Effective school leaders and student achievement: an examination of 265 schools in Northern Illinois

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ABSTRACT

EFFECTIVE SCHOOL LEADERS AND STUDENT ACHIEVEMENT: AN EXAMINATION OF 265 SCHOOLS IN NORTHERN ILLINOIS

Jason Bednar, EdD
Department of Leadership, Educational Psychology, and Foundations
Northern Illinois University, 2018
Dr. Kelly Summers, Director

This dissertation examines the relationship between scores on the Effective Leader strand of the 5Essentials Survey for elementary school principals in the suburban collar counties around Chicago and student achievement on state assessments in Illinois using longitudinal data from 2013 to 2015. This study selected only those schools which gave the 5Essentials Survey in both years. Significant associations were found between Effective Leader score and student achievement over time. In addition, several demographic variables such as SES, teacher retention, and principal retention were associated with student achievement. Implications are discussed.
EFFECTIVE SCHOOL LEADERS AND STUDENT ACHIEVEMENT: AN EXAMINATION OF 265 SCHOOLS IN NORTHERN ILLINOIS

BY

JASON BEDNAR
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A DISSERTATION SUBMITTED TO THE GRADUATE SCHOOL IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE DOCTOR OF EDUCATION

DEPARTMENT OF LEADERSHIP, EDUCATIONAL PSYCHOLOGY, AND FOUNDATIONS

Doctoral Director:
Kelly H. Summer
ACKNOWLEDGEMENTS

Many people have helped me reach completion of this dissertation through their contributions of
time, expertise, and ongoing support in various ways. I would first like to thank my dissertation chair, Dr.
Kelly Summers. Through much time and many conversations, she helped me craft this idea into a
cohesive dissertation. The others on my committee, Dr. Stephen M. Tonks and Dr. Christine Kiracofe,
have given me great advice through the proposal, courses taken with them, and all the conversations I’ve
had with them since starting the program.

That I have completed this dissertation is in no small measure due to the support I have received
from my wife, Rachel Bednar, and my children, Emma and Noah. Their understanding, commitment to
my work, and juggling all of the other things that make up life have made this process possible.
DEDICATION

This dissertation is dedicated to my wife, Rachel Bednar, and children, Emma and Noah Bednar.
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CHAPTER 1

BACKGROUND ON EDUCATIONAL LEADERSHIP

Historical Perspectives on the Role of the Principal

The most recent revision of ESEA, the Every Student Succeeds Act (ESSA), has been described as a bipartisan effort to reauthorize “the 50-year-old Elementary and Secondary Education Act (ESEA), a national education law, and longstanding commitment to equal opportunity for all students” (US Department of Education, 2015). The ESEA and its reauthorizations have led to increased questions about leadership and student achievement in public schools. Hallinger and Heck (1996) stated there is a longstanding belief that principals have an impact on student learning and that “research on change implementation conducted during the 1970s identified the important role principals play in school-improvement efforts” (p.5). Since that time, researchers have not found a universal reason that explains how or which specific change efforts led by a principal lead to school improvement. Researchers started searching for aspects of successful schools regardless of differences in demographics, socio-economic status, and size (Bridges, 1982). Researchers have continued to examine the effect that a principal’s change efforts produce.

When the Illinois Legislature passed the Chicago School Reform Act in October 1988, Bryk, Easton, Kerbow, Rollow, and Sebring (1993) began examining how the Chicago Public
Schools (CPS) implemented reform and what effect those reforms had on student achievement, and then Bryk, Sebring, Allensworth, Luppescu, and Easton (2010) continued to study the effect in relation to strategies that promote school improvement. Stemming from the 1988 Act, Bryk and colleagues (2010) did their research in the context of CPS and identified the five essential elements common across the CPS elementary schools where school improvement, as defined by student achievement, increased compared to the CPS schools where improvement was less successful. Within the five essential supports found in the research, Bryk and colleagues (2010) identified leadership as the primary driver for school improvement in CPS. When ISBE decided to administer a version of this study statewide in 2013, there was a gap in the research in regards to how this survey and its previous findings applied outside of CPS. As a result of this gap, my study examines relationships between principal effectiveness and student achievement in elementary schools outside of CPS.

Theoretical Framework

Change Theory

In the field of education, change seems to be a constant. The late 1950s and early 1960s began a time of national educational reform that continues today. As public schools demographics and students change, educators constantly strive to respond to students’ needs. Even in looking at change theory in 2000, Ellsworth (2000) said, “Change, or the pressure to change, is in the air in our educational systems” (p.73). This statement could have been said at any time since school reform began. Fullan (2001b) cited Goodlad and Klein (1970), Sarason
(1971), and Gross, Gianquinta, and Bernstein (1971) to show that new ideas and innovations such as curricular reforms, team teaching, and open-floorplan classrooms appeared in the 1970s, but there was little change or improvement in student achievement at the classroom level. As these innovations suffered what Fullan (2001b) called “failed implementation” (p. 5), reformers learned that changing practice was more complex than people anticipated. Fullan blamed implementation failure on the fact that the status quo is ingrained in many inter-connected realms including the teacher, administrator, and parents because each has a reason to want to maintain the status quo. Fullan (2001b) stated that successful change “must always be viewed in relation to the particular values, goals, and outcomes it serves” (p. 9). Without connection to purpose, the implementation of any reform is destined to failure.

According to Fullan (2001b), implementing educational change “involves ‘change in practice’” (p. 38), such as getting teachers to change what they do in the classroom or getting a district to change policies and actions. Fullan claimed change is “multidimensional” (p. 39) and includes materials, instructional approaches, and teacher beliefs viewed within a specific context. Because effective change could include multiple dimensions—materials, instructional approaches, or teacher beliefs—systemic change is difficult to implement. Principals are in difficult positions because the change can come to them from the district level and then they have to implement the change within their buildings. One of the obstacles to change is how teachers react in response to the change request. Fullan (2001b) reported that principals were overloaded with demands to both manage the school and serve as instructional leader. Fullan (2001b) also stated that “22% of Vermont administrators employed in the fall of 1984 had left the state’s school systems by the fall of 1985” (p.140). In surveys of principals, responses showed dissatisfaction with policy, sacrifice in their personal lives, lack of achievement, lack of
growth opportunities, and lack of support from superiors among the reasons why they thought of quitting (p. 140). Fullan found principals who were not thinking of quitting had an inclusive approach to situations, a systemic focus on learning, effective management, and were able to strike a balance between putting pressure on and supporting others.

As reform efforts continued, Fullan (2001a) found that principals sought coherence in innovations and changes. He stated that leading in a culture of change is difficult “because disequilibrium is common (and valuable, provided that patterns of coherence can be fostered)” (p. 6). Fullan further identified that having a moral purpose, being knowledgeable about change, connecting with stakeholders, building capacity, and making coherence out of discomfort are key leadership traits for leaders trying to manage change. Throughout this work Fullan (2001a) identified six components for understanding change: “1) The goal is not to innovate the most. 2) It is not enough to have the best ideas. 3) Appreciate the implementation dip. 4) Redefine resistance. 5) Reculturing is the name of the game. 6) Never a checklist, always complexity” (p. 34). When used together, each piece reminded principals that change cannot be controlled or managed, but rather it is a messy process of shared learning and growing for all members of the organization. To lead change in support of school improvement, principals need to understand the components of change. When a principal evaluates the context of one’s school and seeks to develop a plan for improvement, the principal needs to have knowledge of change theory in order to lead the building towards the goals of that plan. As principals implement strategies to improve student achievement, they must change instructional practices of teachers and influence the operation of the school in order for their plan to positively influence student achievement. Effective leaders must be able to lead school improvement. Bryk and colleagues (2010) defined the “primary responsibility of school principals is their continuous focus on improving
instructional work in classrooms” (p. 47) and necessitates that principals can motivate teachers to improve instruction through the change process.

Conceptual Framework

Instructional Leadership

Instructional leadership was a concept that first appeared in Edmonds’s (1979) work where he identified that effective schools have leaders focused on instruction. In a study of two public schools in New York City, Edmonds identified the “more effective inner-city school was led by an administrative team that provided a good balance between both management and instructional skills” (p. 16). Edmonds also looked at another study done in Michigan with school demographics similar to the study in New York. In all schools in his study that were succeeding, Edmonds found “the principal is more likely to be an instructional leader, more assertive in his/her institutional leadership role, more of a disciplinarian, and perhaps most of all, assumes responsibility for evaluation of the achievement of basic objectives” (p. 18). This became the foundational definition of instructional leadership upon which future researchers refined and elaborated.

Neumerski (2012) examined the reform literature and called for examination of “schools as interconnected organizations and to press on an entire system, rather than reforming one aspect of schools” (p. 314). Neumerski referenced Tyack and Hansot (1982) in which the instructional leader principal was defined as “principal teacher . . . and a mobilizer” (p. 318). The
focus was on general behaviors of principals in schools deemed effective. In summarizing prior research, Neumerski (2012) identified progress monitoring, being visible in the school, frequently visiting classrooms, observing and evaluating teaching, having curricular expertise, and setting the vision as actions of an instructional leader principal. With the increased focus on the principal as an instructional leader, Neumerski referenced Hallinger (1990) and the Principal Instructional Management Rating Scale (PIMRS). Neumerski (2012) cited that the PIMRS assessed instructional leadership in three dimensions: “defining the school’s mission . . . managing the instructional program . . . promoting a positive school learning climate” (p. 319), and encompassed 50 principal behaviors as part of effective instructional leadership. Neumerski then referenced the Council of Chief State School Officers (CCSSO) and the Standards for School Leaders (Council of Chief State School Officers, 2008). Neumerski (2012) stated, “In 1996, the Interstate School Leadership Licensure Consortium created the national Standards for School Leaders, influenced in part by Hallinger’s framework” (p. 319). In 2008, these standards were revised and “adopted by at least 43 states” (Neumerski, 2012, p. 319). These standards identified six domains essential to instructional leadership. These domains included setting the vision, advocating positive culture for learning, effective management of the school, collaboration with families and community, and participating in the larger political and economic culture (CCSSO, 2008). Neumerski acknowledged that studies from Hallinger and Heck (1996) and Leithwood and Jantzi (2008) showed principal effects on student learning are indirect and statistically small but suggested that analysis of the three instructional leadership roles of principal, teacher, and coach would potentially show instructional leadership having a greater influence on student achievement.
Instructional leadership is one of the pillars of effective leadership as defined by Bryk and colleagues (2010) and has been defined by Hallinger and Heck (1996, 1998) as one of the primary responsibilities of a principal. Together with change theory as defined by Fullan (2001b), a principal must be able to facilitate change in pedagogy through instructional leadership and relationship building. Bryk and colleagues (2010) stated that the instructional leadership “aspect of school leadership now stands at the core of many reform efforts. Its centrality is a function of the fact that instructional leadership directly impacts the dynamics of student engagement and learning” (p. 62). As one of the four measures in the Effective Leader strand of 5E, Bryk and colleagues put an emphasis on this aspect of school leadership that is reflected in current literature about the roles of a principal.

Effective Leadership in 5Essentials

Bryk, Sebring, Allensworth, Luppescu, and Easton (2010) identified the years 1990 through 1996, following passage of the Chicago School Reform Act of 1988, as an “extraordinary natural experiment in school change” (p. 12). In the context of major economic and social changes through the second half of the twentieth century, Chicago Public Schools (CPS) saw a significant increase in poverty, changing demographics, and increased racial isolation in each school. Bryk and colleagues identified that the 1990 census showed 40% of CPS students’ families had incomes below the poverty line. In 1994, Bryk et al. indicated 82% of CPS students were eligible for free or reduced lunch, while only 21% of students in the rest of Illinois schools were similarly eligible. Bryk and colleagues wrote, “Chicago’s modal school – racially isolated, with a 100-percent African-American student body and a low-income
enrollment exceeding 90 percent – there is literally no relevant comparison school in most other districts in Illinois” (p. 14). Bryk and colleagues acknowledged that Chicago is unique within Illinois and has contexts unlike most school districts across the state, yet their research, and survey instrument, has been used statewide in contexts very different than CPS since 2013.

