frame this study by presenting and discussing both quantitative and qualitative data. The data came from two sources:

- The researcher administered the Multifactor Leadership Questionnaire to 112 principals of high poverty Pennsylvania secondary schools; and
- Six of those principals participated in an interview.

Of the 265 surveys mailed, 132 were returned. Those surveys were scored, and data was entered into SPSS 13 for analysis. Principals whose schools showed no

improvement in any category related to the adequate yearly progress mandate of the No Child Left Behind Act of 2002 were eliminated from the study. Twenty surveys were removed leaving 112 cases for analysis. There remained 12 middle/junior high school principals and 100 high school principals.

The MLQ employed a five-point Likert scale ranging from zero to four to measure the extent to which the principals perceived themselves to exhibit six factors of the Leithwood Model of Transformational Leadership, the Model as a whole, and three categories into which the relevant behaviors were sorted, Setting Direction, Developing People, and Redesigning the Organization.

Descriptive statistics were analyzed for each of the six factors and for the composite score of the Model itself. The mean scores for each factor indicated that this group of principals embodied the behaviors consistent with the Leithwood Model of Transformational Leadership. Across the six factors, mean scores ranged from a low of 3.23 to a high of 3.53. This was important because Leithwood wrote that to be a Transformational Leader, one must practice all dimensions to some degree (1994, 1999). The composite mean for the Model itself was 3.33. For the purposes of this study, a mean score of three was considered to indicate a Transformational Leadership style.

Next, Pearson Product Moment Correlations were calculated to determine the degree of linear relationship between the variables. There was no statistically significant relationship between the Leithwood Model of Transformational Leadership and reading change, math change, and points.

Correlation coefficients were then calculated for the variables attendance and graduation rate. Twelve principals of schools with eight as the highest grade were

responsible for attendance. The remaining 100 principals led schools with graduating classes so they were responsible for graduation rate. There was no statistically significant relationship between the leadership style and either of the variables just named. The researcher posited that these were small groups, especially the attendance group, so there was no predictive value to the results.

The next section of this chapter presented the qualitative data. Six principals participated in an interview guided by 18 open-ended questions that can be found in Appendix D. The principals represented a diverse population that included both genders with two representatives each from the western, the central, and the eastern portions of the state. They came from large, medium and small schools from urban, suburban, and rural communities. Their experience varied from 2.5 years in the position to long-time veterans.

Their responses to the questions were compared with the Podsakoff (1990) behaviors found in Appendix B. The discussions led the researcher to determine that these individuals clearly practiced behaviors consistent with the Leithwood Model of Transformational Leadership. In fact, 252 of the behaviors were counted for this group.

Interview responses were compared and contrasted with survey results to examine Research Question Four. First, means were compared for two groups All Survey Respondents, and Interview Respondents. As expected, the group Interview Respondents had higher means in every factor, since Transformational Leadership score was one of the criteria for their selection. A similar comparison was then performed between the same two groups and Setting Direction, Developing People, and Redesigning the Organization.

The Interview Respondents scored higher than the group All Survey Respondents. This was expected for the same reason.

The researcher then compared the interview group's survey responses with their interview responses. The data was determined to be consistent. The convergence of both types of data results in an affirmative response to Research Question Four as follows:

The behaviors associated with the Leithwood Model of Transformational Leadership are common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress.

The next section of this chapter was headed: *Triangulation of Data: A Response to the Research Questions*. Research Question One asked: Is there a relationship between the Leithwood Model of Transformational Leadership in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments? Table 8 in the quantitative section established that for the group as a whole there was no statistically significant relationship between those variables, so the next step was to look at math, reading, and improvement points for the six Transformational Leaders who participated in the interview. That information was reported in Table 14. This small group showed a 6.1 point improvement in reading and growth of 15.7 points in math. They earned 38.50 improvement points. It was noted that not all six schools improved and two suffered slight declines. The researcher noted that the two schools with declines already had scores significantly higher than the target scores set by the Commonwealth. Randomization normally causes some fluctuation in scores. When the scores are high at the start, there is less room for growth. This data is inconsistent with

the correlation coefficients for the large group. The researcher noted that the interviewed group numbered only six. Inferences cannot be made from such a small group.

The researcher then examined this question from another perspective. Data was saved to an Excel spreadsheet and ranked by leadership score from high to low. Next, it was sorted by math improvement and the cases were divided in half with the higher leadership scores on the top half and the lower leadership scores on the bottom. Math scores were summed for each group with the result that the higher leaders scored significantly more points than the lower leaders. The same steps were taken for reading and improvement points. In each case the result was the same.

Next, the researcher performed the same exercise, but this time the leaders were divided into four groups. Again, the highest group of leaders outscored the lower groups by significant margins. This time, however, the third and fourth quarters of leaders outscored quarter two. Because of that fact, the researcher concluded that the results might have been due to chance alone or circumstances outside the scope of this study and could not be generalized to another population. After visually examining the spreadsheets, the researcher noticed that many of the schools with great gains started out at a lower point. Conversely, it appeared that schools with modest gains or even losses had higher scores in 2006. This led the researcher to perform one more calculation. Correlation coefficients were run to examine a correlation between high starting scores and improvement. There was a statistically significant negative correlation at the .01 level between the two variables as expected. This means that as beginning scores rose, improvement points declined. The researcher determined that failure to address this phenomenon was a weakness of this study and a potential topic for further study.

To paint a clearer picture of the issue of leadership and AYP improvement, interview question three was discussed next: *What specific challenges do you face regarding AYP?* These individuals pointed to subgroups as their major concern. Statistics specific to each of the six schools were analyzed regarding subgroup performance and AYP status revealing that schools with very high scores in the All Students group faced NCLB consequences to a greater extent than lower scoring schools when they had official subgroups that were not achieving. It also revealed that because Pennsylvania only tests one grade in high school, the presence or absence of a particular subgroup sometimes changed year by year. A major research study recently reported in Title I Report (2008) gave credence to this worry with the information that "...the likelihood of a school missing AYP increased as the number of subgroups increased" (p. 10).

Looking at the first Research Question from these different perspectives resulted in an inconclusive response. The researcher opined that although the results for the interviewed group were slightly different than the results of the All Respondents group, it cannot be said with confidence that test scores improve in the same direction as leadership scores. In attempting to explain the results from Tables 15 and 16, the researcher concluded that while it might be tempting to draw a conclusion that when the group is ranked by leadership score and test scores are summed at intervals, higher scoring Transformational Leaders outperform those with lower leadership scores, that assumption is clouded by the results of Table 16. In that case, the same group was divided into quarters. While the quarter with the highest leadership scores clearly outscored the remaining three groups, the second quarter scored below quarters three and four. The researcher concluded that more than leadership style affects the number of

improvement points. The beginning score also limits it. Schools whose scores are already high are less likely to improve by a large number of points than schools that are at the low end of the target. It cannot be said with confidence that Transformational Leadership is a factor in student improvement. These results cannot be generalized to any other group.

Research Question Two asked: Is there a relationship between the Leithwood Model of Transformational Leadership and each of its three categories in principals of low socioeconomic middle or junior high schools and improvement in attendance? The researcher split the survey response cases to limit this group to the 12 principals who led schools with eight as the highest grade level. The interview group was split the same way with two principals meeting that criterion. For the group of 12, a mean score of 3.43 indicated the composite score for the leadership style. Their respective mean scores for the two interviewed principals were 3.50 and 4.00. Both the group as a whole and the interviewed group for this Research Question were very small, so it cannot be generalized that middle school principals practice Transformational Leadership to a greater extent than all secondary principals.

Having established that this particular group of principals, however, was highly transformational, the researcher calculated correlation coefficients for the variable Attendance to see if there was a relationship to the leadership style. There was no statistically significant relationship between the two variables. The direction, in fact, was negative. Both of these facts are consistent with the two schools that participated in the interview. Each of them had high transformational scores and each of them experienced slight declines in attendance at .23 and .15 respectively. It was noted that both schools



already had very high attendance rates of 93.14 and 94.23. Small variations can be attributed by chance alone. High starting scores reduce the likelihood of achieving large gains. To further investigate this finding, the researcher presented descriptive statistics for Attendance 2006, the starting point of this study. Analysis of these statistics confirmed that attendance for the 12 schools in question was very high indeed with a mean of 94.12. In fact, the lowest attendance rate for the 12 schools was 92.92. Such a high percentage leaves little room for improvement no matter what leadership style is practiced at the school

This data resulted in an unclear response to Research Question Two. It cannot be said with confidence that there is or is not a statistically significant relationship between the Leithwood Model of Transformational Leadership and each of its three categories in principals of low socioeconomic middle/junior high schools and attendance. Again, it must be noted that this group was very small indeed and attendance was very high to begin with so results cannot be generalized to any other group.

