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An Examination of the Relationship Between Servant-Leadership Behavior
of the Elementary School Principal, School Climate and Student Achievement

as Measured by the 4th grade Mathematics and Reading

Michigan Educational Assessment Program

by

Ryan L. Cunningham

Dissertation

Submitted to the Department of Leadership and Counseling

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DOCTOR OF EDUCATION

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Ryan L. Cunningham

Abstract

The purpose of this study was to determine what relationship exists between the servant-leadership behavior of the elementary school principal, school climate, and student achievement. Data were collected through the use of two survey instruments. The (Revised) Servant-Leadership Profile: 360 (SLP-R: 360), developed by Page and Wong (2000), was used to assess principals' perceptions of their servant-leadership behavior. To assess teachers' perceptions of the health of the school climate, the Organizational Health Inventory for Elementary (OHI-RE), developed by Hoy, Tarter, and Kottkamp (1991), was used. The SLP-R: 360 was utilized as a self-perceived leadership style inventory, and the OHI-RE was used to assess teacher perception of school climate. Student achievement data, 4th grade MEAP test results, were gathered from the participating schools or through School Matters, a service of Standard and Poors.

The population of this study consisted of 206 randomly selected teachers from 27 elementary schools in Michigan. Data were analyzed through the use of Pearson Product Moment correlation analysis and linear regression analysis.

The results indicated a small or weak negative relationship between the servant-leadership behavior of elementary school principals and the health of the school climate, a small or weak negative relationship between the health of the school climate and student achievement, and a small or weak negative relationship between the independent variables of socioeconomic status, school population size, and community degree completion percentage and the dependent variable student achievement. Additionally, a small or weak negative relationship was identified between the independent variables of

socioeconomic status, school population size, and community degree completion percentage and the health of the school climate. The results of the study indicate that there is no relationship between independent variables of servant-leadership behavior, school climate, socioeconomic status, school population size, and community degree completion percentage. There is also not enough statistical evidence to predict a relationship between the secondary independent variables (socioeconomic status and community degree completion percentage) and the health of the school climate. There is, however, statistical evidence to demonstrate a relationship between school population size and the health of the school. Conversely, when reporting correlations as significant at the 0.07 alpha level, the research concludes that there is a relationship between school population size, the health of the school climate, and student achievement.

TABLE OF CONTENTS

Chapter I: Introduction to the Study	1
Statement of the Problem	2
Purpose of the Study	3
Research Questions and Hypotheses	4
Methodology	5
Strengths and Weaknesses	9
Definition of Terms	10
Limitations and Delimitations.	14
Summary	15
Chapter II: Review of Literature	16
Approaches to Leadership Theory	16
Servant-Leadership	21
The Relationship Between Principals and Teachers	31
School Climate	32
Servant-Leadership in the School Climate	36
School Climate and Student Achievement	38
The Relationship Between Leadership, School Climate and Student Achievement	40
Summary	44
Chapter III: Research Design and Methodology	46
Introduction	46
Instrumentation	49

Population	51
Limitations and Delimitations.	52
Human Subjects Procedures	53
Data Analysis	54
Validity and Reliability	55
Summary	57
Chapter IV: Results	58
Introduction	58
Population	59
Response Rate.	59
Instrumentation	60
Results.	61
Hypothesis I	63
Hypothesis II	65
Hypothesis III	69
Hypothesis IV	73
Hypothesis V	78
Summary	88
Chapter V: Summary, Conclusions, Discussion and Recommendations	91
Introduction	91
Summary of Findings	93
Conclusions	95
Importance of Findings	95

LIST OF TABLES

Table	Page
1. The Bases of Social Power	18
2. MEAP Reliability and Validity	57
3. Descriptive Statistics for Each Variable	62
4. Correlation Between Servant-Leadership Behavior and School Climate	64
5a. Correlation Between Organizational Health Inventory and Student Achievement (Math)	66
5b. Correlation Between Organizational Health Inventory and Student Achievement (Reading)	67
6a. Correlation Between Servant-Leadership Behavior and Student Achievement (Math)	70
6b. Correlation Between Servant-Leadership Behavior and Student Achievement (Reading)	71
7a. Correlation Between Socioeconomic Status and Organizational Health Inventory	74
7b. Correlation Between Community Degree Completion Percentage and Organizational Health Inventory	74
7c. Correlation Between School Population Size and Organizational Health Inventory	75
8a. Correlation Between Socioeconomic Status and Student Achievement (Reading)	79
8b. Correlation Between School Population Size	

	and Student Achievement (Reading)	80
8c.	Correlation Between Community Degree Completion Percentage and Student Achievement (Reading)	80
8d.	Correlation Between Socioeconomic Status and Student Achievement (Math)	81
8e.	Correlation Between School Population Size and Student Achievement (Math)	81
8f.	Correlation Between Community Degree Completion Percentage and Student Achievement (Math)	82

LIST OF FIGURES

Figure	Page
1. The Principal in the Rough	26
2. Conceptual Model	44
3. Scatterplot of the Correlation Between Servant-Leadership Behavior and School Climate	65
4a. Scatterplot of the Correlation Between Organizational Health Inventory and Student Achievement (Math)	68
4b. Scatterplot of the Correlation Between Organizational Health Inventory and Student Achievement (Reading)	69
5a. Scatterplot of the Correlation Between Servant-Leadership Behavior and Student Achievement (Math)	72
5b. Scatterplot of the Correlation Between Servant-Leadership Behavior and Student Achievement (Reading)	73
6a. Scatterplot of the Correlation Between Socioeconomic Status and Organizational Health Inventory	76
6b. Scatterplot of the Correlation Between Community Degree Completion Percentage and Organizational Health Inventory	77
6c. Scatterplot of the Correlation Between School Population Size and Organizational Health Inventory	78
7a. Scatterplot of the Correlation Between Socioeconomic Status and Student Achievement (Reading)	83

7b.	Scatterplot of the Correlation Between Community Degree Completion Percentage and Student Achievement (Reading)	. . . . .	84
7c.	Scatterplot of the Correlation Between School Population Size and Student Achievement (Reading)	. . . . .	85
7d.	Scatterplot of the Correlation Between Socioeconomic Status and Student Achievement (Math)	. . . . .	86
7e.	Scatterplot of the Correlation Between Community Degree Completion Percentage and Student Achievement (Math).	. . . . .	87
7f.	Scatterplot of the Correlation Between School Population Size and Student Achievement (Math)	. . . . .	88

CHAPTER I

INTRODUCTION TO THE STUDY

In public school education, high-stakes testing, student achievement, and accountability have driven schools to change programming, procedures, and, ultimately, the school climate. One of the key components to sustained change and heightened student achievement is the building principal's responsibility to ensure the success of every student. Marzano, Waters, & McNulty noted:

If we consider the traditions and beliefs surrounding school leadership, we can easily make a case that leadership is vital to the effectiveness of a school. In fact, for centuries people have assumed that leadership is critical to the success of any institution. (2005, p. 4)

Significant efforts have been made in recent decades to ascertain what constitutes an effective school leader and what effect, if any, a school leader has on student achievement. Though examinations of the variables that link effective school leadership with student achievement are by no means new, school leadership development is still getting a great deal of attention (Firestone & Riehl, 2005; Smylie et al., 2005). "Efforts to identify the knowledge, skills, and dispositions associated with effective leadership have a long history" (Yukl, 2002 as cited in Smylie et al., 2005, p. 140; Bass, 1990) and research indicates that an important characteristic of an effective school is strong leadership.

The link between a servant-leadership behavior of elementary school principals and student learning was the foundation for this study. Fullan (2001) suggested that the role of the principalship is the most important position in the development of a school culture that allows students to learn and become successful citizens. School culture is a large and complex concept that has been related to school climate. For the purpose of this

study, they can be thought of as two parts of an interactive whole (Sherblom, 2006). If elementary principals can positively affect student achievement through the school climate, then identification of specific principal behaviors is important.

Servant-leadership is a relatively new style of leadership that is becoming increasingly popular in current literature. Servant-leadership is a complex yet simple term that integrates theory and terminology from many different disciplines (Page & Wong, 1998).

The relationship between the servant-leadership behavior of the elementary school principal, school climate, and student achievement was the basis for this study. Understanding the complex interplay between these factors and determining how they impact student learning will provide guidance to school leaders as they strive to meet the demands of the contemporary educational environment. Due to the complexity of the elementary school principalship, additional variables were examined to determine what relationship exists between the secondary variables (socioeconomic status, school population size, and community degree completion percentage), the health of the school climate, and student achievement. The examination of these variables provided the researcher with additional insight on the dynamics surrounding elementary schools.

Statement of the Problem

There is a great need for understandable and reliable research that examines the effectiveness of school leaders and the outcomes that they seek to effect (Smylie et al., 2005). For many school leaders, this claim is quite unsettling, and therefore there is need for continued research in this area. There is a long history of looking for links to educational practice and student achievement or outcomes, with little empirical evidence

to support such a link (Gruenert, 2005). Stein and Spillane noted, “Researchers in educational administration have searched for direct effects of principals on student learning” to little or no avail (2005, p. 30).

There is, however, a great deal of research on school leadership and school climate, and on what impact those factors have on student achievement. “Great variation exists among schools in the United States in terms of quality and type of education they provide their students. This variation can best be understood in relation to the multiple settings in which schools exist and function” (Reyes & Wagstaff, 2005, p. 101). Reyes and Wagstaff believe that student success is highly dependent on principal leadership, and that one’s leadership ability either promotes and nourishes or impedes and diminishes student academic success. According to Firestone and Riehl, there is a “need for more robust and better warranted research on how educational leadership can contribute to improved and more equitable student learning” (2005, p. 171).

Purpose of the Study

The purpose of this study was to examine the relationship between servant-leadership behavior of the elementary school principal, school climate, and student achievement as measured by the 4th grade Mathematics and Reading on the Michigan Educational Assessment Program (MEAP) test. Smylie, Bennett, Konkol, and Fendt suggest that we need to know more about this area and that there is a tremendous need for new studies concerning the knowledge, skills, and dispositions required of school leaders (2005). Further, the examination of secondary variables was used to provide additional information on other factors that may influence the health of the school climate and student achievement.

Research Questions and Hypotheses

The following research questions were investigated:

1. What is the relationship between self-perceived servant-leadership behavior of elementary school principals and the health of the school climate as perceived by teachers?
2. What is the relationship between the health of the school climate (as perceived by teachers) and student achievement as measured by the 4th grade MEAP test?
3. What is the relationship between self-perceived servant-leadership behavior of elementary school principals and student achievement as measured by the 4th grade MEAP test?
4. What is the relationship between the independent variables (socioeconomic status, school population size, and community degree completion percentage) and the health of the school climate?
5. What is the relationship between the independent variables (socioeconomic status, school population size, and community degree completion percentage) and the dependent variable of student achievement as measured by the 4th grade MEAP test?

The following null hypotheses were investigated at a 0.05 level of significance:

1. There will be no relationship between self-perceived servant-leadership behavior of elementary school principals and the health of the school climate as perceived by teachers.
2. There will be no relationship between health of the school climate as perceived by teachers and student achievement.

3. There will be no relationship between self-perceived servant-leadership behavior of elementary school principals and student achievement.
4. There will be no relationship between independent variables (socioeconomic status, school population size, and the community degree completion percentage) and the health of the school climate.
5. There will be no relationship between independent variables (socioeconomic status, school population size, and the community degree completion percentage) and student achievement.

Methodology

Quantitative data were collected through the use of two survey instruments (issued online via Zoomerang.com) and the 4th grade Mathematics and Reading Michigan Educational Assessment Program. The (Revised) Servant-Leadership Profile: 360 (SLP-R: 360), developed by Page and Wong (2000), and the Organizational Health Inventory for Elementary (OHI-RE), developed by Hoy, Tarter, and Kottkamp (1991), were utilized. The SLP-R: 360 (Appendix A) was used to assess principal perceptions of servant-leadership behavior, and the OHI-RE (Appendix B) was used to assess teacher perceptions of school climate. Permission to use these surveys was granted via email by the respective authors.

Using informed consent, principals from schools within the Shiawassee Regional Education Service Department (SRES D) and the Clinton County Regional Education Service Agency (CCRESA) were sampled using the SLP-R: 360, and teachers from the same schools were randomly sampled using the OHI-RE. These schools were all relatively similar suburban and/or rural communities in the same geographic region with

a relatively homogenous population. The ethnic breakdown reveals a 94.9% Caucasian makeup on average with the lowest Caucasian population at 85.6% and the highest at 99.1%. The comparable demographics placed some inherent control over the population variable. This sample was selected for research convenience.

Twenty-nine elementary school principals were invited to participate in the study albeit only 27 schools and principals were selected to participate due to their composite school make-up. The school must have had a 4th grade class who participated in the Michigan Educational Assessment Program as part of their composite school make-up. Therefore, 27 respondents participated for a 100% return rate. Each elementary school principal was contacted by phone, by mail, or in person at one of the monthly county elementary principals' meetings. A copy of the survey instruments was included as well as information on how to access the online instrument. A total score for servant-leadership behavior was calculated in order to assess each principal's perception of his or her own leadership style.

Data on the principal's assessment of his or her servant-leadership behavior were obtained by using the SLP-R: 360-survey instrument developed by Page and Wong (2000). The instrument measured 62 items falling into seven categories. The seven factors were developing and empowering others; power and pride (vulnerability and humility); authentic leadership; open, participatory leadership; inspiring leadership; visionary leadership; and courageous leadership. The reliability and validity for this instrument were based on the original Servant-Leadership Profile: 360 developed by Page and Wong (1998). Each principal completed the 62-question inventory, and then a total score was assigned for each survey. The items were scored on a Likert scale by assigning

1 to "strongly agree" down to a 7, which indicated "strongly disagree." In general, the lower the overall score, the higher one falls on the servant-leadership scale.

School climate data were obtained through surveying teachers from each of the 27 participating elementary schools that were in the two intermediate school districts. Once permission was granted from the principal and a list of teachers' names were provided, a letter or e-mail was sent to randomly selected teachers inviting them to participate in the survey. Every "nth" teacher was selected to voluntarily participate in the study. The number of teachers per building selected to participate was determined by the school population size. A ratio of one voluntary teacher for every 50 students (approximately 206 teachers) was sought. Follow-up e-mails, letters, and phone calls were made to encourage participation in the survey.

Out of the 206 randomly selected teachers, 135 returned or completed the survey for a 65.5% return rate. The climate of each of the participating schools was measured by using the Organizational Health Inventory for Elementary (OHI-RE) developed by Hoy, Tarter, and Kottkamp (1991). This instrument identifies four dimensions of the organizational health of a school—collegial leadership, professional teacher behavior, achievement press, and institutional vulnerability (Hoy et al., 1991). The assessment tool has been used in several studies and investigations and has been demonstrated to be reliable and valid (Hoy, 1991; Hoy, 1997; Sinden, 2004; Cybulski, Hoy & Sweetland, 2005). The OHI-RE was administered to participating teachers via Zoomerang.com and distributed as a hard copy when requested. Assigning 1 to "rarely occurs," 2 to "sometimes occurs," 3 to "often occurs," and 4 to "very frequently occurs," scored the items. When an item is reversed scored, "rarely occurs" receives a 4, "sometimes occurs"

a 3, and so on. Each item is scored for each respondent, and then an average school score for each item is computed by averaging the item responses across the school because the school is the unit of analysis. Upon the completion of the survey instrument by each teacher, a score was calculated for the health index of the school climate for each elementary school. A minimum of three teacher responses was required in order to calculate the average score for the schools' Organizational Health Index. This number was arbitrarily determined to be sufficient by the researcher in order to increase the validity and reliability of the schools' health index score and was not established by the instrument.

Student achievement data, as measured by the 4th grade Mathematics and Reading Michigan Educational Assessment Program (MEAP) test, from the same randomly selected schools were obtained through online resources. An advantage of this type of study was that the MEAP data were readily available through these sources. For the purpose of this study, proficiency results from levels 1 (Exceeded Standards) and 2 (Met Standards) were utilized. According to the State of Michigan website, "The MEAP tests have been recognized nationally as sound, reliable and valid measurements of academic achievement." The reliability and validity of the MEAP test is provided in Chapter 3 (Table 2).

Data were analyzed through the use of Pearson Product-Moment correlation and linear regression analysis using the software package SPSS, version 14 for Windows. The investigation and differences were tested using a level of significance of 0.05. A linear regression analysis was performed to gain a better understanding of the relationships that exist among the independent variables (servant-leadership behavior, school climate,

socioeconomic status, student population size, and community degree completion percentage) and the dependent variable student achievement and also to efficiently assess the contributions of the independent variables on student achievement. According to MacMillan (1992), linear regression is a statistical approach used to examine predictor variables.

More specifically, a Pearson Product-Moment correlation was generated to determine what relationship exists between servant-leadership behavior of the principal and health of the school climate. Next, a Pearson Product-Moment correlation was generated to determine what relationship exists between the health of school climate and student achievement. Then, a Pearson Product-Moment correlation was used to determine the strength of relationship of each independent variable (socioeconomic status, school population size, and community degree completion percentage) and the health of the school climate. Finally, a correlation analysis was generated to determine strength of relationship of each independent variable (socioeconomic status, school population size, and community degree completion percentage) and the dependent variable of student achievement. A conceptual model of this analysis is provided in Chapter 2 (Figure 2). Portney and Watkins notes Pearson Product-Moment correlation analysis can be used to explain the nature of the relationships that exist among two or more variables for the purpose of hypothesis testing (1993; as cited in Kelley, 2005).

Strengths and Weaknesses

There were several strengths to this study. First, data were collected for this study in a relatively short period of time. Second, the participating schools were located in relatively similar suburban and/or rural communities, which placed some control over the

population variable. Finally, a major strength of this study was attributed to the high validity and reliability rates that have been demonstrated for both survey instruments in both leadership profiling (SLP-R: 360, Page and Wong, 2000) and the school climate inventory (OHI-RE, Hoy, Tarter, & Kottkamp, 1991), and the Michigan Educational Assessment Program (Michigan Department of Education website). According to McMillan, validity is defined as “the extent to which inferences are appropriate and meaningful” (1992, p. 100) and reliability is defined as “consistency of scores” (McMillan, 1992, p. 104).

This study also has some weaknesses. Foremost is that correlational design does not determine cause and effect; it can only examine relationship (Kelley, 2005). However, the purpose of this study was not to determine causality but to examine the relationship that exists between servant-leadership behavior, school climate, and student achievement and the secondary variables (socioeconomic status, school population size, and community degree completion percentage). While the results of this study will not be generalizable, they can provide insight into the relationship that exists between the three variables and provide guidance to school leaders. The results of this study indicated that the secondary variables might have had less of an impact in the study due to the rural demographics, as 94.9% of the student population was Caucasian.

Definitions of Terms

The definitions provided by the researcher will help readers understand the intended meaning of a word or phrase. Clear definitions play a role in communicating intent and remove assumptions.

Academic Emphasis

Academic Emphasis refers to the school's press for achievement. The expectation of high achievement is met by students who work hard, are cooperative, seek extra work, and respect other students who get good grades (Hoy, 2007).

Closed Climate

Closed climate occurs when the principal is distrustful, non-supportive of faculty, unyielding, and authoritarian. Additionally, the faculty is apathetic, self-involved, uncaring about students and each other, and is unwilling to accept responsibility.

Principal and teacher behaviors are guarded and closed (Hoy & Sabo, 1998).

Collegial Leadership

Collegial Leadership refers to behavior by the principal that is friendly, supportive, open, and guided by norms of equality. At the same time, however, the principal sets the tone for high performance by letting people know what is expected of them (Hoy, 2007).

Community Degree Completion Percentage

The Degree Completion Percentage refers to the percentage of community members who have received a bachelor's degree or higher (School Matters, 2007).

Elementary School

A school for the first four to eight years of a child's formal education, often including kindergarten.

Healthy School Climate

A healthy school is one in which the institutional, administrative, and teacher levels are in harmony; and the school meets functional needs as it successfully copes with disruptive external forces and directs its energies toward its mission (Hoy and Sabo, 1998).

Institutional Integrity

Institutional Integrity describes a school that has integrity in its educational program. The school is not vulnerable to narrow, vested interests of community groups; indeed, teachers are protected from unreasonable community and parental demands. The school is able to cope successfully with destructive outside forces (Hoy, 2007).

Leadership

“Leadership is the process of influencing others to understand and agree about what needs to be done and how it can be done effectively, and the process of facilitating individual and collective efforts to accomplish the shared objectives” (Yukl, 2002, p. 7).

Leadership Style

The characteristic way in which a leader uses power, makes decisions, and interacts with others (Lashway, 1997).

Open Climate

Open climate occurs when the principal supports teachers and gives them freedom to act. The principal avoids burdening teachers with busy work. The faculty is respectful, non-critical of each other, and committed to assisting students. Teacher and principal behavior are open (Hoy & Sabo, 1998).

Resource Influence

Resource Influence describes the principal's ability to affect the action of superiors to the benefit of teachers. Teachers are given adequate classroom supplies, and extra instructional materials and supplies are easily obtained (Hoy, 2007).

School Climate

The set of internal characteristics that distinguishes one school from another and influences the behavior of its members. School climate is construed as organizational “personality” (Hoy, Tarter, & Kottkamp, 1991, p. 4).

Servant-Leader

A leader whose primary purpose for leading is to serve others by investing in their development and well-being for the benefit of accomplishing tasks and goals for the common good (Page & Wong, 1998).

Socioeconomic Status

For the purpose of this study, identifying the percentage of each school’s free and reduced lunch population calculated SES.

School Population Size

Also known as enrollment – the total number of students in an elementary school building.

Teacher Affiliation

Teacher Affiliation refers to a sense of friendliness and strong affiliation with the school. Teachers feel good about each other and, at the same time, have a sense of accomplishment from their jobs. They are committed to both their students and their colleagues. They find ways to accommodate to the routine, accomplishing their jobs with enthusiasm (Hoy, 2007).

Transformational Leadership

This view of leadership tries to restore the idea of leaders possessing special gifts and abilities. The transformational leader is the leader who is able to energize, align, and excite followers by providing a compelling vision of the future (Oxford, 2007).

