EFFECTS OF LEADERSHIP STYLES AND STUDENT ACADEMIC ACHIEVEMENT

by

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Abstract

Schools and school leadership have continued to be scrutinized by the legislature and public. With the passage of such laws as No Child Left Behind in 2001, the accountability standard of public schools has risen to all-time levels. This literature review seeks to discover the effects school leaders have on student achievement. This literature review will look at a variety of leadership styles, seek to identify the direct/indirect influences of school leadership on learning, look at leadership and teacher efficacy traits that impact learning and consider school leadership traits that lead to student achievement. In summary, the research has demonstrated that school leadership has both direct and indirect implications leading to student achievement. Albeit most leadership influences are indirect; these indirect influences lead to increased collective efficacy and improved school culture. In conclusion, future implications suggest greater collective research should be performed targeting the traits successful school leaders have demonstrated leading to student achievement.
Chapter I: Introduction

Statement of Problem

Public schools around the world are expected to prepare students academically so they can compete on a global level, as well as be held accountable by legislation, such as No Child Left Behind (NCLB). NCLB is a federal attempt to measure student learning through high-stakes testing. As part of holding schools accountable for student achievement, teachers are required to become “highly-qualified” in the subject area they teach. Very few qualifications are placed on administrators to be “highly-qualified” in maintaining the success of the educational system. For example, under Governor John Engler’s administration in the 1990’s, in Michigan, qualifications for superintendents to have a background in education were not necessary, the underlying idea was that business leaders could lead schools and maintain high student achievement.

Much of the current literature studying school leadership posits that leadership has a minimal direct impact on student achievement (Ross & Gray, 2006). Kruger, Witziers and Sleegers (2007), postulated that leadership is no longer proposed as having a direct influence on academic outcomes, but indirectly influences instructional organization and culture. It is important to research the extent to which school leaders and leadership styles impact student success. The literature review will integrate current data on the direct effects of school leadership on student success and some indirect effects school leaders might have on student achievement. A variety of leadership styles will also be researched to see if a specific leadership style is associated more positively with greater student achievement.

Research Question(s)

Does school leadership increase student achievement by impacting the school culture? Is one particular school leadership style more positively associated with student achievement?
Definition of Terms

Organizational Behavior: “a field of social-scientific study and application to administrative practice that seeks to understand and use knowledge of human behavior in social and cultural setting for the improvement of organizational performances.” (Owens & Valesky 2007, p. 259)

Self-efficacy/Collective teacher efficacy: Sense of efficacy is a belief about one’s own ability (self-efficacy), or the ability of one’s colleagues collectively (collective efficacy), to perform a task or achieve a goal. It is a belief about ability, not actual ability. (Leithwood & Jantzi, 2008)

Organic Leadership: Organic Leadership by Miller and Rowan (2006, p. 219) is defined “A shift away from conventional, hierarchical patterns of bureaucratic control toward what has been referred to as a network pattern of control, that is, a pattern of control in which line employees are actively involved in organizational decision making, staff cooperation and collegiality supplant the hierarchy as a means of coordinating work flows and resolving technical uncertainties, and supportive forms of administrative leadership emerge to facilitate line employees’ work.”

Transformational Leadership: “multidimensional construct that involves three clusters: charisma (identifying and sustaining a vision of the organization), intellectual stimulation of members, and individual consideration. Transformational leadership enhances an organization by raising the values of members, motivating them to go beyond self-interest to embrace organizational goals, and redefining their needs to align with organizational preferences” (Ross & Gray 2006, p. 800).
Chapter II: Literature Review

The past century has taught us several ways of viewing educational organizations. One prominent model is the traditional approach, which views organizations as a hierarchical system in which power and intelligence are originated at the top and passed down through commands and control to the lower levels of the system before being put into practice. According to Chrispeels, Burke, Johnson and Daly (2008), gains in student learning have been made, but a top-down approach in leadership could inhibit organizational learning by preventing flexibility or teacher discretion in meeting the needs of diverse learners. Another perception on organizational leadership, which is also the newer perspective, is to think about organizations as cooperative, collegial and collaborative in which the belief is good ideas exist at every level of the organization. These ideas can be manifested when the leaders of those in command act in ways to motivate subordinates to release their capabilities (Owens & Valesky, 2007).