Research Question Three asked: Is there a relationship between the Leithwood Model of Transformational Leadership and each of its three categories in principals of low socioeconomic high schools and improvement in four-year graduation rate? Data for this section focused on the 100 high school principals who responded to the survey. Descriptive statistics confirmed that this group embodied each of the factors and categories of the Leithwood Model of Transformational Leadership. The composite mean for the Leithwood Model was 3.32.

The mean leadership score of the group All Respondents was compared with the individual scores of the four high school principals who participated in the interview.

Those scores were 3.21, 3.71, 3.88 and 4.00. Interestingly, the principal whose interview responses most reflected the behaviors of the Model received the lowest survey score of this group. That principal also achieved the largest number of improvement points in the interviewed group.

Having established that these 100 principals as a group met the criteria for Transformational Leadership, the researcher next calculated correlation coefficients for the variables Graduation Rate, Leithwood Model, Setting Direction, Developing People, and Redesigning the Organization. The results proved that there is no statistically significant relationship between the Model, its three categories, and Graduation Rate. When comparing this result to the graduation rate improvement of the four principals who participated in the interview, it was noted that each of the four schools experienced a slight decline from a low of .83 to a high of 3.97 points. The school with the largest decline had already achieved a graduation rate of 92.86%, a figure well above the state goal. The second-largest decline, 2.25 points, occurred in a school whose rate was also high at 94.52%.

Descriptive statistics were run to examine 2006 Graduation rate. The mean for 2006 was 88.71 which appears to be high. However, the scores ranged from a low of 47.66% to a high of 100%. The modal score was only 78.77% which is below the state goal of 80%. To examine whether graduation improvement was affected by starting percentage, the researcher calculated correlation coefficients. There was a statistically significant negative relationship at the .01\*\* level showing that as initial percentages rose, improvement declined. This is consistent with the results for Research Question One and Research Question Two. The interview results supported the statistical results.

However, in response to Research Question Three, it also cannot be said with confidence that there is or is not a relationship between the Leithwood Model of Transformational Leadership and each of its three categories in principals of low socioeconomic high schools and improvement in four-year graduation rate.

Triangulation of the data for this study revealed that there are more factors involved in meeting AYP and improving scores than leadership alone. The starting point of the comparison is one factor, and that is a weakness of this study. The other factor is the presence or absence of subgroups. Both of these factors affect schools that do not have low socioeconomic populations as well as those that do. However, subgroups are present to a greater degree in large high schools with low socioeconomic populations. Therefore, school size can be considered a third factor. The final chapter of this study will analyze and discuss the findings and draw implications from the study.

## CHAPTER V

### CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

The purpose of this study was to examine the relationship between the Leithwood model of Transformational Leadership present in the practice of Pennsylvania principals of secondary schools with high concentrations of poverty and student achievement of adequate yearly progress on the Pennsylvania System of State Assessments (PSSA) in math and in language arts. It also measured the relationship between that leadership model and student attendance and four-year graduation rate in high schools.

The No Child Left Behind Act of 2002 mandated that all students would participate in rigorous state assessments and demonstrate proficiency in math and reading by the year 2014. Each state developed its own definition of proficiency, its own definition of adequate yearly progress (AYP) towards that goal, and two additional factors.

Pennsylvania chose an increase in four-year graduation rate at the high school level and improved attendance for schools that do not have graduating classes as the two measures. Schools were also required to demonstrate that at least 95% of eligible students participated in the assessments. Failure to achieve AYP for two consecutive years results in increasingly serious consequences for the school.

Issues external to the school can complicate attainment of AYP. The literature is clear that students from a low socioeconomic background frequently struggle in school (Coleman, 1966; Kaestle et al., 1991; Barton, 2003; Payne, 2001; Gershoff, 2003; Utne, 2001; McNeal, 2001; Feuerstein, 2000). Studies by McLeod (2000) and Lippman, Burns & McArthur (1996) determined that the poverty effect on student achievement was

related more to concentrations of poverty in a school rather than individual conditions of poverty. In other words, as the school's level of poverty rises, the achievement of its economically disadvantaged students decreases. The schools in this study had concentrations of poverty at the level of at least 30%.

The No Child Left Behind Act also holds schools accountable for subgroups of 40 or more students whose records indicate that they are from families with low socioeconomic status and seven additional subgroups including students with disabilities, students with limited English proficiency, and students from major racial or ethnic backgrounds. Each subgroup must achieve the same level of proficiency as the entire school. The consequences that attach to the All Students Group apply to the entire school if any subgroup fails to meet AYP (Pennsylvania Department of Education, 2003). Schools with low concentrations of students in these groups are not accountable for subgroup performance. Small schools and those located in higher income suburban areas are examples of such schools.

It follows that schools with one or more subgroups of students who struggle to reach AYP must restructure to increase their capacity to meet the demands of No Child Left Behind or face the consequences that begin with school choice and end with closing or otherwise restructuring the school. As noted above, poverty is one such subgroup.

The literature strongly suggests that the school principal is the key to successful restructuring (Brookover & Lezotte, 1979; Edmonds, 1979; Teddlie & Stringfield, 1993; Osterman & Crow, 1997; Hallinger & Heck, 1996; Leithwood, 1994; Leithwood & Jantzi, 1994; Leithwood, Jantzi & Steinbach, 1999; Leithwood, Louis, Anderson & Wahlstrom, 2004). Leithwood (1994) and Leithwood Jantzi and Steinbach (1999)

developed and refined a model of Transformational Leadership for principals that they posit is the most effective leadership model for restructuring secondary schools in the context of the No Child Left Behind Act of 2002. In that model, Transformational Leadership characteristics and behaviors were grouped into three main categories: Setting Direction, Developing People, and Redesigning the Organization.

Responses to the self-rater form of the Multifactor Leadership Questionnaire, Form 5x-Short (Bass & Avolio, 1995) measured the extent to which 112 principals who responded to the survey perceived themselves to embody and exhibit the six dimensions of leadership that are requisite to the Leithwood Model of Transformational Leadership. Twelve principals led schools that were responsible for attendance, and 100 were high school principals responsible for improved four-year graduation rate. A selected response item on the survey asked respondents if they were willing to take part in an interview. Six principals representing a variety of demographics were chosen to participate. That choice was based on the selected response item on the survey, their score results indicating that they were Transformational leaders, and demographics representative of the whole population.

Quantitative and qualitative data were measured and triangulated to address the following research questions:

Question 1: Is there a relationship between the Leithwood Model of Transformational Leadership in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments?

Question 2: Is there a relationship between the Leithwood Model of Transformational Leadership in principals of low socioeconomic middle or junior high schools and improvement in attendance?

Question 3: Is there a relationship between the Leithwood Model of Transformational Leadership in the principals of low socioeconomic high schools and improvement in four-year graduation rate?

Question 4: Are the behaviors associated with the Leithwood Model of Transformational Leadership common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress? The behaviors are fully described in Appendix B.

Descriptive statistics indicated that, as a group, the 112 principals who responded to the survey exhibited the factors of Transformational Leadership. This was not surprising because all of the schools surveyed have high percentages of students with low socioeconomic backgrounds. The research cited previously indicates that low-income students struggle with achievement of AYP. It follows that all of these schools would be in a state of restructuring to some degree. The Leithwood (1994) and Leithwood et al. (1999) research is clear that Transformational Leadership is the most effective in that context of restructuring.

### Results of Data Analysis

Both quantitative and qualitative methodologies were employed to address the four research questions. Quantitative measures included descriptive statistics, Pearson Product Moment correlations, and spreadsheet analyses. Qualitative information was obtained from meetings with six principals who agreed to participate in an interview

based on 18 open-ended questions closely related to the survey items that can be found in Appendix D.

### *Discussion of Demographic Data and Survey Results*

Descriptive statistics revealed that 100 of the respondents led high schools and 12 led secondary schools without graduating classes that could best be described as middle or junior high schools. Of the group 81.3% held the position of principal at their current buildings for two years or more. The majority (46%) served from two to five years. The average student population ranged from 500 to 599 students. The six schools represented in the interviews ranged from 500 to more than 2,000 students. Two of the principals who participated in the interview group led middle or junior high schools while the remaining four were high school principals.