Limitations and Delimitations

The findings of this study were limited by the following factors:

This study used a sample of elementary schools in Michigan and was based on the voluntary responses from a sample of teachers and principals from each elementary school. This study was limited to the honest survey responses of the teachers and principals. They should not have feared possible repercussions or limited their responses due to loyalty to their school, leader, or district. A system of checks and balances are built into each survey to ensure the integrity of the respondents' answers and to help increase the validity and reliability of the survey instruments. This study did not attempt to account for differences in personal or professional conflicts between teachers and their principal. The results were not generalizable to all parts of the state. The researcher recognizes the limitations of the MEAP as a measure of student achievement and acknowledges that other factors may have an impact on student achievement such as the experience factor for principals and teachers, multicultural variables and parental involvement, or the unique makeup of elementary schools compared to the secondary level. The validity and reliability of the MEAP examination are provided in Table 2. Limitations of the MEAP may include, but are not limited to, content validity, construct validity, or criterion validity. The MEAP is also considered a high-stakes test and there

admittedly are certain pressures that accompany the test - the Hawthorne effect is difficult to account for when it comes to these testing situations.

The researcher gathered data during the 2007 calendar year. MEAP data were collected from elementary schools in the Clinton and Shiawassee County intermediate school districts from the fall 2006 testing date. Elementary schools with principals of a variety of years of experience were used in the study. This study was not limited to principals with a certain minimum number of years of experience; however, the study was limited to principals who had 4th grade as part of their composite school make-up. Additionally, the teachers involved in this study were randomly selected regardless of their number of years of experience.

Summary

Chapter I provided an introduction to this study. The chapter began with an explanation of the importance and complexity of the elementary school principalship. Although there is an abundance of research in the field of educational leadership and leadership style, there is little research that exists to support the impact that one's leadership style has on student achievement.

Subsequent chapters provide a review of related literature, a discussion of the research design and methodology, a report of the results, and a discussion of the conclusions and implications of the study.

CHAPTER II

REVIEW OF LITERATURE

Significant efforts have been made in recent decades to ascertain what constitutes an effective school leader and what effect, if any, the school leader has on student achievement. There has been a great deal of research to identify the knowledge, skills, and dispositions associated with effective leadership (Firestone & Riehl, 2005; Smylie et al., 2005; Yukl, 2002, as cited in Smylie et al., 2005, p. 140; Bass, 1990). Examinations of the variables that link effective school leadership with student achievement are by no means new; however, the identification of specific characteristics of effective school leaders is still critically important.

Approaches to Leadership Theory

The study of leadership is an ancient art (DePree, 1989), and the role of the school leader is continuously evolving. “Given the perceived importance of leadership in schools and the central role of the principal in that leadership, one might assume that suggestions regarding leadership practice in schools are based on a clear, well-articulated body of research spanning decades” (Marzano et al., 2005, p. 6). The principal’s role, as a school leader, is metamorphosing in order to drive systemic change and to create a collaborative school climate where the focus is student achievement.

School leadership is a term that is used loosely in the K-12 educational setting. The theory of leadership, not the leaders themselves, is the key to this revolutionary change (Fullan, 2005). There are many different leadership styles used by educational leaders in today’s schools. Throughout history, the leadership pendulum has swung in different directions. According to the U.S. Army Handbook *Military Leadership*, there

are three leadership styles (autocratic, participative, and free-rein), and these are used independently or in combination, depending on the situation (U.S. Army Handbook, 1973). Initially, school leaders were very autocratic or authoritative by nature. They were required to be efficient and effective decision-makers, according to a tradition that is largely based on the business model, which calls for the high efficiency of mass production. Later, as human rights activists and unions began to play a role in the work environment (especially in dealing with children), the focus shifted towards a more humanistic approach (Burns, 1978).

Several models of leadership have been identified within the school environment as well as within the business world. They include Theory X, Y, and Z (McGregor, 1967) and Theory S (Stone and Winston, 2003). Theory S is commonly referred to as servant-leadership. This theory is clearly different from the three other theories (X, Y, Z) identified by McGregor (1967). Theory X views workers as basically lazy and in need of being controlled. Theory Y suggests that workers are self-motivated and responsible and have an intrinsic interest in work. Theory Z attempts to incorporate both X and Y. In contrast, Theory S emphasizes the importance of leadership motivation and postulates that most workers will respond positively to leaders who seek to serve and empower them. Thus, servant-leaders may be referred to as Type S leaders (Wong, 2003).

According to Wong (2003), experienced Type S leaders make use of all leadership styles in order to maximize their leadership potential. Hoyle (2005) stated, "School leaders must strive to free others to create and find fulfillment in their roles" (p. 34). These inspirational and transformational leadership behaviors encourage, empower,

and build up employees. In essence, they choose to remain at the top part of the hierarchical pyramid.

Table 1.

The Bases of Social Power

1. Reward power – Based on the leader’s ability to reward workers.
2. Coercive power – Based on the leader’s ability to induce compliance and conformity through manipulation and threats of punishment.
3. Legitimate power – Derived from cultural expectations, responsibility and authority associated with a leadership position.
4. Referent power – Derived from a worker’s desire to become identified and closely associated with the leader, because of relationship and the leader’s personality.
5. Expert Power – Based on the knowledge and expertise attributed to the leader by followers.
6. Information power – Based on the leader’s possession or access to valuable information.
7. Connection power – Based on the leader’s “connection” with important and powerful persons inside and outside the organization.
8. Political power – Based on the leader’s ability to maintain power and weaken the opposition through bureaucratic control and political maneuvers.
9. Inspirational power – Based on a leader’s ability to inspire workers to embrace a shared vision and a higher purpose; to motivate them to do their very best

10. Transformational power – Based on a leader’s ability to transform the culture, climate, and direction of the organization through the strength of his or her courage, integrity, character, and charisma.

French & Raven (2001); Hersey, Blanchard, & Natemeyer (2001); Yukl (1989); Bass (1998), as cited in Wong (2003).

In contrast, autocratic self-seeking leaders would prefer coercive and political power that control subordinates. Table 1 displays ten bases of power as identified by Wong (2003). The first six bases of power were proposed by French & Raven (2001, as cited in Wong, 2003); the next two were provided by Hersey, Blanchard, & Natemeyer (2001, as cited in Wong, 2003); and these are followed by Yukl’s (1989, as cited in Wong, 2003) political power and Bass’ (1998, as cited by Wong, 2003) inspirational and transformational power.

Leadership, in an elementary school setting, has traditionally rested with the principal (Knicker, 1999). It is the principal’s role, as educational leader, to transform the school, moving it to new possibilities for all within. Elementary principals employ a variety of strategies to accomplish their goals and motivate others.

Sergiovanni (1996) speaks of five different types of leadership authority used by principals and school administrators. Bureaucratic authority is described as the typical “top-down” method based on a clearly defined hierarchy. Inherent in this system are the notions of principal as expert and authority in all areas and teacher as subordinate in need of close supervision. Psychological/Personal authority has at its core the idea that what is rewarded will be reinforced. This type of leadership is highly dependent on the interpersonal skills of the leader and focuses on boosting the morale of the staff and

making conditions in the school conducive for staff collegiality. A third type of leadership authority identified as highly practiced discipline is the Technical/Rational approach. This type of leadership strives to make a science out of teaching and leadership. It seeks to quantify and measure all aspects of teaching and learning. Research is studied, applied, and standardized. Teachers are often viewed as technicians, and there is little room for individuation or creativity.

Sergiovanni (1996) refers to a fourth framework regularly employed by leaders to motivate and inspire. Professional Authority relies largely on the expertise of teachers. Teacher collegiality and creativity is encouraged. Sergiovanni views this type of leadership as empowering for both staff and students. Finally, Moral Authority promotes a learning community where values, ideals, and goals are the authority to which everyone in the building responds. Therefore authority rests not in a person, or even a group of people, but rather in the shared values and beliefs to which each member of the community ascribes. Moral Authority can be closely related to servant-leadership behavior. In the ISLLC Standards (1996) this type of advocacy is referred to as being a moral agent.

Effective school leaders are strong educators, anchoring their work on central issues of learning and teaching and school improvement. They are moral agents and social advocates for their children and the communities they serve. Finally, they make strong connections with other people, valuing and caring for others as individuals and as members of the educational community. (ISLLC, 1996, p. 5)

School leaders tend to use leadership strategies that are centered on participative and facilitative management and that empower people, unless the situation calls for an authoritative decision (Marzano et al., 2005). “The modern roots of instructional leadership can be found in the effective schools movement of the late 1970s and early

1980s” (Brookover & Lezotte, 1997, as cited in Leithwood, 2004, pp. 7-8). Many contemporary school leaders use a transformational model to guide their work.

Servant-Leadership

One transformational leadership style in particular has been identified as a critical component in promoting student achievement. Servant-leadership is a unique approach, and it is based on the school leader being at the center of the organization rather than at the top of a hierarchical pyramid. It requires that the servant-leader be able to bear pain inflicted by conflict, be a steward of resources, be an effective listener, and be the developer of skills of those within the organization (DePree, 1989).

In many ways, servant-leadership mirrors this transformational model and the concept shares similarities with the notion of transformational leadership. There are, however, some fundamental differences. “Servanthood isn’t about being the star of the show—it’s about being a one-person supporting cast that makes the stars (teachers, parents, and students) shine” (McEwan, 2003, p. 152). Graham describes servant-leadership as follows:

Servant-leadership encourages followers’ intellectual and skill development and enhances moral reasoning capacity so followers become autonomous agents. In the workplace, servant leaders are sensitive to the needs and desires of organizational stakeholders, hold themselves accountable, and encourage the intellectual and moral development of those around them. (1991, p. 105)

Elaborating on the differences between transformation leadership and servant-leadership, Ehrhart states:

First, servant-leadership acknowledges the responsibility of the leader not just to the organization’s goals and to the personal development of followers, but also to a wider range of organizational stakeholders. Second, servant-leadership adds a moral compass to the idea of transformational leadership. The primary allegiance of transformational leaders is clearly to the organization (or to themselves) rather than to follower autonomy. Servant leaders, on the other hand, want their

subordinates to improve for their own good, and view the development of the follower as an end in and of itself. (2003, p. 69)

The term “servant-leadership” first appeared in the leadership literature in the 1970s. It is attributed to Robert Greenleaf, “who believed that effective leadership emerges from a desire to help others” (Marzano et al., 2005, p. 16). Greenleaf, who is considered the father of servant-leadership, coined the term in 1970 (Spears, 1995), after reading Hermen Hesse’s story *Journey to the East*. In the story, the main character (Leo) considered himself a servant even though he was the leader of an Order. However, the practice of servant-leadership tenets may in fact date to a much earlier time (Marzano et al., 2005; Spears, 1995) as during his recount of Jesus Christ’s last days, Mark quotes Jesus saying, “If anyone wants to be first, he must be the very last, and the servant of all” (NIV, 1994, p. 1067).

Servant-leadership is characterized by the desire to serve and empower followers and the belief that the best way to achieve organizational goals is through developing the potential of workers. The primary aim is service to others (Greenleaf, 1977). The idea of leaders and servants has gained increasing acceptance in the leadership and organizational literature (e.g., Farling, Stone, & Winston, 1999; Russell & Stone, 2002; Wheatley, 1994). When applied to public education, Covey (2006) claims for no other reasons, organizations are founded to serve the basic needs of the human race.

A common misconception of servant-leadership is that one must give up power in order to be servant-leader. “Authority is commonly defined in words of command, control, power, sway, rule, supremacy, domination, dominion, strength, and might” (Covey, 2006, p. 5). However, servant-leadership is not sublime. It is more appropriately referred to as an antonym to authority – civility, servitude, weakness, and

passivity (Covey). Wong (2003) points out that Type S leaders, like other types of leaders, make use of various sources of social power, but they have different preferences and practices (Table 1).

Servant-leadership is considered an oxymoron to some degree, and this is the reason why there is not an abundance of research (Sendjaya & Sarros, 2002). “It may be difficult to think and act both as leader and servant at the same time – a leader who serves and servant who leads” (Sendjaya & Sarros, 2002, p. 57). Consequently, servant-leadership is an effective model for educational leadership and management (Crippen, 2004). Hamilton (2007) contests “Servant-leadership is such an effective method because the needs of others are ensured, enabling them to reach their full potential and therefore perform at their best and become capable of serving others” (p. 5).

With this type of leadership style, personal integrity, personal values, and empathy for others lead to moral accountability. Servant-leadership assumes that leaders have inherent social values that guide their practice (Firestone and Shipps, 2005). It is well known that every leader sets the tone for his or her organization. Abrashoff (2002) relates achievement and leadership through the successful development of a positive climate. “Directly, I had nothing to do with these triumphs. As I saw it, my job was to create the climate that enabled people to unleash their potential. Given the right environment, there are few limits to what people can achieve” (p. 31).

Traditional leadership models have become problematic when applied to leadership settings where student outcomes are the goal, and almost everyone agrees that leadership is the key to reforming traditional hierarchial models (Fullan, 2005). Effective leaders are separated from ineffective leaders only by how much they care about the

people that they lead (Fullan, 2001). “Servant power is used to create opportunity and alternatives so that individuals may choose and build autonomy. In coercive power, individuals are forced into a predetermined path. Even if it is good for them, if they experience nothing else, ultimately their autonomy will be diminished” (Greenleaf, 1977, pp. 41-42). Wiley offered the following perspective on the changing phenomena of leadership:

We are beginning to see that traditional autocratic and hierarchical modes of leadership are slowly yielding to a newer model—one that attempts to simultaneously enhance the personal growth of workers and improve the quality and caring of our many institutions through a combination of teamwork and community, personal involvement in decision-making, and ethical and caring behavior. This emerging approach to leadership and service is called *servant-leadership*. (1995)

The servant-leadership theory is a paradigm shift. “A paradigm is a framework, a construct, a contextual perspective through which we view our experience” (Bennis & Goldsmith, 1997, as cited in Crippen, 2004). It essentially removes the principal from the top of the organizational hierarchy and places them at the foundation in direct contrast to the historical hierarchical model of leadership.

Spears listed Greenleaf’s ten characteristics that are essential to principal leadership and underscore a true servant leader. Listening, empathy, caring, healing, awareness, persuasion, conceptualization, foresight, stewardship, and the commitment to the growth of people and building community are the foundational principles of servant-leadership (Spears, 1998).

In Figure 1 the ten characteristics are referred to as the building blocks and are at the foundation of “The Principal in the Rough.” This model was created in an effort to illustrate the theory of servant-leadership in a different perspective. Greenleaf (1977)

suggests that the typical pyramid organizational chart is not in keeping with the servant-leadership model. He urges leaders to conceptually turn the pyramid upside down so that the needs of employees, constituents, and community become the reason for the institution's existence. "This inversion of such an accepted and familiar societal symbol, the organizational pyramid, challenges us to re-think our priorities and view an accepted metaphor for success in a new light" (Lincoln, 1989, as cited in Knicker, 1999).

Each triangle represents a reflection of the other. Greenleaf's ten characteristics are placed in the upper triangle with its mirrored image in the lower triangle identified as educational leaders. This is simply because a servant-leader innately displays these characteristics. In the second portion of the upper triangle is the school climate, which simulates the measurement of the organizational health of a school - collegial leadership, professional teacher behavior, achievement press, and institutional vulnerability (Hoy et al., 1991). It is a reflection of the professional members of the organization (teachers, etc.).

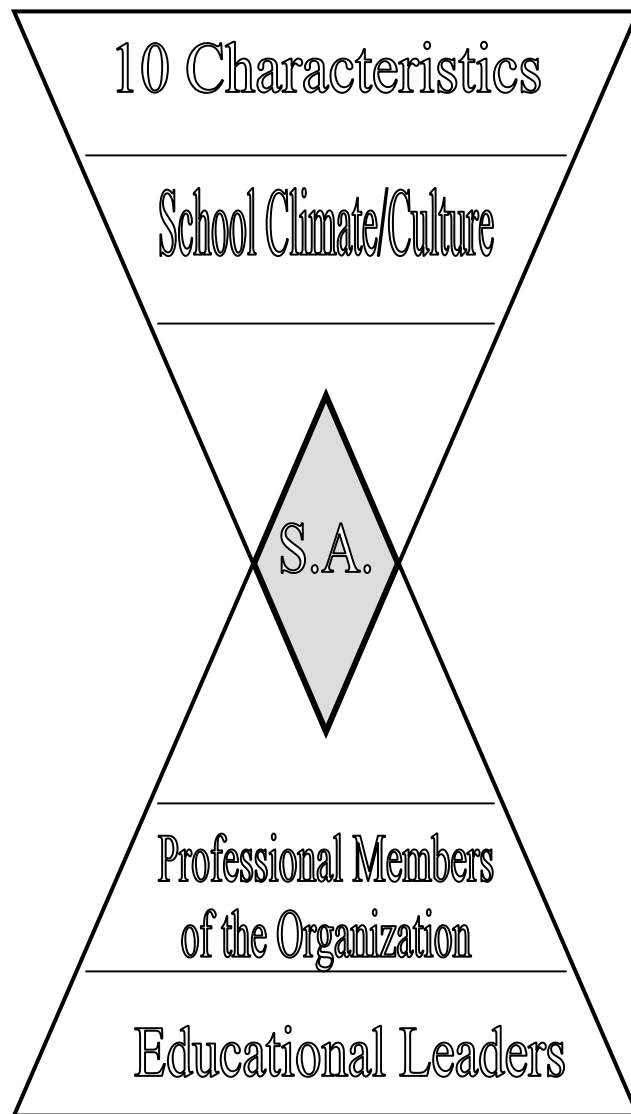


Figure 1. The Principal in the Rough

*Note: S.A. = Student Achievement

Finally, we see the two points of the triangles come together and overlay one another in the shape of a diamond. The diamond is representative of student achievement.

This conceptual model brings the two triangles, or pyramids, together in a non-traditional, non-hierarchical form. Hypothetically, they create an invaluable jewel of

success. This conceptual model plays on the idea of “the diamond in the rough” - an age-old adage. The principal is considered the one under constant development, and it is through that development that students will become successful. The end result, through an improved school climate, should be higher student achievement. Greenleaf stated “The first order of business [is to begin] on a course toward people-building with leadership that has a firmly established context of people first. With that, the right actions fall naturally into place” (1982, as cited in McEwan, 2003, p. 53). As in nature, a diamond is created.

Recent research confirms the findings that the most effective leaders delegate authority, develop collaborative decision-making processes, and step back from being at the top of the traditional hierarchical pyramid (Newmann, 1996; Leithwood, 2004; Leithwood & Jantzi, 2005; Marzano et al., 2005). The concept of servant-leadership attempts to address the unique issues facing school leaders (Reyes & Wagstaff, 2005). “Leadership must be about service” (Spears, 1998, as cited in Crippen, 2004). Greenleaf says, “True leadership emerges from those whose primary motivation is a deep desire to help others” (1977, as cited in McEwan, 2003, p. 151). Leadership is about inspiring others to achieve. The leader is viewed as the facilitator or catalyst who motivates and inspires. In other words, an effective leader is one who generates opportunity for achievement.

The idea that servant-leadership fosters a school climate or community that teachers and students alike will thrive in is a perfectly plausible argument. “Empowerment is the natural compliment to accountability” (Sergiovanni, 2001, p. 151). The way principals lead in high-stakes environments is paralleled to the success of

student achievement; however, a researcher must have at his or her disposal a demonstration of evidence that reinforces a conceptual framework. The collection, analysis, and use of data reveal the challenges that administrators face (Zmuda et al., 2004). “Although schools rarely use data and results to inform practice, data should be an essential factor of how schools do business” (Schmoker, 1996, p. 30).

Servant-leadership is a unique approach. It requires that the servant leader be able to bear pain inflicted by conflict, be a steward of resources, be an effective listener, and be the developer of skills of those within the organization (DePree, 1989). According to Greenleaf, servant-leadership can be described this way:

The servant leader is servant first. It begins with the natural feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead. The best test, and difficult to administer, is: Do those served grow as persons? Do they, while being served, become healthier, wiser, freer, more autonomous, more likely themselves to become servants? And, what is the effect on the least privileged in society; will they benefit, or, at least, not be further deprived? (1977, p. 14)

The principalship has evolved into a complex role at all levels (Brown and Wynn, 2004), in contrast to Kelley’s claim that high schools are more complex than elementary or middle schools (2005). Research (Fiedler, 1972; Kottkamp, Mulhern, & Hoy, 1987; Herriott & Firestone, 1984, as cited in Hoy & Tarter, 1997) has demonstrated that elementary schools are substantially different from secondary schools in structure, complexity, and climate. Knicker states, “The elementary school is often a family’s first introduction into formalized schooling. It is also the educational setting, which teaches children in their most formative years. For many students the time spent at the elementary setting will be longer than the time spent in middle school, junior high or high school.” (1999, p. 3) Herriott and Firestone (1984, as cited in Hoy, et al., 1991), in their

study of centralized decision-making and goal consensus in the schools, found that elementary schools are more centralized in their decision-making than are high schools. Moreover, the elementary schools elicit a greater goal consensus than would be found in high schools. The successful elementary school principal, for example, is likely to let people know what is expected of them and schedule the activities of the school; the need for consensus, however, apparently requires a principal who is approachable and concerned about the welfare of the faculty as a whole. General management issues, along with the demands of high-stakes testing, the requirements of No Child Left Behind, and Michigan's accountability program (Adequate Yearly Progress and the Michigan School Report Card), truly make this a robust and challenging position. Barth notes, "It is not the teachers, or the central office people, or the university people who are really causing schools to be the way they are or changing the way they might be. It is whoever lives in the principal's office" (1976, p. 10).

Leadership style crosses over to many different disciplines. Captain Michael Abrashoff (2002) used similar techniques in leading *USS Benfold* out of utter despair in the United States Navy. He acknowledges that with the appropriate leadership style, a cultural transformation can take place. "Leaders must free their subordinates to fulfill their talents to the utmost. However, most obstacles that limit people's potential are set in motion by the leader and are rooted in his or her own fears, ego needs, and unproductive habits" (p. 4). Having the ability to "see through the eyes of the crew" (Abrashoff, 2002, p. 13) is the guiding principle that allows a leader to find out what's really wrong and empower employees to fix it.