For the past two decades, legislators and the public have provided external pressures to encourage schools to develop and change places of education. Leadership and School Restructuring have been in the forefront of school reform in the effort to focus on school improvement and student achievement (Goker, 2006). In studying school improvement and student achievement, individuals should understand leadership and administration means working with and through other individuals to achieve organizational goals. When working towards achieving organizational goals, school leadership has to take into account organizational behavior. Organizational behavior according to Owens and Valesky (2007) is defined as “a field of social-scientific study and application to administrative practice that seeks to understand and use knowledge of human behavior in social and cultural setting for the improvement of organizational performances” (p. 259). The hypothesis of this literature review is that school
leadership has an effect on student achievement by playing a central role in nurturing the internal conditions for developing school instruction, as well as maintaining positive school and community relationships.

Variety of Leadership Styles

Transformational Leadership

A review of the literature on some of the leadership styles that breed success within educational organizations discovered that Transformational Leadership was more effective than Transactional Leadership. Ross and Gray (2006, p. 800) define transformational leadership as the Multidimensional construct that involves three clusters: charisma (identifying and sustaining a vision of the organization), intellectual stimulation of members, and individual consideration. Transformational leadership enhances an organization by raising the values of members, motivating them to go beyond self-interest to embrace organizational goals, and redefining their needs to align with organizational preferences.

In comparison, transactional leaders often try to accomplish organizational goals without attempting to elevate the motives of followers or the human resources within the organization. Transactional leadership does not constitute a change in the culture of the organization, whereas transformational leadership requires a change in the culture of the organization in order to be effective.

In looking at the effects of transformational leadership on student achievement, Ross and Gray (2006) discovered principals are often perceived as accountable for student achievement, but most researchers found that principals have very little direct impact on achievement. The researchers hypothesized that principals indirectly contributed to student achievement through
teacher commitment and beliefs about their collective capacity. Ross and Gray re-analyzed data from a database to test the link between leadership and student achievement. A total of 205 schools within two districts and 3,042 teachers were retained for research. Student achievement was tested in grades three through six. Data collection was performed using Likert items with a 6-point response scale ranging from strongly disagree to strongly agree. Results indicate that the principle effects on achievement primarily occur through leadership contributions to teacher perception of capacities, commitment to professional values and collective teacher efficacy. The indirect effects of leadership impact on student achievement were limited. Results indicate that every 1.0 standard deviation increase in transformational leadership led to a .222 SD increase in student achievement. The results indicated that the achievement effects of leadership continue to be indirect, as the path from leadership to student achievement of (standardized regression weight .113, p=.502) was not statistically significant. Likewise the path from collective teacher efficacy, standardized regression weight of .270, p = .122 was also not statistically significant, suggesting that the effect of collective teacher efficacy on achievement likely mediated by teacher commitment to professional values. The research indicates that principals who adopt a transformational leadership style have a stronger effect on teachers commitment to the school mission (r = .75; p<.01), which may indirectly impact the school process and student achievement.

*Organic Leadership*

Organic Leadership by Miller and Rowan (2006, p. 219) is defined as

A shift away from conventional, hierarchical patterns of bureaucratic control toward what has been referred to as a network pattern of control, that is, a pattern of control in which line employees are actively involved in organizational
decision making, staff cooperation and collegiality supplant the hierarchy as a means of coordinating work flows and resolving technical uncertainties, and supportive forms of administrative leadership emerge to facilitate line employees’ work.

The researchers examined the relationship between organic management and growth in student achievement by using two large scale data sets of longitudinal data. The NELS:88 and Prospects: The congressionally-Mandated Study of Educational Opportunity, which contained longitudinal information on student achievement growth in both reading and mathematics. The study looked at two different Cohorts in both math and reading which included over 5000 students and up to 146 schools. Items were rated using a 6-point Likert scale ranging from strongly agree to strongly disagree. The results indicate that at the elementary level, when considering all the variables studied none of the measures of organic management of staff cooperation, teacher control or supportive leadership had any effect on achievement status. At the secondary level (grades 8-12) results indicate that the only variable to show any association with organic management is teacher control in respects to achievement in reading and math at the end of the 10th grade. Aside from this association, there were no linear effects in achievement growth or achievement deceleration. Results show that organic management is not a powerful determinant of student achievement at neither the elementary nor the secondary level and the rates of academic growth among schools was largely due to random school effects such as attendance, SES, race or some other random factor.

Instructional Leadership

The concept of instructional leadership theory’s empirical origin studies came about during the 1970’s and 80’s in poor urban communities where students had succeeded despite the odds.
According to Robinson, Lloyd and Rowe (2008) these schools typically had strong instructional leadership, which included a climate free of distraction, a system of clear teaching objectives and high teacher expectations for students. The researchers performed a meta-analysis in which they looked at 22 of the 27 studies involved in the comparison of transformational and instructional leadership on student achievement. The researchers found that on average, instructional leadership on student achievement was three to four times that of transformational leadership. The Robinson, Lloyd and Rowe study will be looked at more in-depth in the next section of the literature review.