To illustrate, Bryk and colleagues (2010) conducted a large-scale study to “articulate… a theory of practice about organizing urban schools for improvement and then systematically test it against data on school change” (p. 29). They collected data from the same survey administered in 1991, 1994, and 1997 to identify trends across schools. Stemming from the Chicago School Reform Act of 1988, Bryk and colleagues developed a survey to assess the current and changing state of reform in the schools. The survey series known as “Charting Reform” (p. 27) was initiated in 1991 and included both a teacher survey and a principal survey. Bryk and colleagues received responses from “12,708 teachers (70 percent) in 401 schools” (p. 27) in 1991. Over 90% of principals responded to the companion survey a year later. The survey series was expanded in 1994 to include students. In 1994, Bryk and colleagues received surveys from 266 of the 477 elementary schools for the teacher survey, the student survey, or both. They received surveys from “some 13,000 sixth-grade students, 13,800 eighth-grade students, and 6,200 teachers” (Bryk, et al., 2010, p. 27). In 1997, Bryk and colleagues had response rates far higher than any other survey by the Chicago Consortium on School Research (CCSR). Participation was high in 1997 with 422 (or 88%) of elementary schools in CPS participating in the student survey, the teacher survey, or both. In 1997, “21,900 sixth graders, 19,700 eighth graders, and 10,300 elementary school teachers responded to the survey” (p. 27). The 1997 survey had the highest percentage of educator responses, which gave Bryk and colleagues confidence their data were truly representative of all Chicago schools.
In analyzing the available achievement data, Bryk et al. identified that the existing methods of comparing students to a national norm and grade equivalents were inaccurate or provided weak connection to the larger question of school improvement because “norm-referenced test statistics, such as grade equivalents or percentile ranks, are not actually designed to make such comparisons” (p. 33). Bryk et al. proposed an “academic productivity profile” (p. 33) that summarizes what each school contributed to student outcomes as well as how this may reflect a value-added change. The standardized achievement assessment used by Bryk and colleagues was the Iowa Test of Basic Skills (ITBS), but they had to “create a new ITBS test score scale that would allow … more valid judgments about improvements in student learning that might actually be occurring in the CPS” (p. 33). They also used attendance trends.

In developing a theory of action based upon their survey data, Bryk et al. (2010) began with “leadership as the driver for change (essential support number 1) and more specifically with principals as catalytic agents for systemic improvement” (p. 45). Bryk and colleagues determined effective leaders focus their efforts on the other four essential supports – parent-community ties, professional capacity, student-centered learning climate, and instructional guidance. Instructional leadership is an essential part of the leader’s role. Bryk and colleagues wrote that instructional leadership from principals entails being “experts in teaching and learning, to spend the majority of their time in classrooms, and, more generally, to support improvements in instruction” (p. 47). Bryk et al. viewed effective leaders as the primary driver supporting the other four essentials. Among the tasks fulfilled by principals, Bryk et al. suggested three parts of the principal’s duties are of the utmost importance. These three parts of the principal role – managerial, instructional, and inclusive-facilitative leadership – became the leadership aspects necessary for the other four essential supports -- Ambitious Instruction, Collaborative Teachers, Involved Families and
Supportive Environment-- to effectively lead the school to improve. The managerial element consisted of the principal organizing and running school operations to create a learning environment. The instructional element directly impacted students. By focusing on protecting instructional time, mentoring teachers for continuous improvement in teaching, and articulating high expectations for all students, the principal creates the opportunity for teachers to maximize student learning. Overall, the 5E Survey examined the climate of the school and identified how likely a school was to improve based on scores on the essentials. These three parts of the principal role became the foundation for the four subscore areas within the Effective Leader strand of 5E. Those four subcategories are Program Coherence, Teacher-Principal Trust, Instructional Leadership, and Teacher Influence (Table 1).

Table 1. Five Essentials Elements

<table>
<thead>
<tr>
<th>Essential</th>
<th>Effective Leaders</th>
<th>Ambitious Instruction</th>
<th>Collaborative Teachers</th>
<th>Involved Families</th>
<th>Supportive Environment</th>
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<tr>
<td>Measures</td>
<td>Teacher Influence</td>
<td>Course Clarity</td>
<td>Collective Responsibility</td>
<td>Human and Social Resources in the Community</td>
<td>Peer Support for Academic Work</td>
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<tr>
<td>Principal Instruction Leadership</td>
<td>Principal Instruction Leadership</td>
<td>English/Language Arts Instruction</td>
<td>Quality Professional Development</td>
<td>Teacher Outreach to Parents</td>
<td>Academic Personalism</td>
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<th>Essential Leaders</th>
<th><strong>Effective Leaders</strong></th>
<th>Ambitious Instruction</th>
<th>Collaborative Teachers</th>
<th>Involved Families</th>
<th>Supportive Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Coherence</td>
<td>Math Instruction</td>
<td>School Commitment</td>
<td>Teacher-Parent Trust</td>
<td>Academic Press</td>
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<td>Teacher-Principal Trust</td>
<td>Quality of Student Discussions</td>
<td>Teacher-Teacher Trust</td>
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<td>Safety</td>
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<td>Schoolwide Future Orientation</td>
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<td>Expectations for Post-Secondary Education</td>
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(Adapted from Klugman, Gordon, Bender Sebring, & Sporte, 2015)

For the Effective Leader strand, which is the focus of this study, only teachers respond to the items for those four measures. Teachers also respond to the measures for Collaborative Teachers and Teacher Outreach to Parents and Teacher-Parent Trust under Involved Families. As Klugman et al. (2015) explained, Ambitious Instruction and Supportive Environment contain
student measures and are therefore not part of the 5E Survey for K – 5 schools. Only students in grades 6 – 12 participate in the 5E Survey.

Bryk et al. (2010) based these core indicators on what was measured in both 1994 and 1997 so growth could be shown. The measures had high reliability, and each had a similar pattern of connection to the student learning that existed in their larger set of 14 indicators. They found that strength on any one core indicator significantly increased the likelihood of improvement overall as measured by student achievement. In examining the validity of their study, Bryk and colleagues identified three sources of error that included a lack of reliability in the surveys given to teachers, their decision to base analysis on all five competencies together, and the limits caused by having a single survey administered within the seven-year reform time frame. Bryk and colleagues suggested that a different survey tool other than the one they used might have given them greater reliability. Despite these limits, Bryk and colleagues found a high overall estimate of reliability for their leadership strand and the overall survey.

To seek a more reliable result, Bryk and colleagues required additional longitudinal data to monitor growth sustainability over time. This led to the 1997 survey after they had initially surveyed CPS K – 8 elementary schools in 1991 and 1994. The data from seven years of research and three major survey years confirmed Bryk and colleagues’ (2010) theory that “school leadership is the catalyst for change” (p. 134). In analyzing the data, Bryk and colleagues found that schools with high scores on their survey measures were more likely to see school improvement as a result of reform efforts than schools at the other end of the survey measure spectrum. They highlighted two specific schools that showed the two ends of the spectrum and connected the indicators to the school contexts: where there was weak leadership, the school did not increase student outcomes on reading and math assessments, whereas the school with strong
leadership improved student learning over time. Bryk and colleagues found that the larger framework of five essential indicators suggested the findings were “robust in size and likely to generalize broadly across urban school community contexts” (p. 212). It was this work which led Illinois to select the same survey to administer statewide beginning in 2012-2013 (ISBE, Division of Public Information, 2013a) and include on school report cards released in October 2014. In October 2013, the ISBE released a fact sheet explaining the rationale for using the 5E Survey. ISBE stated, “Several pieces of legislation, including Senate Bill 7, signed into law in 2011, required ISBE to implement a learning conditions and climate survey to help paint that fuller picture and guide school improvement planning” (ISBE, Division of Public Information, 2013a, p. 1). The ISBE acknowledged a need for a fuller picture of teaching and learning in a school than what test scores alone could show.

Illinois Performance Standards for School Leaders

While the ISBE was saying that, “while the 5Essentials Survey measures concepts that have been linked to school improvement, it is important to remember that this is just one of many metrics that should be considered together regarding overall school quality” (ISBE, Division of Public Information, 2013a, p. 4), they also said that “survey data should be used to inform the development of and progress toward school and principal goals, but survey data should not be used as a single measure of principal or assistant principal progress” (ISBE, ISBE Performance Evaluation Advisory Council, 2013, p. 2). While 5E data is not meant to evaluate a principal’s effectiveness, the Illinois Performance Standards for School Leaders are meant to be used in
evaluation. The Illinois Performance Standards for School Leaders (2010) were developed in response to the Performance Evaluation Reform Act (PERA) signed into law in 2010. These standards identified six domains along with indicators to show related activities. These exact leadership standards were first developed as the Interstate School Leaders Licensure Consortium (ISLLC) Standards for School Leaders in 1996 and published by the Council of Chief State School Officers (CCSSO). The National Policy Board for Educational Administration (NPBEA) revised and adopted these standards as the Educational Leadership Policy Standards: ISLLC 2008 (Council of Chief State School Officers, 2008) in light of the increased demands on principal leadership. “Among the concerns addressed is the fact that the 1996 standards were too restrictive, as the very nature of listing examples of leadership indicators was unintentionally limiting and negated other areas that could have been included in an exhaustive listing” (Council of Chief State School Officers, 2008). With the revision, the CCSSO, along with the NPBEA, wanted to encourage flexibility for how institutions defined and viewed leadership in their preparation programs. The most fundamental change between 1996 and 2008 was the addition of “policy” in the document title. This was done because the ISLLC 2008 standards were designed to be the focus at the “policymaking level to set policy and vision” (CCSSO, p. 6).

ISLLC 2008 incorporated research from over 100 projects and studies in an effort to reflect the nature of how the principal role had changed since 1996. Most of these standards focused on aspects of instructional or transformational leadership. As a foundation, ISLLC 2008 became the basis for the Illinois Performance Standards for School Leaders in 2010 (see Table 2). The first standard is “Living a Mission and Vision Focused on Results” (Illinois Performance Standards for School Leaders, 2010, p.1). The second and third standards link managing systems of change and improving the quality of teaching. The fourth and fifth standards connect building
and maintaining relationships and professionalism with a thread of ethical behavior. The last standard expects the principal to participate in the political and legal culture relating to education.

Table 2. Illinois Performance Standards for School Leaders

<table>
<thead>
<tr>
<th>Standard</th>
<th>Indicator</th>
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<tr>
<td>I. Living a Mission and Vision Focused on Results</td>
<td>The principal works with the staff and community to build a shared mission, and vision of high expectations that ensures all students are on the path to college and career readiness, and holds staff accountable for results</td>
</tr>
<tr>
<td>a. Coordinates efforts to create and implement a vision for the school and defines desired results and goals that align with the overall school vision and lead to student improvement for all learners</td>
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<td>b. Ensures that the school’s identity, vision, and mission drive school decisions</td>
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<tr>
<td>c. Conducts difficult but crucial conversations with individuals, teams, and staff based on student performance data in a timely manner for the purpose of enhancing student learning and results</td>
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<tr>
<th>Standard</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>II. Leading and Managing Systems Change</td>
<td>The principal creates and implements systems to ensure a safe, orderly, and productive environment for student and adult learning toward the achievement of school and district improvement priorities</td>
</tr>
<tr>
<td>a. Develops, implements, and monitors the outcomes of the school improvement plan and schoolwide student achievement data results to improve student achievement</td>
<td></td>
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<tr>
<td>b. Creates a safe, clean and orderly learning environment</td>
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<tr>
<td>c. Collaborates with staff to allocate personnel, time, material, and adult learning resources appropriately to achieve the school improvement plan targets</td>
<td></td>
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<tr>
<td>d. Employs current technologies</td>
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(Continued on the following page)
Table 2 (continued)

III. Improving Teaching and Learning
The principal works with the school staff and community to develop a research-based framework for effective teaching and learning that is refined continuously to improve instruction for all students.

- a. Works with staff to develop a consistent framework for effective teaching and learning that includes a rigorous and relevant standards-based curriculum, research-based instructional practices, and high expectations for student performance.
- b. Creates a continuous improvement cycle that uses multiple forms of data and student work samples to support individual, team, and school-wide improvement goals, identify and address areas of improvement and celebrate successes.
- c. Implements student interventions that differentiate instruction based on student needs.
- d. Selects and retains teachers with the expertise to deliver instruction that maximizes student learning.
- e. Evaluates the effectiveness of instruction and of individual teachers by conducting frequent formal and informal observations providing timely feedback on instruction as part of the district teacher appraisal system.

VI. Creating and Sustaining a Culture of High Expectations
The principal works with staff and community to build a culture of high expectations and aspirations for every student by setting clear staff and student expectations for positive learning behaviors and by focusing on students’ social-emotional learning.

- a. Builds a culture of high aspirations and achievement and for every student.
- b. Requires staff and students to demonstrate consistent values and positive behaviors aligned to the school’s vision and mission.
- c. Leads a school culture and environment that successfully develops the full range of students’ learning capacities— academic, creative, social-emotional, behavioral and physical.