The Multifactor Leadership Questionnaire utilized a five-point Likert scale with zero as the low choice and four as the high choice to measure the Leithwood Model of Transformational Leadership as a whole, the six factors that comprise it, and the three categories into which the behaviors have been sorted, Setting Direction, Developing People, and Redesigning the Organization. The mean leadership score for the model was 3.33. Across the factors, mean scores ranged from 3.23 to 3.53. This was important because to be a Transformational Leader, one must practice all dimensions to some degree (Leithwood et al., 1994, 1999). The means for the three categories also indicated the practice of Transformational Leadership ranging from 3.35 to 3.40.

The primary difference between the Leithwood model and other models of Transformational Leadership is the issue of Transactional factors. Earlier researchers considered these to be polar opposites (Burns, 1979; Bass, 1985; Bass & Avolio, 1988).



Later, Bass and Avolio (1995, 1999) recognized that Contingent Reward which has a high positive correlation at .71 with the remaining factors enabled the leader to practice Transformational Leadership. Leithwood (1994) and Leithwood, Jantzi and Steinbach (1999) went further. They subsumed Contingent Reward into their model characterizing it as an essential component of Transformational Leadership that promotes buy-in from the followers and enables the leader to function in an optimal manner. Consequently, it became the sixth factor of the Leithwood Model. The survey results from this study were in accord with that concept, since Contingent Reward had a mean of 3.25. Indeed, the six principals who participated in the interview relied heavily on rewards for performance from both teachers and students with a mean score of 3.60. Survey data confirmed that the group exhibited all six factors of the Leithwood model of Transformational Leadership.

#### Discussion of the Research Questions

It has been established that as a group the principals who participated in this study practice Transformational Leadership. That fact was analyzed in relationship to student performance in math and reading in response to the first research question. A correlation with the model was also measured for improvement in attendance and four-year graduation rate, the second and third research questions respectively. Pearson Product Moment correlation coefficients were calculated for the group as a whole and for the smaller group who participated in the interview. Behaviors consistent with the three categories defined in the model were also measured for the interviewed group in response to the fourth research question.

*Discussion of the Results for Research Question One*

Research Question One stated: Is there a relationship between the Leithwood Model of Transformational Leadership in principals of low socioeconomic secondary schools and improvement in math and/or reading on the Pennsylvania state assessments? The quantitative results for this question definitively indicated that there is no statistically significant relationship between Reading Change and the Leithwood model. The correlation coefficient was .01. Coefficients for each of the three behavior categories were similar as expected ranging from -.01 for Setting Direction to .02 for Developing People. The category Redesigning the Organization contains all of the factors of the model; so it is always consistent with the coefficient for the model. The results are identical for Math Change with one insignificant exception. While the correlation with Reading Change and Setting Direction was -.01, it was .03 for math.

Initial examination of the quantitative results of Reading Change and Math Change for the six principals who participated in the interviews contradicted the statistical results for the large group. Overall, the six schools improved 6.10 points in reading and 15.70 points in math. However, not all six schools improved. Two schools decreased their scores in reading, and two decreased in math. One of the schools did not achieve AYP, and another received a designation of Making Progress. Yet the behaviors of all six principals were consistent with the Transformational Leadership model. The researcher noted mention of 252 instances of behaviors consistent with those included in the three categories during the conversations. This motivated the researcher to examine the phenomenon from another perspective.

Spreadsheets with survey results were sorted by Transformational Leadership mean scores in descending order. They were then sorted separately by math change, by reading change, and by improvement points. The spreadsheet was divided into two equal halves with the 56 highest mean scores in the first half and the lower 56 mean scores in the second half. Math, reading and improvement point changes for each half were summed and compared to the mean leadership scores included in the section to see if higher leadership scores corresponded with higher improvement in any of the three areas. In all cases, the higher leadership half outscored the lower leadership half by significant margins. Next, the process was repeated, but the group was divided into four equal groups. Again, those with the highest leadership mean scores clearly outscored the lower three quarters. This time, however, the pattern was not quite as clear. Groups three and four had almost identical outcomes, but both of them outscored the second quarter of leaders in all categories. Still, those with the highest leadership mean scores ranging from 3.63 to 4.00 had significantly higher improvement in all three categories.

The researcher puzzled over this discrepancy and continued to study the spreadsheets. A visual examination of the spreadsheets and of the actual scores of the interviewed group seemed to indicate that schools with higher 2006 scores in both reading and math did not improve at the same rate as schools with lower starting scores. This led to an additional set of statistical computations. Correlation coefficients were calculated for Reading 2006 and Reading Change. This time, there was a negative relationship of  $-.52$ . This was statistically significant at the  $.01^{**}$  level indicating that as the beginning score increased, improvement points decreased. The same negative relationship was determined for math with a coefficient of  $-.44$ . This was also

statistically significant at the .01\*\* level. Upon examining the results of the six schools represented in the interviews, the same phenomenon was noted. Those with higher starting scores had small increases or even decreases. The researcher determined that this was a weakness of this study that could be investigated by subsequent research.

Based on the above analysis, the answer to Research Question One is unclear. One cannot say with certainty that there is a relationship between principals who practice the Leithwood Model of Transformational Leadership and improvement in math and/or reading based on the Pennsylvania state assessments. Likewise, one also cannot say that there is no relationship between the variables. This cloudy outcome points to the fact that using linear assessment gains in student achievement is not an effective way to compare the progress of one school to another nor is it useful in determining whether a particular leadership style is more effective than another. Even in schools with high numbers of economically disadvantaged students, other factors intervene to determine whether the proficiency scores at the outset are high or low. The most important of these is demographics that result in subgroups.

The third *interview* question asked: As a principal of a (middle or high) school, what specific challenges do you face regarding AYP? The six principals unhesitatingly replied that the presence of subgroups was the greatest challenge. Two of the principals referred to schools within the same district that had no subgroups. They indicated that those schools moved through the quest for AYP unscathed while their own schools had upward battles. The principals had to constantly “rally the troops” because their teachers perceived themselves to have greater workloads than their colleagues across town who had no subgroups.

In both cases their own schools achieved high scores for the All Students groups, but were constantly on the brink of school improvement because of subgroup performance. A single subgroup's failure to achieve AYP puts the entire school in jeopardy. Both of the principals mentioned that scores from students in the subgroups affected multiple subgroups. For example, a single student might be an English Language Learner of Hispanic origin who was classified as learning disabled and received free lunch. The scores of that student would affect the All Students group and the four subgroups named in each subject area. If he failed to attend during the testing period, he would also affect Participation Rate for the whole school and for each of the subgroups as well. Schools fail AYP if 95% of the All Students group or any of the subgroups do not participate in the test. The Pennsylvania Department of Education lists 41 ways that a school with many subgroups can fail each time the test is given (<http://www.pde.state.us>).

One of the two schools had raised its achievement enabling it to move out of the "school improvement" category in 2006. Its All Students scores were now well above the state targets. In 2007, however, it received another designation of Warning because of the performance of three of its five subgroups. It should be recalled that performance targets increase regularly towards the goal of 100%. The second school achieved AYP for most of its subgroups in 2007 after failing to achieve that status the prior year.

Each of the four remaining principals spoke about the performance of one or more subgroups as their biggest challenge. All four schools surpassed the targets for the All Students group but continued to struggle with AYP designations because of subgroup performance. Smaller high schools and even larger ones at times experience occasional years without a subgroup because high schools in Pennsylvania are only assessed at one

grade level. It is possible that in a given year, a school might not have 40 students from a single subgroup at that grade level. If the demographic makeup of a school is highly diverse and the school is large; however, that situation is unlikely. Two of the principals experienced the ‘no subgroup’ phenomenon in 2007. They both worried a great deal about the upcoming year because the current sophomores had sufficient numbers of students in one or more categories to comprise an official subgroup.

The concern of these principals was supported by data from the National Assessment of Title I Final Report, a 2007 publication from the United States Department of Education. While it reported an upward trend across all subgroups from the 2002 to the 2004 school year in reading and math scores, only 29% of the Economically Disadvantaged subgroup and 31% of eight other subgroups are predicted to achieve AYP by the 2014 deadline.