Helping people to reach their full potential and getting people to feel good about themselves is the key to getting more accomplished (Blanchard & Johnson, 1981).

Sergiovanni concurs.

Ultimately, however, it is not just personality that counts. At least equally important is the leader's ability to establish a climate of trust and a sense of integrity in the ideas being proposed. Key to this effort is something worth following. Without ideas, values, and commitments, there can be no followership. Without followership, there can be no leadership. In this sense, the most basic principle is followership first, then leadership. (1990, as cited in McEwan, 2003, p. 85)

Educational leadership today has become a mosaic - it has become the art of taking little pieces and putting them together to create the big picture. Simply having organizational skills, management skills, and curriculum knowledge is no longer enough to create and sustain an educational environment that is safe, efficient, and effective. There are many added pressures at the elementary level, as early success in mathematics and reading may substantially lead to a more keen and able student at the secondary level (McCook, 2007). "As administrators, we often forget that we have great influence over the programs and structures in our buildings" (Bower, 2008, p. 30).

One method to determine a school leader's leadership style is through profiling. The Servant-Leadership Profile: 360 (SLP-R: 360) survey is provided in Appendix A and further described in Chapter 3. "If servant-leadership has the potential to have a positive impact on society, including organizations such as schools, it would be very important to identify a servant-leadership assessment tool. Page and Wong (2000) were the pioneers in the development of a servant-leadership tool" (Kelley, 2005, p. 7). Page and Wong developed a survey instrument called the (Revised) Servant-Leadership Profile: 360 (2000). This survey assesses servant-leadership qualities, and "it helps to address the

reliability of a self-reported servant-leadership” (Rude, 2004). According to Page and Wong, servant-leadership is “an area that is under-researched in the abundant literature on servant-leadership” (2000, p. 70). The SLP-R: 360 instrument consists of 62 items and includes 7 factors. The seven factors are empowering and developing others; humility; serving others; open, participatory leadership; inspiring leadership; visionary leadership and integrity; and authenticity.

The Relationship Between Principals and Teachers

It is apparent that the relationship between principals and teachers is vital. Dungy (2007) said, “Loyalty and relationships are important” (p. 84). Empowering individuals within your organization can lend itself to a more healthy school climate. According to Leithwood, “The generic meaning of organizational leadership, while contested, is encompassed in the concept of influence relationships.” (2001, as cited in Hoyle, 2005, p. 37). In any organization you are defined by who you are, not what you do. Success is about building relationships, being organized and energizing people. “Character comes in all guises; sometimes we are teachers, sometimes we are learners. The line between the two can be indistinct” (Martelli, 2007, p. 97).

Fullan (2001) discussed the importance of relationships and building a climate in schools. When leaders foster leadership in others, mobilize people to tackle tough problems, and build trust, student performance increases. Leaders must be willing to create a climate in which there is collegiality, open communication, collaboration and conversation (Barth, 2005). Weiss and Milinaro argue, “Leadership is critical to culture and values because it is the leaders of the organization who can create, manage and change an organization’s culture” (2005, as cited in Davis, 2006, p. 106). One of the strongest

measures of organizational culture is collective efficacy. Cybulski, Hoy, & Sweetland define collective efficacy as “the perception of teachers in a specific school that the faculty as a whole can execute courses of action required to positively affect student achievement” (2005, p.79). Teacher leaders may be formal (department chair or team leaders) or informal (Ackerman & Mackenzie, 2006). “Many principals nurture and support teacher leadership because they know how crucial it is to establish improvements in teaching and learning at the classroom level” (Ackerman & Mackenzie, 2006, p. 66). Covey (1989) refers to this as “sharpening the saw” - taking time out from production to build capacity for “talent knows no rank” (Abrashoff, 2002, p. 58). This interdependence is a “win/win” (Covey) paradigm under which, with the No Child Left Behind laws, it is not hyperbole to say that building a climate of trust can be a life or death prospect when it comes to accomplishing goals.

In management research, Collins and Porras (1997, as cited in Davis, 2006) found that measures of culture are strong predictors of financial success. The ability for one to change values, norms, and, ultimately, the school climate, does not happen automatically with a change of leadership or in a short period of time. A leader, however, can create a paradigm shift and effect systemic change by laying a foundation (Kuczmarski et al., 1995), leading by example, listening aggressively, communicating with purpose and meaning, creating a climate of trust, and looking for results, not salutes (Abrashoff, 2002).

School Climate

Underlying the question of which leadership approach is most effective is the question of how effective leadership is in the school environment. Most empirical

evidence about leaders' influence on student achievement has come from school-level research. "Studies of this type usually report very large leadership effects not only on student learning but on an array of school conditions as well" (Leithwood, 2004, p. 3).

Arguably the most important factor in this study deals with building-level leadership and a principal's ability to create a school climate that enables authentic school achievement. DePree stated, "Leaders are responsible for effectiveness. Leaders don't inflict pain; they bear pain" (1989). Researchers have been challenged to go beyond socioeconomic status and other variables to make a difference in student achievement. "Coleman startled educators with his findings that the characteristics of a school mattered little in explaining student achievement" (Hoy, Tarter & Hoy, 2006). Studies that directly link leadership practices and student achievement have been elusive. Therefore, focus has been shifted to determining factors that make up high-performing schools.

There is a great deal of research that exists on the relationship between the health of the school climate and student achievement. School climate is construed as organizational "personality" (Hoy, Tarter, & Kottkamp, 1991, p. 4), a set of internal characteristics that distinguishes one school from another and influences the behavior of its members. Schools with an open climate tend to be healthy, and, conversely, healthy schools tend to have an open climate (Hoy and Miskel, 1996). Healthy schools maintain a balance between tasks to complete and relations among those in the school (Imperial, 2004, as cited in Pilar, 2006, p. 8). Additionally, open climates are less likely to alienate students (White, 1993; Sweetland and Hoy, 2000; Fraser, 2001; Smith, 2002; Goodard, Sweetland, and Hoy, 2000; Imperial, 2004, as cited in Pilar, 2006, p. 8).

One of the more prevalent problems in educational leadership is transforming the professional community into a school climate that is conducive not only to student learning but also to staff development and professional growth. The only way this type of authentic leadership will occur is through the development of the skills necessary to allow an educational leader to meet the professional, personal, and emotional needs of his or her staff (Fullan, 2001).

Since particular facets of school climates have been linked to student achievement, investigating a school's climate would be a logical starting point for measuring a school's effectiveness. Getting a pulse on the health of the organization allows a principal to effectively monitor the school climate. Climate profiles such as the Organizational Health Inventory (Hoy, 2007) help leaders specifically communicate and understand their most valuable resource: the staff. "We cannot rule out the possibility that the climate-profiles may actually constitute a better criterion of school's effectiveness than many measures that already have entered the field of educational administration and now masquerade as criteria" (Halpin, 1966, p. 195).

The Organizational Health Inventory for Elementary (OHI-RE) identifies four dimensions that measure the organizational health of a school: collegial leadership, professional teacher behavior, achievement press, and institutional vulnerability (Hoy et al., 1991). The OHI-RE is scored by calculating an average for each of the four dimensions broken up into five domains: institutional integrity, collegial leadership, resource influence, teacher affiliation, and academic emphasis. The definitions for each of these domains are as follows:

Institutional Integrity

Institutional Integrity describes a school that has integrity in its educational program. The school is not vulnerable to narrow, vested interests of community groups; indeed, teachers are protected from unreasonable community and parental demands. The school is able to cope successfully with destructive outside forces.

Collegial Leadership

Collegial Leadership refers to behavior by the principal that is friendly, supportive, open, and guided by norms of equality. At the same time, however, the principal sets the tone for high performance by letting people know what is expected of them.

Resource Influence

Resource Influence describes the principal's ability to affect the action of superiors to the benefit of teachers. Teachers are given adequate classroom supplies, and extra instructional materials and supplies are easily obtained.

Teacher Affiliation

Teacher Affiliation refers to a sense of friendliness and strong affiliation with the school. Teachers feel good about each other and, at the same time, have a sense of accomplishment from their jobs. They are committed to both their students and their colleagues. They find ways to accommodate to the routine, accomplishing their jobs with enthusiasm.

Academic Emphasis

Academic Emphasis refers to the school's press for achievement. The expectation of high achievement is met by students who work hard, are cooperative, seek extra work, and respect other students who get good grades.

Generally speaking, a healthy school is an open school. In order for authentic teaching and learning to occur, the climate of the school must be open enough for teachers to feel empowered, part of the community, and valued as individuals. With these things in place, the school climate will lend itself to authentic student achievement (Page and Wong, 2000).

Servant-Leadership in the School Climate

There are few studies that examine the relationship that exists between the servant-leadership behavior of elementary school principals (specifically) and the school climate. In one qualitative study of elementary school principals as servant-leaders (Knicker, 1999), the subjects of the study shared that they were sometimes viewed as being weak and indecisive. The misconceptions that often accompany the role of servant leader may be the same misconceptions that led only 78% of panel members to rate “respected by peers” as a good descriptor of servant-leaders. Responses may indicate that the servant-leaders participating in this study feel a lack of respect from peers in their own environment.

Kelley (2005) identified one study in particular that measures leadership practices of principals who were identified as servant-leaders. An “Examination of Leadership Practices of Principals Identified as Servant Leaders” suggested that “principals identified as servant-leaders may be more effective leaders than were principals identified as not using servant-leadership practices” (Kelley, 2005, p. 45).

Kelley also offers a review of a dissertation “A Study of the Relationship Between Transformational Leadership and Organizational Climate of Elementary

Schools in Western Pennsylvania” (Mooney, 2003). Kelley made reference to Mooney’s study:

Mooney conducted a study to determine the relationship between transformational leadership style, which has some similar characteristics as servant-leadership, and climate in elementary schools. Mooney identified a positive correlation between this leadership style and some of the dimensions of the elementary school climate. (2003, as cited by Kelley, 2005, p. 45)

Leithwood and Jantzi (2005) reviewed 32 empirical studies from 1996 to 2005 that related to transformational leaders. Although their review was of the “transformational leader,” the transformational leader and servant-leader can easily be compared, as Bass stated:

[Transformational leaders] convert followers to disciples; they develop followers into leaders. They elevate the concerns of followers on Maslow’s hierarchy from needs for safety and security to needs for achievement and self-actualization, increase their awareness and consciousness of what is really important, and move them to go beyond their own self-interest for the good of the larger entities to which they belong. The transforming leader provides followers with a cause around which they can rally. (1995, as cited in Leithwood and Jantzi, 2005, p. 467)

Leithwood and Jantzi (2005) choose to include only published studies in their review. Leadership (style) was the independent variable in all of these studies. Nine of the studies identified achievement as the dependent variable, and six of them used engagement (student participation and identification). “While effects of leaders on students are generally regarded as indirect, positive effects were reported” (Leithwood and Jantzi, 2005, p. 192). School climate is a critical area of importance for the success of students and is intertwined with educational leadership. Research identified three domains of instructional leadership in relation to school climate. They were defining the school mission, creating a positive learning climate, and managing the school’s instructional program (Hallinger and Murphy’s 1987, as cited in Davis, 2006). The

results indicated specific instructional leadership behaviors that are shown to increase student achievement.

School Climate and Student Achievement

Philip Hallinger, Ronald Heck, Kenneth Leithwood, and Doris Jantzi are some of the more influential researchers in the area of school climate and student achievement. Hallinger and Heck (1996) completed a review of the empirical research that took place in the United States and several other countries from 1980 through 1995. Their efforts were designed to give support to the research community and policymakers and to show that studies conducted throughout this time period lend empirical support to lay wisdom. “The belief that principals have an impact on schools is long-standing in the folk wisdom of American educational history” (Hallinger and Heck, 1996, p. 1).

According to Hallinger and Heck, the traditional studies of principal effectiveness did not take into account the complexity of the issue. They used three criteria to examine studies reported in national and international journals. First, the research must have conceptualized and measured principal leadership as one of the independent variables. Second, the studies had to include student achievement as the dependent variable. Finally, studies that examined the effects of principals conducted outside of the United States were sought. Using these criteria, 40 studies were identified “that explored the relationship among principal leadership behavior and school effectiveness” (Hallinger and Heck, 1996, p. 4).

Most studies employed a cross-sectional, correlation design and involved surveys or reviews as their methods of data collection. Each was non-experimental. Although the interpretation of the results was approached with caution, the conclusion of the analysis

supported the notion that “principal leadership can make a difference in student learning” (Hallinger and Heck, 1996, p. 16). However it was also concluded that the effect of leadership on student achievement was indirect.

Through the creation of an open climate, where teachers are supported and empowered, authentic teaching and learning may occur. Bullach and Malone (2006) report research findings that reveal that students attending schools characterized with positive culture had significantly greater achievement than students attending schools with negative climate. A study of 91 elementary schools in Michigan showed that “school variables,” (day-to-day culture and climate) had more influence on children’s achievement than did race and economic variables (Brookover, 1979).

Research done by Gay indicated that the “tone of the educational setting has an astounding effect on student performance” (2002, as cited in Pilar, 2006). “Cold threatening climates are likely to hinder academic performance...while warm supportive climates have been found to be a contributing factor in the success of students” (p. 613).

A caring educational leader can organize structures and systems, lead in the instruction, and promote a healthy school climate. A high rate of student achievement is a sign of the quality of the school climate. If leaders understand school climate, they can shape values, beliefs, and attitudes for a secure and nurturing learning environment. Students within a healthy school have a respect for learning and are motivated academically (Imperial, 2004, as cited in Pilar, 2006, p. 9). Freiberg states, “School climate can be a positive influence on the health of the learning environment or a significant barrier to learning” (1998, p. 22). Students in a school with a strong positive culture have been shown to have a greater chance of success and achievement (Fullan,

2001b; Sergiovanni, 2000, as cited in Sherblom, 2006). Sergiovanni (2001) argues that “shared commitments pull people together and create tighter connections among them and between them and the school. These factors count in helping students learn at higher levels” (p. 23).

Negative school cultures that foster destructive attitudes and mistrust, on the other hand, can prevent schools from making the most of their potential and can create barriers to growth and change (Fullan, 2001a; Sarason, 1995, as cited in Sherblom, 2006).

“Effective managers manage themselves and the people they work with so that both the organization and the people profit from their presence” (Blanchard & Johnson, 1981, p. 15). In primary public school education, the “profit” is measured out in increments of student achievement. More specifically, Michigan measures success through its standardized testing, the Michigan Educational Assessment Program (MEAP). For the purpose of this study, student achievement was measured by the 4th grade Mathematics and Reading on the Michigan Educational Assessment Program (MEAP). Zins, Bloodworth, Weissberg, and Wahlberg (2004) report that good school climate is linked with positive academic and intellectual outcomes and is predictive of standardized achievement test scores.

The Relationship Between Leadership, School Climate, and Student Achievement

While there is ample research on instructional practices that have a positive impact on student learning, there is little recent research on whether leadership style has an effect on achievement in elementary schools (Miller & Rowan, 2006).

As Donmyer states:

Recent studies of schools invariably identify the principal’s leadership as a significant factor in a school’s success. Unfortunately these studies provide only

limited insight into how principals contribute to their school's achievements. (1985, p. 31, as cited in Marzano et al., 2005, p. 6)

For example, a recent synthesis of the research on school leadership “concluded that statistically there is almost no relationship among school leadership and student achievement” (Marzano et al., 2005, p. 6). The synthesis conducted by Witziers, Bosker, and Kruger involved 37 studies and examined the impact of building leadership on student achievement (2003, as cited by Marzano et al., 2005).

Marzano, Waters, and McNulty believe in a different perspective. The conclusion of their meta-analysis of research conducted over the past 35 years provides strong guidance on specific leadership behaviors for school administrators and that those behaviors have well-documented effects on student achievement” (2005, p. 7).

Linking effective leadership and student achievement is a daunting task, since problems must always be measurable and observable (Blanchard & Johnson, 1981). A growing body of evidence suggests that educational leaders have a direct influence on the school climate and that a positive school climate may significantly enhance student academic achievement (Benninga, Berkowitz, Kuehn, & Smith, 2003; Berkowitz & Bier, 2005, as cited in Sherblom, 2006). Research is beginning to create links between educators' sense of commitment and satisfaction with supportive, collegial interactions among teachers and administrators opportunities for caring, personal involvement with students with organizational effectiveness and student achievement (Ashton et al., 1986).

President Bill Clinton stated, “You've got to get a good principal who is well trained and understands that he or she has to create a culture” (Barkley, 2005, p. 74) to have a good school. To a large degree, a principal has an indirect impact on student achievement, through the community and climate that he or she maintains in the school

building. “School leaders that shape their cultures to become more collaborative should reap the benefits of greater teacher performance and satisfaction and greater student performance” (Gruenert, 2005, p. 43).

The Interstate School Leaders Licensure Consortium (ISLLC): Six Standards for School Leaders were adopted in 1996 and are used by 35 states to help reform school leadership. Standards 2 and 6 promote the success of all students and speak most directly to the theory of developing effective school leaders. Standard 2 reads “A school administrator is an educational leader who promotes the success of all students by advocating, nurturing, and sustaining a school climate and instructional program conducive to student learning and staff professional growth.” Standard 6 reads, “A school administrator is an educational leader who promotes the success of all students by understanding, responding to, and influencing the larger political, social, economic, legal and cultural context” (ISLLC, 1996). One of the underlying premises in this way of thinking is that educational leaders have the ability or skills necessary to meet the needs of their staff, though “Unfortunately, very few educators have received instruction in these skills themselves” (Thornburg, 2002, p. 65).

Goals are an important aspect of educational leadership and organizational development. Imagine a sporting contest with no scores, goals, or points scored; it would be difficult to assess individual, team, or organizational progress. Student achievement must be a common or shared goal throughout the school. Encouraging intuitive thinking, cultivating a caring community, recognizing accomplishments, developing strengths in others, and creating learning communities are productive ways to avoid anomie and lay the foundation for success (Kuczarski et al., 1995).

This review of empirical research on leadership styles helped to guide the design of this study. In general, there is a great deal of research that identifies leadership as the independent variable and student achievement as the dependent variable. The results of these studies are inconclusive and suggest the need for additional research in this area.

Leithwood summarized the importance of this topic:

Research-based evidence about educational leadership is vastly larger in quantity and more sophisticated than it was even a scant 20 years ago. As is the case in all social-science domains, this improved sophistication and substance does not mean that the evidence is irrefutable, nor will it ever be. But it has now reached the critical mass necessary for it to be an important guide for policy and practice. (2004, p. 21)

This study of the relationship between the servant-leadership behavior of the elementary school principal, school climate, and student achievement was built on the works of others in order to more fully understand ways to impact student learning.

Figure 2 offers a conceptual model that guided this study to help determine what relationship exists between the servant-leadership behavior of the elementary principal, the school climate, and student achievement. Prior research demonstrated that the leadership style of the elementary principal has an indirect impact on student achievement.

The three-domain structure identifies the primary variables utilized in this study. Servant-leadership behavior and school climate were the independent variables, and student achievement (math and reading) was the dependent variable. The two arrows that drive through the model indicate that it is through school climate that servant-leadership behavior has an indirect effect on the student achievement. The overarching arrow indicates the indirect relationship between servant-leadership behavior and student achievement. Additionally, an underlying domain exists that represented the other

independent variables that were examined during the study. The independent variables of socioeconomic status, school population size, and the community degree completion percentage earned in a community were examined to determine if a relationship exists between the independent variable of school climate and the dependent variable of student achievement. The large block arrows represent those relationships that were examined.

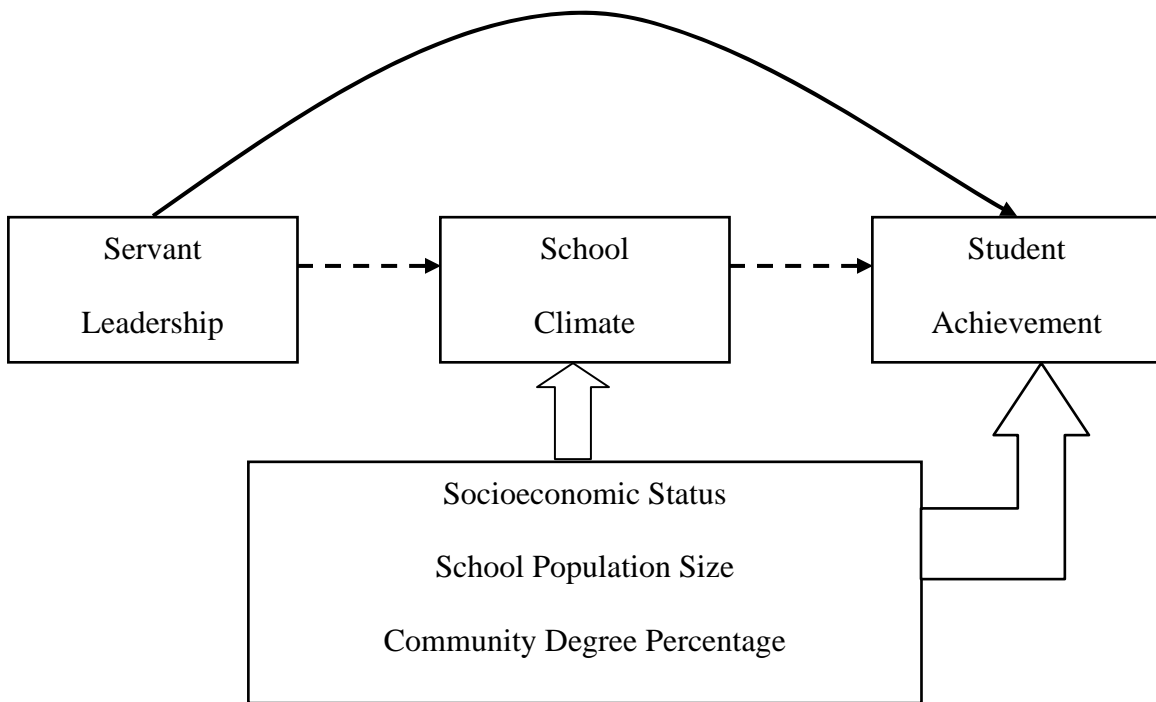


Figure 2. Conceptual Model.