(Illinois Association of School Administrators, n.d.)

As a whole, these standards expected instructional leadership and change agency from principals (Illinois Association of School Administrators, n.d.). If the work of schools does not enable every student to achieve, then the instructional leader must identify the necessary changes and process to implement to lead the building toward improvement (Illinois Association of School Administrators, n.d.). These standards are the basis of principal evaluations across Illinois and guide a leader in ways to become a better leader. Fullan (2001a) described the work of the change agent as someone who transforms “the culture – changing the way we do things around here” (p. 44), also referred to as “reculturing” (p. 44). The principal cannot control instruction in every classroom at every minute, but a principal can establish a culture of adults holding each other accountable, with everyone focused on a common goal for student learning. It is the leader’s primary responsibility to transform the environment so that there is a focus on student learning results.
The six standards relate to how a principal leads the school in all areas and the common thread is how these six areas impact student achievement. These standards help principals focus on how to better lead the efforts of the school. The 5E Effective Leader strand focuses on how a school leader creates a school culture focused on student achievement. Bryk and colleagues used four measures to assess effective leadership – Instructional Leadership, Teacher-Principal Trust, Teacher Influence, and Program Coherence. The Illinois Performance Standards for School Leaders look at six areas for high-quality leadership – Living a Mission and Vision Focused on Results, Leading and Managing Systems Change, Improving Teaching and Learning, Building and Maintaining Collaborative Relationships, Leading with Integrity and Professionalism, and Creating and Sustaining a Culture of High Expectations. There is significant overlap between the 5E Survey and the standards for principal evaluation. This is important because the 5E results are publicly included in the school report card and principal evaluation provides guidance for how leaders can improve themselves and their schools.

Problem Statement

The State of Illinois passed several pieces of legislation, including Senate Bill 7, in an effort to fully identify the characteristics of effective schools (ISBE, Division of Public Information, 2013b). Senate Bill 7 directed the Illinois State Board of Education (ISBE) to identify and administer a statewide survey of climate and learning in public schools (ISBE, Division of Public Information, 2013b). To meet the requirement to begin this assessment during the 2012-2013 school year, the ISBE adopted the 5Essentials Survey (5E; Bryk, Sebring, Allensworth, Luppescu & Easton, 2010). The 5E assessed a school’s strength on five indicators
and was validated through close to twenty years of survey administration in the Chicago Public Schools, a completely urban school district (ISBE, Division of Public Information, 2013a). All schools in Illinois, not just CPS, gave the 5E to teachers, parents, and students in Grades 6 – 12 starting in 2012-2013 (ISBE, Division of Public Information, 2013b) and had results published via school report cards starting in 2014.

When Bryk et al. (2010) initially developed the survey, they focused on the unique circumstances of the school and community structures found in the Chicago Public Schools, which has a very different school system than most other school districts in Illinois. For example, suburban and rural schools are organized and staffed differently than the urban school system in Chicago. Student demographics can be very different. The Chicago School Reform Act of 1988 created structures in the schools that set CPS apart. Local School Councils (LSCs) are in effect a school board for every school in CPS. The LSC is made up of “the principal, two teachers, six parents, and two local community members” (Bryk et al., 2010, p.15). This creates a closer connection between students and those adults charged with oversight of the school than is typical in suburban or rural districts. Bryk et al. (2010) presented the “modal school” (p. 14) for Chicago as “racially isolated, with a 100-percent African-American student body and a low-income enrollment exceeding 90 percent-- there is literally no relevant comparison school in most other districts in Illinois” (p. 14). These differences create issues of generalizability for the 5E. To date, there has not been any research to examine how the actions identified in the 5Essentials Effective Leaders strand relate to the contexts outside the Chicago Public Schools, yet suburban and rural administrators must share their results on publicly available school report cards. With the overlap between the Professional Standards for School Leaders and 5E Effective Leaders, seeking to find how the 5E Effective Leader strand relates to student achievement outside CPS
can indicate whether there is a connection between the standards for evaluation of principals and the public expression of effective leadership as defined by 5E.

Purpose

The purpose of this study was to understand how the 5E Effective Leaders strand relates to student achievement in contexts other than a large urban district like CPS. This was done by examining 5E scores for elementary schools in the suburban schools in the counties surrounding Chicago and examining how these scores relate to student achievement results on ISAT and PARCC tests.

Study Significance

My study is significant because it identifies how the statewide 5Essentials Survey reflects the connection between leadership behaviors and student achievement in settings other than CPS. This research could help resolve the question of whether the research done in CPS, which is the foundation for 5E, has relevance for administrators in suburban and rural settings. The process by which ISBE chose the 5E survey was described as “a competitive process” (ISBE, Division of Public Information, 2013b); however, the criteria or procedures used were not described in detail. Senate Bill 7 required ISBE to establish and administer a survey of each school’s climate and learning conditions beginning in the 2012-2013 school year. In explaining the measures, factors, variables, and items used in the research behind the 5E Survey, the authors stated how
they used a number of factor analyses that allowed them to combine some of their individual measures into factors (Bryk et al., 2010).

The foundational research was done in Chicago Public Schools starting in 1994. The researchers gathered data from more than 400 CPS sites throughout the twenty years prior to Senate Bill 7. In addition to Chicago, “a version of the 5Essentials survey has been administered in schools in Connecticut, Indiana, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri, and New York” (ISBE, Division of Public Information, 2013b). Among the districts to have used a form of the 5E Survey outside Illinois are the Detroit Public Schools, Minneapolis Public Schools, St. Paul Public Schools, and Baltimore City Public Schools (Levenstein, 2016). These are all urban school systems like CPS.

Through their research, Bryk et al. identified that effective leaders, collaborative teachers, involved families, supportive environment, and ambitious instruction were the essential components of well-organized schools. In the first year of implementation, “87% of all public schools in the state met the required 50% participation threshold to receive 5Essentials results. More than 70% of all teachers and eligible students across Illinois took part in the 2012-2013 survey” (ISBE, Division of Public Information, 2013b). With such a high percentage of participation, it was a bit surprising that the state allowed three alternative surveys to be considered by individual school districts. The key deterrent to choosing one of the alternatives was that the school district would incur the cost of administering and scoring the alternatives. However, if the district chose 5E, it was fully funded by the state. With more than 20 years of research in the Chicago Public Schools, 5E makes sense for the leaders of schools in this urban setting. Arising from the Chicago School Reform Act of 1988, Bryk et al. (2010) focused specifically on the characteristics and contexts found in Chicago. What Bryk and colleagues did
not determine was how the different context and characteristics of suburban or rural schools fit their analysis of urban schools. Without consideration for the context, it was impossible to address the change process of reforming schools.

Research Questions

The following research questions guided my study:

1. What are the associations among the 5E Effective Leader scores and student achievement?

2. Do 5E scores at Time 1 relate to student achievement at Time 2?

3. What are the associations among the 5E Effective Leader scores and demographic factors?

4. Does principal leadership moderate the association between demographic factors and student achievement?
CHAPTER 2

LITERATURE REVIEW

This chapter examines how policies related to school leaders shaped the means by which those leaders and their schools were held publicly accountable for student achievement. This chapter also examines the literature related to instructional leadership and change agency as ways for leaders to improve student outcomes. Previous research has been done in the United States and other countries increasingly seeking to define the relationship between principal actions and student achievement.

Policy Related to Principals in Illinois

Significant presidential involvement in schools started when President Lyndon Johnson signed the first Elementary and Secondary Education Act (ESEA) into law on April 11, 1965. Each president following Johnson made policy recommendations relative to education that continued to add assessment and accountability measures over time. When President George W.
Bush took office, one of his first legislative proposals was the No Child Left Behind Act (NCLB). This was partly a reauthorization of ESEA begun under President Johnson, but it also added new provisions. The new provisions advanced some of the ideas seen in Goals 2000, especially related to improving student achievement through common standards, assessments, and specific rules for accountability, such as making “adequate yearly progress” (AYP; Klein, 2015). The act required states “to bring all students to be at the ‘proficient level’ on state tests by 2013-2014” (Klein, 2015, p. 1) in reading, mathematics, and science. This brought accountability to the forefront by assigning consequences to schools that repeatedly failed to make the required AYP targets, using the school’s aggregate number of students but also each disaggregated subgroup that met the minimum threshold for numbers of students within that subgroup. This act created significant consequences for failure to reach specified targets with even one reportable subgroup. Each year of failure led to increased sanctions. As a result, accountability moved to front and center in educational policy.

When President Obama took office in 2009, ESEA was due for reauthorization; however, the political climate in 2009 was vastly different than in 2001 when NCLB “passed Congress with widespread bipartisan support” (Klein, 2015, p.1). It took until December 10, 2015, for Congress to pass a revision and for President Obama to sign the Every Student Succeeds Act (ESSA) (US Department of Education, 2015). President Obama continued the focus on education spending when he proposed an economic stimulus bill, also known as the American Recovery and Reinvestment Act (ARRA; McGuinn, 2011). According to McGuinn, the ARRA plan allowed state governments to financially support schools through the Individuals with Disabilities Education Act (IDEA) and Title I of ESEA. President Obama’s administration further tied funding to a federal reform agenda through the Race to the Top Fund (RTTT). RTTT
was a competitive grant program that required states to submit a plan containing four educational reform goal areas: using internationally benchmarked standards and assessments, recruiting and retaining effective teachers and principals, adopting data systems to track student performance, and improving struggling schools. This program also required states to remove any state law or school code barriers to using student achievement data to assess teachers and principals, and states had to remove any limits on the number of charter schools allowed in each state.

As this federal policy was adopted and implemented, Illinois legislators made the necessary changes in state law to allow for application in phase one. However, Illinois did not receive approval until phase three in December 2011. Two new Illinois laws, the Performance Evaluation Reform Act (PERA) and Senate Bill 7, addressed the *great teachers and leaders* portion of Illinois’s Race to the Top application. Along with requirements that student performance become part of teacher and principal evaluations, Senate Bill 7 required “an instrument to provide feedback from, at a minimum, students in grades 6 through 12 and teachers on the instructional environment within a school” (Quish, 2013). In her presentation to Race to the Top districts, Quish went on to state that PERA required a minimum of one instrument to provide feedback to principals on the instructional environment within a school. When Nick Montgomery, CEO of UChicago Impact, created a launch document to share with all schools in Illinois, he added information about the legislation’s requirement that school report cards have “2 or more indicators from any school climate survey developed by the State” (Montgomery, 2012, p.26). The Illinois State Board of Education chose the UChicago Impact’s 5Essentials Survey as the tool for implementation of this policy.
The state used a competitive process in choosing “a survey that is based on 20 years of research at the University of Chicago Consortium on Chicago School Research (CCSR)” (ISBE, Division of Public Information, 2013b). This survey had been used in the Chicago Public Schools for 20 years and also in “school districts in Connecticut, Indiana, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri and New York” (ISBE, Division of Public Information, 2014). In a March 2014 press release from the Illinois State Board of Education, they wrote that schools should use the 5Essentials Survey “for improvement purposes, but the results do not dictate what a school should do to improve; nor do they evaluate people who work in schools”. However, another release from the Illinois State Board of Education, the Performance Evaluation Advisory Council (PEAC) offered guidance for using the 5Essentials as part of a principal’s evaluation. They suggested that “the Illinois 5Essentials Survey data can be used as part of goal setting within the principal evaluation process and not as a separate, weighted outcome measure combined in the principal’s summative score” (ISBE, Performance Evaluation Advisory Council, 2013). For the first time in the educational reform movement, the accountability focus shifted beyond test scores alone to also include measures of how the school culture is aligned for improvement. The ISBE required schools to participate in the 5Essentials Survey chosen by the state and to report survey results in their 2013 school report cards. This marked the beginning of public connection between the actions and effectiveness of the school leader and student achievement.
Since the first schools were opened in the United States, they have served several related purposes. Ultimately, schools have helped prepare children for the world they inherit as adults. Each era or generation defined how this was achieved using differing measures. Bridges (1982) reviewed the “domain of research on the school administrators for the period, 1967-1980” (p. 12). Bridges found that the research of that era focused on behavior of administrators, antecedents to that behavior, and outcomes from that behavior (p. 17). Bridges also found that studies of administrator effectiveness had “teachers typically serve as the raters” (p. 21). Bridges stated that “researchers are far more likely to focus on organizational maintenance than organizational achievement” (p. 21). Teacher morale and school climate were the most often used indicators. Student achievement was not part of research on school administrators. Since 1969, the National Center for Education Statistics (NCES) has administered the National Assessment of Educational Progress (NAEP) (National Center for Education Statistics, 2015). This changed with the 1983 publication of A Nation at Risk. This publication marked the beginning of increased accountability by way of increased assessment. States began instituting new statewide assessments in response to the report. Starting in 1983, Illinois administered a state assessment to students known as the Illinois Inventory of Educational Progress (IIEP) (Mattoon School District, 2013). In 1988, the assessment became the Illinois Goal Assessment Program (IGAP; Mattoon School District, 2013, p. 2) and assessed students in Grades 3, 6, 8, and 11. Changes were coming to the NAEP also. Beginning in 1990 as trial assessments and then becoming permanent assessments in 1996, state assessments became part of NAEP, and Illinois is one state that participates (National Center for Education Statistics, 2015). The passage of
NCLB in 2001 required “states who receive Title I funding to participate in state NAEP in reading and mathematics at grades 4 and 8 every two years” (National Center for Education Statistics, 2015). This has made NAEP a regular part of Illinois school districts’ assessment schedules.