Identifying direct and indirect influence of school leadership on learning

Individuals recognized that principals cannot lead alone because of complexity and the array of leadership skills necessary to perform the task of leadership cannot successfully be achieved by a single individual. High levels of student achievement are possible when schools and districts perform as coordinated units of change. Principals have a difficult time with leading alone and school leadership teams are an essential part to the school improvement process (Chrispeels, Burke, Johnson, & Daly, 2008).

Over the course of the past four decades, the United States has seen a variety of changes in school reform. From the 1960’s, funds were allocated to support teachers who worked with high needs students, to the current reform changes in which the school as a whole is looking at school and classroom effectiveness developed into a variety of models such as Accelerated Schools, and the Success for All and School Development Model. These models implemented leadership team methods such as including teachers, principals and parents to play key roles in the organizational structure, curriculum and instruction. Chrispeels, Burke, Johnson and Daly (2008), who performed a case study involving one K-8 school in California that serves 19,654
students in 19 elementary, five middle schools and one special needs center, found that when school leadership teams and the central office collaborate and when the mental models are fully implemented, they have shown potential for raising student achievement. The authors show school leadership cannot be done alone; therefore, school leaders do not have a direct impact on student achievement. School leaders do play an indirect role by providing the elements of professional development, clear expectations and safe space for School Leadership Teams to align their aspirations with the central office, which can enhance organizational effectiveness and goal attainment.

In looking at the effects of collective leadership on student achievement, Leithwood and Mascall (2008) considered more than 15 years of research on organic management by Miller and Rowan (2006). The researchers reported that “the main effects are weak and positive effects appear to be contingent on many other conditions” (p. 220). Although, organic management does not appear to have a direct impact on student achievement, data seems to correlate with research from a variety of other studies, which indicates effect leadership studies rarely detect significant effects on students, whereas indirect studies have (Hallinger & Heck, 1996).

Leithwood and Mascall selected nine states, 45 districts and 180 schools to study when designing the framework for their correlational study on collective leadership. The researchers presumed indirect leadership effects and conceptualized those teacher performance indicators such as motivation, capacity and work situations that would be variables which mediated employee performance and student achievement. A 104-item survey was conducted, which measured collective leadership and teacher performance antecedence. A six-point scale was used which required the participants to rate the extent of the direct influence on school decisions. Student achievement was measured by looking at results from state-mandated tests of language
and mathematics at several grade levels over a three year period. School-level individual teacher surveys were merged with the school-level achievement results and SPSS was used to calculate the results. In looking at the impact of collective leadership effects on teachers and students, capacity, motivation, setting and collective leadership were variables. Results indicate that collective leadership is related to all three teacher variables. The strongest are with leadership and teachers work setting ($r = .58; p<.01$) and teacher motivation ($r = .55; p<.01$). All variables except teacher capacity corresponded to student achievement: work setting ($r = .37; p<.01$), teacher motivation ($r = .36; p<.01$) and collective leadership ($r = .34; p<.01$). Results indicated that collective leadership is significantly, directly related to all three teacher variable of motivation ($r=.25; p<.05$), capacity ($r=.36; p<.05$) and work situations ($r=.58; p<.05$). The results also indicated that collective leadership has modest but significant, indirect effects on student achievement by influencing teacher motivation and work setting, which in turn significantly influences student achievement. It should be noted that collective leadership did not pose a significant effect on teacher capacity and that the teacher capacity variable was not significantly linked to student achievement.

The picture one obtains from researching meta-analysis studies of quantitative evidence linking indirect and direct influences of school leadership to student outcomes varies among the research. According to Robinson, Lloyd and Rowe (2008) the meta-analysis of 37 multinational studies on the direct impact of leadership on student academic outcomes shows a reported z-score of 0.02, indicating a very weak impact. As discussed later in this literature review and noted by the researchers, the results of a meta-analysis by Waters, Marzano and McNulty (2004) reported an average effect of ($r = 0.24; p<.05$) on leadership and student outcomes when looking at a quantitative meta-analysis. The researchers took these discrepancies into consideration when
performing a meta-analysis on 22 of 27 studies comparing transformational and instructional leadership on student outcomes. Rather than looking at the impact of leadership on outcomes, the researchers focused on identifying the relative impact of different types of leadership leading to student achievement. The researchers applied relevant information from 27 studies, which was then entered into a spreadsheet under multiple headings. Of the 27 relevant studies, 22 allowed for the possibility to record or calculate effect sizes as z scores. The five studies that did not allow for statistical effect sizes to be calculated were accounted for later in the meta-analysis. Results indicate a mean effect size estimate for transformational leadership of (ES = 0.11), instructional leadership (ES = 0.42) and other leadership types (ES = 0.30) on student outcomes. These results indicate an average effect of instructional leadership on student outcome was three to four times that of transformational leadership. It should be noted that the transformational leadership study outcome measures were primarily social outcomes, while instructional leadership researchers tended to focus on academic outcomes. Also, transformational leadership constitutes a change in culture that focuses more on the relationship between leadership and followers, than on educational work of school leaders, and the quality of relationships does not necessarily correlate with the quality of student outcomes.