As indicated by the conceptual model(s), the principal has an indirect impact on the school climate, and it is through that influence that students attain high levels of achievement.

Summary

This chapter outlined a review of various models for school leadership and their impact on education. It provided a review of literature in the areas of leadership

theory, servant-leadership, and school climate. This chapter also helped to frame the research questions through a conceptual model. Successive chapters will present the research design and methodology, summarize the results, draw conclusions, discuss implications for the study, and make recommendations for possible topics of further research.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

Introduction

While there is ample research on instructional practices that have a positive impact on student learning, there is little recent research on whether leadership style has an effect on achievement in elementary schools (Miller & Rowan, 2006). Looking for links to educational leadership practice and student achievement has a long history with little empirical evidence to support it (Gruenert, 2005). According to Gruenert, “Despite the rhetoric, minimal empirical evidence exists to support these claims” (2005, p. 43). Miller and Rowan state that research only provides “mixed empirical support” (2006, p. 220).

Most empirical evidence about leaders’ influence on student achievement has come from school-level research. The purpose of this chapter is to describe the methodology utilized to examine the relationship between the servant-leadership behavior of the elementary school principal, school climate, and student achievement. Included in this chapter are sections that address research design, instrumentation, population and selection of participants, limitations and delimitations, data collection, data analysis, validity and reliability, and the importance of findings.

According to McMillan (1992), the purpose of correlational research is to measure the relationship between two or more quantitative variables and make predications based on the value of those variables. The researcher used a nonexperimental, correlational design in this quantitative study to examine the relationship between the servant-leadership behavior of elementary school principals, school climate, and student achievement as measured by the 4th grade Mathematics and

Reading Michigan Educational Assessment Program through a multivariate statistical procedure. A Pearson Product-Moment correlation was generated to determine what relationship exists between servant-leadership behavior of the principal and health of the school climate. The researcher also examined the relationship of the independent variables of servant-leadership behavior and school climate, and the dependent variables of student achievement. Secondary examinations were conducted on the relationship between the dependent variables of student achievement and the independent variables of socioeconomic status, school population size, and community degree completion percentage, of each building. Further, an examination was done to determine what relationship exists between the secondary independent variables and the health of the school climate. The researcher used cross-sectional data that were collected at one point in time.

The researcher was able to gather readily available data for the dependent variables of student achievement and the secondary independent variables of socioeconomic status, school population size, and community degree completion percentage of each building. This information was collected from the Standard and Poor's website, School Matters, and was advantageous to this type of study. Using two survey instruments, The (Revised) Servant-Leadership Profile: 360 (SLP-R: 360), developed by Page and Wong (2000), and the Organizational Health Inventory for Elementary (OHI-RE), developed by Hoy, Tarter, and Kottkamp (1991), quantitative data were collected through issuance online via Zoomerang.com. The respective authors granted permission to use these surveys through an email communication. The SLP-R: 360 (Appendix A) was used to assess principals' self-perceptions of servant-leadership

behavior and the OHI-RE (Appendix B) was used to assess teacher perceptions of school climate.

In this study, data were collected in a relatively short period of time. A major strength in this study is attributed to the high validity and reliability rates that have been demonstrated by the survey instruments in both leadership profiling (SLP-R: 360, Page and Wong, 2000) and the school climate inventory (OHI-RE, Hoy, Tarter, & Kottkamp, 1991). According to McMillan, validity is defined as “the extent to which inferences are appropriate and meaningful” (1992, p. 100). Reliability is defined as “consistency of scores” (McMillan, 1992, p. 104). Demographically, the participating schools were located in relatively similar suburban and/or rural communities, which placed some control over the population variable. Finally, the response rate for this survey was relatively high, as 65.5% of the teachers contacted completed the school climate inventory and 100% of the principals completed the servant-leadership profile instrument.

The purpose of this study is not to determine causality but to examine the relationship that exists between servant-leadership behavior of the elementary school principal, school climate, and student achievement. “A weakness of correlational design is that it does not determine cause and effect; it can only show relationship” (Kelley, 2005, p. 17). While the results of this study are not generalizable, they provide useful information about the relationship between the variables. Such information may prove instructive to elementary school principals and other educational leaders.

Using informed consent, principals from elementary schools within the Shiawassee Regional Education Service Department (RES D) and the Clinton County

Regional Education Service Agency (CCRESA), two regional service centers in Michigan, were invited to participate in the study. They were sampled using the (Revised) SLP-R: 360 (Page and Wong, 2000), an instrument designed to gather data from the principals about their self-perceived servant-leadership behaviors. Teachers randomly selected from the same schools were asked to complete a survey measuring the organizational health of their school. The OHI-RE, an instrument developed by Hoy, Tarter, and Kottkamp (1991), was used. The schools that participated in this study were relatively similar suburban and/or rural communities in the same geographic region of Central Michigan. This sample was selected for research convenience.

Instrumentation

Data were obtained from principals and teachers from each of the 27 elementary schools in the two intermediate school districts. Each elementary principal was contacted by phone, by mail, or in person at one of the monthly county elementary principals' meetings. A copy of the survey instruments were included, as well as information about how to access the online instrument. Once permission was granted from the principal and a list of teachers' names were provided, a letter or e-mail was sent to randomly selected teachers, inviting them to participate in the survey. A ratio of one voluntary teacher for every 50 students (approximately 206 teachers) was sought. Follow-up e-mails, letters, and phone calls were made to encourage participation in the survey. Out of the 206 randomly selected teachers, 135 teachers returned or completed the survey for a 65.5% return rate.

Student achievement data, as measured by the 4th grade Mathematics and Reading Michigan Educational Assessment Program, were obtained from the Standard and Poor's

website. For the purpose of this study, proficiency results from levels 1 (Exceeded Standards) and 2 (Met Standards) were utilized. According the Michigan Department of Education website, “The MEAP tests have been recognized nationally as sound, reliable and valid measurements of academic achievement.”

A total score for servant-leadership behavior was calculated in order to assess each principal’s perception of his or her own servant-leadership behavior. Upon the completion of the survey instrument by each teacher, a score was calculated for the health index of the school climate for each elementary school. (A minimum of three teachers’ responses were required in order to calculate the average score for the Organizational Health Index.) A multivariate statistical analysis was done to determine what relationship exists between servant-leadership behavior of the principal, health of the school climate, and student achievement. A Pearson Product-Moment correlation was used to determine the strength of relationship of each independent variable (servant-leadership, health of school climate, socioeconomic status, school population size, and community degree completion percentage) and the dependent variables of student achievement. According to Portney and Watkins, Pearson Product-Moment correlational analysis can be used to explain the nature of the relationships that exist among two or more variables for the purpose of hypothesis testing (1993). For the purpose of this study, the strength of the relationship was determined by the correlation coefficient. In general, the higher the correlation coefficient, the stronger the relationship between the variables. A “perfect” relationship is equal to 1.00 ($r = +/-1.00$). “In general, positive correlations between .10 and .30 are referred to as small or low positive relationships, .40 to .60 are moderate positive relationships, and .70 and above are high positive

relationships” (McMillan, 1992, p. 98). Negative correlations always include a negative sign, however the strength is independent of its sign. “Correlations between $-.10$ and $-.30$ are considered small; between $-.40$ and $-.60$, moderate; and between $-.70$ and -1.0 , high” (McMillan, 1992, p. 98).

Data were analyzed through the use of Pearson Product-Moment correlation and linear regression analysis using the software package SPSS, version 14 for Windows, and were tested using a level of significance of 0.05. A linear regression analysis was performed to gain a better understanding of the relationships that exist among the independent variables (servant-leadership behavior, school climate, socioeconomic status, school population size, and community degree completion percentage) and the dependent variables student achievement. Linear regression analyses were used to efficiently assess the contributions of the independent variables on student achievement. According to MacMillan (1992), linear regression analysis provides a powerful statistical approach for explaining and predicting quantifiable outcomes. Linear regression analyzes the relationship between two variables, X and Y.

Population

The sample for this study consisted of 27 elementary schools that were part of either Clinton County RESA or the Shiawassee RESD located in central Michigan. The schools that participated in the research project varied in socioeconomic status, school population size, and community degree completion percentage. All schools were relatively similar suburban and/or rural communities in the same geographic region.

The survey instrument (SLP-R: 360) was distributed to the principals of the selected schools, and a list of teachers’ names was obtained from each principal. Every

“nth” teacher was selected to participate by completing the OHI-RE online. Completion of the surveys was on a voluntary basis. The number of teachers per building selected to participate was determined by the student enrollment. The ratio of one teacher for every 50 students resulted in a range of three participating teachers in the smallest school, and 16 in the largest school, based on 2006 student enrollment.

Limitations and Delimitations

This study is limited by several factors. First, while an attempt was made to include all elementary schools in the Clinton and Shiawassee Intermediate School Districts, not all schools had 4th grade in their school make-up. Further, schools that did not have a least three participants in the OHI-RE were eliminated from the study. The researcher gathered data during the 2007 calendar year from the School Matters website using fall 2006 achievement data. The study was limited to the voluntary and honest survey responses of the teachers and principals from a sample of elementary schools in Michigan. When dealing with self-reporting in surveys, the bias was minimized through a series of questions within the survey that target the same topic, therefore providing a system of checks and balances. Elementary schools with principals of a variety of years of experience were used in the study. The study was not limited to principals with a certain minimum number of years. Additionally, the teachers involved in the study were randomly selected regardless of their number of years of experience. The study did not attempt to account for differences in personal or professional conflicts between teachers and their principal, nor did the study attempt to account for multicultural variables.

The researcher recognizes the limitations of the MEAP as a measure of student achievement and acknowledges that other factors may have an impact on student

achievement, such as decreased dropout rates and parental involvement. The validity and reliability of the MEAP examination are provided in Table 2.

Human Subjects Procedures

The researcher obtained authorization to conduct the study from the Human Subjects Institutional Review Board (IRB) at Eastern Michigan University (Appendix E). The principals of participating elementary schools received an informed consent letter (Appendix C) and the information to complete the survey online. Each principal also received the teachers' consent letter (Appendix D) and copies of both survey instruments. Data were obtained from the principal from each building with a list of teachers' names. To assist the principals in completing the online survey instrument, follow up emails and phone calls were made. In three instances, an online survey was created for individual buildings so that the participating principal could receive complete building results. In those instances, survey responses were randomly selected with permission granted by the teacher via email.

Once permission from the principals was received and a list of the teachers' names provided, the randomly selected teachers were contacted by email with instructions on how to complete the online survey. Included in the email were the teachers' letter of consent (Appendix D) and a copy of the survey. The email cover letter assured the confidentiality of their responses. In some instances, self-addressed stamped envelopes were mailed along with hard copies to teachers who requested a paper survey. To assist the teachers in completing the online survey instrument, follow-up emails and phone calls were made.

Student achievement data, 4th grade MEAP test results, were obtained from the School Matters website, a service of Standard and Poors. Additionally, socioeconomic status (as measured by the percent of students qualifying for free and reduced lunch), school population size, and community degree completion percentage were also obtained through the School Matters website.

Data Analysis

All raw data collected about servant-leadership behavior, school climate, student achievement, socioeconomic status school population size, and community degree completion percentage were entered into a database. The software package SPSS, version 14.0 for Windows, was used for analysis.

Upon completion of each survey instrument, a total score was calculated. For the servant-leadership behavior, a total score was calculated to assess the principal's self-perception of his or her leadership behavior. The organizational health surveys completed by each teacher were calculated to determine the "health" of the school climate. (A minimum of three survey responses was required to complete the profile of a school.) Linear regression analysis was used to assess the strength of the predictor variables and their effect on student achievement. A multivariate statistical analysis was done to determine what relationship exists between servant-leadership behavior of the principal, health of the school climate, and student achievement. Each independent variable (servant-leadership, health of school climate, socioeconomic status school population size, and community degree completion percentage) was tested against the dependent variables (student achievement) to determine the strength of relationship using a Pearson Product-Moment correlation. A correlational analysis can be used to explain

the nature of a relationship between two or more variables and to make predictions (McMillan, 1992).

Validity and Reliability

Validity helps to determine the appropriateness and meaningfulness of inferences, and reliability determines the consistency of scores (McMillan, 1992, p. 104). The SLP-R: 360 is a survey instrument developed by Page and Wong that, through an extensive study of the literature on servant-leadership, led to the establishment of the descriptors of servant leaders (2000). Initially, the instrument consisted of 99 items and was grouped into 12 categories. Eventually, the instrument was narrowed to 62 items and seven categories. The seven factors are empowering and developing others; humility; serving others; open, participatory leadership; inspiring leadership; visionary leadership and integrity; and authenticity. The reliability and validity for this instrument are based on the original Servant-Leadership Profile: 360 developed by Page and Wong (1998). The reliability scores are integrity (.80), humility (.66), servanthood (.76), caring for others (.71), empowering others (.77), developing others (.92), visioning (.57), goal setting (.77), leading (.84), modeling (.76), team building (.82), shared decision-making (.80), and total (.94) (Kelley, 2005).

To assess perception of servant-leadership behavior, SLP-R: 360 developed by Page and Wong (2000) was utilized. To calculate the results of the SLP-R: 360, a total score for servant-leadership behavior of each principal was calculated.

The OHI-RE (Hoy, Tarter, & Kottkamp, 1991) was administered via Zoomerang.com, an online site. Zoomerang allows you to create a survey, invite participants, and analyze results in a timely and efficient manner. A system was designed

to anonymously track teachers' responses but match them to their school. The OHI-RE items were scored by assigning 1 to "rarely occurs," 2 to "sometimes occurs," 3 to "often occurs," and 4 to "very frequently occurs." When an item is reversed scored, "rarely occurs" receives a 4, "sometimes occurs" a 3, and so on. Each item was scored for each respondent, and then an average school score for each item was computed by averaging the item responses across the school to make the school a unit of analysis.

McMillan (1992) defines reliability as "the extent to which measures are free from error" or the "consistency of scores" (p. 104). Additionally, validity is defined as "the extent to which inferences are appropriate and meaningful" (McMillan, 1992, p. 100). Validity is a judgment of the appropriateness of a measure for the specific inferences or decisions regarding the use of tests, not the test itself (McMillan). The Michigan Educational Assessment Program determines the validity of the exam by reviewing the p-value of each item ($p > 0.30$), Differential Item Functioning (DIF), and Discrimination. Table 2 demonstrates the reliability of the academic achievement measure, the Michigan Educational Assessment Program (MEAP), as stated on the Michigan Department of Education website.

Table 2.

MEAP Reliability and Validity (1998-99)

Test	Reliability
Grade 4 Reading – Story	.814
Grade 4 Reading – Informational	.809
Grade 4 Mathematics	.931

Michigan Department of Education website (2007).

Summary

This chapter described the methodology utilized to conduct this study on the relationship between servant-leadership behavior of elementary school principals, school climate, and student achievement. It discussed the research design, instrumentation, sample, limitations and delimitations, procedures for data collection, data analysis, the validity and reliability of the survey instruments, and student achievement data. Chapter IV will present the results of the study, and Chapter V will summarize the study and discuss conclusions, recommendations, and implications for practice.

CHAPTER IV

RESULTS

Introduction

The role of the elementary principal is very complex, and student success may be directly related to the leadership traits that a principal may exhibit (Marzano, Waters, & McNulty, 2005). The variation that exists in the quality of educational setting can best be explained in relation to the multiple settings, in which schools exist and function (Reyes & Wagstaff, 2005). “In these settings, powerful contextual variables such as race, ethnicity, social class, teacher quality, and leadership skills strongly influence the kind of education available to students” (Reyes & Wagstaff, 2005, p. 101). The concept of servant-leadership (Gooden, 2002; Segiovanni, 1996; 2001) attempts to address the unique challenges educational leaders face and contests contemporary leadership models. Despite the promotion of servant-leadership behavior in multiple settings, little research has been done in the elementary school setting to support or refute the effectiveness of servant leadership.

Presented in this chapter are the results of the data analysis conducted to address the research questions of the study. The following research questions were posed:

1. What is the relationship between self-perceived servant-leadership behavior of elementary school principals and the health of the school climate as perceived by teachers?
2. What is the relationship between the health of the school climate (as perceived by teachers) and student achievement as measured by the 4th grade MEAP test?

3. What is the relationship between self-perceived servant-leadership behavior of elementary school principals and student achievement as measured by the 4th grade MEAP test?
4. What is the relationship between the independent variables (socioeconomic status, school population size, and percentage of community degrees) and the health of the school climate?
5. What is the relationship between the independent variables (socioeconomic status, school population size, and percentage of community degrees) and the dependent variable of student achievement as measured by the 4th grade MEAP test?

Population

The population of this study consisted of principals and teachers from 27 elementary schools in the Shiawassee Regional Education Service Department (SRES D) and the Clinton County Regional Education Service Agency (CCRESA) in Michigan. All principals were included in the study regardless of their years of experience. Additionally, teachers within the 27 elementary schools were randomly selected to participate regardless of their years of experience. Data were gathered during the 2007 calendar year.

Response Rate

There were 29 elementary schools within the Shiawassee Regional Education Service Department (SRES D) and the Clinton County Regional Education Service Agency (CCRESA) that had 4th grade in their composite school make-up. Of the 29 principals of these elementary schools, 27 were contacted to participate in the study, and

all participated (100%). A list of teacher's names was obtained from each principal, and every "nth" teacher was selected to participate. Information on how to access the survey online was emailed to 206 teachers or a paper copy was provided when requested. Surveys were completed and returned by 135 teachers (65.5%).

Instrumentation

Data were collected through the use of two survey instruments. The Organizational Health Inventory for Elementary schools, developed by Hoy, Tarter, and Kottkamp (1991), was used to assess teachers' perceptions of school climate. To assess principals' perception of their servant-leadership behavior, The (Revised) Servant Leadership Profile: 360 (SLP-R: 360), developed by Page and Wong (2000), was utilized.

The Organizational Health Inventory for Elementary (OHI-RE), developed by Hoy, Tarter, and Kottkamp (1991), identifies four dimensions of the organizational health of a school—collegial leadership, professional teacher behavior, achievement press, and institutional vulnerability. Upon the completion of the survey instrument by each teacher, a score was calculated for the health index of the school climate for each elementary school. Assigning 1 to "rarely occurs," 2 to "sometimes occurs," 3 to "often occurs," and 4 to "very frequently occurs," scored the items. When an item was reversed scored, "rarely occurs" received a 4, "sometimes occurs" a 3, and so on. Each item was scored for each respondent, and then an average school score for each item was computed by averaging the item responses across the school, because the school was the unit of analysis. A minimum of three teacher responses was required in order to calculate the average score for the schools' Organizational Health Index.

The SLP-R: 360 survey instrument, developed by Page and Wong (2000), measured 62 items falling into seven categories. The seven factors were developing and empowering others; power and pride (vulnerability and humility); authentic leadership; open, participatory leadership; inspiring leadership; visionary leadership; and courageous leadership. Each principal completed the 62-question inventory and then a total score was assigned for each survey. The items were scored on a Likert scale by assigning 1 to “strongly agree” down to a 7, which indicated “strongly disagree.” In general, the lower the overall score, the higher one falls on the servant-leadership scale.

Student achievement data, as measured by the 4th grade Mathematics and Reading Michigan Educational Assessment Program (MEAP) test, from the same randomly selected schools were obtained online from School Matters, a service of Standard and Poors. This service also provided the researcher with data on school population size and the community degree completion percentage. Socioeconomic status data, as determined by a school’s free and reduced lunch count, were obtained online through the Michigan Department of Education.

Results

The data were analyzed with the help of SPSS, version 14.0 for Windows, software. Statistics describing the responses of the 135 teachers, and the other variables, are found in Table 3. Included in the table are the minimum, maximum, mean, and standard deviation for each variable.

Table 3.

Descriptive Statistics for Each Variable

Variable	N	Minimum	Maximum	Mean	Standard Deviation
Degree	27	11.10	36.80	16.09	5.64
Enrollment	27	150.00	790.00	389.44	154.66
Math	27	69.20	100.00	86.91	7.30
OHI	27	497.90	713.04	587.88	49.94
Reading	27	72.60	100.00	88.52	7.14
SES	27	7.00	63.40	31.60	13.64
SLP	27	65.00	236.00	134.85	47.72

Note: Socioeconomic status was determined by the percentage of free and reduced lunch students in a school. Student achievement results (Math and Reading) were determined by looking at the percentage of students who received proficiency levels of 1 & 2. Code: Degree = Community Degree Completion Percentage; Enrollment = School Population Size; Math = MEAP Mathematics Test; OHI = Organizational Health Index for Elementary; Reading = MEAP Reading Test; SES = Socioeconomic Status; and SLP = Servant-Leadership Profile.

A Pearson Product-Moment correlation was generated to determine what relationship exists between servant-leadership behavior of the elementary school principal and health of the school climate. Additionally, a Pearson Product-Moment correlation was generated to determine what relationship exists between the school and health of school climate and student achievement. Finally, a Pearson Product-Moment correlation was used to determine the strength of relationship of each independent variable (servant-leadership, health of school climate, socioeconomic status, enrollment, and community degree percentage) and the dependent variable of student achievement.

Correlations were deemed significant at the 0.05 level. According to Portney and Watkins, Pearson Product-Moment correlational analysis can be used to explain the nature of the relationships that exist among two or more variables for the purpose of hypothesis testing (1993). For the purpose of this study, the strength of the relationship was determined by using McMillan's (1992) criteria for defining relationships.

Therefore, correlations between .10 and .30 are referred to as small or low positive relationships, .40 to .60 are moderate positive relationships, and .70 and above are high positive relationships. Negative correlations between -.10 and -.30 are considered small or weak; between -.40 and -.60, moderate; and between -.70 and -1.0, high. A "perfect" relationship is equal to 1.00 ($r = +/-1.00$). Additionally, scatterplots were provided to visually clarify the strength and shape of each relationship (Portney & Watkins, 1993).