In Illinois, science was added to IGAP in 1993 in Grades 4 and 7. Despite having a state assessment since 1983, individual student score reports were not reported until 1994 (Mattoon School District, 2013). With new learning standards adopted by Illinois in 1997, the assessment was revised and was administered in 1999 as the Illinois Standards Achievement Test (ISAT; Mattoon School District, 2013, p. 3). The 1999 test was administered to third-, fifth-, and eighth-grade students. In 2006, Illinois public schools still used the ISAT, but testing was added to Grades 4, 6, and 7 to complete the spectrum of assessments from Grade 3 to Grade 8 (Mattoon School District, 2013).

Illinois used ISAT and PSAE as the state achievement assessments for several years until new learning standards were adopted in Illinois and across the country in 2010. In response to new learning standards, known as the Common Core State Standards (CCSS), Illinois developed a plan to prepare for new assessments aligned to the new standards. Illinois joined a consortium of states known as the Partnership for Assessment of College and Career Readiness (PARCC). The process of drastically changing the assessments required time to pilot items and review and analyze responses before a fully aligned assessment could be implemented. In preparation for the rigor of the new learning standards and the new assessment, Illinois chose to raise the target scores for meeting the standards on ISAT and PSAE in 2013.
The 2012 test, given in March 2012, was the last state assessment based entirely on the 1997 Illinois learning standards. Starting with the 2013 test, the state revised the cut scores as a result of new standards. The test had not yet been revised, but the cut score was made more rigorous to reflect new college and career readiness benchmarks as a result of CCSS (Illinois State Board of Education, 2013). For example, the items on ISAT were not modified more extensively than a previous year’s worth of review and revision. That year the assessments were the same, but the targets for passing were raised. In 2014, the state piloted some new items in addition to the ISAT and PSAE in preparation for a completely redesigned assessment aligned to CCSS to be given in 2015.

As learning standards evolved and increased in rigor, school report cards began showing 5E results alongside student achievement results from ISAT and then PARCC. However, there had not been research done to explain how the 5E score relates to the student achievement results for schools outside CPS. For many years, effective leaders were measured for the operation of a school (Bridges, 1982). More recently, the focus has moved to examine how the effective leader impacts student achievement. Hallinger and Heck (1996, 1998) reviewed studies between 1980 and 1995 that marked the beginning of explicit examination of the relationship between leadership and student achievement. Beginning in 2011 in Illinois, principals included student achievement as 30% of their evaluation. How leadership affects student achievement is a question that relates to the evaluation of principals in Illinois. Identifying effective leadership in principals and seeking to define its relationship to student achievement could influence how principal evaluations evolve over time.
When public schools were first created, the principal was typically in charge of managerial tasks to operate schools (Bridges, 1982). Leadership has evolved from strictly managerial tasks and operations to focus on leadership in instruction (Hallinger & Heck, 1996). With the passage of ESEA in 1965, the march toward using student achievement to evaluate principals and teachers has continued unabated. When ESEA was reauthorized as NCLB, the expectation for leaders to have a positive impact on student achievement arrived. The requirement to include links to student achievement in principal evaluations led to an increase in the amount of research focused on examining the connection between leadership and student achievement. Principals do not directly instruct, but they do have the ability to change the culture and climate of a building which can subsequently impact student achievement (Bridges, 1982). As principals strive to both lead their staff and students toward excellence and meet the requirements of accountability legislation, they must work to change their building climate to have a focus on high expectations and student learning (Bridges, 1982).

Bridges examined the concept that principals must change the building climate as part of their work. Michael Fullan also wrote about the change agency a principal must use to shift school culture to focus on student learning. As Fullan (2001a) wrote, the positive changes that come about through a principal’s leadership would not be possible without the mess that is inevitable. All change is difficult in that it requires people to alter their way of working. Where Witziers, Bosker, and Krüger (2003) examined the time from 1986 to 1996, Bridges (1982)
reviewed the studies on school leadership that were completed between 1967 and 1980. Witziers et al. (2003), Bridges (1982), and Fullan (2001a) examined the leadership of principals and the practices used by those principals to improve student learning. Fullan (2001a) examined the larger context of change, but all three discussed how the leader must implement strategies to change the culture in every building if they expect student achievement to improve. In Bridges’s (1982) review of 322 research reports split between 168 from Dissertation Abstracts International (Humanities and Social Sciences) and 154 peer-reviewed journal articles from Educational Administration Quarterly (EAQ), Journal of Educational Administration (JEA), and Administrative Science Quarterly (ASQ), he found “the distinct feeling that studies of school administrators are intellectually random events” (p.22) and lacked interrelation. The main problems Bridges (1982) found were an “excessive reliance on survey research designs, questionnaires of dubious reliability and validity, and relatively simplistic types of statistical analyses” (pp.24-25). Bridges found that the lack of quality in the research did not reflect the actual work of school leaders. However, these studies were important in that this time period served as the foundation for research into the effect of administrators on school outcomes. The methods were simplistic but gave later researchers identifiable gaps to research, which led to an increase in studies.

At the same time as Bridges (1982), Bossert, Dwyer, Rowan, and Lee (1982) reviewed literature and research on the principal’s role as instructional manager. They examined studies that defined successful schools through the most widely used method of the 1970s. Bossert et al. acknowledged the reliability problems with this method but accepted it as the standard measure for the era encompassing the late 1970s through 1982. They focused on instructional organization, school climate, and principal management behavior as the three strands of the
principal’s role as instructional manager. Bossert and colleagues (1982) identified gaps in the research such that existing studies “do not present models that describe how certain management or leadership acts actually become translated into concrete activities which help children succeed in school” (p. 34). They identified a problem stemming from a lack of empirical sources for the connection between the principal’s behavior and student learning. Like Bridges (1982), Bossert et al. identified gaps in previous research that pointed out the need for examination of how the actions of a leader impact student achievement. Referencing research done on effective schools, Bossert et al. identified principals’ contributions as “providing coherence to their schools’ instructional programs, conceptualizing instructional goals, setting high academic standards, staying informed of policies and teachers’ problems, making frequent classroom visits, creating incentives for learning, and maintaining student discipline” (p. 35) among the characteristics of effective schools. These same characteristics appear in contemporary descriptions of effective schools. What Bossert and colleagues could not find was a design for how the principals’ actions and these characteristics led to student achievement. Bossert and colleagues summarized their findings by saying that “current research and practice have not identified clear relationships between what a principal does and the concrete learning experiences children have in school” (p. 54). They viewed this work as a first step toward a program of research that would seek to further examine the relationship between the principal’s actions and students’ learning.

researchers to focus on the effects of principal leadership” (p. 159). It was clear to Hallinger and Heck (1998) that further research was warranted after 1980. Hallinger and Heck (1996) first looked at the conceptual foundations for how principals affect student achievement. Hallinger and Heck (1996) stated that, as earlier reviewers concurred, “the tradition of principal-effectiveness studies has not generally done justice to this complexity in terms of either theoretical or methodological sophistication” (p. 6). While this was where their studies began, Hallinger and Heck found increased attention to those issues in the fifteen years of their study. Hallinger and Heck (1996) cited the summer 1982 issue of *Educational Administration Quarterly (EAQ)* as a turning point in the research as it contained both Bridges (1982) and Bossert et al. (1982). That Bridges and Bossert reached differing conclusions served as an initiation point for Hallinger and Heck to examine how the conceptual focus of Bridges (1982) and the methodological focus of Bossert et al. (1982) intertwine. In identifying studies for their research, Hallinger and Heck (1996) wanted studies designed to explicitly examine the “effects of the principal’s leadership beliefs and behavior” (p.10) and must have “conceptualized and measured principal leadership as one of the independent variables” (p.10). Hallinger and Heck (1996) also wanted studies that had “an explicit measure of school performance as a dependent variable” (p.10). Their third consideration was to include studies completed outside the United States. They identified 40 studies that explored the relationship between the leadership behavior of principals and the effectiveness of schools. They relied heavily on quantitative methods found in these studies and expressed disappointment that more mixed-method studies did not exist. They also found that most studies included in their research were correlational in nature. They acknowledged that studies they reviewed between 1980 and 1995 had increased sophistication in their theoretical conception and this carried over into their methodological approach. They also
found that reliability of measurement scales became less of an issue since Bridges (1982).

Hallinger and Heck (1996) found that these studies supported the notion that principal leadership can have an impact on student learning. However, they identified a need for future researchers to examine the context in which the effect takes place.

Hallinger and Heck (1998) further built on their earlier analysis of conceptual and methodological issues related to research on the means by which principal leadership appears to influence student achievement. Hallinger and Heck focused on the “substantive findings from empirical studies conducted during this period” (p. 159). Hallinger and Heck acknowledged that the construct for school leadership and the means by which it is evaluated has constantly evolved. They also acknowledged that there was no universal theory that took into consideration all contexts. Hallinger and Heck selected studies that were designed to explicitly assess the principal’s beliefs and behaviors, had an “explicit measure of student achievement as a dependent variable” (p.161), and sought a variety of countries from which these studies came. For this investigation of empirical studies, they found 40 journal articles, dissertations, and papers from peer-reviewed conferences. They used a non-experimental method focused on several different effect models. Hallinger and Heck acknowledged that researchers’ “conceptualization of educational leadership has evolved considerably” (p. 169) during the window of time their study examined. They found at least six different leadership frameworks used to examine the effect a principal had on student achievement. The two predominant frameworks they found were “instructional leadership and transformational leadership” (p. 169). They defined transformational leadership as focusing on “increasing the organization’s capacity to innovate” (p. 169). They identified instructional leadership as focusing on curriculum and instruction. Hallinger and Heck (1998) focused on these conceptual frameworks because their
study looked for quantitative measures of principal impacts on school effectiveness because school effectiveness was the predominant paradigm during the 1980s.

According to Hallinger and Heck (1998), “The general pattern of results drawn from this review supports the belief that principals exercise a measurable, though indirect effect on school effectiveness and student achievement” (p. 186). They identified a need for expanded analysis of the relationship between effective leadership and student achievement. Their analysis also suggested that earlier discrepancies might be explained by the methods and concepts held by researchers in the early years covered in this study.

A few years after Hallinger and Heck (1998), Witziers, Bosker, and Krüger (2003) described how educational leadership’s impact on student outcomes had been a significant focus of research studies for the previous twenty years. Similar to Hallinger and Heck (1998), Witziers et al. wrote that researchers generally agree the effects of leadership on student outcomes are indirect and difficult to measure. Witziers et al. set out to contribute to the scholarly discussion and specifically sought to identify the direct impact leadership has on student achievement.

Witziers et al. (2003) focused their examination of the direct effects of educational leadership on student achievement and examined studies from 1986 to 1996. They used a quantitative meta-analysis for their study. They completed a systematic search of databases that held abstracts of empirical studies and cited ERIC as particularly important. They next looked in volumes of peer-reviewed education journals and then reviewed the references in the studies already chosen. From these identified studies, Witziers and colleagues used two criteria to select studies for their project. They chose only those studies that contained a clear conceptualization of educational leadership and a valid measure for that concept. Chosen studies also had to have valid measures of student achievement. After applying their criteria, Witziers et al. had 37
studies for their meta-analysis. They also decided to use data collected in the 2003 study by the International Association for the Evaluation of Educational Achievement (IAEEA) on reading literacy in 25 countries. Witziers et al. determined that school leadership has a significant and positive impact on student learning, but the effect sizes were very small. They found an effect size of .02 for the total sample and only slightly higher at .04 when the IAEEA data was excluded. They also determined that there was a large variation in effect size within and between studies. They concluded that leadership effects appear to be absent in secondary education but were related to student achievement in elementary schools. Within their analysis, they identified that the most relevant leadership behavior in terms of improving outcomes was defining and communicating the mission of the school. Interestingly, they also found that when principals conducted specific activities aimed at improving the school, such as principals working with teachers to improve the school’s education, there appeared to be a negative relationship with student achievement. Witziers et al. elaborated on this negative relationship by acknowledging that “unequivocal conclusions” (p. 412) cannot come from this study. They believed that principals in schools with low achievement might also suffer from low expectations. These low expectations could have impacted the relationship and warranted further examination. Witziers et al. summarized that their findings are not robust and suggest that these findings should be viewed cautiously.