By the 2004-05 school year 12% of United States schools were under sanction. Of these 84% were Title I schools serving the disadvantaged. Of all Title I schools serving elementary and secondary students 18% were in penalty situations. The report stated:

Schools with high concentrations of poor and minority students were more likely to be identified than other schools, as were schools in urban areas. Just under one-third of high-poverty schools (32 percent) and schools with high percentages of minority students (31 percent) were identified schools in 2004-05, compared with 4 percent of schools with low concentrations of these students (p. 11-12).

In his keynote address at Adelphi University on October 9, 2007, Alfie Kohn characterized high-stakes test scores as “exquisitely accurate measures of the size of

houses in a school district.” The *National Assessment of Title I Final Report* above cited gives some support to that idea. Kohn stated that poor and minority students increasingly attend schools where all that matters are test scores while their wealthier mainstream counterparts enjoy a richer, fuller education. The six principals who participated in the interview spoke a great deal about test scores; however, they also addressed other dimensions of schooling as well. Principal Four expressed it best: “Obviously, we want—we need—to pass the test, but our mission is to help students achieve success when they leave here. Whether the kid wants to be a musician, an artist, a math teacher or an engineer, we have to do what is right for that kid.”

When linking student achievement to a particular style of leadership, attention must be directed to the demographic issues of schools. That is particularly true when schools serve large percentages of economically disadvantaged students. The blockbuster study known as The Coleman Report (1966) determined that school factors do not matter much in the improvement of educational outcomes for economically disadvantaged children. Rather “...a child’s family background and the schools’ socioeconomic makeup are the best predictors of academic success” (Hoff, 1999, p. 1). That statement was supported by studies by Kaestle et al., 1991; Barton, 2003; Payne, 2001; Gershoff, 2003; Utne, 2001; McNeal, 2001; Feuerstein, 2000. Additional research refined this conclusion with the idea that it was not necessarily individual poverty that altered academic performance, but a concentration of poverty within the school (McLeod, 2000; Lippman, Burns & McArthur, 1996). Leithwood and Jantzi (1999) call socioeconomic status “...a crude proxy, masking a host of family interactions which have powerful educational consequences” (p. 460). The issue of subgroups, especially low socioeconomic status,

requires more study. Clearly, there are factors beyond leadership that influence improvement in achievement, attendance, and graduation outcomes for these students.

### *Discussion of the Results for Research Question Two*

Research Question Two asked: Is there a relationship between the Leithwood Model of Transformational Leadership in principals of low socioeconomic secondary middle or junior high schools and improvement in attendance? Analysis of the quantitative data provides a clear response that there is no statistically significant relationship between the two variables. The correlation coefficient was  $-.46$ . As expected, there was also no relationship between improved attendance and any of the three categories with coefficients of  $-.38$  for Setting Direction,  $-.51$  for Developing People, and  $-.46$  for Redesigning the Organization. The behaviors organized into the categories are the behaviors that make up the model.

Data for the two middle/junior high school principals corroborated that information. In fact, each of the schools experienced slight declines from the prior year at  $.23$  and  $.15$  respectively. The researcher noted that these two schools had very high attendance the previous year at  $93.14$  and  $94.23$ . This prompted further investigation. Descriptive statistics confirmed the researcher's suspicions. All 12 schools had extremely high attendance rates in 2006 from a low of  $92.92$  to a high of  $95.84$ . With percentages this high, any minor fluctuation can be attributed to chance alone such as weather patterns, contagious diseases, or current events, rather than to leadership. No matter what the leader does or does not do, annual attendance will never be constant at  $100\%$  nor will it cease to fluctuate from year to year. Recognizing this, the state set its goal at  $90\%$ .



While both the quantitative and qualitative results provide a negative response to Research Question Two, it must be noted that the starting points were already high, and that the group was very small so results from this question cannot be generalized to any other population. Further studies might address the issue of starting point. They might also ask what constitutes attendance at schools. With the sophisticated student data systems that must be in place to comply with the data demands of No Child Left Behind, schools or districts determine their own algorithms as to what defines reportable attendance. This can be as little as appearance at one class or any other number the district or school deems appropriate. It is likely that these definitions vary from school to school. The accuracy of attendance reporting is directly related to the diligence of those reporting it, and it can easily be manipulated by leaders or by followers.

Large-scale studies discussed by Leithwood and Jantzi (1999) show an indirect positive effect of Transformational Leadership on a factor called student engagement which begins with attendance; however, they point out that “the effects on student engagement of Transformational Leadership practices were substantially smaller than those of family educational culture” (p. 470). In the studies in question, family educational culture was substituted for socioeconomic status. As in the results reported for the first research question, there are factors beyond leadership that affect school outcomes such as attendance.

### *Discussion of the Results for Research Question Three*

Research Question Three asked: Is there a relationship between the Leithwood Model of Transformational Leadership in principals of low socioeconomic high schools and improvement in four-year graduation rate? The quantitative data provides a clear

response that there is no statistically significant relationship between the two variables. The correlation coefficient was .07. As expected, there was also no relationship between improved graduation rate and any of the three categories with coefficients of .12 for Setting Direction, .08 for Developing People, and .07 for Redesigning the Organization.

The information gleaned from the website <http://www.paayp.com> indicated that each of the four high schools represented in the interviews suffered a decline in four-year graduation rate between 2006 and 2007. The declines ranged from .83 to 3.97. All of these principals were Transformational leaders according to the survey and the interviews. The researcher noted that the school with the largest decline had started with a rate of 92.86, a figure well above the state goal of 80%, so additional statistics were analyzed.

Descriptive data showed a mean graduation rate of 88.71% for 2006, the starting point for this study, and a mean growth rate of .84. The median rate was 89.13. While this appeared to be a relatively high graduation rate, other descriptive data somewhat shades that conclusion. The rates from 2006 ranged from a low of 47.66 to a high of 100%. The modal score was only 78.77% which is below the state goal of 80%. At this point, it made sense to calculate correlation coefficients for Graduation 2006 and Graduation Improvement. The resulting coefficient was -.38 which was statistically significant at the .01\*\* level. The negative correlation confirmed the researcher's position that as the starting scores rose, improvement declined. This was not surprising since it was an effect identical to the one uncovered for Research Questions One. As in the first question, this result clouds the conclusion for Research Question Three. Again, there are intervening factors that do not allow one to say with confidence that there is or

is not a relationship between the Leithwood Model of Transformational Leadership in principals of low socioeconomic high schools and improvement in four-year graduation rate.

One factor is 2006 graduation rate. An additional consideration is how local educational agencies define a high school graduate. The state decrees the number of credits a student needs to accrue in each subject area to graduate. However, districts determine the content of each course, student expectations, passing grades, and criteria for achieving the passing grades. Expectations and passing criteria can even be different across student groups within the same school. For example, students with disabilities, English Language Learners, vocational students, and those who are in classes populated with low achieving students might have different expectations than those in honors classes. Since Pennsylvania has no statewide exit examinations which could possibly be used as a standard for comparing graduation rates, the remaining criteria is subjective and varies from place to place. The only comparison that makes sense is longitudinal growth within the same school and that is what is currently being measured for AYP.

The National Assessment of Title I Final Report (2007) acknowledged the difficulty in comparing graduation rates across schools because of the variance in calculating those rates. It referenced the averaged freshman graduation rate calculated by the National Center for Education Statistics as a useful tool for comparisons. It stated a 7% difference between rates from state reports and the measure above mentioned. The report concluded that:

The recent trend in the averaged freshman graduation rate has been fairly steady, and the mean graduation rate in 2004 (75%) was slightly higher

than in 1996 (73%). However these longitudinal data may not be strictly comparable because of changes in reporting over time (p. 10-11).

Graduation rate, therefore, is a reflection of each community, its schools, and the different groups within the schools more than it is a reflection of the Commonwealth of Pennsylvania. However, NCLB mandates that schools measure growth from year to year in the four-year graduation rate, so the definition is periodically being narrowed by the federal government. States are then required to enforce it. According to Long (2008), all indicators point to a focus on high schools during the next iteration of NCLB targeted for reauthorization as early as this summer. With achievement of high school diplomas so closely tied to personal and national economics (Rodgers, 1997; National Center for Educational Statistics, 1993; U. S. Department of Labor, 2003), it makes sense that a more uniform definition will be part of the reauthorization.

This study found no link to principal leadership and improved graduation rate, and perhaps there can be none, since dropping out of school is often a culmination of a long term process beginning in early childhood.

#### *Discussion of the Results for Research Question Four*

Research Question Four was addressed more from a qualitative viewpoint than a quantitative one. It asked: Are the behaviors associated with the Leithwood Model of Transformational Leadership common to principals of low socioeconomic secondary schools that improve on any aspect of adequate yearly progress? The behaviors in question are fully described in Appendix B.