Hypothesis I

There will be no relationship between self-perceived servant-leadership behavior of elementary school principals and the health of the school climate as perceived by teachers.

The results of the Pearson Product-Moment correlation, displayed in Table 4, do not provide sufficient statistical evidence to reject the null hypothesis for Hypothesis I. Pearson's linear correlation is -0.322 with its associated p-value of 0.102, indicating that only 10% of the variance in the health of the school can be explained by servant-leadership behavior. This negative relationship is considered to be relatively small or weak.

Table 4.

Correlation Between Servant-Leadership Behavior and School Climate

Pearson's Correlation	Servant-Leadership Behavior	Health Index	Sign. (2-Tailed)
Servant-Leadership	1.00	-0.322	.102
Health Index	-0.322	1.00	.102

N = 27

The scatterplot found in Figure 3 displays the small or weak negative relationship between servant-leadership behavior of elementary school principals and the openness of the school climate. The X-axis represents the degree of servant-leadership behavior, and the Y-axis represents the health of the school climate. As the value of servant leadership increases, the value of the health of the school climate decreases. The result is a negative slope.

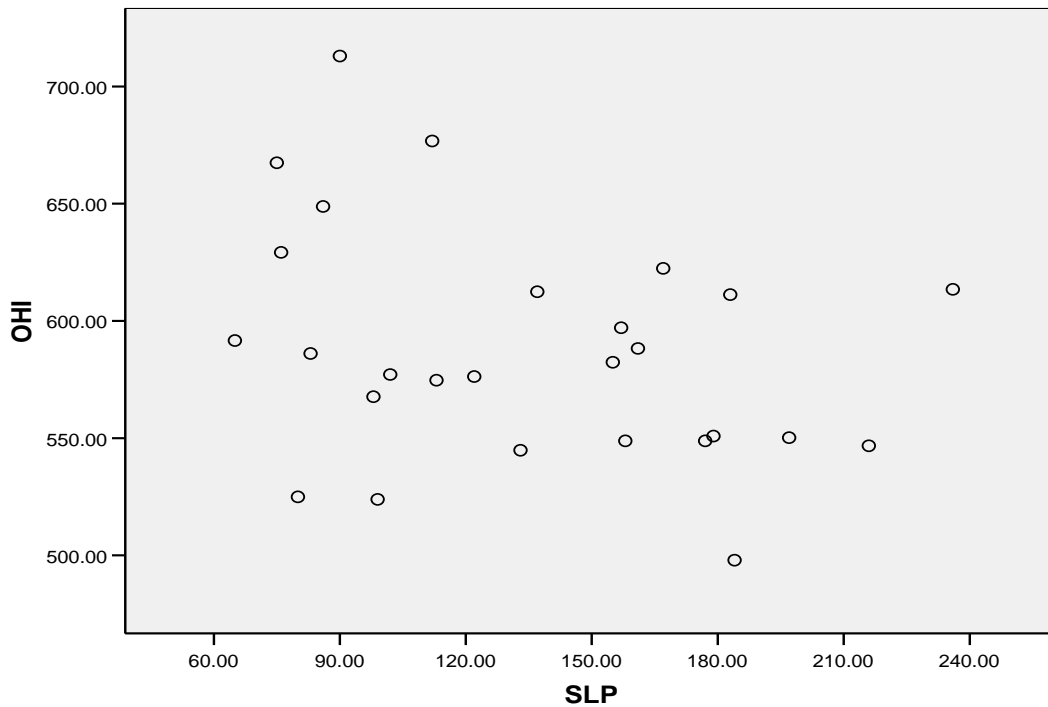


Figure 3. Scatterplot of the Correlation Between the Independent Variables of Servant-Leadership Behavior and the School Climate

Hypothesis II

There will be no relationship between health of the school climate as perceived by teachers and student achievement.

The results of the Pearson Product-Moment correlation, displayed in Tables 5a and 5b, do not provide enough statistical evidence to reject the null hypothesis for Hypothesis II in relation to mathematics or reading. The Pearson's linear correlation is relatively small or weak at 0.376 with its associated p-value of 0.053 for MEAP Mathematics to suggest that as the health of the school climate increases, the percentage

of student proficiency increases. However, changing the reported alpha level by two one-hundredths to 0.07 would cause enough of a relationship to make a prediction between the two variables. As observed in Table 5b, the positive relationship between the health of the school climate and MEAP Reading is relatively small or weak and not strong enough to establish a relationship. Pearson's linear correlation is 0.361 with its associated p-value of 0.064. Consequently, by altering the alpha level to 0.07, the relationship between the two variables would become significant. There, one would be able to conclude that there is a relationship between the health of the school climate and student achievement.

Table 5a.

Correlation Between School Health Index and Student Achievement (Math)

Pearson's Correlation	School Health Index	MEAP Math	Sign. (2-Tailed)
Health Index	1.00	0.376	0.053
MEAP Math	0.376	1.00	0.053

N = 27

Table 5b.

Correlation Between School Health Index and Student Achievement (Reading)

Pearson's Correlation	School Health Index	MEAP Reading	Sign. (2-Tailed)
Health Index	1.00	0.361	0.064
MEAP Reading	0.361	1.00	0.064

N = 27

The scatterplot found in Figure 4a displays a small or weak positive relationship between the health of the school and mathematics achievement. The X-axis represents the health of the school climate, and the Y-axis represents the mathematics achievement. As the value of health of the school increases, the mathematics achievement increases. The result is a positive slope.

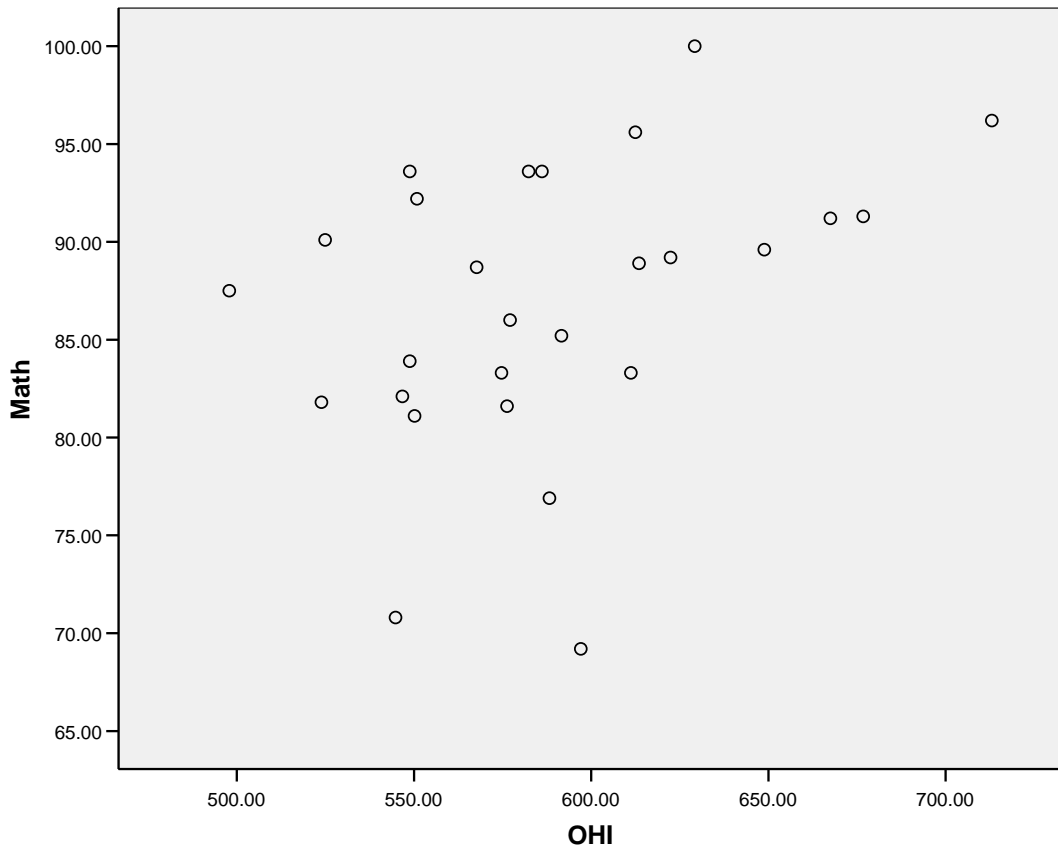


Figure 4a. Scatterplot of the Correlation Between the Independent Variables of School Health Index and the Dependent Variable of Student Achievement (Math)

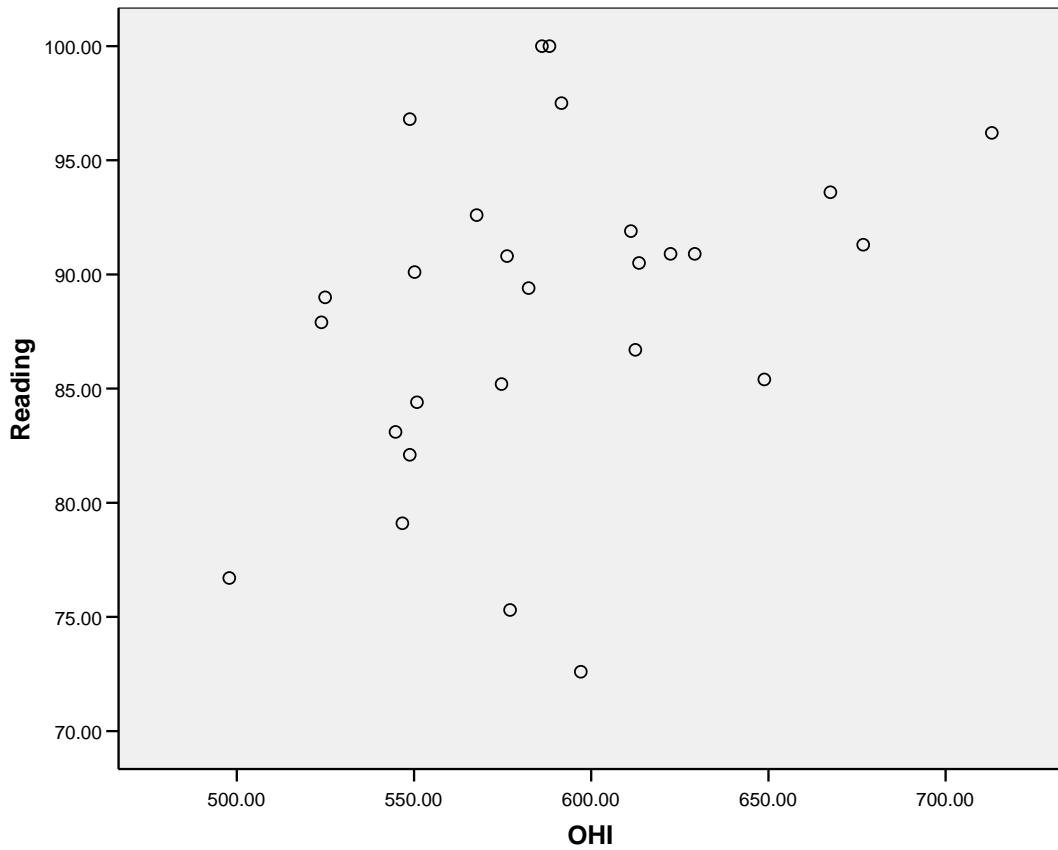


Figure 4b. Scatterplot of the Correlation Between the Independent Variables of School Health Index and the Dependent Variable of Student Achievement (Reading)

Similarly, Figure 4b displays a positive slope while using the X-axis to represent the health of the school climate and the Y-axis as reading achievement. As the value of the health of the school climate increases, the reading achievement increases.

Hypothesis III

There will be no relationship between self-perceived servant-leadership behavior of elementary school principals and student achievement.

The results of the Pearson Product-Moment correlation, displayed in Tables 6a and 6b, do not provide sufficient statistical evidence to reject the null hypothesis for

Hypothesis III. Pearson’s linear correlation is -0.289 with its associated p-value of 0.144 for MEAP Mathematics, indicating that this negative relationship is considered to be relatively small or weak and not statistically significant enough to reject the null hypothesis. Therefore, only 8% of the variance of MEAP Mathematics can be explained by the variation of Servant-Leadership Behavior. Similarly, the negative relationship between Servant-Leadership and MEAP Reading as presented in Figure 6b is relatively small or weak. Pearson’s linear correlation is -0.304 with its associated p-value of 0.123. Therefore, we can conclude that there is no significant relationship between servant-leadership behavior of elementary school principals and student achievement.

Table 6a.

Correlation Between Servant-Leadership Behavior and Student Achievement (Math)

Pearson’s Correlation	Servant-Leadership Behavior	MEAP Math	Sign. (2-Tailed)
Servant-Leadership	1.00	-0.289	.144
MEAP Math	-0.289	1.00	.144

N = 27

Table 6b.

Correlation Between Servant-Leadership Behavior and Student Achievement (Reading)

Pearson's Correlation	Servant-Leadership Behavior	MEAP Reading	Sign. (2-Tailed)
Servant-Leadership	1.00	-0.304	0.123
MEAP Reading	-0.304	1.00	0.123

N = 27

The scatterplot found in Figure 5a displays a small or weak negative relationship between servant-leadership behavior of elementary school principals and mathematics student achievement. The X-axis represents the mathematics achievement, and the Y-axis represents the servant-leadership behavior of elementary school principals. As the value of servant-leadership increases, the mathematics achievement decreases. The result is a negative slope.

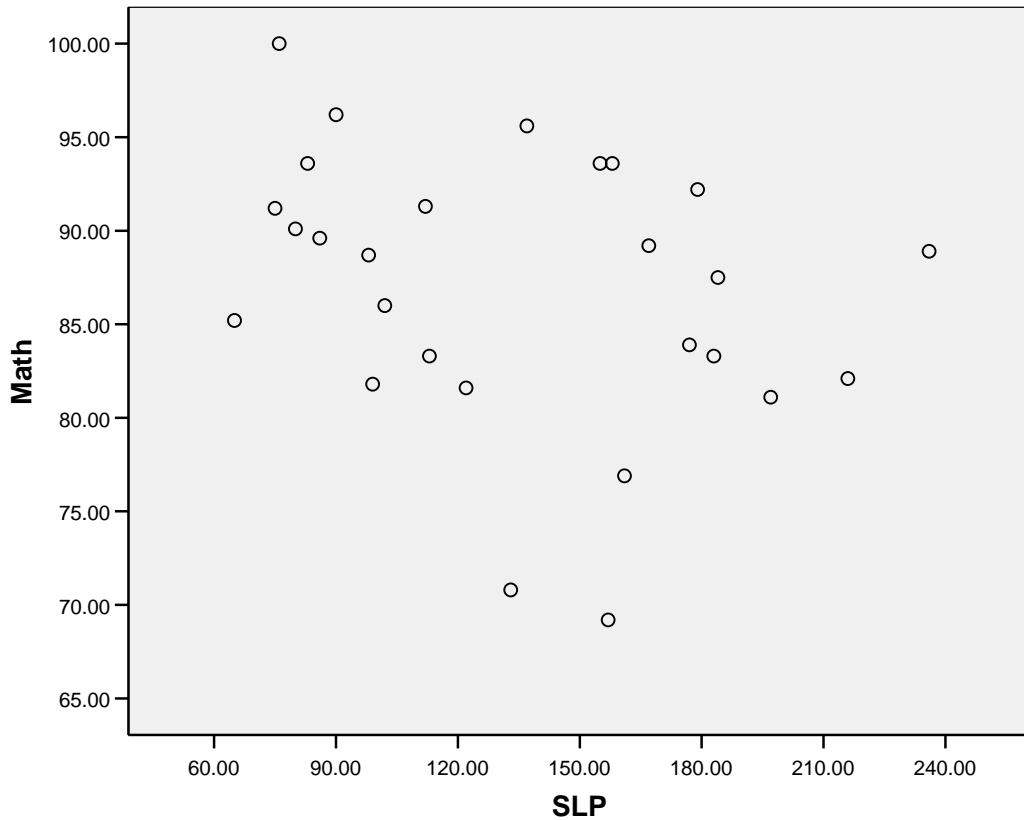


Figure 5a. Scatterplot of the Correlation Between the Independent Variables of Servant-Leadership Behavior and the Dependent Variable of Student Achievement (Math)

Similarly, Figure 5b displays a negative slope while using the X-axis to represent reading achievement and the Y-axis as servant-leadership behavior. As the value of servant-leadership increases, the reading achievement decreases.

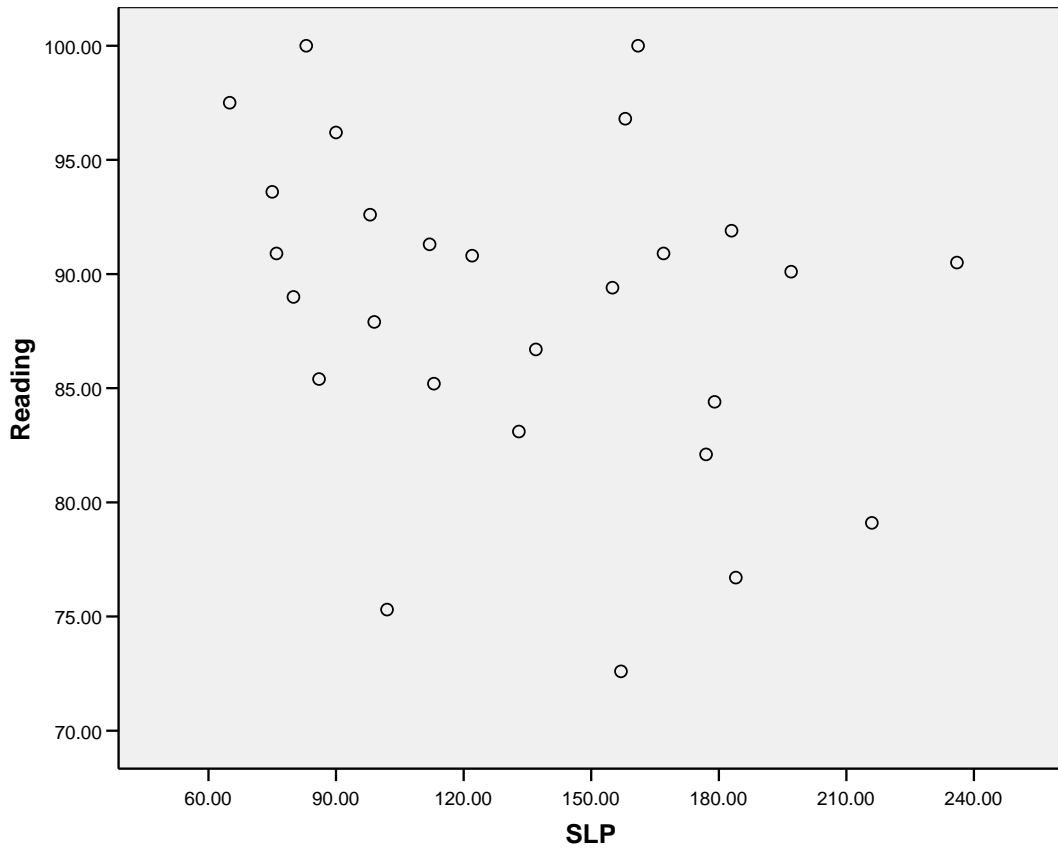


Figure 5b. Scatterplot of the Correlation Between the Independent Variables of Servant-Leadership Behavior and the Dependent Variable of Student Achievement (Reading)

Hypothesis IV

There will be no relationship between independent variables (socioeconomic status, school population size, and the percentage of community degrees) and the health of the school climate.

The results of the Pearson Product-Moment correlation, displayed in Tables 7a and 7b, do not provide statistical evidence to reject the null hypothesis for Hypothesis IV. Despite the statistical evidence that a negative relationship exists, the relationship was

determined to be small or weak. Pearson’s linear correlation of -0.140 with its associated p-value of 0.485 indicates that the health of the school climate increases as socioeconomic status decreases; however, the relationship is not significant. Further, there was almost no relationship between the health of the school climate and the percentage of degree completion within a community when Pearson’s linear correlation is -0.077 and the p-value is 0.701. However, there is evidence to suggest that a relationship exists between the variables of school population size and the health of the school climate. As indicated in Table 7c, a small or weak relationship exists when Pearson’s linear correlation is -0.384 and the p-value is 0.048, which is statistically significant. Therefore, one may predict that the health of the school climate is directly related to the number of students enrolled in the school – the fewer students, the healthier the school.

Table 7a.

Correlation Socioeconomic Status and School Health Index

Pearson’s Correlation	Socioeconomic Status	School Health Index	Sign. (2-Tailed)
Socioeconomic Status	1.00	-0.140	0.485
School Health Index	-0.140	1.00	0.485

N = 27

Table 7b.

Correlation Degree Completion and School Health Index

Pearson's Correlation	Degree Completion	School Health Index	Sign. (2-Tailed)
Degree Completion	1.00	-0.077	0.701*
School Health Index	-0.077	1.00	0.701*

N = 27

Table 7c.

Correlation Student Population Size and School Health Index

Pearson's Correlation	Student Pop. Size	School Health Index	Sign. (2-Tailed)
Student Pop. Size	1.00	-0.384	0.048
School Health Index	-.384	1.00	0.048

N = 27

The scatterplot found in Figure 6a displays a small or weak negative relationship between socioeconomic status and the health of the school. The X-axis represents the health of the school, and the Y-axis represents socioeconomic status. As the value of socioeconomic status decreases, the health of the school increases. Although the slope represents a negative relationship, it is not significant enough to draw a conclusion.