Early research on school effectiveness of principals was performed using the direct-effect models, which postulated that a school leader’s practices will have a direct effect on the school’s outcome. According to Kruger, Witziers and Sleegers (2007) some researchers have found school leadership matters (Goldring & Pasternack, 1994; Sammons, Hillman & Mortimore, 1995). However, the empirical basis for this statement is rather weak. The researchers now suggest “leadership is no longer proposed as having a direct influence on learning outcomes, but
as having an indirect influence through the way it has an impact on instructional organization and culture” (p. 3).

**Leadership and Teacher Efficacy Impacting Learning**

Collective teacher efficacy is a specific form of self-efficacy in which the target of the belief is that the efforts of the faculty as a unit will have a positive impact on student performance. Ross and Gray (2006) identified 20 studies providing evidence linking leadership to teacher outcomes. These studies indicated that transformational leadership predicted that educators were willing to follow transformational leadership, which led to changed classroom behavior. Although research has established an empirical link between transformational leadership and teacher outcomes on student achievement, the researchers wanted to address whether the relationship between leadership and teacher commitment was direct or indirect. Ross and Gray constructed two models mapping the paths from transformational leadership and collective teacher efficacy leading to commitment to school mission, commitment to professional community and commitment to community partnerships. The researchers invited all elementary teachers in two large districts to participate in a survey of Likert items with a 6-point response scale. The invitation generated 3,074 responses from 218 schools. Included in the study were those schools that provided at least five teacher responses. Results indicate that the main finding of the study is “collective teacher efficacy is a partial rather than a complete mediator of the effects of transformational leadership on commitment to organizational values” (Ross & Gray, 2006, p. 191). It was also found that for every one standard deviation in transformational leadership, one could expect a (.81; p<.05) SD in teacher commitment to school mission, a (.64; p<.05) SD increase in teacher commitment to the school as a professional community, and a (.37; p<.05) SD increase in commitment to community partnerships. Other findings from the research
indicate that transformational leadership had an (.42; p<.05) impact on collective teacher efficacy of the school, collective teacher efficacy was a strong predictor of commitment to community partnerships and that transformational leadership had direct effects on teacher commitment, independent of agency beliefs. The researchers indicate that due to the established link between collective teacher efficacy and student achievement, the leadership-efficacy relationship matters.

Conducting extensive research for evidence about Leadership Self-efficacy (LSE) and Leadership Collective efficacy (LCE) and using a framework of a causal model, Leithwood and Jantzi (2008) set out to identify the many links to the chain joining state, district and school leadership to learning. Research of prior studies relating to leader efficacy yielded only 15 empirical studies carried out in a school context and six LSE studies carried out in other organizations. The researchers study addressed four questions:

1. To what extent are district leadership and district organizational conditions related to school leaders’ individual and collective sense of efficacy for school improvement? Are there differences in the antecedents of the two types of efficacy?

2. What is the relationship between leaders’ efficacy and leader practices or behaviors, as well as school and classroom conditions?

3. What is the contribution of leaders’ efficacy to variations in student learning?

4. Are the relationships between leaders’ efficacy and student learning significantly moderated by personal or organizational characteristics?

A stratified random sampling procedure was used to select 45 districts, containing 180 schools, encompassing nine states. A variety of factors such as district size, student diversity, curriculum standards, accountability and evidence for improving student achievement were considered. Surveys were conducted with 96 principals and 2,764 teacher respondents. Results
indicate that the district leadership variable strongly related to LCE (r = .61; p<.05) and significantly but moderately related to LSE (.32; p<.05). The results of pertaining to district leadership, the strongest association with Leader Collective Efficacy was (.61; p<.05) in redesigning the organization, (.55; p<.05) developing people, (.53; p<.05) managing the instructional program and (.42; p<.05) in setting directions. With Leader Self-efficacy, it was found that managing the instructional program (.34; p<.05), redesigning the organization (.28; p<.05), developing people (.27; p<.05) and setting direction (.23; p<.05).