Because they had inconclusive results, Witziers et al. (2003) suggested that a better definition of educational leadership is necessary and should take context and immediate factors into consideration. They also felt their research was advantageous because the analysis emphasized relationships between values and behaviors. All previous studies were completed in
a short window of exposure. To improve future studies, Witziers and colleagues identified a need for longitudinal data to examine long-term consequences.

At the same time that Witziers et al. (2003) published their analysis of studies between 1986 and 1999, Easton, Correa, Luppescu, Park, Ponisciak, Rosenkranz, and Sporte (2003) published their analysis of trends between 1999 and 2002 in the Iowa Test of Basic Skills (ITBS) used in CPS and the ISAT used statewide. This also coincided with the time Bryk and colleagues (2010) studied the CPS schools. The primary assessment for school accountability in CPS was the Iowa Test of Basic Skills (Easton et al., 2003, p.1). Easton and colleagues found with the passage of NCLB, CPS announced a new approach to accountability using the ISAT, the state’s test since 1999 (p.1). Easton and colleagues examined the trends in ITBS and ISAT scores between 1999 and 2002. One of the first differences Easton and colleagues identified was that ISATs were criterion-referenced tests (CRTs) while the ITBS comprised norm-referenced tests (NRTs; p.3). Easton et al. explained that the ISAT and other CRTs measure whether students “demonstrate pre-determined levels of mastery regarding the specific subject matter” (p.3). Easton and colleagues also explained that the ITBS and other NRTs compare “the performance of students to a national average” (p.3). Easton et al. found strong correlations between reading and math for both the ISAT and ITBS (p.7). They attributed the increased appearance that ISAT was more demanding or difficult than ITBS to the increased amount of time and number of items for each assessment (p.7). Easton et al. also noted for ISAT “that these cut scores were set only once, in 1999” (p.8). That the process for setting cut scores was done only in 1999 and other years were modified using “equating studies” (Easton et al., p.8) means that ISAT scores from 2003 until it was replaced by PARCC in 2015 were correlated in the same way. Easton and colleagues (2003) summarized their research with the conclusions that “ITBS and ISAT behave
similarly among CPS students” (p.19) and that “the standards setting process on the ISAT can influence score results” (p.19). Easton et al. also acknowledged the difference between “norm-referenced and standards-based approaches” (p.19). Because ISAT was created as a criterion-referenced test and ITBS was a norm-referenced test, Easton et al. anticipated some discrepancies somewhere. Easton et al. found the discrepancies were the greatest in the “first and fourth quartiles of the ITBS” (p. 15). As CPS transitioned from ITBS to ISAT, Easton and colleagues suggested that the change in assessment would still produce similar outcomes. Starting in 2015, CPS and all other public schools in Illinois gave the PARCC assessment, which is another CRT.

The search for leadership qualities that contribute to increasing student achievement has been a significant concern in recent research. Several studies identified that leadership has an impact but could not define the definition of high-quality leadership practices. Jacobson (2011) sought to answer this question with his study. Bryk and colleagues (2010) identified effective “leadership as the driver for change (essential support number 1) and more specifically with principals as catalytic agents for systemic improvement” (p. 45). Jacobson (2011) began with reviewing the leadership practices identified in Leithwood and Riehl (2005) and added the data from the International Successful School Principalship Project to research this question.

While acknowledging that teacher quality has the most significant influence on student achievement, Jacobson (2011) stated that “the quality of leadership matters in determining the motivation of teachers and the quality of their teaching” (p. 35). Jacobson further referenced the core leadership traits identified by others (Fullan, 2001b; Leithwood, Seashore Louis, Anderson, & Wahlstrom, 2004; Marzano, Waters, & McNulty, 2005; Sergiovanni, 2001). He listed
direction setting, staff development and organizational redesign as valued practices for principals. All of these practices required buy-in from the teaching staff to create a sense of coordinated purpose towards the common vision. Using data from the International Successful School Principalship Project (ISSPP), Jacobson (2011) examined these practices within the framework of seven nations, including the United States. Where Bryk and colleagues (2010) focused on CPS, Jacobson (2011) sought to find connections across seven different nations’ schools. The research team for the ISSPP created a database of cases that examined the actions of successful leaders in diverse contexts. Cases were chosen for inclusion in the database based on having positive student outcome measures during the tenure of the principal, which included evidence such as improved academic achievement, high-quality school reputations, and/or other indicators of success at that site. Data was collected from interviews with principals, teachers, support staff, parents, and students, with all items focused on the practices of the principal and how they related to the success of the school.

In analyzing the initial results of the ISSPP in 2001, Jacobson (2011) found that the core leadership practices were evident in all contexts but adaptable to the specific circumstances of each context. Jacobson found that US schools had principals setting direction for short-term goals and were explicitly linked to demands for accountability from local, state, and national agencies. Jacobson’s direction setting was also conceived as establishing a vision or planning for school improvement (p.37). With the focus in America on high-stakes testing, most surveyed principals focused on strategies to address immediate changes in student academic achievement. In contrast, Australian principals focused their direction setting on life-long learning. In Norway, Denmark, and Sweden, direction setting focused on the service of responsible citizenship. In all contexts surveyed, they found these practices grounded in collaborative building cultures with
various forms of distributed leadership in place. Narrowing his focus to high-poverty communities, Jacobson examined 13 of the original 65 cases that focused on high-poverty communities with six in Australia or England and seven in the US. A common thread among these 13 sites was a commitment to the socially just and equitable education for all students. There was also a stronger connection with the community in these examples as compared to the other cases in the study.

To examine whether these school successes could be sustained, the ISSPP teams revisited a few of the cases five years later based on three criteria. All three criteria looked for success associated with the principal originally in place; if they remained, if they left but success continued, or if they left and success was evident in their new location. One US site maintained success but had to reorganize as a district charter to sustain their success. At this school, Jacobson (2011) analyzed test scores, school report card data, and interviews with members of the staff and community to determine how the contexts had changed over the intervening five years. This site converted from traditional public school into a district charter when faced with budget issues and teacher contracts that would have forced the school to accept whichever district staff had seniority, regardless if a staff member embraced the school’s vision or not.

Jacobson (2011) stated that the ISSPP findings confirmed the essential core leadership practices of “setting direction, developing people and redesigning the organization” (p.36) as identified by others. Additionally, this study showed that the practices are best realized in culturally sensitive ways. At the foundation, a learning environment must accompany these leadership practices. Similar to Jacobson, Bryk and colleagues (2010) identified instructional leadership, program coherence, teacher-principal trust, and teacher influence as the essential
measures within effective leadership. Further study could expand the number and types of contexts studied.

From Bossert et al. (1982) and Bridges (1982) and their studies on operational management to Jacobson (2011) and the examination of how leadership affects the learning environment, all researchers were working to identify how leadership influences student achievement across a variety of contexts and environments. In Illinois, ISBE revised the state assessments and adopted the 5E Survey as “part of a statewide effort to establish rigorous expectations for college and career readiness and give schools the tools to meet these higher expectations” (ISBE, Division of Public Information, 2013a, p. 1). The ISBE explicitly stated that 5E was not to be used for principal evaluation, yet the importance of leadership for student achievement was not easily measured. Jacobson (2011) found that context shapes effective leadership. ISBE selected the 5E Survey after Bryk and colleagues devised it in a study of a single unique context in CPS. It was necessary to apply the learning from these studies to the context of Illinois schools outside CPS.

**5E and the Characteristics of Effective Leaders**

Bryk et al. (2010) framed their research by two CPS elementary schools that went in opposite directions following the implementation of the Chicago School Reform Act of 1988. These two schools were barely two miles apart and had virtually identical student demographics. Bryk et al. found that both buildings had populations that were 100% African-American,
virtually all students qualified as low income, about half of the males aged 16 and up in each neighborhood were unemployed, and about half of the students in each school received some form of public assistance. Despite these two schools being nearly identical at the start of the reform movement, they went in very different directions. As Bryk et al. commented, “But over time, these two schools did become quite different places. And, change processes like this occurred literally hundreds of times during the early and mid-1990s across the city of Chicago” (p. 11). Hancock Elementary had a new principal in Bonnie Whitmore in 1989 and she led the staff and students forward to improved learning and student achievement. In contrast, the Local School Council (LSC) at Alexander Elementary already had its choice for principal in Betty Green, who had been principal since the mid-1980s. Both schools began the 1990s among the worst 100 CPS elementary schools in reading and math achievement on ITBS. When Bryk and colleagues (2010) started looking at the impact of school reform in 1993, they found “a story of thirds” (p. 16). One third of schools, including Hancock, had embraced reform and were actively restructuring their schools. Another third of schools, including Alexander, attempted similar efforts but were floundering. The final third appeared to make no changes and showed no improvement.

With any change, the impacts might not be immediately evident. Through 1992, student achievement changed little, even though Bryk et al. (2010) saw productive movement in schools during their field studies. As a baseline for their data, Bryk et al. used data from the 1990 ITBS. In 1990, Bryk et al. (2010) found that “only 24 percent of Chicago elementary school students scored at or above the national average in reading comprehension, and only 27 percent in mathematics” (p. 18). By 1996, these scores rose to 29 percent in reading and 31 percent in
Bryk and colleagues began searching for explanations for why the top schools improved as much as they did and why others did not.

Bryk and colleagues (2010) described the purpose of their study as to articulate a “theory of practice about organizing urban schools for improvement and then systematically test it against data on school change” (p. 29). They chose trends in attendance, reading, and math performance as indicators to measure student outcomes. In attendance, Bryk and colleagues found that the top quartile of schools improved from an average of 92.2% in 1990 to an average of 93.8% in 1996 and that the bottom quartile actually decreased from 92.8% in 1990 to 90.5% in 1996. Bryk and colleagues further found that the schools in the bottom quartile also had other serious problems. Attendance was not the causal reason for the other problems but was an indicator of other problems existing concurrently. Bryk et al. identified a problem created by looking at percentages of students at or above national norms. Students who made significant improvement but are either already above that target line or fail to cross it despite improvement do not affect the percentage. Only students whose improvement led to crossing the target line impacted the overall percentage. Bryk and colleagues identified this as a “weak statistical indicator” (p. 32) because there was more information present in the school than just the number of students who moved across the target line. In response, Bryk et al. developed an “academic productivity profile” (p. 33) based on aggregating the ITBS data across different test forms and levels that were administered between 1990 and 1996. They used a “content-referenced scale” (p. 34) that used Rasch analysis to equate the eight levels and six different forms that were administered during that window. One benefit they identified from using the Rasch analysis was that “both the test scale scores and the item difficulties are placed on the same scale” (p. 34). This helped Bryk and colleagues in their efforts to assess learning over time.
For the academic profile, their chart created a trapezoid with initial data on the left and data after input and output trend impact on the right-hand side. If the trapezoid appeared to spread out over time, this suggested improvement; narrowing over time suggested regression.

Bryk and colleagues identified the “extent to which the test gains at the end of their study, 1996, exceeded (or were less than) what they were in that grade during the base period of 1990” (p. 36) as the Learning Gain Index (LGI). Looking at the two schools highlighted at the start of the book, Bryk et al. found that attendance at Alexander started slightly higher than at Hancock. Alexander’s attendance was 92.4% in 1990 while Hancock’s attendance was 92.1%. By 1996, Alexander’s attendance declined almost a full percentage point while Hancock’s attendance improved to 92.6% even with students moving to Hancock from other struggling neighborhood schools. Students at Alexander also made no improvements in mathematics and declined by 9% in reading from 1990 to 1996. Contrasting Alexander’s struggles, Hancock students’ LGI were “19 percent greater in mathematics and nearly 10 percent greater in reading” (p. 41) through the same time frame. With these trends examined, Bryk and colleagues sought to investigate what made these two schools, and others like them, different from each other.