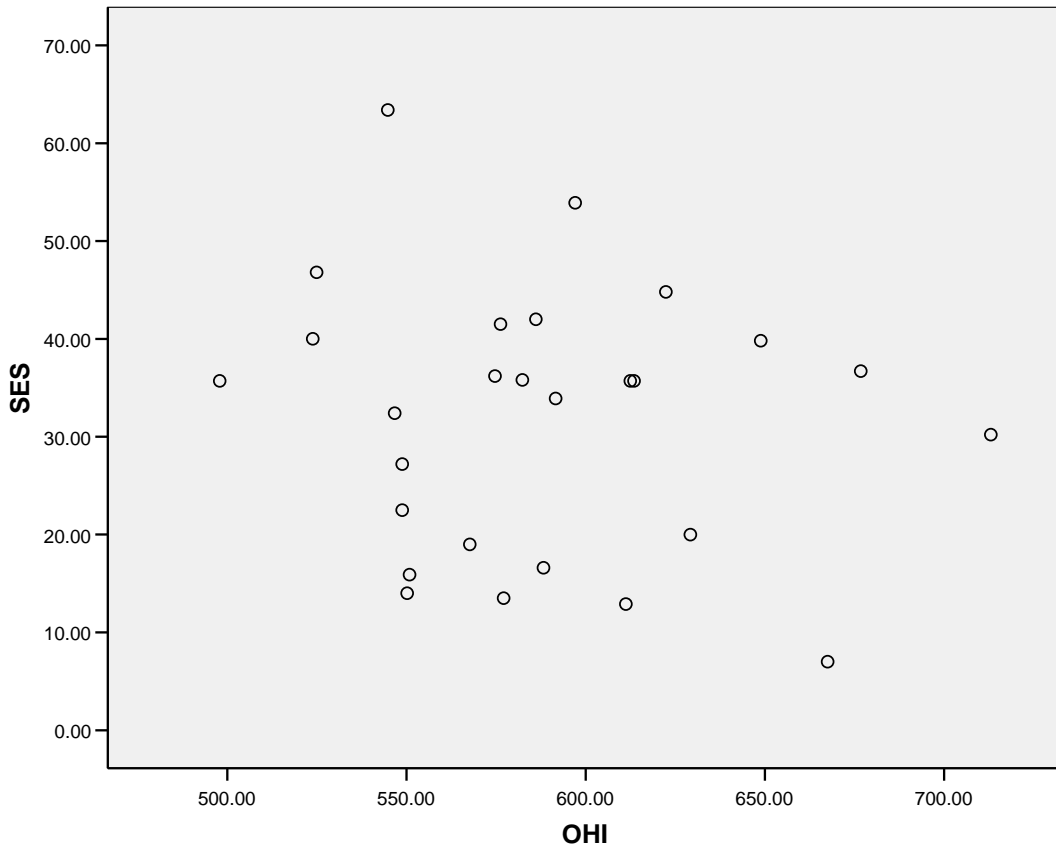


Figure 6a. Scatterplot of the Correlation Between Socioeconomic Status and the Health of the School Climate

In Figure 6b, there is almost no slope, indicating a very small or weak relationship between the two variables, community degree completion percentage and the health of the school climate.

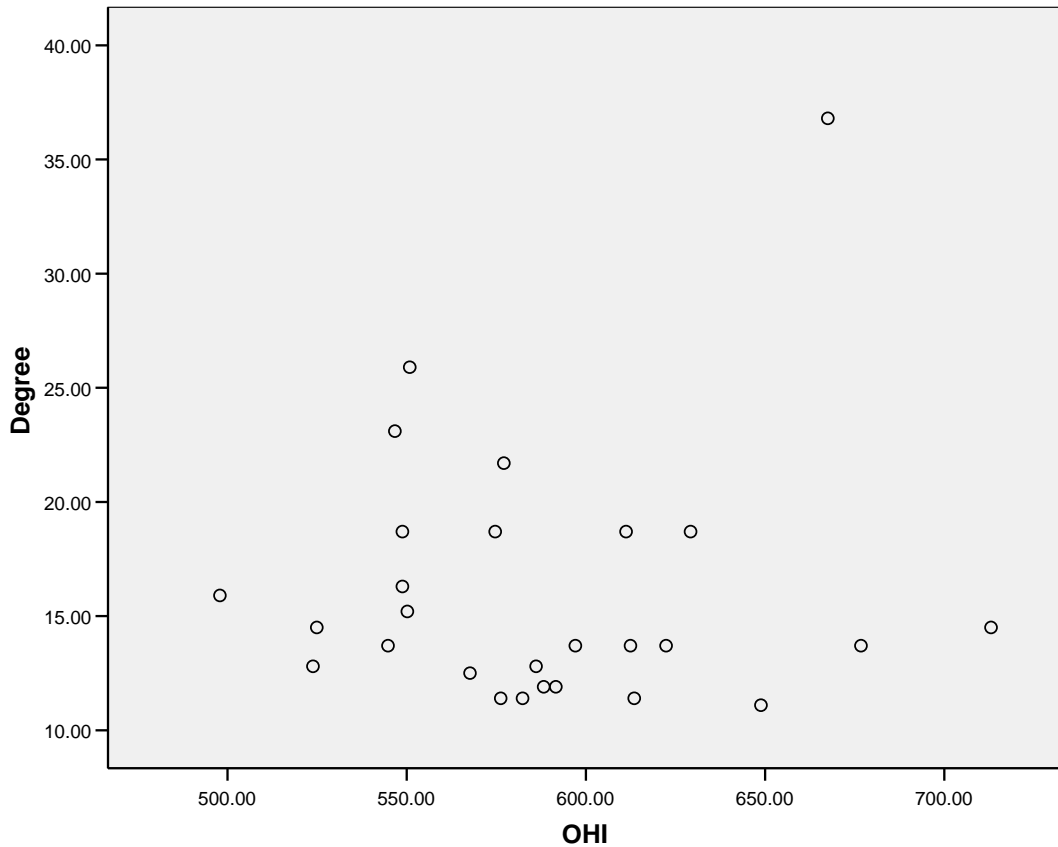


Figure 6b. Scatterplot of the Correlation Between Community Degree Percentage and the Health of the School Climate

Consequently, the variables of school population size and the health of the school climate have a strong enough relationship to draw conclusions as seen in Figure 6c. From the scatterplot, the negative slope indicates that as the school population decreases, the health of the school climate increases. This can be predicted with 95% confidence.

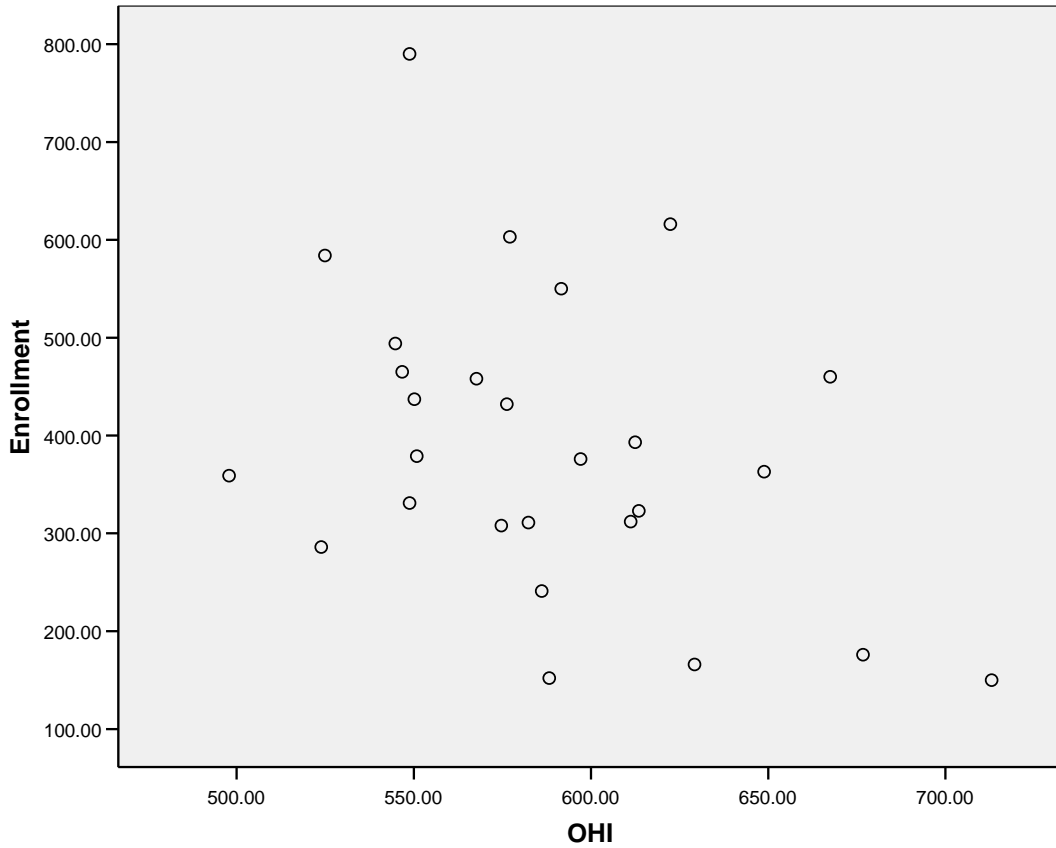


Figure 6c. Scatterplot of the Correlation Between School Population Size and the Health of the School Climate

Hypothesis V

There will be no relationship between independent variables (socioeconomic status, school population size, and the percentage of community degrees) and student achievement.

The results of the Pearson Product-Moment correlation, displayed in Tables 8a and 8b, do not provide statistical evidence to reject the null hypothesis for Hypothesis IV. Pearson's linear correlation of -0.249 with its associated p-value of 0.211 indicates that reading scores increase as socioeconomic status decreases. The statistical evidence suggests that a negative relationship exists; however, the relationship was determined to be at small or weak. Further, there was no significant relationship between reading achievement scores and school population size when Pearson's linear correlation is -0.023 and the p-value is 0.450. Finally, there is not enough statistical evidence to reject the null hypothesis regarding community degree completion percentage and reading achievement. As indicated in Table 8c, a small or weak relationship exists when Pearson's linear correlation is -0.036 and the p-value is 0.346.

Tables 8d, 8e, and 8f display small or weak relationships between the independent variables (socioeconomic status, school population size, and community degree completion percentage) and mathematics achievement. Therefore, the researcher concludes that there is not a significant relationship between the independent variables and mathematics student achievement.

Table 8a.

Correlation Between SES and Student Achievement (Reading)

Pearson's Correlation	SES	Student Ach. Reading	Sign. (2-Tailed)
Socioeconomic Status	1.00	-0.249	0.211
Student Achievement (R)	-0.249	1.00	0.211

N = 27

Table 8b.

Correlation Between Enrollment and Student Achievement (Reading)

Pearson's Correlation	Enrollment	Student Ach. Reading	Sign. (2-Tailed)
Enrollment	1.00	-0.023	0.450
Student Achievement (R)	-0.023	1.00	0.450

N = 27

Table 8c.

Correlation Between Degree % and Student Achievement (Reading)

Pearson's Correlation	Degree %	Student Ach. Reading	Sign. (2-Tailed)
Degree %	1.00	-0.036	0.346
Student Achievement (R)	-0.036	1.00	0.346

N = 27

Table 8d.

Correlation Between SES and Student Achievement (Math)

Pearson's Correlation	SES	Student Ach. Math	Sign. (2-Tailed)
Socioeconomic Status	1.00	-0.107	0.096
Student Achievement (M)	-0.107	1.00	0.096

N = 27

Table 8e.

Correlation Between Enrollment and Student Achievement (Math)

Pearson's Correlation	Enrollment	Student Ach. Math	Sign. (2-Tailed)
Enrollment	1.00	-0.093	0.644
Student Achievement (M)	-0.093	1.00	0.644

N = 27

Table 8f.

Correlation Between Degree % and Student Achievement (Math)

Pearson's Correlation	Degree %	Student Ach. Math	Sign. (2-Tailed)
Degree %	1.00	-0.138	0.491
Student Achievement (M)	-0.138	1.00	0.491

N = 27

Figures 7a through 7f visually display the strength of the relationship between the independent variables (socioeconomic status, school population size, and community degree percentage). Although there is a small or weak relationship in each scatterplot, there is not enough statistical evidence to make a prediction when analyzing these variables.

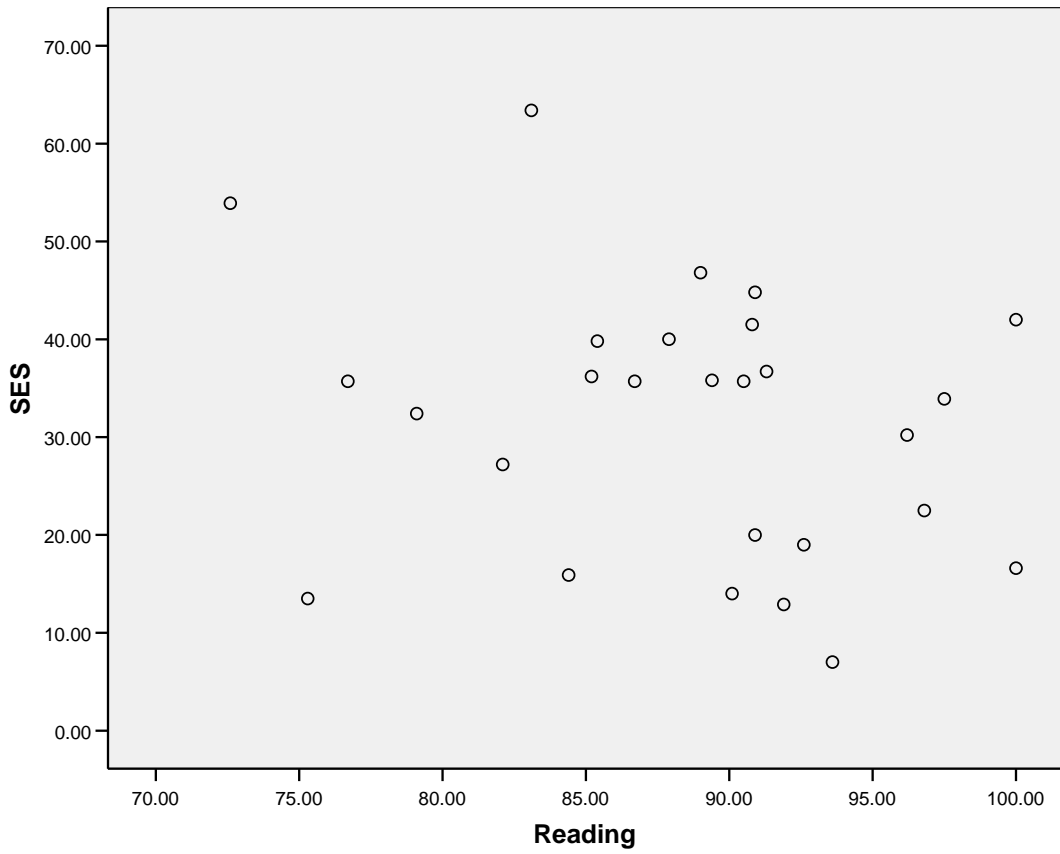


Figure 7a. Scatterplot of the Correlation Between Socioeconomic Status and Student Achievement (Reading)

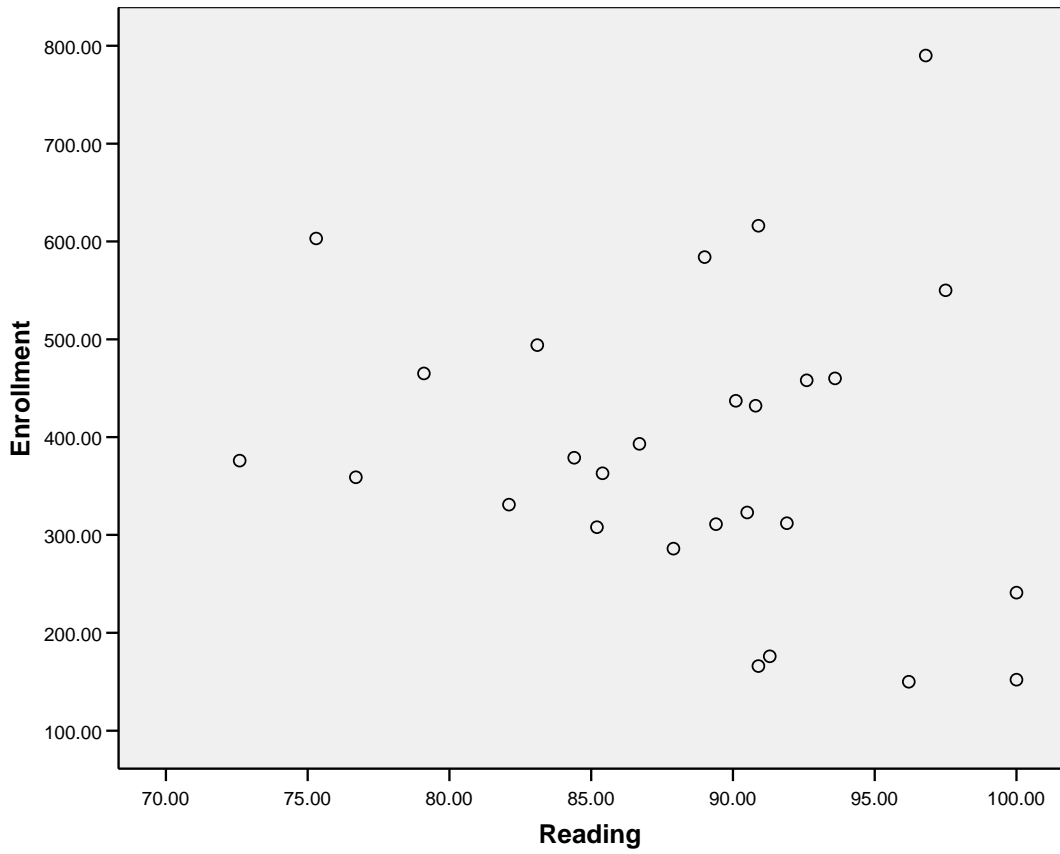


Figure 7b. Scatterplot of the Correlation Between School Population Size and Student Achievement (Reading)

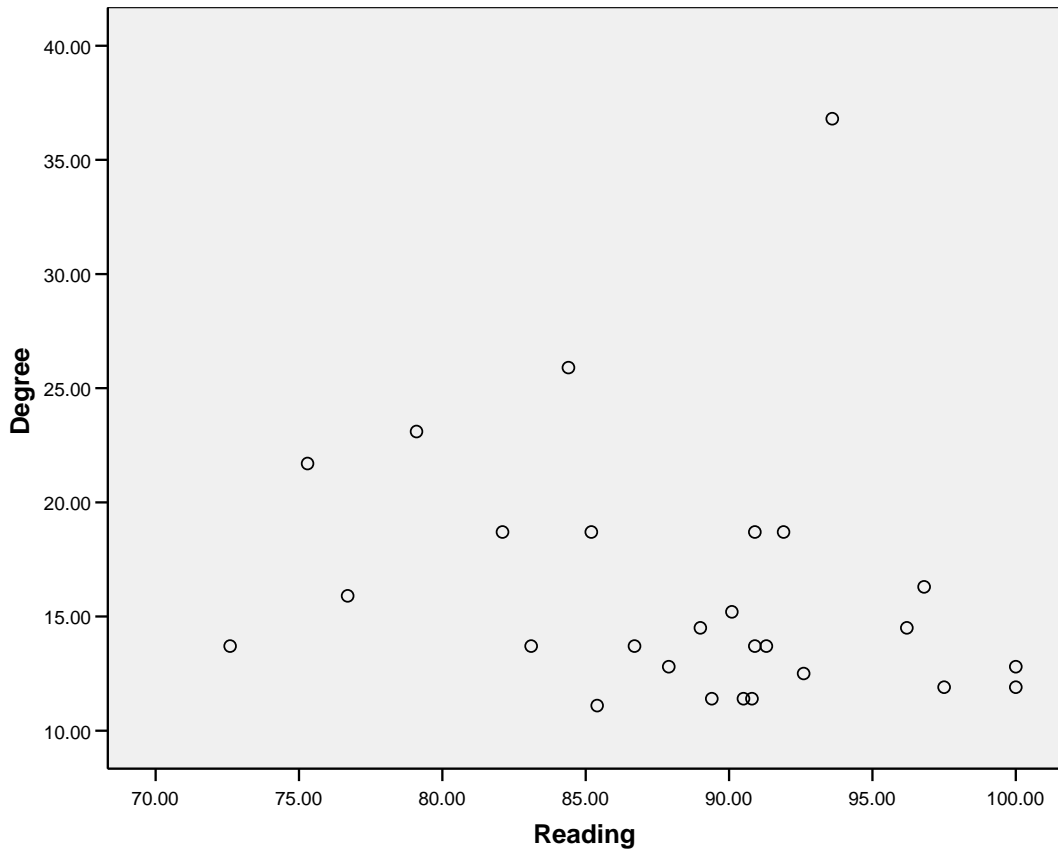


Figure 7c. Scatterplot of the Correlation Between Community Degree Percentage and Student Achievement (Reading)

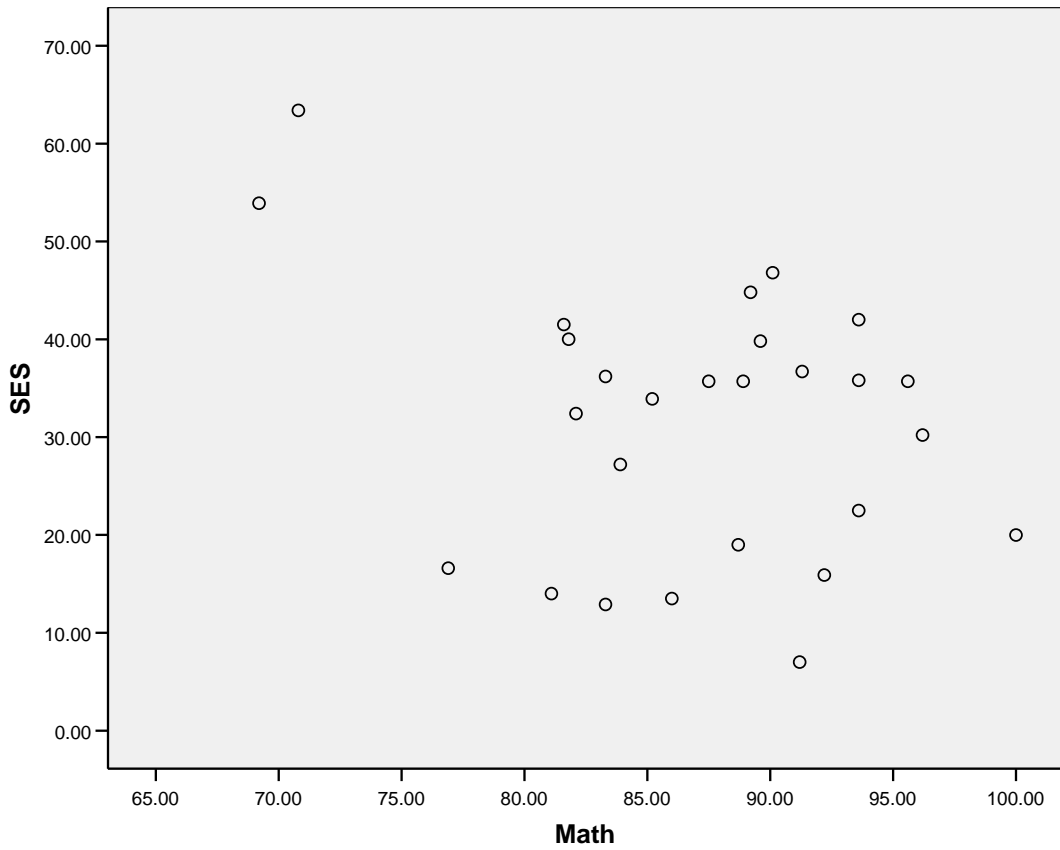


Figure 7d. Scatterplot of the Correlation Between Socioeconomic Status and Student Achievement (Math)