During the course of the interviews, all six principals described their leadership practices in response to the interview questions that were based on the survey to which

they had already responded. The researcher documented 252 instances in which the principals described a behavior which could be aligned to one of the three categories, Setting Direction, Developing People, and Redesigning the Organization. The researcher was struck by how similar the discussions were, almost as if this were a focus group with all seven people present in the same place at the same time.

All principals expressed concern that the performance of their subgroups would place them in school improvement. All used coaching metaphors with strong and frequent references to teams and shared decision making. They discussed their work with passion. They insisted on hard work and continuous improvement. This group unabashedly praised their teachers and rewarded both staff and students for their efforts. All of them empowered teachers and encouraged them to take measured risks without fear of reprisal. Strikingly, they focused strongly on students above and beyond test preparation and high-stakes performance. This was noteworthy because the questions used to focus the interviews were based on AYP efforts. These principals recognized their challenges and rose to the occasion through practices associated with the Leithwood Model of Transformational Leadership. All of them reported success in improving student outcomes towards AYP one year at a time. In triangulating quantitative and qualitative measures, it became clear that the response to Research Question Four would be a positive one. That is consistent with the 2004 report commissioned by The Wallace Foundation. The report concluded that:

While the evidence shows small but significant effects of leadership actions on student learning across the spectrum of schools, existing research also shows that demonstrated effects of successful leadership are

considerably greater in schools that are in more difficult circumstances. Indeed, there are virtually no documented instances of troubled schools being turned around without intervention by a powerful leader. Many other factors may contribute to such turnarounds, but leadership is the catalyst (p. 5).

The Wallace study considers the practices that are basic to the success of leadership in these schools. The researchers categorized them under the headings Setting Direction, Developing People, and Redesigning the Organization. These are the very behaviors identified in the interviews with the six principals who are working to improve the outcome of high poverty schools in the context of the No Child Left Behind Act of 2002.

#### Implications

Several implications for practice and for further study can be drawn from the results of this dissertation. The researcher investigated Transformational Leadership in the context of No Child Left Behind legislation. It has been well established that leadership is a key element for an effective school (Brookover & Lezotte, 1979; Edmonds, 1979; Teddlie & Stringfield, 1993; as cited in Osterman & Crow, 1997; Hallinger & Heck, 1996; Leithwood, 1994; Leithwood & Jantzi, 1994; Leithwood, Jantzi & Steinbach, 1999; Leithwood, Louis, Anderson & Wahlstrom, 2004). It has also been established that the type of leadership effective at any given time is driven by context (Leithwood, 1994; Hallinger & Heck, 1996; Hallinger, Bickman & Davis, 1996), that the context currently driving school change is NCLB, and the best type of leadership for the restructuring demanded by that legislation is Transformational Leadership (Leithwood & Jantzi, 1994; Leithwood, Jantzi & Steinbach, 1999; Leithwood, Louis, Anderson & Wahlstrom, 2004).

This researcher concluded that the Transformational Leadership model was strongly practiced by 112 Pennsylvania secondary principals of schools with high student populations of economically disadvantaged students who have shown improvement in at least one aspect of AYP. The results of the study, however, do not support Transformational Leadership as a key factor in this improvement.

What the research does imply is that public school leaders must be thoroughly grounded in twenty-first century leadership practices. Since Burns (1979) began the discussion about the efficacy of Transformational Leadership to its present utility in the testing and accountability era, research has determined it to be a useful tool for leading schools through the type of rapid change needed to meet the demands of the No Child Left Behind legislation. However, that law is about to be reauthorized, and many groups both inside and outside Washington are discussing if and how the law should change. Whatever modifications occur, the law will again come up for reauthorization four years later and then four years after that. Each time, changes will be considered and implemented.

What does this mean for educational leadership practice? It means that leadership and its behaviors cannot be static no matter what model or definition is in vogue. It means that the teaching of Transformational Leadership should be included in educational leadership preparation programs, but it would not be prudent to do that to the exclusion of other models. Again, Leithwood and others posit that leadership is contextual, and the context will change again and again during the professional life of a principal. That might be the most important concept of all.

A meta-analysis on school leadership conducted by Waters and Grubb for the Mid-continent Research for Education and Learning (2004) examined the seminal reviews of leadership of Hallinger & Heck, 1996; Cotton, 2003; Leithwood & Riehl, 2003; Leithwood, Seashore Louis, Anderson & Wahlstrom, 2004; Waters, Marzano & McNulty, 2003; Marzano, Waters & McNulty, in press, to identify practices and responsibilities that were linked to student achievement in the context of change. This large scale study found a direct link between principal leadership and student achievement to the degree that “a one-standard deviation in improvement in principal leadership is associated with a 10 percentile difference in student achievement on a norm-referenced test” (p. 2). They also noted that principals can *negatively* affect student achievement as well under certain conditions:

1. When they fail to identify and focus on the school and classroom practices that are most likely to improve student achievement...;
2. When they fail to understand the magnitude of change they are leading and actually use the wrong leadership practices... (p. 3).

How is that relevant to this study? The responsibilities and practices framed in this report correspond well with those of the Leithwood model of Transformational Leadership. The report concludes that the label of a model is less important than the manner and the context in which it is practiced.

This researcher found it interesting that three of the six interviewed principals spoke of succeeding autocratic principals and described how their faculties responded to the change. Were the earlier principals responding to their own training, or to the situation that was in place at the time of their appointments? In the same vein, were the current



principals Transformational Leaders because of preparation, or because of some type of professional intuition? If the latter is true, their hard work and well-meaning goals could be for naught if they do not have the training and background to apply appropriate leadership practices to a given situation, or if they are not current on best practices for the types of student present in their schools. If leadership is indeed contextual, and if the context of education continues to be in flux, aspiring principals must be grounded in a variety of leadership types with a focus on agility and on educational strategies appropriate for a broad spectrum of youngsters and teachers. They must have the intelligence and training to adapt and differentiate their leadership as situations change such as national and state legislation which require schools to quickly adapt; a changing maturity level of faculties; national, state, or local disasters such as Hurricane Katrina; and rapidly changing demographics of their students. All of these situations and more should be expected to occur over the professional lifetime of a principal. Hersey and Blanchard write that: “The followers’ effectiveness will ultimately depend on the manner in which the leader applies the appropriate combinations of directive and supportive behaviors. Effective leaders need to be able to adapt their chosen style to fit the requirements of the situation” (in Wren, 1995, p. 210).

The responsibilities of a principal can be overwhelming, particularly in the context of change. At the district level, superintendents and other central office personnel must not only allow but encourage principals to delegate those responsibilities that are important but not essential. Both central office staff and the principals must pursue training in identifying and prioritizing those responsibilities and in empowering and nourishing other leaders at the school level. Waters and Grubb (2004) in their study for McREL

recommend that principals also learn how to tailor their leadership practices to the type of teachers they lead. What works well with a seasoned faculty might be ineffective with untenured teachers who are focused on honing their expertise.

In addition, both aspiring and sitting principals must be taught that high quality, lifelong learning is a professional responsibility. Modeling this will provide the intellectual stimulation that is such a priority in the Leithwood model. Principals do not need to be content specialists across the curriculum, but they need to be aware of best practices in order to lead change appropriately.

Finally, principal preparation and training must be realistic and futuristic. Principals develop their leadership style during the first few years of practice (Osterman & Sullivan, 1994; Osterman & Crow, 1997). This study provides useful information to those who can influence new or aspiring principals as they develop their practices in Pennsylvania in the context of NCLB and, perhaps more importantly, beyond. Aspiring principals must be prepared to lead not a replica of the schools they attended nor the schools where they currently teach, but schools that mirror the changing face of America in the twenty-first century. Every day, newspapers and other media point out the increasing numbers of children living in poverty, of children without health insurance, of burgeoning numbers of immigrant families with no English skills, of single parent households, of the rise in autism and other learning disabilities. While once residing primarily in urban areas, these children now populate every community. Research characterizes them as our difficult-to-educate subgroup children as the principals in this study acknowledge. Principals must have the skills and the agility to oversee an appropriate education for these children because NCLB has made principals accountable for their proficiency. That will be a

constant factor on the educational landscape for the foreseeable future. It demands that universities develop strict criteria for who should be accepted into principal preparation programs and make careful selections. While the theoretical training must remain an important component of the program, programs must move towards more hands-on experience, more field work in *multiple settings*, and formal mentoring not only during the classroom years, but during the formative years of professional practice as well. A model for this can be found at the Center for Urban School Leadership at the University of Memphis soon to be adopted by the entire state of Tennessee. This program is a triangular partnership among the public schools, the Department of Education, and the University system. It focuses on preparing visionary leaders who know instruction, can analyze data, can solve problems, can respond quickly to changing circumstances, and who are capable of building learning communities. The program is built largely on the research of Leithwood (Green, Williams-Griffin & Watson, 2008).