Bryk et al. (2010) had interest in whether the reform movement was working, and this question was also prevalent throughout the university and research community in Chicago. The reform movement brought Argie Johnson to CPS as superintendent, who brought many other new people into the central office. Bryk and Easton took leave from their respective institutions to join the work. Easton worked to rebuild the “research, assessment, and analysis capacity for the school system” (Bryk et al., 2010, p. 44) and Bryk assisted with that in addition to being a general advisor for Johnson. Johnson led development of an intervention plan for unimproving schools. In leading this group, Johnson connected research on effective schools and community
leaders. The Consortium on Chicago School Research (CCSR) was involved and important contributions were also made by the National Center on School Restructuring (CORS) led by Fred Newmann. The combination of the data system being rebuilt by Easton and the theory coming in through Bryk and Newmann led Bryk and colleagues to see the opportunity to develop a framework to study school improvement.

Bryk and colleagues (2010) first began to coalesce their ideas into a theory in their 1993 report, *A View from the Elementary Schools: The State of School Reform in Chicago*. Reform in Chicago had given principals more control over their school budgets, buildings, and personnel while also creating LSCs for each school with parents and community residents making up part of the LSC board (Bryk, Easton, Kerbow, Rollow, & Sebring, 1993). Bryk and colleagues (1993) also found that reform gave teachers influence over choice of the principal as part of the LSC and an advisory role over school curriculum and instruction through the Professional Personnel Advisory Committee (PPAC; p. 4). Bryk and colleagues had a few years of implementation to see how reform was reshaping Chicago schools. Bryk and colleagues were able to review the field research on Chicago school communities since reform was enacted and this led them to develop a conceptual framework. They also had access to CCSR principal and teacher survey data as well as other CPS extant data. Bryk and colleagues (1993) referred to a case study of six schools that were successful in the earliest years following passage of the Chicago School Reform Act of 1988 titled *Experiences of Actively Restructuring Schools* (EARS) (p.4) that gave them research on what goes into successful school development. Bryk and colleagues wove these three data sources into an integrated assessment of the state of school reform in Chicago.
From the case study analysis, Bryk and colleagues (1993) found that “principals broadly influence the activities of their schools” (p. 9) and that principals may influence the participation of parents and faculty in decision making at the school. They collected their analysis of principal behavior into “indicators of inclusive principal leadership” (p. 9). Among the traits of inclusive principal leadership was leadership style. Bryk and colleagues defined this leadership style as conflict viewed as a necessary part of change, decisions made by committee to resolve conflicts, advocating for structured teacher input in decisions, and supporting teachers in building capacity for leadership. Bryk and colleagues also defined how principals used their time and what teachers’ roles should include as two other categories within their description of inclusive leadership. Bryk and colleagues defined the top priority for time use as professional development for themselves and their teachers and working with parent and community groups. Bryk and colleagues found that “three of the EARS schools were among the worst in the system when reform began” (p. 43) but that each had an LSC that recruited a new principal. Bryk and colleagues found that a change in leadership was sometimes the lever that initiated substantive change in a school. Bryk and colleagues saw inclusive and instructional leadership as the first driver for school improvement. This became part of the first strand they defined for the 5E Survey.

Bryk and colleagues (2010) described schools as “complex organizations consisting of multiple interacting subsystems. Each subsystem involves a mix of human and social factors that shape the actual activities that occur and the meaning that individuals attribute to these events” (p. 45). Bryk et al. (2010) recognized that leadership was the key driver, as identified in Bryk and colleagues (1993), but added that the other four essential supports interacted with leadership. From documenting the reform effects in 1993, Bryk and colleagues continued to
refine and test their framework to serve as a guide for the characteristics of schools more likely to improve if they had strong performance in each essential area compared to schools that were weaker in those areas. Bryk and colleagues (2010) began with “leadership as the driver for change (essential support number 1) and more specifically with principals as catalytic agents for systemic improvement” (p. 45). The other four essential supports, parent-community ties, professional capacity, a student-centered learning climate, and instructional guidance, combined with leadership became the five essential supports that Bryk and colleagues identified for schools more likely to improve than schools without these supports. In the statewide 5E Survey, the Effective Leader strand contained four subcategories. These four subcategories are teacher influence, principal instructional leadership, program coherence, and teacher–principal trust. Of these four subcategories, Bryk and colleagues said, “The primary responsibility of school principals is their continuous focus on improving instructional work in classrooms” (p. 47). Bryk and colleagues were not the first to identify the importance of instructional leadership, but their research on school reform in Chicago confirmed the significance of this subcategory in helping drive school improvement.

Principal instructional leadership is one of the subcategories of the 5E Effective Leader strand and one that Bryk and colleagues (2010) emphasized. One of the researchers Bryk and colleagues referenced was Blase and Blase (2000) in supporting the idea of instructional leadership. Blase and Blase (2000) studied teachers’ perspectives on how principals serve as effective instructional leaders. Blase and Blase defined the characteristics of instructional leadership as including “coaching, reflection, group investigation of data, study teams, and risk-laden explorations to solve problems” (p. 130). Blase and Blase asked teachers to identify “what characteristics of school principals positively influence classroom teaching, and what
effects...such characteristics have on classroom instruction” (p. 131). Using the Inventory of Strategies Used by Principals to Influence Classroom Teaching (ISUPICT), Blase and Blase surveyed over 800 teachers from a variety of locations and with a variety of experience levels. Based on results of this survey, Blase and Blase identified two dimensions of effective instructional leadership: “talking with teachers to promote reflection and promoting professional growth” (p. 132). They suggested that principals working to develop an effective instructional leadership approach should “work to integrate reflection and growth to build a school culture of individual and shared, critical examination for instructional improvement” (p. 138). From these findings, Blase and Blase recommended future studies to further use case studies to get at the heart of the relationship between the perspectives of the principal, teachers, students, and parents.

In looking for the most effective leadership style to contribute to the greatest level of student achievement and similar to the work Blase and Blase (2000) researched, Marks and Printy (2003) focused on the relationship between principals and teachers. They examined how the active collaboration between administrators and teachers could maximize the quality of teaching and learning. This is the goal of all schools, but there has been little consensus on how a leader can best contribute to the achievement of students.

In addition to instructional leadership, teacher influence is also a subcategory. Bryk and colleagues (2010) explained this in the context of how much influence teachers have over school decisions. Marks and Printy (2003) chose 24 schools, eight each of elementary, middle, and high school. All schools practiced some form of site-based decision making, but each had a unique conceptualization of their commitment to collaboration between administrator and teachers.
They also looked at two leadership styles that were predominant in the literature at the time. They explained the background on instructional leadership and transformational leadership. Marks and Printy felt that a combination of shared instructional leadership and transformational leadership would have some impact on student learning. Fullan (2001a) supported Marks and Printy (2003) in the area of looking for the connection between instructional leadership and transformational leadership. Fullan (2001a) interviewed a principal who said that “instructional leadership, when it is done well, is transformational leadership” (p. 62). Fullan highlights that the work cannot happen without the connection between principals and teachers. The subcategories of the Effective Leader strand interact with each other, and several researchers did not isolate a single subcategory in their work. Each leadership style had previously been examined in isolation. Marks and Printy wanted to find out how the two strategies could be joined and how that might impact student achievement. They developed three research questions to guide their study. They sought to determine the relationship between transformational and instructional leadership in restructuring schools; identify how varying schools differ in approach based on student community, structures, and achievement; and determine the effect of these two approaches in combination on the achievement of students.

Marks and Printy (2003) chose schools for their study that were also part of the School Restructuring Study (SRS) from the Center on Organization and Restructuring of Schools. The School Restructuring Study examined 24 schools which had undergone significant restructuring and intensively studied student achievement on both conventional standardized assessments and teacher-developed assignments (Newman & Wehlage, 1995). Most of the restructured schools were found in urban settings with significant numbers of economically disadvantaged and racial minority students, but they also had NAEP achievement in the elementary and middle schools.
that was at or above the national average. Marks and Printy then used several of the same quantitative and qualitative instruments from the SRS, including a teacher survey about instructional practices, interviews with teachers and administrators, and observations of classroom instruction. Marks and Printy examined those administrator interviews for evidence of leadership styles. The tests assessed whether the data reflected the constructs of each of the leadership approaches as well as were internally consistent as composite measures. Marks and Printy identified evidence of both transformational leadership and instructional leadership in the interviews and reports.

Marks and Printy defined transformational leadership as including “idealized influence, intellectual stimulation, individualized consideration, and inspirational motivation” (p. 382). Marks and Printy defined instructional leadership as “principal focus on instruction, teachers exercising instructional leadership roles beyond the classroom, and the mutual engagement of principal and teachers as leaders in the core areas of instruction, curriculum, and assessment” (p. 383). Marks and Printy examined the chosen schools using this definition and suggested transformational leadership was a necessary prerequisite for shared instructional leadership. Because these schools were restructured, Marks and Printy believed they would be promising schools for finding transformational leadership in place. With a primary goal of restructuring being to improve student achievement, they also believed they would find instructional leadership to also be present. Marks and Printy found, in terms of baseline student achievement, schools with low scores in leadership averaged less student achievement, schools with limited leadership had average achievement, and schools with integrated leadership had above-average student achievement. Within the schools in the study, there existed considerable variation in how these two approaches functioned in these schools. Although the variation allowed for their study,
this also reminded Marks and Printy that effective leadership practices, beyond managerial functions, is relatively rare in practice. The disadvantage in using this data set was that Marks and Printy could not generalize their findings due to the non-random nature of the dataset. They also found that their integrated view of leadership highlights the interconnectedness of leaders and teachers in a successful leadership model.

In the same vein as Marks and Printy (2003), Robinson, Lloyd, and Rowe (2008) also compared the impact of instructional leadership to transformational leadership in how each impacted student outcomes. The focus on the direct and indirect impact of leadership on student achievement happened not only in the United States but also globally and reflected the societal emphasis on increased accountability in schools. As referenced in Robinson, Lloyd, and Rowe (2008), the Organisation for Economic Co-Operation and Development in 2001 stated that the focus on links between leadership and student achievement arose from a desire to help all students achieve. Prior to this study, research suggested a relatively weak and indirect impact of leadership on student achievement according to quantitative analyses (Witziers, Bosker, & Kruger, 2003); however politicians suggested leaders have a significant impact (Robinson et al., 2008). Researchers and politicians focused on a global definition of leadership. Responding to what Robinson and colleagues viewed as a gap in the research, they examined how different leadership styles impacted student achievement differently. For this study, Robinson et al. identified and defined instructional leadership and transformational leadership as the two styles they would compare with regards to student outcomes.

Robinson and colleagues (2008) first explained the difference between instructional leadership and transformational leadership as they viewed it through the studies they examined.
They defined instructional leadership as containing “instructional goal setting, oversight of the teaching programs, and the development of a positive academic and learning culture” (p. 638). For transformational leadership, they defined it as having the principal’s “energy and commitment to a common vision” (p. 639) transform the organization through collaborative work to overcome obstacles and reach ambitious goals. Once they established the difference in definition, they explained how they gathered studies to examine through meta-analysis.

Robinson et al. acknowledged that a criticism of meta-analysis is “inappropriate aggregation across studies employing very different theoretical or methodological approaches” (p. 640). They countered this criticism by focusing on variations of leadership rather than a more global summarization of the term. To gather their data, they used three different search strategies. They first used a variety of keyword searches of electronic databases with terms relating to leadership and student outcomes. The second was a more intensive search using tables of contents or electronic searches of journals. The third used reference lists from articles and reports to identify any study not found via the other searches. They omitted any studies that were not peer reviewed. Through their searches, they found 27 relevant studies published between 1978 and 2006. In comparison to two contemporary literature reviews by Bell, Bolam, and Cubillo (2003) and Marzano, Waters, and McNulty (2005), Robinson et al. (2008) found more than double the number of peer-reviewed studies for their research.

Once they found studies to analyze, Robinson et al. (2008) were able to use 22 of the 27 studies to calculate effect size and then converted these measures into $z$ scores. For their first research question, they categorized each study as instructional leadership, transformational leadership, or other. They found twelve useable studies with instructional leadership, five useable studies with transformational leadership, and five useable studies that contained other
styles. They then calculated average impacts using the $z$ scores in each category. For the second research question, they disaggregated leadership components and calculated impacts for each component in any study that provided some way to perform the disaggregation. Twelve of the original 22 studies were useable for the second research question. There were several limitations that impact application of the study’s findings to real contexts. They acknowledged that only 22 published and peer-reviewed studies were available. The second limitation was how they defined student outcomes. They focused on academic achievement but acknowledged that future research could examine academic and nonacademic outcomes.