Results of District Conditions indicate that all eight sets of district conditions significantly relate to leader efficacy, particularly with LCE. The results of LCE are as follows:

| District’s expressed concern for student achievement and the quality of instruction | r = .66; p<.05 |
| District culture | .61; p<.05 |
| Targeted and phased focus of improvement | .61; p<.05 |
| New approaches to board-district and district-school relations | .58; p<.05 |
| Emphasis on teamwork and professional community | .57; p<.05 |
| District-wide use of data | .52; p<.05 |
| Investment in instructional leadership at the district and school levels | .51; p<.05 |
| District-sponsored, job-embedded professional development focus for teachers | .40; p<.05 |

Relationships between district conditions and leader self-efficacy were weaker, but are still considered statistically significant. The results are as follows:

| Emphasis on teamwork | r = .45; p<.05 |
| Focus on achievement and quality of instruction | .40; p<.05 |
| District culture | .39; p<.05 |
| District-wide use of data | .35; p<.05 |
| Job-embedded professional development for teachers | .35; p<.05 |
| New district-school relations | .36; p<.05 |
| Targeted and phased focus of school improvement | .33; p<.05 |
Investment in instructional leadership  .25; p<.05

Findings from Leithwood and Jantzi (2008) indicate that district leadership and district organizational conditions have a strong influence on leader efficacy, but are mainly indirect. District leaders primarily create working conditions that are supportive of school leaders. Common to both leader collective efficacy and leader self efficacy were the influence of a district’s commitment to district culture, student learning and quality of instruction. The researchers also indicated that a district’s investment in instructional leadership had a greater impact on a leader’s collective efficacy than on individual efficacy. The researchers postulate that the efficacy of school leaders seems to arise less from direction and inspiration, but more from aligned and supportive working conditions.

The concept of shared leadership roles between principals and teachers along with looking at the relationship between shared instructional leadership to teacher and student learning was explored by Printy and Marks (2006) through review and synthesis of qualitative and quantitative research. The researchers synthesized a number of studies from the National Educational Longitudinal Study (sample size included 2,718 high school teachers and administrators in 420 schools) and studies of shared instructional leadership drawing on a national sample of data from 24 schools included in the Schools Restructuring Study (SRS), which included data on how teachers interact with each other. Qualitative data was derived from extensive case studies performed by SRS researchers. Through review, Printy and Marks found a strong relationship between leading, learning and teaching. It was discovered that colleges who interacted more often with their teaching teams, administrators and other school faculty had high quality teaching methods. Teachers found a purpose for their work, and developed clarity of values and focus on the future. Synthesis of the research pointed out that in effective schools,
teaching is a social practice, and that collegial interaction was the primary source of teacher learning. The case study also supported evidence that trust was a defining element of each school’s climate, which facilitated interaction between colleges. In both case studies, the researchers discovered that teachers had to earn their position as part of the shared instructional leadership team. Teachers who are nonconforming to the vision of the school are ignored and pressured to exit the system. The researchers also found that principals hold themselves accountable for providing the direction and resources to the support their work, and set high expectations relating to teaching, learning and student achievement.