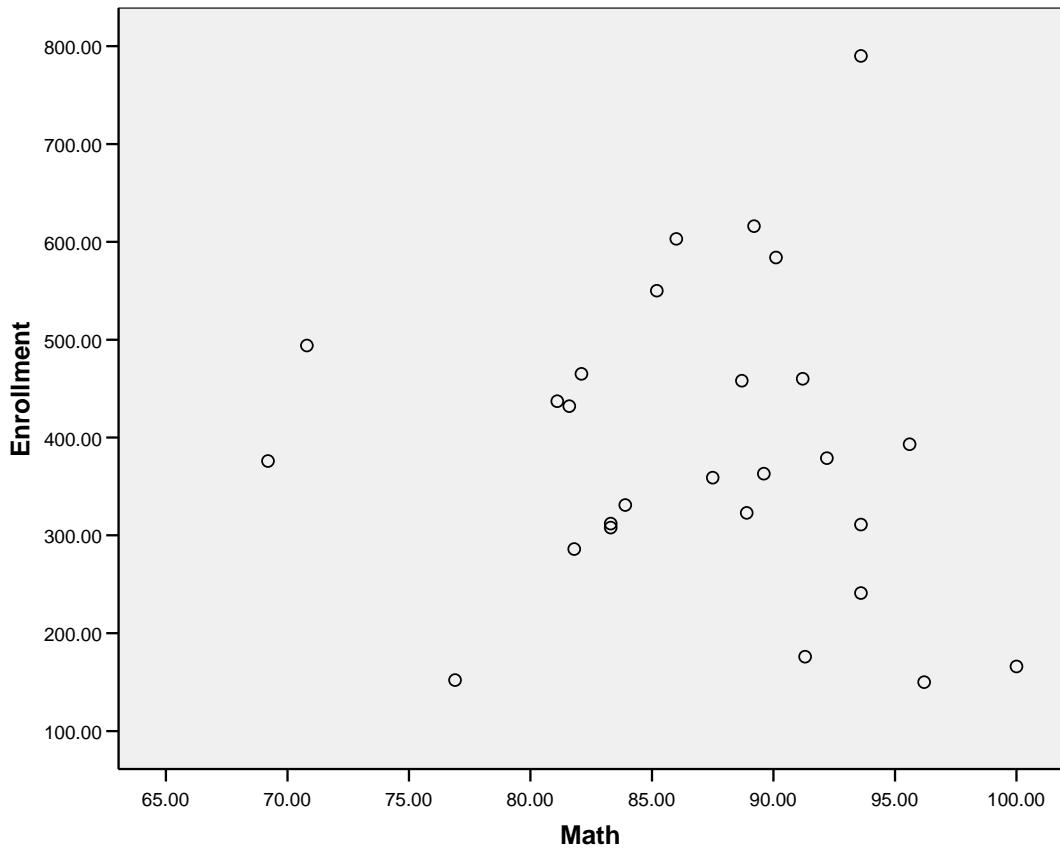


Figure 7e. Scatterplot of the Correlation Between School Population Size and Student Achievement (Math)

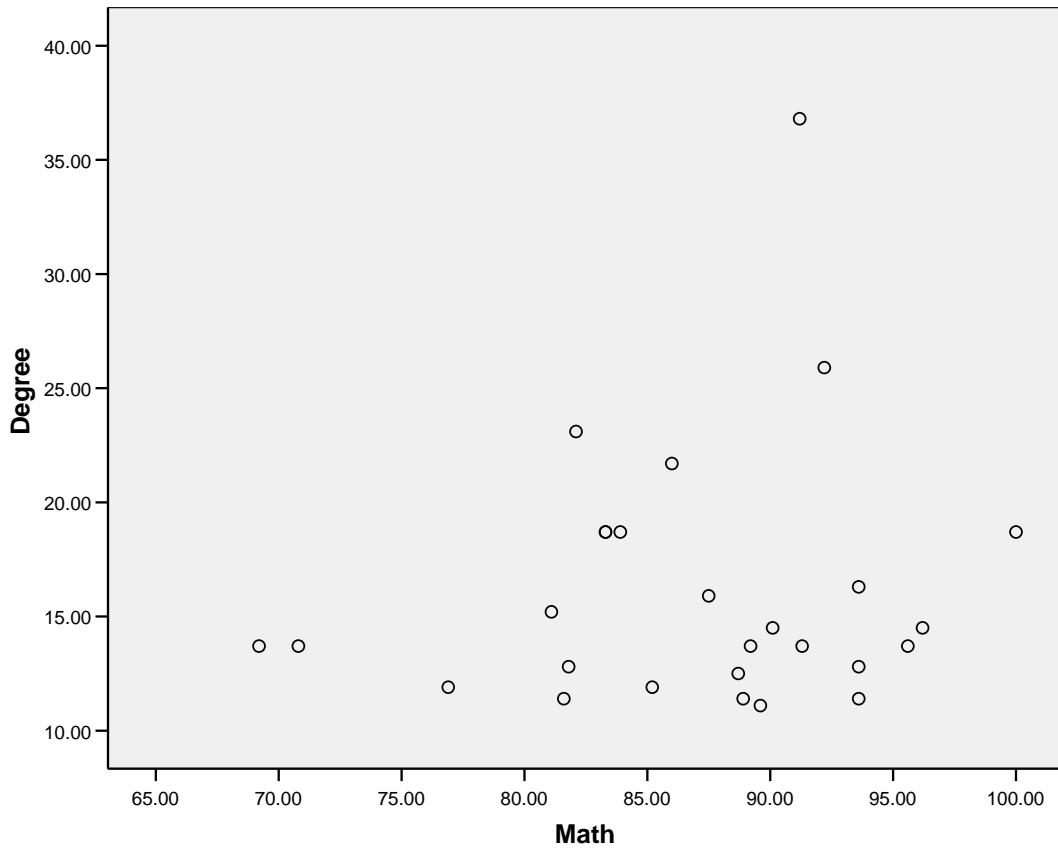


Figure 7f. Scatterplot of the Correlation Between Community Degree Percentage and Student Achievement (Math)

Summary

The results of the data analysis were presented in this chapter. The data were analyzed through the use of Pearson Product-Moment correlational analysis and regression analysis using the software SPSS 14. The results indicated a small or weak negative relationship between the servant-leadership behavior of elementary school principals and the health of the school climate, a small or weak negative relationship between the health of the school climate and student achievement, and a small or weak

negative relationship between the independent variables of socioeconomic status, school population size, and community degree completion percentage and the dependent variable student achievement. Additionally, a small or weak negative relationship was identified between the independent variables of socioeconomic status, school population size and community degree completion percentage and the health of the school climate. The results of linear regression analysis indicated that there is no significant direct relationship between elementary principal servant-leadership behavior and student achievement. However, by altering the alpha level from 0.05 to 0.07, results indicate that the health of the school climate may impact student achievement.

To gain a better understanding of the relationship of the independent variables (socioeconomic status, student population size, and community degree completion percent) and the dependent variable of student achievement, linear regression analysis was conducted. Linear regression analysis was used to efficiently assess the contributions of the independent variables on student achievement. The results indicated that there is not enough statistical information to determine if a significant relationship exists. Further, there was no statistical evidence to determine that a relationship exists between the independent variables of socioeconomic status and the health of the school climate or community degree completion percentage and the health of the school climate. However, there is statistical evidence to suggest that a relationship exists between the independent variables school population size and the health of the school. Therefore, there is enough statistical evidence (when taking into account the altered alpha level), to suggest that there is a relationship between school population size, the health of the school climate, and student achievement. When leaving the alpha level at 0.05, one may

only predict that school population size has an impact on the health of the school climate and that in this study, no other independent variable has a significant relationship with student achievement.

Chapter V provides the summary, conclusions, discussion, implications for practice, and recommendations for further research.

CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

Introduction

There is a great deal of research that examines the relationship between leadership styles of school leaders, the health of the school climate, and student achievement (Yukl, 2002 as cited in Smylie et al., 2005, p. 140; Bass, 1990). Stein and Spillane noted, “Researchers in educational administration have searched for direct effects of principals on student learning” (2005, p. 30) but with little success. However, the person in the principal’s office may have the most significant impact on student achievement (Barth, 1976), although the impact may be indirect. If the principal, through the school climate, indirectly affects student achievement, then it is important to identify principal behaviors that positively affect school climate.

Principal behavior may be directly linked to leadership style. For the purpose of this study, one leadership style in particular was identified as critical to the success of students. Servant-leadership, a term coined by Robert Greenleaf in 1970 (Spears, 1995), is a relatively new leadership style that is beginning to receive a great deal of attention. In contrast to this attention, there is little research that exists to determine what impact this specific leadership style has on school and/or student achievement.

The principalship is a complex and multifaceted role at all levels, and it has been further considered that at the elementary level, principalship may be even more important as success in the primary years may have long-lasting effects. Elementary principals employ a variety of strategies to accomplish their goals and motivate others.

Servant-leadership may appear to be incongruous or contradictory because it is difficult to think of a leader as both a servant and leader. The concept as whole is a paradigm shift. It essentially removes the leader from the top of the hierarchical pyramid and places him or her at the foundation (or center) of the organization. In essence, the student becomes the focal point and the recipient of a healthy school climate where authentic achievement and mastery can take place.

The purpose of this study was to determine what relationship exists between the servant-leadership behavior of the elementary school principal, school climate, and student achievement. Additionally, although not the primary focus, this study investigated the relationship between the independent variables of socioeconomic status, school population size, and community degree completion percentage. The researcher used a nonexperimental, correlational design in this quantitative study to examine the relationship between the servant-leadership behavior of elementary school principals, school climate, and student achievement as measured by the 4th grade Mathematics and Reading Michigan Educational Assessment Program through a multivariate statistical procedure. Data were collected through the use of two survey instruments. The (Revised) Servant-Leadership Profile: 360 (SLP-R: 360), developed by Page and Wong (2000), was used to assess principals' perceptions of their servant-leadership behavior. To assess teachers' perceptions of the health of the school climate, the Organizational Health Inventory for Elementary (OHI-RE), developed by Hoy, Tarter, and Kottkamp (1991), was used. The SLP-R: 360 was utilized as a self-perceived leadership style inventory, and the OHI-RE was used to assess teacher perception of school climate. Student achievement data, 4th grade MEAP test results, were gathered through School

Matters, a web service of Standard and Poors. The population of this study consisted of 206 randomly selected teachers from 27 elementary schools in Michigan. Sixty-five percent of the teachers contacted completed the school climate inventory, and 100% of the principals completed the servant-leadership profile instrument.

The following null hypotheses were investigated at a 0.05 level of significance:

1. There will be no relationship between self-perceived servant-leadership behavior of elementary school principals and the health of the school climate as perceived by teachers.
2. There will be no relationship between health of the school climate as perceived by teachers and student achievement.
3. There will be no relationship between self-perceived servant-leadership behavior of elementary school principals and student achievement.
4. There will be no relationship between independent variables (socioeconomic status, school population size, and the community degree completion percentage) and the health of the school climate.
5. There will be no relationship between independent variables (socioeconomic status, school population size, and the community degree completion percentage) and student achievement.

Summary of Findings

Data were analyzed through the use of Pearson Product Moment correlation analysis and linear regression analysis. Out of the five null hypotheses, only one was rejected at the 0.05 alpha level. For further analysis, the researcher altered the alpha level

to 0.07, which allowed the researcher to reject the null of three of the hypotheses. The total effect, if used in the context of promoting discussion, is something that is positive.

The results indicated a small or weak negative relationship between the servant-leadership behavior of elementary school principals and the health of the school climate ($r = -0.322$, $p = 0.102$). Secondly, a small or weak positive relationship between the health of the school climate and student achievement ($r = 0.376$, $p = 0.053$ for math; $r = 0.361$, $p = 0.064$ for reading) was reported. Next, a small or weak negative relationship was reported for the relationship between servant-leadership behavior and student achievement ($r = -0.289$, $p = 0.144$ for math; $r = -0.304$, $p = 0.123$ for reading). Also, a small or weak negative relationship was determined between the independent variables of socioeconomic status ($r = -0.140$, $p = .485$) and community degree completion percentage ($r = -0.077$, $p = 0.701$) and the health of the school climate. However, despite the small or weak negative relationship between the school population size and the health of the school ($r = 0.384$, $p = 0.048$), there is enough statistical evidence to report that there is a relationship. Finally, a small or weak negative relationship was identified between the independent variables of socioeconomic status ($r = -0.249$, $p = 0.211$ for reading; $r = -0.107$, $p = 0.096$ for math), school population size ($r = -0.023$, $p = 0.450$ for reading; $r = -0.093$, $p = 0.644$ for math), and community degree completion percentage ($r = -0.036$, $p = 0.346$ for reading; $r = -0.138$, $p = 0.491$ for math), and student achievement. The results of the study indicate that there is no relationship between independent variables of servant-leadership behavior, school climate, socioeconomic status, school population size, and community degree completion percentage. There is also not enough statistical evidence to predict a relationship between the secondary independent variables

(socioeconomic status and community degree completion percentage) and the health of the school climate.

Conclusions

While examining the relationship of the variables in this study, the researcher found little statistical evidence to reject the null hypotheses. There is statistical evidence to demonstrate a relationship between school population size and the health of the school. When reporting correlations, the alpha level of 0.05 was utilized. This confidence interval does not allow the researcher to draw conclusions about what variables impact student achievement. However, when the alpha level is altered, there is evidence to suggest that there is a relationship between the health of the school climate and student achievement, both mathematics and reading. Therefore, the research concludes that there is no relationship between the servant-leadership behavior of elementary school principals and the health of the school climate or student achievement. Further, the research concludes that there is no relationship between socioeconomic status and community degree completion and the health of the school climate or student achievement. The researcher also concludes that there is no relationship between school population size and student achievement. Finally, there is minimal statistical evidence to determine that a relationship exists between the school population size, the health of the school climate, and student achievement. In this study, the research cannot conclude that servant-leadership behavior affects student achievement.

Importance of Findings

The effects of servant-leadership on school climate and student achievement are difficult to measure. Due to the complexity of the elementary principalship, the results of

this study may be beneficial to practicing and aspiring principals. The findings of this study may prove to be a guide classifying behaviors related to getting the job done or a guide for action as principals wear many hats and that the job of elementary principal is multifaceted (Gardner, 2008). General knowledge on how an administrator plans the logistics and programs of the building (leadership behavior, teacher autonomy, school improvement planning, composite school make-up, class size, Title I programming, decision-making processes, etc.) may prove to be useful.

Since the study cannot demonstrate that servant-leadership behavior has an impact on student achievement at the elementary level, there is a need for further study. The findings indicate that the school's climate could have a direct effect on student achievement scores, and it is important to identify what characteristics, or variables, impact the health of the school climate. The findings of this study may lead to articulations about school size, class size, redistricting, or the pursuit bond issues and thereby positively impact the school climate and help to create an environment where students are more successful in their academic achievements.

As the principal of a medium-sized elementary school, study results have enhanced the researcher's understanding of what is considered best leadership practice, despite the statistical findings. The study has also improved the knowledge base for building relationships and increasing the openness of an elementary school climate. The results simply lend to the need for further study in other parts of the state and country. Further, the researcher has grown from the research process and has taken the procedures learned in this process and applied them to everyday situations.

Discussion

In a similar study (Kelley, 2005) there was enough statistical evidence to support the claim that servant-leadership behavior does indirectly impact student achievement at the secondary level. However, in this study there was not enough statistical evidence to support such a claim at the elementary level. Therefore, the focus of this discussion now turns towards the articulation of points that may account for this discrepancy between the two studies. An examination of other variables, such as the complexity of the organizational site (elementary environment compared to high school environment) or a study of self-contained classrooms compared to those that departmentalize could prove to be useful.

According to Firestone et al. (1984) there are significant differences that exist between elementary and secondary schools. In general, there is evidence to suggest that secondary schools are more loosely linked than elementary schools, and influence is less centralized with less agreement on goals. The differences were attributed to the historic expectations about how older and younger children should be educated. “In our work elementary schools consistently have stronger linkages than senior high schools.” (p. 7) Linkages were referred to as the strength of goals and the decentralization of power. For example, a loosely linked school may have more ambiguous and diverse goals and an environment where teachers do not have autonomy.

Goal consensus is more problematic at the secondary level due to the complexity of the secondary structure. Having multiple departments with multiple goals can lead to “confusion, vacillation and conflict” (Firestone et al., 1984, p. 10). At the elementary level there is considerably more agreement on goals and more guidance on how those

goals should be prioritized. As stated by Firestone et al., “The more agreement on goals is broadly shared, the more potential goals have to guide behavior” (1984, p. 10).

The concept of teacher autonomy once again surfaces in this discussion as it relates to the decentralization of power. Again a common theme emerges - the more teacher autonomy that exists within a school setting, the healthier the school climate. Historically, teachers feel a greater sense of autonomy in elementary schools than secondary schools, increasing the weight of the leadership variable at the secondary level. Studies in these areas, including this one, may help to demonstrate importance of leadership at the elementary and secondary levels.

Gender composition was another variable that surfaced in the discussion about linkage differences between elementary and secondary schools. According to Firestone et al. (1984),

In American society women generally have lower status than men (Lockheed & Hall, 1976). Therefore, it is argued, men usually dominate mixed-sex situations (Meeker & Weitzell-O’Neill, 1977). When groups are formally differentiated, consistency between organizational and gender-related status becomes important (Homans, 1961). Influence will be more centralized when followers have uniformly lower status. Thus, centralization should be greatest in schools with male principals and all female staffs, a condition that occurs most often at the elementary level. As the proportion of male teachers increases in the upper grades, centralization should be reduced. (p. 15)

This argument stems from research described in the Firestone study. Gilligan (1979, as cited in Firestone, 1984) credits women with having a greater capacity for empathy than men and the ability to assess problems pragmatically, separating them from competition. In this line of thinking, organizations with a greater compilation of women should be more willing to work out compromises that promote goal consensus.

There is evidence to suggest that there are major differences between the organizational complexities of elementary and secondary schools. Elementary schools may inherently have healthier climates due to their composition that includes goal consensus, teacher autonomy, and greater population of female teachers. Therefore, at the elementary level, the role of the principal, as servant-leader, may be minimized and ultimately have a greater impact at the secondary level. These findings allow the researcher to conclude that servant-leadership may not be as critical to health of the school climate as the general composition of the school organization. However, there is statistical evidence to support the contention that the health of the school climate impacts student achievement, and it will be essential for future researchers to define the variables that have a relationship with school climate.

Another consideration to make when looking at the complexity of the elementary school setting is to look at the additional complexities of servant-leadership behavior and student achievement. One may argue that it is difficult to quantify leadership due to all of the variables and that using one form of assessment may lead to subjectivity when interpreting the study results. McMillan (1992) stated, “There is no absolute rule in what constitutes ‘statistical’ significance” and that it is important to interpret results in context. Another online statistical service (surveysystem.com), noted “Significance level is a misleading term that many researchers do not fully understand.” Therefore, when making this consideration, the results of this study may still be open to interpretation. For example, by increasing the alpha level for each linear regression analysis to 0.3, there is still only a thirty percent probability that the difference is due to a chance variation or error in sampling and measurement.

Examining each relationship allows the reader to conclude that there is a significant relationship between servant-leadership behavior of the elementary school principal and school climate; a significant relationship between school climate and student achievement (mathematics and reading); a significant relationship between servant-leadership behavior of the elementary school principal and student achievement (mathematics and reading); a significant relationship between two of the three secondary variables (SES and school population size) and school climate; and a significant relationship between all three secondary variables and student achievement (mathematics and reading).

In conclusion, it is important for the reader not to minimize the impact of the independent variables (primary and secondary) on the health of the school climate and student achievement. Statistical analysis, viewed from a broader perspective, indicates that the leadership variable and the other variables that impact students' learning may in fact be of critical importance.

For further discussion, it is important to look at the reason why socioeconomic status was not a significant factor in the health of the school climate or in regard to student achievement. It may be that socioeconomic status is more of an urban phenomenon or that the low percentage of non-white students (5.1%) skewed the data. It is recommended in the next section that further studies be done in the area of ethnic makeup as it relates to servant-leadership, school climate, and student achievement.

One final discussion centers on the removal of two schools that participated in the study that might be deemed as outliers. An outlier is data that are numerically distant from the rest of the data (McMillan, 1992). Outliers have a strong influence on the slope

of the regression line and consequently on the value of the correlation. The schools that appear to be outliers, when removed, created an entirely different representation and thus provide statistical significance. The removal of the outliers allows the researcher to reject the null on Hypothesis I and II without altering the alpha level. Again, the outliers skew the data, and their removal lends the data a more accurate representation.