For the first research question comparing instructional leadership and transformational leadership, Robinson et al. (2008) found that instructional leadership had three to four times greater impact on student outcomes than transformational leadership based on the studies they examined. They acknowledged that some of these studies showed that leadership styles can also have a negative impact on student outcomes and therefore acknowledged that this study should be interpreted cautiously. For the second question, Robinson and colleagues found that “promoting and participating in teacher learning and development” (p.663) had the most significant positive impact on student outcomes.

While Robinson and colleagues (2008) looked at the relationship between transformation leadership and instructional leadership, Taylor, Martin, Hutchinson, and Jinks (2007) examined servant leadership-oriented principals. They identified a need for examination of how the self-perception of principals correlated to the perceptions held by teachers. They reviewed definitions of leadership and focused on servant leadership. Taylor and colleagues identified servant leadership as an “extension of transformational leadership” and described it as “an action-
oriented state of mind that compels leaders to provide followers with what the followers need in order that the followers might be able to do what needs to be done” (p. 405). Where transformational leaders “elevate the interests of their followers” (p. 405) and maintain their position of authority, servant leaders “must be willing to vacate their leadership position to anyone who has demonstrated superior ability” (p. 405). Few prior studies quantitatively examined how servant leadership impacts student achievement (Taylor et al., 2007). Taylor and colleagues gave the Self-Assessment of Servant Leadership Profile (SASLP) to principals and Kouzes and Posner’s Leadership Practices Inventory (LPI) to teachers (p. 408). Using Kouzes and Posner’s (1997) research, Taylor and colleagues identified five leadership experiences. Of these, “modelling the way” (p. 409) was most similar to instructional leadership practices. Taylor et al. found that “principals who rated themselves high in terms of their perception of their use of the characteristics of servant leadership were also rated significantly higher by their teachers for all of the five best leadership practices” (p. 409). Taylor et al. claimed these results can be “a justification of additional inquiries on the servant style of leadership” (p. 417). Taylor and colleagues focused on servant leadership, which is similar to Fullan (2001a) and moral purpose. Fullan (2001a) acknowledged that “moral purpose is profoundly built into the five components of leadership” (p. 15) and is an essential part of change. Both Taylor et al. (2007) and Fullan (2001a) highlighted the connection between servant leadership, change leadership, and teacher-principal trust. All three of these show the importance of positive relationships between principals and teachers in order for school improvement to be possible.

Shortly after Taylor and colleagues (2007) published their study, Parolini, Patterson, and Winston (2009) published their own study that examined the differences between transformational and servant leadership styles. They identified the need for this study after
identifying several distinctions suggested by these styles. Parolini et al. used an online survey to ask respondents to select items based on transformational or servant leadership qualities. Parolini et al. analyzed the results and found five statistically significant scale differences between transformational and servant leadership. These differences led Parolini et al. to suggest that these “items be used to assess individual leaders in key positions of leadership to assure that teams are comprised of the unique differences of both types of leaders” (p. 288). They summarized their findings to suggest that “the transformational leader who is focused on the needs of the organization is balanced by the servant leader who is focused on the needs of the individual” (p. 288). Parolini et al. suggested that “a more diverse sample population in terms of ethnicity and education level” (p. 289) be used in a future study. Parolini et al. identified a need to examine leadership in a diverse set of contexts. By examining different populations and contexts, Parolini et al. suggest that more specific understandings of the effect of leadership could be found.

Leadership Style and Change

As principals seek to define their leadership style, “change leaders work on changing the context, helping create new settings conducive to learning and sharing that information” (Fullan, 2001a, p. 79). Leadership efficacy connects with changing the context because it looks at how effectively leaders could implement the changes necessary to shift the context. Leithwood and Jantzi (2008) developed a study on leadership efficacy as part of their examination of the links in the chain that indirectly connect leadership to student achievement. They also look beyond the
school leader to investigate the impact of district leadership and other organizational conditions on school leaders’ sense of efficacy. Leithwood and Jantzi referenced Bandura in explaining their conception of leaders’ self-efficacy beliefs. Bandura (1977) identified a gap in the empirical testing of the relationship between self-efficacy and performance due to the “inadequacy of expectancy analysis” (p. 194). Bandura defined an adequate expectancy analysis to include “detailed assessment of the magnitude, generality, and strength of efficacy expectations commensurate with the precision with which behavioral processes are measured” (p. 194). Using the Bandura (1977) definition of an adequate analysis as a starting point, Leithwood and Jantzi (2008) reviewed the previous studies into leadership self-efficacy or confidence and found infrequent use of adequate measures of the efficacy beliefs of leaders or the antecedents of those beliefs. Leithwood and Jantzi also found where there was some research into self-efficacy, the research into Bandura’s further concept of the shared beliefs that lead a group to goal attainment or collective efficacy was scarce. They sought to investigate the extent to which district leadership and organizational conditions related to the individual and collective sense of efficacy for school leaders towards school improvement. They also wanted to learn more about the relationship between efficacy and leadership practices.

For this portion of their larger study, Leithwood and Jantzi (2008) conceptualized district leadership and organizational conditions as two categories of antecedents for leader efficacy. To establish a foundation for their conception of leadership efficacy, Leithwood and Jantzi examined 15 empirical studies that were done in schools between 1983 and 2005. All 15 of the school-based studies used one cross-sectional survey to gather their data. In analyzing these studies, they identified three dimensions of efficacy that matched Bandura’s conceptualization of efficacy – complexity, generality, and strength. As they analyzed the studies, Leithwood and
Jantzi found researchers focused on collective efficacy among teachers, but not leaders. This led them to focus on the collective efficacy of school leaders in addition to their focus on individual efficacy.

Leithwood and Jantzi (2008) found that previous research focused primarily on the outcomes of collective efficacy with less emphasis on the antecedents. They summarized the existing data and found that no single antecedent had drawn much attention from researchers. Those antecedent possibilities that were most frequently studied, including leader gender, years of experience, and level of schooling, were still lacking in research. Gender was the most frequently examined antecedent but only appeared in 5 of the 15 studies. Only one study had investigated district antecedents of school leader efficacy. Leithwood and Jantzi narrowed their investigation to focus on two subtopics in their conception of district antecedents. They focused on research of organizational conditions and psychological dispositions. Although those topics have been empirically associated with student achievement, Leithwood and Jantzi originally included them in their study because the contributions they make to leader efficacy was unknown.

It was also necessary for Leithwood and Jantzi (2008) to define their conceptualization of successful leadership. Leithwood and Jantzi (2008) used and expanded on “setting directions, developing people, and redesigning the organization” (Leithwood, Jantzi, & Steinbach, 1999, p. 506) by adding management of the instructional program as a managerial task that has connection with leadership. With these conceptual ideas defined, they used stratified random sampling procedures to select 180 schools from 45 districts found in nine states. One criterion for selection was having improving student achievement over three or more years. They produced
a principal survey with 134 items and a teacher survey with 104 items. These surveys were part of Leithwood and Jantzi’s larger study, but 58 items from the principals’ survey and 56 items from the teachers’ survey provided data they were able to use for this study. From the principals’ survey, they collected data on leaders’ collective efficacy, leaders’ self-efficacy, district conditions, and district leadership. From the teachers’ survey, they gathered data on school leadership, class conditions, and school conditions. Individual teacher responses were aggregated to the school level and merged with the principal’s response. In terms of district leadership’s impact, Leithwood and Jantzi found this variable to be strongly and positively related to leaders’ collective efficacy and moderately and positively related to self-efficacy. Using the four characteristics of successful leadership and collective efficacy, they found a moderate, positive correlation with district leadership, redesigning the organization, developing people, managing the instructional program, and setting directions. In terms of self-efficacy, they found small, positive correlations with managing the instructional program, redesigning the organization, developing people, and setting direction.

For their other variable, district conditions, Leithwood and Jantzi (2008) found collective efficacy had a moderate relationship with all eight sets of district conditions. Self-efficacy had generally weaker relations. When they combined this with student achievement measures through regression analysis, they found that collective efficacy, self-efficacy, and an aggregated efficiency measure could not account for a significance portion of the variance of the three-year achievement change. They did find that self-efficacy was significantly related to annual student achievement. They found that district size, school enrollment numbers, grade levels, and principal turnover were moderating variables impacting the relationship between leadership and student achievement. When those moderators were added to a series of regression equations,
Leithwood and Jantzi found that these moderators accounted for a significant amount of difference between the leader’s self-efficacy and the leader’s collective efficacy. However, no additional variance was accounted for once achievement was added into the model.

In summary, Leithwood and Jantzi (2008) determined that the most direct effects of district leadership are in the areas of district conditions, such as a districtwide focus on student achievement and districtwide use of data, believed to produce student learning. District conditions also influenced both collective efficacy and self-efficacy. The model further suggested direct effects of school conditions, such as shared beliefs and values and teachers’ participation in decision making, on student learning and indirect effects through classroom conditions. Their results suggested that the effects of district leadership are mostly indirect and help to create district conditions that leaders view as supporting their efforts. Their results also point to a relatively weak impact of setting directions on student achievement, where previous research found this to be a significant impact. Leithwood and Jantzi suggested this was an area for future studies to investigate further.

The relationships between efficacy and behavior in leaders was weaker than Leithwood and Jantzi expected. They allow for the possibility that they did not adequately capture the differences of efficacy in terms of what leaders do and how they are perceived. They also acknowledged the leader efficacy effects were significantly moderated by several organizational characteristics, but none of the variables they investigated in this study. Another finding was that the relationship between district efforts in developing instructional leadership and both types of efficacy were the weakest of the relationships tested. They found that elementary schools were more sensitive to leadership influence than those schools at the middle or high school levels.
Bryk and colleagues (2010) examined how effective leadership in elementary schools in CPS influenced the culture towards school improvement. Leithwood and Jantzi (2008) suggested that elementary schools feel more influence from the leadership of a principal. The findings from Bryk and colleagues (2010) and Leithwood and Jantzi (2008) suggest a measureable effect size for leadership towards student achievement should be apparent at the elementary level, if a measurable effect size is to be found at all.

It is generally accepted that leadership influences student achievement, though in largely indirect ways. To determine how leadership indirectly influences achievement, researchers must choose mediating variables to investigate. According to Leithwood, Patten and Jantzi (2010), there was little consensus among researchers about which mediators held the greatest potential to positively impact student achievement. They described and then tested a new conception that they claimed would be relatively comprehensive in nature. Leithwood and colleagues described four paths along which the leadership influence can flow to improve student learning. These paths were Rational, Emotions, Organizational, and Family (Leithwood et al., 2010). They stated that all mediators fall into one of these paths. They then defined each of the paths. For each path, Leithwood et al. generated a hypothesis and added a sixth hypothesis to examine which path had the greatest impact from leadership. Variables that fell into the Rational path were tied to the knowledge and skills of curriculum, teaching, and learning for staff in the school. Another name for the skills in this path was the technical core as defined by other researchers. Leithwood et al. chose academic press and disciplinary culture as the specific two variables for their examination from the Rational path. Leithwood et al. defined academic press as the amount of effort staff put into setting “high but achievable school goals and classroom academic standards” (p.699). Specifically, Leithwood and colleagues identified leadership practices such as “promoting
schoolwide professional development; monitoring and providing feedback on the teaching and learning processes; developing and communicating shared goals; and being open, supportive, and friendly” (p.674) as those which would likely increase a school’s academic press. They defined the Emotions path as including the feelings, dispositions, or affective states of staff members and was connected to Bolman and Deal’s (2008) human resources framework. They chose to focus on collective teacher efficacy and trust in colleagues, students, and parents as the two mediators for the focus in this study.

Leithwood and colleagues defined the Organizational path as including structures, cultures, policies and operating procedures. Collectively, these mediators made up teachers’ working conditions. For this path, Leithwood et al. chose instructional time and professional learning communities as the variables for focus in this study. They defined the Family path as including unalterable and alterable family-related variables. Unalterable variables were those that the school cannot impact such as parental level of education or parental income. They viewed home environment, time spent watching television, and school visits to the home as alterable variables. The two variables Leithwood et al. chose from the Family path were access to adult support for homework and access to a computer for homework. They developed a fifth hypothesis on the relative effect of the four paths in connection to each other and a sixth hypothesis on which of the four paths would be most affected by leadership.