Leadership Traits Leading to Student Achievement

Looking to challenge the theory that certain types of leadership will improve student achievement, Berker (2007) performed a qualitative case study looking at the Shire School in the south of England. Seventeen staff members were selected and interviewed. Interview notes were word processed in first person statement. Classroom observations were also performed to triangulate comments from interviews to student and teacher relationships. The researcher found that although the leadership of the school played an important process in transforming the processes of the school, the direct effect on leadership pertaining to student achievement remains unclear and unproven. Miller & Rowan (2006) also looked at a study that included 20,000 students enrolled in 250 American schools. The study showed that “organic management” had no effect on achievement growth. Although the results of many studies on transformational leadership indicate the strong leaders significantly impact student outcomes, few empirical studies provide strong evidence of direct leader impact on student outcomes. Berker (2007) suggests the effects are usually indirect and mediated by teachers.
In performing an inductive exploratory study to discover the common theme of successful schools in Virginia, Crum and Sherman (2008) interviewed principals to gain insight into their practice, which was supportive of high student achievement. The need for the study was supported by the lack of information concerning successful school leadership in the post No Child Left Behind era and the statement by Dinham (2005) “there can be little doubt from an examination of research findings that leadership is important in developing effective, innovative school and in facilitating quality teaching and learning” (p. 340). The researchers conducted semi-structured interviews with 12 principals using a standard interview guide. The principals were chosen from successful schools determined by those schools that met both state and federal accreditation standards. All principals were at least in their third year and had at a minimum two years of leadership experience. The research was grounded by allowing the principals to talk about actual practice, rather than theory, while identifying specific initiatives that supported success within their school. Six common leadership principles or themes emerged from the interview process. The themes are: developing personal and facilitating leadership, responsible delegation and empowering the team, recognizing ultimate accountability, communicating and rapport, facilitating instruction, and managing change. Principals in the study gave credit to their staff, rather than crediting themselves. It was also discovered that principals recognized the fact that they could not physically be in each class to guide instruction, therefore the role of the school leader was to facilitate and build rapport, and that the staff members held the responsibility of student success. It should also be noted that failure to communicate was a theme that was detrimental to the system, which caused lack of focus on teaching and student learning. Although this study took the form of a semi-structure interview, Crum and Sherman (2008)
provide insight for future leaders in determining leadership styles that advocate successful student achievement.

Outstanding education outcomes of students in years seven to ten in 38 secondary schools in Australia were studied by Dinham (2005). Outstanding educational achievement was defined as: develop fully the talents of all students, attain high standards of knowledge, skills and understanding through a comprehensive and balanced curriculum, and be socially just. Research was conducted through site visits, document analysis lesson observations, interviews with teachers, community members, principals, other executive staff and students. Site teams use prepared protocols when recording data and observations and the information was compiled entered into a database using open ended coding. Results indicate that principals in successful schools have a positive attitude toward change and a strong focus on students and learning. Six areas contributing to outstanding educational outcomes emerged around the focus on students and learning. They include:

1. External awareness and engagement
2. Bias towards innovation and action
3. Personal qualities and relationships
4. Vision, expectations and a culture of success
5. Teacher learning, responsibility and trust
6. Student support, common purpose and collaboration

The researchers also discovered three things found in outstanding schools: Principals use their powers and the rules and boundaries of the system creatively, exhibit a bias towards experimentation and risk taking, and exhibit strength, consistency, yet flexibility in decision making and the application of policy and procedure. As found in other research, teachers indeed
play a huge role in obtaining student achievement, this study recognizes this fact, along with realizing that school leaders also play a key role in creating conditions where teachers feel comfortable and can operate efficiently while facilitating student achievement.

In performing a meta-analysis, Waters, Marzano and McNulty (2004) looked at the effect leadership has in impacting student achievement. Synthesizing over 25 years of research by Mid-continent Research for Education and Learning (McREL), the researchers questioned whether leadership is a science or an art. In conducting the research, the study focused on two important questions: Do the focus and quality of leadership have a significant relationship to student achievement? What specific leadership responsibilities and practices have the greatest impact? Waters, Marzano and McNulty looked at more than 5,000 studies that related to the effect of leadership on student achievement. Of the 5000 studies, the researchers examined 70 published since 1978 that reported standardized objectives and quantitative measures of achievement, such as a correlation between district leadership and student achievement, and a standardized measure to index student achievement. The sample created contained 2,894 schools, 14,000 teachers and 1.1 million students. Results indicated that leadership matters. A statistically significant correlation of \( r = .24; p<.05 \) was found between student achievement and effective school leadership. This translates to one standard deviation increase in principal leadership behavior corresponding with a 10% gain in student achievement on a norm reference test.

The authors also discovered that although leadership does matter, other studies have reported that leaders who exhibited the same leadership qualities that led to student achievement in the current study, the leaders may have had a negative impact on student achievement. The authors contribute this effect to be caused by two primary variables that will determine if leadership will have a positive or negative effect on student achievement. The first variable is the
Focus of Change, which is whether leaders properly identify the correct focus for school and classroom improvement efforts. Those school leaders are most likely to have a positive impact on student achievement in schools. The second variable is the Order of Change and whether or not leaders understand the order of change and adjust leadership to compensate.