#### Limitations of the Study

The study attempted to discover whether a relationship between the Leithwood model of Transformational Leadership and improvement in student achievement in math and reading, in attendance, and in four-year graduation rate. From the results of the study, the researcher cannot say with confidence that there is a relationship. The researcher believes the primary limitation of the study was in equating AYP changes with student achievement and attempting to compare results in a linear way. It was determined that different entry points in the measures limit improvement. There is less room for growth when a school starts at a higher point in these measures.

It is also limited by the many intervening variables that might affect student performance on standardized tests over which the principal and the school have no control. Demographics, longevity of the principal and faculty, and geographic location of the schools are some of the variables.

The extent to which PSSA accurately measures student academic achievement limits the study as well. In like manner is the difficulty in comparing growth in attendance and graduation rate because each district and school defines those variables for themselves. Reported data is based on those local definitions which can vary significantly even within the same school for different groups of students.

Finally, this study relied on self-reporting of leadership practices by the principals. Bass & Avolio (1995) state that leaders tend to rate themselves as Transformational to a somewhat greater extent than their followers rated them. On the other hand, Podsakoff et al. (1996) posits that followers can skew the results in either direction depending on their current relationship with the leader. He bolsters that opinion with the work of Kerr and Jermier (1978). However, it would have been costly and unwieldy for the researcher to survey the teachers of 112 principals and would have severely limited the number of usable cases available for study.

#### Recommendations for Further Study

This study could be repeated with different samples and different methodologies. It could compare the utility of Transformational Leadership in different populations, for example, schools with high poverty and those with low poverty. It could compare leadership behaviors of newer principals with those of experienced veterans. It could also compare small schools with large schools or urban with rural and suburban. From

another perspective, the study could be replicated by comparing subgroup performance in like schools. Comparisons such as these could use t-tests or ANOVA procedures. From the qualitative standpoint, it would be interesting—though perhaps difficult—to organize the principals into focus groups to discuss their schools and leadership practices. The researcher believes there are larger issues that might affect future studies, however.

The validity and reliability of the measures used to define and compare improving student achievement demands further study. Districts and schools control definitions of attendance and graduation rate and how they are reported. Are there different criteria for graduation for different groups of students? How accurately is attendance measured? There is currently no yardstick against which one can accurately measure and compare growth in either category.

As for the proficiency scores themselves, some of the principals who participated in the interviews spoke extensively about realigning the curricular topics they teach with a calendar so the tested material would be taught before the test and the remainder afterwards. This would definitely result in score increases, but can that be considered improved student achievement? Can these gains be maintained and increased once the curriculum alignment is fully operational? A longitudinal study could follow the progress of schools *after* these curricular adjustments have occurred.

All of the principals discussed the variety of ways in which their teachers prepared students for the state test. Test preparation can mean many things. Alfie Kohn (2007) tells us that the more time spent preparing students for taking a test, the less valid the test becomes. He said that 80% to 90% of variance in scores accurately predicts family income and parent education, and that poor and minority students spend their school

hours mired in little more than test preparation. Richard Elmore (2003) supports both of those assertions. If that is the case, it raises additional questions for study. Do different groups of students within the same school receive different types of education? Has test preparation replaced what Kohn (2007) refers to as deeper, richer, engaged learning for some or all students? How ethical are test administration and proctoring practices in a given school?

Another question arises from the fact that the only known demographic the Pennsylvania schools in this study had in common was the fact that 30% or more of their student bodies qualified for free and reduced lunch. The demographic makeup of the remaining populations might vary greatly. Are some of the scores initially high and therefore subject to slower growth because the remaining 70% of the students live in very different economic situations from the 30% who are reported as economically disadvantaged? How many more are not reported because they are ashamed to fill out the forms for free or reduced lunch?

Claims of NCLB-related gains reported by the federal government in the *National Assessment of Title I Final Report* (2007) are small and occurred primarily at the 4<sup>th</sup> grade level between 2002 and 2004 based on state assessment results. When comparing 8<sup>th</sup> and 12<sup>th</sup> grade results on the National Assessment of Educational Progress, an assessment structured with a consistent set of items over the last 30 years, it is clear that secondary students have *not* made gains, with one exception. Eighth-graders did improve somewhat in math but remained the same in reading. At the high school level, 2005 reading scores did not change from the 2002 administration and actually showed a significant decline from 1992. Math scores were not available for high school. This

information is pertinent to the population for this study, which was secondary school principals who are trying to raise student achievement in their schools. To equate any leadership style with improving student performance, researchers should utilize common measures that are valid and reliable, ongoing, and based on how students learn in the twenty-first century.

Further exploration of this topic should be qualitative in nature with interviews and focus groups of principals, teachers, students, parents, and community members to uncover what the reality is for secondary schools with populations of economically disadvantaged students. Does location enhance or inhibit opportunities for school improvement? Is staff development of a high caliber? Is the school overwhelmed with large populations of English Language Learners or impoverished students? If so, what methodologies do they use to educate these youngsters? Are students with disabilities included in the mainstream or confined to self-contained classrooms? Other than the presence or absence of subgroups, does school size play a role in student performance? This is important and timely because political experts (Long et al., 2008) predict that the reauthorization of NCLB will focus heavily on high schools.

From a leadership perspective, the professional maturity level of school faculties might be explored qualitatively. Is leadership a one-size-fits-all, or is the principal capable of leading different groups in different ways? Does the Transformational Leadership model lend itself to differentiated leadership where faculties have diverse maturity levels? What type of pre-service preparation did the principal have? What kind of leadership expectations come from the central office? What kind of district support is available to the principal? Does the principal model lifelong learning thereby increasing

his or her own capacity for leadership? The intricacies of school leadership in the changing face of public schooling in America continue to provide fertile ground for educational research. Its urgency will only increase as the stakes continue to rise.

### Summary

NCLB has put the responsibility for student achievement squarely on the shoulders of the principal. The research is clear that the principal is the key to any school restructuring effort (Brookover & Lezotte, 1979; Edmonds, 1979; Teddlie & Stringfield, 1993; as cited in Osterman & Crow, 1997; Hallinger & Heck, 1996; Leithwood, 1994; Leithwood & Jantzi, 1994; Leithwood, Jantzi & Steinbach, 1999; Leithwood, Louis, Anderson & Wahlstrom, 2004; Waters & Grubb, 2004). The literature review for this study clarified that concentrations of students who are economically disadvantaged struggle with schoolwork (Coleman, 1966; Kaestle et al., 1991; Barton, 2003; Payne, 2001; Gershoff, 2003; Utne, 2001; McNeal, 2001; Feuerstein, 2000; McLeod, 2000; and Lippman, Burns & McArthur, 1996); that schools with demographic makeups resulting in 40 or more students in up to eight accountability subgroups are more likely to be targeted for sanctions than their wealthier counterparts from more homogeneous locations (U. S. Department of Education, 2007); and that variations occur in the way variables such as attendance and graduation rate are measured. NAEP results based on consistent assessment items over more than 30 years tell us that real student improvement has not occurred at the secondary level and has, in fact, actually declined since 1992 (U. S. Department of Education, 2007).

Under the pressure of an accountability-driven, high-stakes testing environment, principals do whatever it takes to keep up with the ever-increasing goals of adequate



yearly progress demanded by NCLB. Of the 41 possible ways to fail (<http://www.pde.state.pa.us>) each time the test is given, schools need to miss only one of those targets in two consecutive years to face serious consequences for the entire school. Leithwood (1994) and Leithwood et al. (1999) posits that context is the determinant of the appropriate leadership style at any given time and that Transformational Leadership is best suited to the type of change required by NCLB, especially in large, complex high schools. Survey and interview results support the fact that Pennsylvania principals from secondary schools with 30% or more of their students eligible for free or reduced lunch practice the behaviors associated with this style to a great extent. The relationship of student achievement gains to Transformational Leadership or any leadership style is less clear. The results opened the door to the idea that perhaps leadership is not as directly connected with student improvement as was previously assumed. In fact, one of the 1999 large-scale replication studies conducted by Leithwood and Jantzi began to explore that notion when they found that the relationship between Family Educational Culture and Student Engagement was much larger than the relationship between Student Engagement and Transformational Leadership. In the conclusion, the authors reflected on leadership research as follows:

Finally, even the most sophisticated quantitative designs used in current leadership effects research (including the one used in this study) treat leadership as an exogenous variable influencing students...The goal of such research usually is to validate a specific form of leadership. The logic of such designs assumes that influence flows in one direction—from the leader to the student...But the present study hints at a far more complex set of interactions

between leadership, school conditions, and family educational culture in the production of student outcomes (p. 471).