Recommendation for Further Study

It is difficult to determine if other variables would impact further studies. There is a need for further study in the areas of servant-leadership, school climate, and the complexity of the elementary school setting. A great deal of research and discussion needs to take place in the areas mentioned above. Further, the variables that encompass the health of the school climate and student achievement need to be examined to determine their relationship strength.

The researcher recommends further studies in the conceptual framework of servant-leadership behavior, school climate, and student achievement. It is recommended that future researchers use not only the Servant-Leadership Profile but other leadership style profiling inventories, as well. Utilizing generalized leadership style inventories might prove to be more beneficial in terms of identifying specific leadership behaviors that may directly or indirectly affect school climate or student achievement.

Continuing on, the effects of school and class size, other assessments (i.e., national norm-reference tests, value-added assessments, credentialing, etc.), servant-leadership, and the idea of feminism, legal, and ethical implications of teaching a moral-based theory of leadership may provide additional insight on this delicate and complex issue. Finally, researchers may consider including demographic data in the research to

determine if gender composition, ethnicity, principal longevity, or location has an effect on school climate and student achievement.

Summary

Presented in this chapter were a summary of the findings, conclusions, implications of findings, and a discussion and recommendations for possible topics of further research.

The results of this study should be used as a basis for additional research in the area of servant-leadership, school climate, and the impact of independent variables on school climate and student achievement. Continued research in the areas of servant-leadership, school climate, and other variables may allow for a healthier school climate and, ultimately, a better experience for students, staff, and the building principal.

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APPENDICES

Appendix A

(Revised) Servant-Leadership Profile: 360 (SLP-R: 360)

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Leadership matters a great deal in the success or failure of any organization. This instrument was designed to measure both positive and negative leadership characteristics.

Please use the following scale to indicate your agreement or disagreement with each of the statements in describing your own attitudes and practices as a leader. If you have not held any leadership position in an organization, then answer the questions as if you were in a position of authority and responsibility. There are no right or wrong answers. Simply rate each question in terms of what you really believe or normally do in leadership situations.

	1	2	3	4	5	6	7
Strongly Disagree (SD)		Undecided				Strongly Agree (SA)	

For example, if you strongly agree, you may circle 7, if you mildly disagree, you may circle 3. If you are undecided, circle 4, but use this category sparingly.

1. To inspire team spirit, I communicate enthusiasm and confidence.
1 2 3 4 5 6 7
2. I listen actively and receptively to what others have to say, even when they disagree with me.
1 2 3 4 5 6 7
3. I practice plain talking—I mean what I say and say what I mean.
1 2 3 4 5 6 7
4. I always keep my promises and commitments to others.
1 2 3 4 5 6 7
5. I grant all my workers a fair amount of responsibility and latitude in carrying out their tasks.
1 2 3 4 5 6 7
6. I am genuine and honest with people, even when such transparency is politically unwise.
1 2 3 4 5 6 7

7. I am willing to accept other people's ideas whenever they are better than mine.
1 2 3 4 5 6 7
8. I promote tolerance, kindness, and honesty in the workplace.
1 2 3 4 5 6 7
9. To be a leader, I should be front and center in every function in which I am involved.
1 2 3 4 5 6 7
10. I create a climate of trust and openness to facilitate participation in decision-making.
1 2 3 4 5 6 7
11. My leadership effectiveness is improved through empowering others.
1 2 3 4 5 6 7
12. I want to build trust through honesty and empathy.
1 2 3 4 5 6 7
13. I am able to bring out the best in others.
1 2 3 4 5 6 7
14. I want to make sure that everyone follows orders without questioning my authority.
1 2 3 4 5 6 7
15. As a leader, my name must be associated with every initiative.
1 2 3 4 5 6 7
16. I consistently delegate responsibility to others and empower them to do their job.
1 2 3 4 5 6 7
17. I seek to serve rather than be served.
1 2 3 4 5 6 7
18. To be a strong leader, I need to have the power to do whatever I want without being questioned.
1 2 3 4 5 6 7
19. I am able to inspire others with my enthusiasm and confidence in what can be accomplished.
1 2 3 4 5 6 7
20. I am able to transform an ordinary group of individuals into a winning team.

1 2 3 4 5 6 7

21. I try to remove all organizational barriers so that others can freely participate in decision-making.

1 2 3 4 5 6 7

22. I devote a lot of energy to promoting trust, mutual understanding, and team spirit.

1 2 3 4 5 6 7

23. I derive a great deal of satisfaction in helping others succeed.

1 2 3 4 5 6 7

24. I have the moral courage to do the right thing, even when it hurts me politically.

1 2 3 4 5 6 7

25. I am able to rally people around me and inspire them to achieve a common goal.

1 2 3 4 5 6 7

26. I am able to present a vision that is readily and enthusiastically embraced by others.

1 2 3 4 5 6 7

27. I invest considerable time and energy in helping others overcome their weaknesses and develop their potential.

1 2 3 4 5 6 7

28. I want to have the final say on everything, even areas where I don't have the competence.

1 2 3 4 5 6 7

29. I don't want to share power with others, because they may use it against me.

1 2 3 4 5 6 7

30. I practice what I preach.

1 2 3 4 5 6 7

31. I am willing to risk mistakes by empowering others to "carry the ball."

1 2 3 4 5 6 7

32. I have the courage to assume full responsibility for my mistakes and acknowledge my own limitations.

1 2 3 4 5 6 7

33. I have the courage and determination to do what is right in spite of difficulty or opposition.

1 2 3 4 5 6 7

34. Whenever possible, I give credits to others.
1 2 3 4 5 6 7
35. I am willing to share my power and authority with others in the decision-making process.
1 2 3 4 5 6 7
36. I genuinely care about the welfare of people working with me.
1 2 3 4 5 6 7
37. I invest considerable time and energy equipping others.
1 2 3 4 5 6 7
38. I make it a high priority to cultivate good relationships among group members.
1 2 3 4 5 6 7
39. I am always looking for hidden talents in my workers.
1 2 3 4 5 6 7
40. My leadership is based on a strong sense of mission.
1 2 3 4 5 6 7
41. I am able to articulate a clear sense of purpose and direction for my organization's future.
1 2 3 4 5 6 7
42. My leadership contributes to my employee's/colleagues' personal growth.
1 2 3 4 5 6 7
43. I have a good understanding of what is happening inside the organization.
1 2 3 4 5 6 7
44. I set an example of placing group interests above self-interests.
1 2 3 4 5 6 7
45. I work for the best interests of others rather than self.
1 2 3 4 5 6 7
46. I consistently appreciate, recognize, and encourage the work of others.
1 2 3 4 5 6 7
47. I always place team success above personal success.
1 2 3 4 5 6 7

48. I willingly share my power with others, but I do not abdicate my authority and responsibility.

1 2 3 4 5 6 7

49. I consistently appreciate and validate others for their contributions.

1 2 3 4 5 6 7

50. When I serve others, I do not expect any return.

1 2 3 4 5 6 7

51. I am willing to make personal sacrifices in serving others.

1 2 3 4 5 6 7

52. I regularly celebrate special occasions and events to foster a group spirit.

1 2 3 4 5 6 7

53. I consistently encourage others to take initiative.

1 2 3 4 5 6 7

54. I am usually dissatisfied with the status quo and know how things can be improved.

1 2 3 4 5 6 7

55. I take proactive actions rather than waiting for events to happen to me.

1 2 3 4 5 6 7

56. To be a strong leader, I need to keep all my subordinates under control.

1 2 3 4 5 6 7

57. I find enjoyment in serving others in whatever role or capacity.

1 2 3 4 5 6 7

58. I have a heart to serve others.

1 2 3 4 5 6 7

59. I have great satisfaction in bringing out the best in others.

1 2 3 4 5 6 7

60. It is important that I am seen as superior to my subordinates in everything.

1 2 3 4 5 6 7

61. I often identify talented people and give them opportunities to grow and shine.

1 2 3 4 5 6 7

62. My ambition focuses on finding better ways of serving others and making them successful.

1 2 3 4 5 6 7

Appendix B

Organizational Health Inventory for Elementary (OHI-RE)

The following statements are statements about your school. Please indicate the extent to which each statement characterizes your school by circling the appropriate response.

RO=RARELY OCCURS/ SO=SOMETIMES OCCURS/ O=OFTEN OCCURS/ VFO=VERY FREQUENTLY OCCURS

1. The principal explores all sides of topics and admits that other opinions exist.
RO SO O VFO
2. The principal gets what he or she asks for from superiors.
RO SO O VFO
3. The principal discusses classroom issues with teachers.
RO SO O VFO
4. The principal accepts questions without appearing to snub or quash the teacher.
RO SO O VFO
5. Extra materials are available if requested.
RO SO O VFO
6. Students neglect to complete homework.
RO SO O VFO
7. Students are cooperative during classroom instruction.
RO SO O VFO
8. The school is vulnerable to outside pressures.
RO SO O VFO
9. The principal is able to influence the actions of his or her superiors.
RO SO O VFO
10. The principal treats all faculty members as his or her equal.
RO SO O VFO
11. The principal goes out of his or her way to show appreciation to teachers.
RO SO O VFO
12. Teachers are provided with adequate materials for their classrooms.
RO SO O VFO
13. Teachers in this school like each other.

- | | | | | |
|--|----|----|---|-----|
| | RO | SO | O | VFO |
|--|----|----|---|-----|
14. Community demands are accepted even when they are not consistent with the educational program.
- | | | | | |
|--|----|----|---|-----|
| | RO | SO | O | VFO |
|--|----|----|---|-----|
15. The principal lets faculty know what is expected of them.
- | | | | | |
|--|----|----|---|-----|
| | RO | SO | O | VFO |
|--|----|----|---|-----|
16. Teachers receive necessary classroom supplies.
- | | | | | |
|--|----|----|---|-----|
| | RO | SO | O | VFO |
|--|----|----|---|-----|
17. The principal conducts meaningful evaluations.
- | | | | | |
|--|----|----|---|-----|
| | RO | SO | O | VFO |
|--|----|----|---|-----|
18. Students respect others who get good grades.
- | | | | | |
|--|----|----|---|-----|
| | RO | SO | O | VFO |
|--|----|----|---|-----|
19. Teachers feel pressure from the community.
- | | | | | |
|--|----|----|---|-----|
| | RO | SO | O | VFO |
|--|----|----|---|-----|
20. The principal's recommendations are given serious consideration by his or her superiors.
- | | | | | |
|--|----|----|---|-----|
| | RO | SO | O | VFO |
|--|----|----|---|-----|
21. The principal maintains definite standards of performance.
- | | | | | |
|--|----|----|---|-----|
| | RO | SO | O | VFO |
|--|----|----|---|-----|
22. Supplementary materials are available for classroom use.
- | | | | | |
|--|----|----|---|-----|
| | RO | SO | O | VFO |
|--|----|----|---|-----|
23. Teachers exhibit friendliness to each other.
- | | | | | |
|--|----|----|---|-----|
| | RO | SO | O | VFO |
|--|----|----|---|-----|
24. Students seek extra work so they can get good grades.
- | | | | | |
|--|----|----|---|-----|
| | RO | SO | O | VFO |
|--|----|----|---|-----|
25. Select citizen groups are influential with the board.
- | | | | | |
|--|----|----|---|-----|
| | RO | SO | O | VFO |
|--|----|----|---|-----|
26. The principal looks out for the personal welfare of faculty members.
- | | | | | |
|--|----|----|---|-----|
| | RO | SO | O | VFO |
|--|----|----|---|-----|
27. Teachers express pride in their school.
- | | | | | |
|--|----|----|---|-----|
| | RO | SO | O | VFO |
|--|----|----|---|-----|
28. Teachers identify with the school.

- | | | | | |
|---|----|----|---|-----|
| | RO | SO | O | VFO |
| 29. The school is open to the whims of the public. | RO | SO | O | VFO |
| 30. A few vocal parents can change school policy. | RO | SO | O | VFO |
| 31. Students try hard to improve on previous work. | RO | SO | O | VFO |
| 32. Teachers accomplish their jobs with enthusiasm. | RO | SO | O | VFO |
| 33. The learning environment is orderly and serious. | RO | SO | O | VFO |
| 34. The principal is friendly and approachable. | RO | SO | O | VFO |
| 35. There is a feeling of trust and confidence among the staff. | RO | SO | O | VFO |
| 36. Teachers show commitment to their students. | RO | SO | O | VFO |
| 37. Teachers are indifferent to each other. | RO | SO | O | VFO |

Appendix C

Principal's Informed Consent Letter

To: Clinton and Shiawassee County Elementary Principals
From: Ryan L. Cunningham, Principal, Leonard Elementary School
732 N. Mabbitt Rd., Ovid, MI 48866
Re: Permission to Conduct Research

I am a doctoral student at Eastern Michigan University and am currently completing my dissertation by conducting a research project that will study the relationship between servant-leadership behavior of elementary school principals, school climate and the impact on student achievement. I am requesting your permission to survey some of your teachers.

With your permission, in September, I will randomly select some of your teachers to voluntarily complete a survey online at Zoomerang.com. The survey, Organizational Health Inventory for Elementary, will attempt to measure the health of the school climate. The survey completed online will take only a few minutes. Once the completed surveys are submitted online, the teachers' participation will have been completed. Teachers may choose not to participate at any time, without penalty. Those teachers that choose to participate will be offered a summary of the results, which may have the potential benefit of improving their school climate, principal's leadership behavior, and/or student achievement.

Further, I would like to take this opportunity to invite you to participate in the study as well. I am asking all principals to complete the (Revised) Servant-Leadership Profile: 360 (SLP-R: 360). This will provide the researcher with a self-perceived inventory of leadership styles. The survey may be accessed online at www.zoomerang.com or completed via paper and pencil and returned.

Participating schools, principals, and teachers will not be identified nor labeled by any means within the dissertation. Surveys will be coded for the sole purpose of tracking so that follow-up letters can be sent, if necessary. All completed surveys will be stored at the researcher's home residence. Also, teachers' names will not appear on the surveys. Again, confidentiality will be maintained, and participation is completely voluntary.

I would appreciate a list of your teaching staff so that I may randomly select one participant for every 50 students enrolled in your school. Names of participating teachers will not be revealed to the building principals. Should you choose not to participate, your school will be eliminated from the study.

This research protocol and informed consent document has been reviewed and approved by the Eastern Michigan University Human Subjects Review Committee for use from August 2007 through October 2007. If you have any questions about the approval

process, please contact Dr. Deb de Laski-Smith (734.487.0042, Interim Dean of the Graduate School and Administrative Co-chair of UHSRC), human.subjects@emich.edu).

Thank you for your time and cooperation.

Ryan L. Cunningham
989-834-2474 (work)
989-224-7285 (home)

Leonard Elementary School
732 N. Mabbitt Rd.
Ovid, MI 48866

Ronald Williamson Ed.D.
(734) 487-0255

Eastern Michigan University
304 Porter Building
Ypsilanti, MI 48197

Subject _____

Date _____

Researcher _____

Date _____

Appendix D

Teacher’s Informed Consent Letter

To: Clinton and Shiawassee County Elementary Teachers
From: Ryan L. Cunningham, Principal, Leonard Elementary School
732 N. Mabbitt Rd., Ovid, MI 48866
Re: Request to Participate in Research

I am a doctoral student at Eastern Michigan University and am currently completing my dissertation by conducting a research project that will study the relationship between servant-leadership behavior of elementary school principals, school climate and the impact on student achievement. I am requesting your participation in my dissertation research.

Please consider completing the enclosed survey online at www.zoomerang.com. The survey, the Organizational Health Inventory for Elementary should only take you a few minutes. It is designed to assess the health of your school climate. Once the completed surveys are submitted online, your participation will have been completed. You may choose not to participate at any time, without penalty. If you choose to participate, you will be offered a summary of the results, which may have the potential benefit of improving their school climate, principal’s leadership behavior, and/or student achievement.

Participating schools, principals, and teachers will not be identified nor labeled by any means within the dissertation. Surveys will be coded for the sole purpose of tracking so that follow-up letters can be sent, if necessary. All completed surveys will be stored at the researcher’s home residence. Also, teachers’ names will not appear on the surveys. Again, confidentiality will be maintained (building principals will not know who has been randomly selected), and participation is completely voluntary.

This research protocol and informed consent document has been reviewed and approved by the Eastern Michigan University Human Subjects Review Committee for use from August 2007 through October 2007. If you have any questions about the approval process, please contact Dr. Deb de Laski-Smith (734.487.0042, Interim Dean of the Graduate School and Administrative Co-chair of UHSRC), human.subjects@emich.edu).

Thank you for your time and consideration.

Ryan L. Cunningham
989-834-2474 (work)
989-224-7285 (home)

Leonard Elementary School
732 N. Mabbitt Rd.
Ovid, MI 48866

Ronald Williamson Ed.D.
(734) 487-0255

Eastern Michigan University
304 Porter Building
Ypsilanti, MI 48197

Subject _____

Date _____

Researcher _____

Date _____

Appendix E

Human Subjects Institutional Review Board (IRB) Approval

EASTERN MICHIGAN UNIVERSITY

Education First

January 4, 2007

Ryan Cunningham
4150 Estate Way
Saint Johns, MI 48879

Dear Ryan Cunningham:

The Human Subjects Institutional Review Board (IRB) of Eastern Michigan University has granted approval to your modified proposal, "An Examination of the Relationship Among the Leadership Styles of the Elementary School Principal, School Climate and Student Achievement as Measured by the 4th Grade Mathematics and Reading Michigan Educational Assessment Program."

After careful review of your completed application, the IRB determined that the rights and welfare of the individual subjects involved in this research are carefully guarded. Additionally, the methods used to obtain informed consent are appropriate, and the individuals participating in your study are not at risk.

You are reminded of your obligation to advise the IRB of any change in the protocol that might alter your research in any manner that differs from that upon which this approval is based. Approval of this project applies for one year from the date of this letter. If your data collection continues beyond the one-year period, you must apply for a renewal.

On behalf of the Human Subjects Committee, I wish you success in conducting your research.

Sincerely,



Deb de Laski-Smith, Ph.D.
Interim Dean
Graduate School
Administrative Co-Chair
University Human Subjects Review Committee

Note: If project continues beyond the length of **one** year, please submit a continuation request form by **1/05/09**.

Reference # 080106M

University Human Subjects Review Committee · Eastern Michigan University · 200 Boone Hall
Ypsilanti, Michigan 48197
Phone: 734.487.0042 Fax: 734.487.0050
E-mail: human.subjects@emich.edu
www.ored.emich.edu

Appendix F

Permission to use Organization Health Inventory for Elementary Schools (OHI-RE)

To: Ryan Cunningham

Fr: Wayne K. Hoy

You have my permission to use the Organizational Health Inventory for Elementary Schools (OHI-RE) in you dissertation research. Just down load it from my web site, copy it, and use it. Make sure that you give proper credit in your dissertation. I would also appreciate a summary of your results when you complete your research.

Good luck.

Wayne

Wayne K. Hoy
Fawcett Professor of
Education Administration
www.coe.ohio-state.edu/whoy

7687 Pebble Creek circle, #102
Naples, FL 34108
239 514 3907

On Feb 23, 2007, at 3:22 PM, Ryan Cunningham wrote:

Dr. Hoy,

My name is Ryan Cunningham and I am a doctoral student at Eastern Michigan University. I am working on my dissertation proposal and would like to gather your permission to use the *Organization Health Inventory for Elementary Schools* in anticipation of conducting my dissertation research. The study, *An Examination of the Relationship Among the Leadership Styles of the Elementary School Principal, School Climate and Student Achievement as Measured by the 4th grade Mathematics and Reading Michigan Educational Assessment Program*, will be available for your review upon completion.

Thank you for your time and consideration.

Appendix G

Permission to use (Revised) Servant Leadership Profile: 360 (SLP-R: 360)

From: "Don Page" page@twu.ca
To: Ryan Cunningham
Cc: pwong@tyndale.ca
Subject: RE: Permission to use survey

You have our permission to use the Revised Servant Leadership Profile and the accompanying 360 degree instrument in your research. I am attaching a self-explanatory scoring key that will make it easier for you to record the results. We shall look forward to seeing the results of your research.

From: Ryan Cunningham [mailto:ryanc@oe.edzone.net]
Sent: Tuesday, February 20, 2007 11:54 AM
To: Don Page
Subject: Permission to use survey

Dr. Page,

My name is Ryan Cunningham and I am a doctoral student at Eastern Michigan University. I am working on my dissertation proposal and would like to gather your permission to use the *Revised Servant Leadership Profile: 360* in anticipation of conducting my dissertation research. The study, *An Examination of the Relationship Between the Leadership Styles of the Elementary School Principal, School Climate and Student Achievement as Measured by the 4th grade Mathematics and Reading Michigan Educational Assessment Program*, will be available for your review upon completion.

Thank you for your time and consideration.

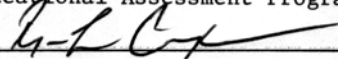
Ryan

Cc: Dr. Wong

Appendix H

Dissertation Information Sheet

DISSERTATION INFORMATION SHEET

NAME Ryan L. Cunningham STUDENT # E00048601
ADDRESS 4150 Estate Way
CITY Saint Johns STATE MI ZIP 48879
PHONE (H) 989-224-7285 (W) 989-834-2474
EMAIL ryanc@oe.edzone.net
Dept/School EDLD Committee Chair Dr. Ron Williamson
Title of Dissertation An Examination of the Relationship Between Servant-Leadership Behavior of the Elementary School Principal, School Climate and Student Achievement as Measured by the 4th grade Mathematics and Reading Michigan Educational Assessment Program.
Signature 

Style Guide Used (check one):

APA Chicago Turabian

For office use only--Graduate School staff must complete the following:

Is Approval Form signed by all committee members and the department head/school director?

Yes No

If the research involved the use of human or animal subjects, is evidence of approval from the UHSRC or IACUC submitted with the dissertation? Yes No

1. If the answers to both the above questions are "yes," you may accept the dissertation from the student. If not, return it to the student for compliance with the above requirements.
2. Date stamp below. Name of staff person accepting dissertation _____
3. Make two copies of this form. One copy goes to student and the other to the reader.
4. Enter in database and Banner and file original in binder.

DATE STAMP HERE

10/07