Waters, Marzano and McNulty concluded that we can empirically define effective leadership through 21 areas (see Appendix A) of leadership responsibility, which positively correlate with students’ achievement and that effective leaders not only know what to do, but how, when and why they effectively lead. The results indicate that effective leadership may have an effect on student achievement, although leadership may not be direct, there are many indirect factors effective school leaders contribute to an organization that lead to student achievement.
Chapter III: Results and Analysis Relative to Problem

Research on school leadership reveals a plethora of leadership styles including transformational, instructional, collective, and organic. Although transformational leadership has been determined to be more effective than a transactional leadership style, results indicate that principals have very little direct impact on achievement. Researchers were able to demonstrate that transformational leadership behaviors do contribute to teacher commitment directly and indirectly through collective teacher efficacy. Results show that organic management is not a powerful determinant of student achievement at neither the elementary nor the secondary level. Instructional leadership is indicated to have three to four times’ greater impact on student achievement than transformational leadership, although transformational leadership is shown to have small indirect influence on student achievement or social student outcomes and consistently predicted the willingness of teachers and educational staff to exert extra effort and change past practice or attitudes. (Miller & Rowan, 2006; Robinson, Lloyd & Rowe, 2008; Ross & Gray, 2006)

Looking at the direct/indirect effects of school leadership on student learning, research demonstrated that the direct effects of school leaders on student achievement are indeterminable. School leadership appears to have a more indirect impact on a student’s success by facilitating school improvement teams, so districts can operate as coordinated unites of change. By developing a school culture that fosters student success and building leadership models, which include teachers, principals, parents to play key roles in the organizational structure, curriculum and instruction, can increase the potential to indirectly lead to increased student achievement. Collective leadership has been shown to be directly related to variables such as motivation, capacity and work situations, which directly impact teachers, and might indirectly impact student
achievement due to the classroom teacher having the direct impact on student learning. Qualitative and quantitative research on the direct impacts of school leadership on student achievement have a tendency to show different results because it is very difficult to show direct impacts though quantitative studies due to a variety of school conditions and leadership styles. Quantitative research has indicated that the direct effects of school leadership impacting student achievement are weak. Although the direct effects of school leadership leading to increased student achievement are weak, school leaders indeed play an important role in indirectly impacting student achievement by forming and facilitating an educational culture that breeds student success through collaboration and team oriented models. (Chrispeels, Burke, Johnson & Daly, 2008; Leithwood & Mascall, 2008; Robinson, Lloyd & Rowe, 2008) Kruger, Witziers and Sleegers (2007) postulated that “leadership is no longer proposed as having a direct influence on learning outcomes, but as having and indirect influence through the way it has an impact on instructional organization and culture” (p. 3).

Collective teacher efficacy is the understanding that the efforts of the faculty as a system will have a positive impact on student achievement. Researchers have pointed out that individual efficacy belief of teachers have a large effect on both teacher performance and student achievement. Research has indicated that classroom behavior is impacted by a teacher’s willingness to follow transformational leadership. These findings indicate that due to the established link between collective teacher efficacy and student achievement, the leadership-efficacy relationship matters. The research also indicates that a districts’ leadership and district organizational conditions are a strong indicator of school leader efficacy. District leaders primarily create working conditions that are aligned, trusting, share clarity of values, focus on the future and are conducive to supporting leader efficacy, which impacts teachers’ efficacy,
leading to student performance. Principals cannot lead alone. School leaders must develop a leadership style that provides the educational staff with clear direction and resources to support their work, as well as setting high expectations relating to academics and student achievement. (Leithwood & Jantzi, 2008; Printy & Marks, 2006; Ross & Gray, 2006)

As stated by Dinham (2005) “there can be little doubt from an examination of research findings that leadership is important in developing effective, innovative schools and in facilitating quality teaching and learning” (p. 340). Although some research has indicated that school leaders have an indirect effect on student achievement, there are indeed identified leadership traits that are more conducive to increasing student performance by enhancing working conditions and the educational environment. Qualitative research, interviewing successful school principals has provided the emergence of common themes relating to the empowerment of a team oriented approach to education, communication, relationship building, trust, sharing a common vision and accountability standards. Three common discoveries were found in outstanding schools: principals used their power and the rules of the system creatively; they exhibit a bias towards experimentation and risk taking, and exhibit strength, consistency and flexibility in decision making and the application of policy and procedure (Berker, 2007; Crum & Sherman, 2008; Dinham, 2005). Waters, Marzano and McNulty (2004) have indicated that leadership indeed impacts the success of a student and school by pointing out that an increase of one standard deviation of principal behavior corresponds with a 10% gain in student achievement. Although this statistically significant correlation was discovered, the leadership traits of the school leader did not always lead to increased student performance in different settings. Successful leadership was attributed to two variables: Focus of Change and Order of Change. These findings along with the twenty-one leadership traits (Appendix A) indicate that
school leadership is not just a learned behavior, but also depends on a variety of direct and indirect variables, such as personality, district goals, values and collective efficacy of all parties involved (Waters, Marzano & McNulty, 2004; Waters & Cameron, 2007).