For this researcher, conducting this study invited more questions than it answered. The complexity of leadership against a backdrop of the inadequacy of the measurement system currently in vogue cannot be reduced to the results of a single study by a novice researcher. A great deal of additional study needs to occur with different populations and different methodologies before any reliable conclusions can be drawn as to whether there can be a single “right” leadership style.

Chapter II of this dissertation opened with the following quotation attributed to Augustine more than 1600 years ago: “To live is to change, and to live long is to change often.” Those who strive to become school leaders in the twenty-first century must learn to apply that thought to their professional lives. Clearly, leadership for the future must be a dynamic and agile exercise.

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## Appendix A

Please circle the best responses to the following questions:

1. How long have you been principal in this building? Less than 2 years. 2 to 5 years 5 years +
2. Circle all grades that are housed in this building. 5<sup>th</sup> 6<sup>th</sup> 7<sup>th</sup> 8<sup>th</sup> 9<sup>th</sup> 10<sup>th</sup> 11<sup>th</sup> 12<sup>th</sup>
3. Circle your school enrollment. less than 500 500 to 999 1000 +
4. Circle each area where you have shown any improvement in an AYP indicator:  
Whole School: Reading Math Participation Reading Participation Math Attendance Graduation Rate  
Subgroup: Reading Math Participation Reading Participation Math
5. Would you be willing to participate in a follow-up interview? Yes No

### Multifactor Leadership Questionnaire

#### LEADER FORM

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

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

Thank you for your participation. If you would like to receive a copy of the research results, please include your e-mail address below:

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## Appendix B

School-level Principal Leadership Practices According to Leithwood Model of School Transformational Leadership (Leithwood, Jantzi & Steinbach, 1999, pp.58-87).

### Setting Directions

1. Building school vision Helping to provide colleagues with an overall sense of purpose;
  - Initiating processes (retreats, and so on) that engage staff in the collective development of a shared vision;
  - Espousing a vision for the school but not in a way that pre-empts others from expressing their vision;
  - Exciting colleagues with visions of what they may be able to accomplish if they work together to exchange their practices;
  - Helping clarify the meaning of the school's vision in terms of its practical implications for programs and instruction;
  - Assisting staff in understanding the relationship between external initiatives for change and the school's vision;
  - Assisting staff in understanding the larger social mission of which their vision of the school is a part, a social mission that may include such important end values as equality, justice and integrity;
  - Using all available opportunities to communicate the school's vision to staff, students, parents and other members of the school community.
2. Establishing school goals
  - Providing staff with a process through which to establish school goals and to regularly review those goals; this is likely to be a problem solving' process and to include careful diagnosis of the school's context;
  - Expecting teams of teachers (for example, departments) and individuals to regularly engage in goal setting and reviewing progress towards those goals;
  - Assisting staff in developing consistency between school visions and both group and individual goals;
  - Working towards the development of consensus about school and group goals and the priority to be awarded such goals;
  - Frequently referring to school goals and making explicit use of them when decisions are being made about changes in the school;
  - Encouraging teachers, as part of goal setting, to establish and review individual professional growth goals;
  - Having ongoing discussions with individual teachers about their professional growth goals;
  - Clearly acknowledging the compatibility of teachers' and school's goals when such is the case;
  - Expressing one's own views about school goals and priorities;

- Acting as an important resource in helping colleagues achieve their individual and school goals.

### 3. Demonstrating high performance expectations

- Expecting staff to be innovative, hard working and professional; these qualities are included among the criteria used in hiring staff;
- Demonstrating an unflagging commitment to the welfare of students;
- Often espousing norms of excellence and quality of service;
- Not accepting second-rate performance from anyone;
- Establishing flexible boundaries for what people do, thus permitting freedom of judgment and action within the context of overall school goals and plans;
- Being clear about one's own views of what is right and good.

### Developing People

#### 4. Offering individualized support

(Equitable, humane, and considerate treatment of one's colleagues)

- Treating everyone equally; not showing favoritism towards individuals or groups;
- Having an 'open-door' policy;
- Being approachable, accessible and welcoming;
- Protecting teachers from excessive intrusions on their classroom work;
- Giving personal attention to colleagues who seem neglected by others;
- Being thoughtful about the personal needs of staff.

(Support for the personal, professional development of staff)

- Encouraging individual staff members to try new practices consistent with their interests;
- As often as possible, responding positively to staff members' initiatives for change;
- As often as possible, providing money for professional development and other needed resources in support of changes agreed on by staff;
- Providing coaching for those staff members who need it

(Developing close knowledge of their individual colleagues)

- Getting to know individual teachers well enough to understand their problems and to be aware of their particular skills and interests; listening carefully to staff's ideas;
- Having the 'pulse' of the school and building on the individual interests of teachers, often as the starting point for school change.

(Recognition of good work and effort)

- Providing recognition for staff work in the form of individual praise or 'pats on the back;'
- Being specific about what is being praised as 'good work';



- Offering personal encouragement to individuals for good performance;
- Demonstrating confidence in colleagues' ability to perform at their best.

(Approaches to change)

- Following through on decisions made jointly with teachers;
- Explicitly sharing teachers' legitimate cautions about proceeding quickly toward implementing new practices, thus demonstrating sensitivity to the real problems of implementation faced by teachers;
- Taking individual teachers' opinions into consideration when initiating actions that may affect their work;
- Instilling in staff a sense of belonging to the school.

(Contingent reward)

- Assuring staff members that they can get what they want personally in exchange for their efforts;
- Paying personal compliments to staff when they do outstanding work;
- Frequently acknowledging good performance;
- Providing public recognition for good work.

## 5. Providing intellectual stimulation

(Change those school norms that might constrain thinking of staff)

- Removing penalties for making mistakes as part of efforts toward professional and school improvement;
- Embracing and sometimes generating conflict as a way of clarifying alternative courses of action available to the school;
- Requiring colleagues to support opinions with good reasons;
- Insisting on careful thought before action.

(Challenge the status quo)

- Directly challenging the basic assumptions of staff about their work as well as unsubstantiated or questionable beliefs and practices;
- Encouraging staff to evaluate their practices and refine them as needed;
- Encouraging colleagues to re-examine some of their basic assumptions about their work; determining the problems inherent in the way things are;
- Stimulating colleagues to think more deeply about what they are doing for their students.

(Encouraging new initiatives)

- Encouraging staff to try new practices without using pressure;
- Encouraging staff to pursue their own goals for professional learning;

Helping staff to make personal sense of change;

- Providing the necessary resources to support staff participation in change initiatives;

(To bring their colleagues into contact with new ideas)

Stimulating the search for and discussion of new ideas and information relevant to school directions;

- Seeking out new ideas by visiting other schools, attending conferences and passing on these new ideas to staff;
- Inviting teachers to share their expertise with their colleagues;
- Consistently seeking out and communicating productive activities taking place within the school;
- Providing information helpful to staff in thinking of ways to implement new practices.

#### 6. Modeling best practices and important organizational values

(The transformational leader's general commitment to the school organization)

- Becoming involved in all aspects of school activity;
- Working alongside teachers to plan special events;
- Displaying energy and enthusiasm for own work.

(Commitment to professional growth)

- Responding constructively to unrequested feedback about one's leadership practices;
- Requesting feedback from staff about one's work;
- Demonstrating a willingness to change one's practices in light of new understandings.

(To enhance the quality of both group and individual problem-solving processes)

- Demonstrating, through school decision-making processes, the value of examining problems from multiple perspectives;
- Modeling problem-solving techniques that others can adapt for their own work.

Reinforcing key values such as:

- The basic values of respect for others;
- Trust in the judgment of one's colleagues;
- Integrity;
- The instrumental value of punctuality.