The correlation of ($r = .24; p<.05$), discovered in a meta-analysis conducted by Waters, Marzano and McNulty contradicts much of the findings on the impact of school leadership on student achievement as presented by other researchers of school leadership. Most findings indicate that the impact of school leadership on student achievement is weak. One reason for this contradiction could be that the Waters, Marzano and McNulty meta-analysis encompassed over 25 years of research, and included a very large sample size and only included studies that were performed in the United States; whereas, other researchers included international data reporting. Regardless of the implications, these contradictions in findings call for further research on the effects of school leadership impacting student achievement.
Chapter IV: Recommendations and Conclusion

Recommendation

The recommendation of this literature review would be for school leaders to recognize that leadership, in one form or another, impacts school culture and student achievement. Although much of the research indicated that school leaders indirectly impact student achievement, it is important that principals and other administrative personnel identify and develop a leadership style or model that fits the school’s needs and culture, and would lead to enhanced school performance. The meta-analysis by Waters, Marzano and McNulty has indicated that a positive correlation was discovered between school leadership and student achievement. Although these results contradict many of the findings by a variety of other researchers, school administrators and students of school leadership would be wise to pay close attention to their approach in contemplating a change in school culture, leading to student achievement and collective teacher efficacy.

Areas for Further Research

The characteristics of successful school leadership should be considered for further studies on school leadership. Since 2001 and the passage of NCLB and the accountability standards for schools, it would be interesting to study how school leadership styles have impacted the Annual Yearly Progress of schools. In designing a study, one could consider the list of schools in the United States that received a rating of Gold, Silver, or Bronze as published by US News and World Reports. A quantitative study could be performed comparing AYP grades, graduation rates, grade retentions and dropout rates, as well as a qualitative interview/survey of predetermined questions that could be performed to identify the leadership traits of the leaders of those schools that made the list, in comparison to a random list of districts that did not make the
grade. Quantitative results of the hard data from school report cards and qualitative data of the interview/survey results would be analyzed and compared to identify common traits or trends of school success, leading to student success. One way to determine if a leader had made any direct contributions leading to student achievement would be to look at a year to year progression and graph these results over time, looking for specific progression or traits to occur. The quantitative/qualitative study would require much time, effort and money to be done comprehensively. A university or governmental cohort would likely be the most beneficial in providing the funding, professionalism, resources, accountability and collaboration for the research task. Given the public outcry for school accountability standards, this project may stimulate a private or public entity to propose funding under the American Recovery and Reinvestment Act to fund this research project.

Summary and Conclusion

The hypothesis of this literature review was that school leadership has both a direct and indirect effect on student achievement by playing a central role in nurturing the internal conditions for developing school instruction, as well as maintaining positive school and community relationships. Results have indicated that school leadership plays a much more indirect role in developing both student achievement and school culture. Calculating the direct impact on school leadership through quantitative measures has proven too difficult because of the many variables associated with schools and school leadership. Qualitative measures tend to suggest that leadership does indeed impact student and school success, but is primarily open to opinions expressed in surveys and interviews, not hard facts or numbers. Transformational leadership styles leading to instructional leadership have been shown to improve student achievement. The study of school leadership impacting student achievement has shown that
successful leaders do exhibit certain traits, which lead to both school improvement and increased student achievement. Much of the success of schools and teachers appears to depend on collective efficacy, alignment of goals and accommodating working conditions, which are conducive to student learning. Trust, communication and strong relationship building are a few of the key components successful school leaders have bred into their district. The focus of change and order of change also play a role in the success of a school leader.

In conclusion, more research on school leadership leading to school improvement and student success needs to be performed in order to gain an understanding on the values and constructs which impact school districts and school leadership. In these perilous times of school accountability, forced under No Child Left Behind and the economic woes currently facing our country, schools and school leaders most likely will continue to be scrutinized about past, present and future practice.
References


Appendix A
Twenty-one areas of school leadership that positively correlate with student achievement.
1. Affirmation
2. Change Agent
3. Contingent Rewards
4. Communication
5. Culture
6. Discipline
7. Flexibility
8. Focus
9. Ideals/Beliefs
10. Input
11. Intellectual Stimulation
12. Involvement in Curriculum, Instruction and Assessment
13. Knowledge of Curriculum, Instruction and Assessment
14. Monitoring/Evaluation
15. Optimizer
16. Order
17. Outreach
18. Relationships
19. Resources
20. Situational Awareness
21. Visibility