### Redesigning the Organization

#### 7. Creating a productive school culture

(Strengthening the school culture)

- Clarifying the school's vision in relation to collaborative work and the care and respect with which students were to be treated;
- Reinforcing, with staff, norms of excellence for their own work and the work of students;
- Using every opportunity to focus on, and to publicly communicate, the school's vision and goals;
- Using symbols and rituals to express cultural values in the context of social occasions in which most staff participate;
- Confronting conflict openly and acting to resolve it through the use of shared values;
- Using slogans and motivational phrases repeatedly;
- Using bureaucratic mechanisms to support cultural values and a collaborative form of culture (for example, hiring staff who share school vision, norms and values);
- Assisting staff to clarify shared beliefs and to act in accordance with such beliefs and values;
- Acting in a manner consistent with those beliefs and values shared within the school.

(Form of the school culture)

- Sharing power and responsibility with others;
- Working to eliminate 'boundaries' between administrators and teachers and between other groups in the school;
- Providing opportunities and resources for collaborative staff work (for example, creating projects in which collaboration clearly is a useful method of working).

8. Developing structures to foster participation in school decisions.

- Distributing the responsibility and power for leadership widely throughout the school;
- Sharing decision-making power with staff;
- Allowing staff to manage their own decision-making committees;
- Taking staff opinion into account when making decisions;
- Ensuring effective, group problem solving during meetings of staff;
- Providing autonomy for teachers (groups, individuals) in their decisions;
- Altering working conditions so that staff have collaborative planning time and time to seek out information needed for planning and decision making;
- Ensuring adequate involvement in decision making related to new initiatives in the school;
  - Creating opportunities for staff development.

## Appendix C

### Letter to Accompany Survey Forms

Dear Principal:

I am a doctoral student in Leadership and Administration at Indiana University of Pennsylvania under the supervision of Dr Faith Waters, East Stroudsburg University Chairperson, and Dr. Sue Rieg, Indiana University of Pennsylvania Chairperson. My research study will investigate the relationship between the leadership of Pennsylvania secondary school principals in high poverty schools and improvement in one or more areas of adequate yearly progress. The results of this research will give principals and districts important information about leadership in the context of NCLB and a potential link to improved student performance on the PSSA. It will also provide information to principal preparation institutions about leadership skills and attitudes needed to successfully guide secondary schools, and to districts who need to develop current principals, and hire and train new ones.

The Multifactor Leadership Questionnaire (MLQ) is designed to measure leadership styles. Please take a few minutes to complete the enclosed questionnaire and to return it to me either by Fax at (516)488-7738, or in the self-addressed stamped envelope as soon as possible. Your participation is critical to my study. As a former secondary principal, I realize that your time is valuable. I appreciate your cooperation in completing the attached survey which will take no more than 10 minutes. I hope to receive your school's completed survey no later than two weeks from the date of this letter so I can complete the analysis. Surveys and data will be stored separately in locked drawers and will be available only to this researcher. This study will not identify individual schools or principals. Your completed survey will serve as your consent to participate in this study. Please retain this letter for information regarding informed consent.

Your participation in this study is voluntary and you are free to withdraw from the study at any time. There are no known risks and/or discomforts associated with this study. Your response will be kept strictly confidential and will only be used for the purpose of this study. Further, your response will not be used to identify individual principals or schools in the results of the study. Every precaution will be taken to maintain the confidentiality of your response; however, there is always a minimal risk that the confidentiality of the data could be compromised due to unforeseen circumstances beyond the control of the investigator. My handling of your data will be consistent with the standards in the *Federal Policy for the Protection of Human Subjects* (Federal Register, 1991) and the *Ethical Principles in the Conduct of Research with Human Participants* (APA, 1982). Data will be analyzed within the context of available data obtained from your school profile on the Pennsylvania Department of Education website, [www.pde.pa.state.us](http://www.pde.pa.state.us). The end product will protect your confidentiality. Only the principal investigator will have access to the codes that match survey to data.

If you have any questions about this study, please contact me at (516)488-9800 ext. 9874 during the day, or at (516)741-0711 in the evening, or via e-mail at [kgulbin@verizon.net](mailto:kgulbin@verizon.net). You may also contact my advisor, Dr. Faith Waters, at East Stroudsburg University (570) 422-3363 or at [fwaters@po-box.esu.edu](mailto:fwaters@po-box.esu.edu). You may also contact Dr. Shala Davis, Chairperson of the Internal

Review Board at that university at [sdavis@po-box.esu.edu](mailto:sdavis@po-box.esu.edu). If you would like to receive a copy of my findings, please provide your e-mail address on the line provided.

If you agree to participate in a follow-up interview, I will telephone you to arrange an appointment at your convenience. I will make every effort to take a minimum amount of your precious time. Thank you for your time and your cooperation.

Sincerely,

Kathleen M. Gulbin

## Appendix D

## Principal Interview Form

Principal Name \_\_\_\_\_

School Name \_\_\_\_\_

Date Beginning Principalship at this School \_\_\_\_\_

1. How would you describe your leadership style?
2. How important do you think your leadership style is in achieving adequate yearly progress in your school?
3. As a principal of a (middle, high) school, what specific challenges do you face regarding adequate yearly progress?
4. Regarding PSSA results, do you believe your leadership style impacts mainly students, teachers, both? Why and how?
5. How do you believe teachers perceive you as a leader in this school?

**Contingent Reward**

6. Do you express your satisfaction to teachers when they meet your expectations regarding classroom instruction and student achievement?

**Intellectual Stimulation**

7. Do you facilitate teachers examining student achievement issues in the school from different angles?

**Management-By-Exception (passive)**

8. Do you generally believe "If it ain't broke, don't fix it?"

**Management-By-Exception (active)**

9. Do you focus your attention on teachers failing to meet the standards you have set for them?

**Laissez-Faire**

10. Do you keep track of mistakes?
11. Do you feel that you avoid getting involved when important issues arise?

**Idealized Influence Behavior**

12. Do you emphasize the importance of having a collective mission in your school?

**Inspirational Motivation**

13. Do you speak enthusiastically with teachers about raising student achievement on PSSA?

**Idealized Influence Attributed**

14. Do you instill pride in teachers for working with you to raise student PSSA scores?

**Individualized Consideration**

15. Do you spend time coaching teachers regarding ways to improve student scores?

**Extra Effort**

16. Do you believe that you get teachers to do more than they are expected to do regarding preparing students for the PSSA?

**Effectiveness**

17. Do you believe that you are effective in meeting school and district requirements regarding AYP?

**Satisfaction**

18. Do you believe that you use methods of leadership that are satisfying to teachers?

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Adapted from the Multifactor Leadership Questionnaire (Bass & Avolio, 1995) and Verona (2001)

## Appendix E

## Consent Form for Interviews

The following information is provided for you to decide whether you wish to participate in the doctoral study which is under the supervision of Dr. Faith Waters and Dr. Sue Rieg, Co-Chairpersons of my doctoral committee at East Stroudsburg University and Indiana University of Pennsylvania.

The purpose of this study is to investigate the relationship between transformational leadership in Pennsylvania secondary principals of schools with more than 30% of the students qualifying for free and reduced lunch and improvement on one or more aspects of adequate yearly progress as mandated by the No Child Left Behind Act of 2002. The data collection for this qualitative portion of the study will consist of tape-recorded principal interviews. The interviews will take approximately one half hour each and will consist of open-ended questions regarding principal leadership style in your school.

Your participation in this study is voluntary and you are free to withdraw from the study at any time. There are no known risks and/or discomforts associated with this study. The expected benefits associated with your participation are the opportunity to participate in the qualitative portion of a research study, and knowledge and insights about principal leadership in the context of No Child Left Behind and its influence on achievement of adequate yearly progress in schools with large numbers of economically disadvantaged students.

Do not hesitate to ask any questions about the study either before participating or during the time that you are participating. Your name will not be associated with the research findings in any way and any comments you make will be strictly confidential and will not be shared with anyone. Every precaution will be taken to maintain the confidentiality of your responses; however, there is always a minimal risk that the confidentiality of the data could be compromised due to unforeseen circumstances beyond the control of the investigator. If you have any questions about your rights as a research subject, you may call Dr. Faith Waters at East Stroudsburg University who is my advisor in this study.

Please sign your consent with full knowledge of the nature and purpose of the procedures. A copy of this consent form will be given to you for your records.

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Signature of Participant

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Date

Kathleen M. Gulbin, Principal Investigator (516) 488-9800