Continuing to focus on leadership efficacy, Leithwood et al. (2010) used data collected as part of a larger, five-year, ongoing project focused on improving leadership in a Canadian province. Part of the data collected came from a teacher survey with 1,445 teachers from the 199 schools where at least three teachers provided responses. In all parts of this analysis, the survey
was a 5-point Likert-style instrument asking the degree to which they agreed with a statement. For academic press, Leithwood et al. used the scale from Hoy and Tarter that focused on information including, “My school sets high standards for academic success” (p. 684). For disciplinary climate, they found five items. For collective teacher efficacy, they used a scale from McGuigan and Hoy that focused on teachers’ sense of confidence they will be able to motivate students. To examine teacher trust, Leithwood and colleagues used a scale from Tschannen-Moran that examined the relationship between the teachers and the families. For instructional time, Leithwood et al. measured the amount of uninterrupted instructional time and timely student attendance data. They developed a survey to examine Professional Learning Communities (PLC) and the effectiveness of PLC meetings, while to examine leadership, Leithwood et al. drew from several sources found in Robinson, Lloyd, and Rowe to examine leadership distribution throughout the school and management practices. For the two variables from the Family path, Leithwood and colleagues gathered evidence from questionnaire responses from students in Grades 3 and 6 as part of an annual province test of reading, writing, and mathematics.

After gathering their data, Leithwood and colleagues (2010) calculated means, standard deviations and scale reliabilities and conducted factor analyses on all measures of variables for the four paths and correlations between variables. Leithwood et al. used the LISREL program, an acronym for a linear structural analysis software package used in structural equation modeling, to test relationships between leadership, the paths, and student achievement. They analyzed the student data separately for each subject and in most combinations. The pattern of results did not change significantly by combination, so Leithwood et al. reported the results as the average of third- and sixth-grade math as well as average of math, language, and reading scores for Grades
3 and 6 combined. In the summary of responses table, Leithwood et al. found a sizeable variance in reliability between the Family path in a negative to leadership practices at the highest. When focusing on the things within school control, the range narrowed between Organizational path being low but still positive to strongly positive for leadership practices. There were medium-sized coefficients between leadership and both the Rational and Organizational paths. Leadership was almost identical in the reliability relationship with the Rational path and with the Organizational path. The relationship between leadership and the Emotions path was weaker, but still significant. The relationship between leadership and the Family path was low enough to be declared as no relationship.

They found that their evidence confirmed Hypothesis 1 that academic press and disciplinary climate will have equal contribution to the amount of variation in student achievement according to the Rational path. Their evidence also confirmed Hypothesis 3 that instructional time and PLCs will contribute equally to the amount of variation in achievement linked to the Organizational path. Leithwood et al. also found partial support for their Hypothesis 5 that for the amount of variation in student achievement explained in aggregate by the four paths would be most significantly impacted by the Family path followed by Rational, Emotion, and Organizational. Leithwood and colleagues determined the Family path had a weaker correlation than Rational or Emotions, but they found their analysis indicated that the Rational and Family explained identical amounts of variation followed by the Emotions and Organizational. They identified that this hypothesis needed further investigation. Hypotheses 2, 4, and 6 were not supported by the evidence.
Leithwood and colleagues (2010) found three results beyond the hypotheses that they felt were significant. First, some variables had larger effects than others depending on how many variables a researcher included in a study. They gave an example of examining trust in a study but then later doing a study that included trust as a variable as well as academic press, disciplinary climate or any other factors. They acknowledged that this result furthers understandings about leadership; however, the effects might be exaggerated by the methodological structure. The second key finding was that the Organizational path was the one most influenced by leaders, but it had the least influence on student learning. The third result was that the Family path had the most potential for impact on student achievement but was essentially not influenced by leadership at all.

Leithwood and colleagues (2010) found that this research would benefit from a longitudinal dataset that would give more information over time. Leithwood and colleagues believed this would help clarify the relationship between the paths. One limitation of this study was the restricted measure of leadership practices found in the source of their data. A broader measure might have had different outcomes. A second limitation was the choice of which variables they used to represent each path. A third limitation was the assumption that the categories, as represented by paths, matter. They also identified several implications for future research or practicing administrators. They first identified that this study suggested an extension of the meaning of making evidence-informed decisions. Noting which variables have impact on student achievement would potentially change the way administrators use evidence to make leadership decisions. Another implication is that leadership programs should consider how these results suggest what should be included in the preparation programs for leadership. Leithwood et al. believe this study challenges the dominant narrative of instruction as the sole impact on
student learning because this study found evidence that variables such as disciplinary climate have equal impacts on student learning. They also stated that engaging the school productively with parents might be a significant way to improve student learning. As Bryk and colleagues (2010) identified, effective leaders are the primary driver of school improvement and directly impact the other four categories of 5E. Leithwood and colleagues (2010) found connections between leadership and involved families.

As Fullan (2007) wrote, making change to improve learning “all boils down to one word: motivation” (p.8). Giving teachers a purpose for the change helps motivate their efforts to implement. Sebastian and Allensworth (2012) examined the influence of principal leadership at the high school level in the Chicago Public Schools. This was in complement to Bryk et al. (2010), who examined the elementary schools (K-8) in CPS. Sebastian and Allensworth identified gaps in collective knowledge of how leaders can be the most effective and that there was a limited focus on the high-school level. Having identified these gaps in the existing research, they sought to identify the ways leadership in high schools most significantly influenced teaching and learning.

Focusing on high schools in the Chicago Public Schools (CPS) system, Sebastian and Allensworth (2012) collected survey data from teachers and administrators. Prior to gathering their own data, they identified three leadership practices found in many previous studies. Sebastian and Allensworth identified these practices as “professional capacity, parent-community ties, and the school’s learning climate” (p. 626). Acknowledging that high school principals have to share their leadership tasks with others due to the size of buildings and the numbers of teachers and students, Sebastian and Allensworth decided to seek to identify the way
targeted efforts of principals influenced teaching and learning rather than using a whole-school model. The teacher survey used by Sebastian and Allensworth was the biennially administered survey the CPS gave teachers in the 2006-2007 school year and was developed by the Consortium on Chicago School Research (CCSR); 71.6% of high school teachers in CPS completed the survey, for a total of 3,529 teacher participants from 99 high schools. The CCSR also provided survey data for the work of Bryk et al. (2010) that became the foundation for the Illinois 5Essentials Survey.

Sebastian and Allensworth (2012) also collected student achievement data from the Education Planning and Assessment System (EPAS), which includes Explore, PLAN, and ACT, in addition to student report card grades. Because the teacher surveys lacked identification beyond the school level, this was the level at which the researchers looked at the schools. They employed hierarchical linear models to determine expected growth in the EPAS data after controlling for differences in socioeconomic, race, age, gender, and other demographic variables. They used the average EPAS gains and average GPA by school as the dependent variables in their study.

To measure and analyze principal leadership, Sebastian and Allensworth (2012) utilized the teacher surveys and created scales using Rasch analysis. Sebastian and Allensworth collected information through the teacher surveys on principal leadership and the organizational structures in the schools. In addition to those two measures, Sebastian and Allensworth also used 10 measures that examined organizational factors found in the school, such as socioeconomic characteristics, average incoming ability of students based on state test scores and school size. They decided to look at these organizational factors as reflections of the principals’ leadership
that would indirectly impact student achievement. They used multilevel structural equation models to examine teachers as level 1 and schools as level 2.

Sebastian and Allensworth (2012) found leadership indirectly and positively influences classroom instruction. They also stated that fostering a strong learning community appeared to be the most significant way the principal could influence the average instructional quality for the entire school. Fullan’s (2007) change theory and the idea of capacity building connects to Sebastian and Allensworth’s learning community. Fullan (2007) described capacity building as “any strategy that increases the collective effectiveness of a group to raise the bar and close the gap of student learning” (p. 33). As they examined the data between schools, the only mechanism through which they found principal leadership relating to student achievement was in the extent to which there was a learning climate. Sebastian and Allensworth (2012) acknowledged some limitations of their study. The teacher surveys focused only on some aspects of instruction. Another limitation was that this study required attempting to factor out other variables that may play a role in student achievement. Their final limitation was that this study was done with one very large, urban district, which limits how the results can be applied to other contexts.

Sebastian and Allensworth (2012) suggested where future research could build on this study. They suggested that longitudinal data could be gathered to assess the impact of leadership over a longer window of time. They also suggested that as the means of measuring classroom instruction continued to grow, so should the efforts to measure principal leadership be a focus. Another future area could be to include other perspectives beyond the teacher.
While Sebastian and Allensworth (2012) examined Chicago high schools, ten Bruggencate, Luyten, Scheerens, and Sleegers (2012) investigated the same connections by looking at schools in the Netherlands. Ten Bruggencate et al. sought to answer the question of what is the real impact of leadership on student learning when mediating factors are considered empirically.

Employing a mediated-effects model, ten Bruggencate et al. (2012) tested the validity of this model through structural equation modeling (p. 703). They applied the categories of developing a vision and giving direction, understanding and developing people, redesigning the organization, and managing the teaching and learning program, which were common to most research as practices having a positive impact on student learning, and found overlap with a competing values framework. These categories were similar to Bryk and colleagues (2010) and their focus on teacher-principal trust, principal instructional leadership, teacher influence, and program coherence. Ten Bruggencate and colleagues (2012) believed the overlap of categories provided more insights into the effective leadership in schools. They defined the behavior of the school leader to be their primary independent variable. They then attempted to validate their causal model using structural equation modeling.

Ten Bruggencate and colleagues (2012) analyzed their data almost exclusively at the school level because academic performance and promotion rate data was only available at that level of focus. They invited all 485 secondary schools in the Netherlands with the senior secondary general education curriculum as the subjects for their questionnaire. These schools have a homogeneous curriculum and student population in terms of typical ability. In these schools, school leaders and teachers were given the same questionnaire to allow researchers to
test the validity of leaders’ perceptions for measuring school leader behavior and then compare this to the student achievement data. They also surveyed the students in the fifth year of the program regarding their engagement with school and perception of teachers’ work. In total, they received completed questionnaires from 103 school leaders, 998 teachers and 4,336 students; 97 of the 103 schools were chosen for the analysis. They used elements from the School Culture Questionnaire by Houtveen, Voogt, Vegt, and van de Grift and Maslowski and the Engagement and Family Educational Culture Survey of Leithwood, Aiken, and Jantzi (2000) to create a survey focused on school leader behavior, school culture, school organization, and teachers’ work and student engagement. They also gathered the academic performance and mean promotion rate data from the Inspectorate of Education. They also considered contextual variables such as school size and composition.

To analyze the entire model, ten Bruggencate et al. (2012) used a two-step strategy. First, they analyzed the influence of contextual and leadership variables on performance. They removed all nonsignificant relationships and determined an optimal model. Second, they tested the final research model twice, first with the teachers’ perceptions and then with the school leaders’ perceptions. More significant relations were identified using the teacher data and matched recent research findings on similar items.

The results found by ten Bruggencate et al. (2012) indicated significant, though small, positive, mediated effects from the four leadership behaviors on promotion rates through school organization and teachers’ work. School leader behaviors had no mediated effects on examination scores (achievement). They also found that schools in urban settings have lower average exam scores than schools not in urbanized settings. They found that leadership behavior
impacted student outcomes both indirectly and directly. They acknowledged that the increased emphasis on school accountability may be responsible for the negative effects on exam scores. They attributed this to lower performing schools being under more pressure and their actions are therefore directed to more short-term goals.

More research was needed in an examination of the mediating role of student engagement. Ten Bruggencate et al. (2012) also called for additional research to be done to explain the relation between student cohort cohesion and average final exam scores. They also recommended future research on non-academic outcomes. Three limitations impacted their study. Ten Bruggencate et al. were limited by focus on the school level through aggregated data. This diminished the variance in scores, but they believed their use of multi-level techniques compensated for this in some ways. The second limitation was the nature of their assessment. They had a single moment in time and suggested a longitudinal study would identify how this research applied longterm. They also acknowledged a limit caused by their decision to focus solely on the college preparatory track of schools instead of all schools in the Netherlands. While ten Bruggencate et al. included student engagement, Bryk and colleagues (2010) only measured student responses for students in Grades 6-12. Because most CPS elementary schools are structured K – 8, all CPS schools had student responses in their 5E data. For suburban elementary schools in Illinois, most elementary schools are structured K – 5.
Summary of Links to Student Outcomes

Researchers have reviewed studies from 1967 to the present as well as completing new studies all in search of the direct influence leadership has on student achievement. Bridges (1982) did the first meta-study examining nearly 25 years of studies on the impact of the principal. His primary conclusion was that the tools available to researchers were weak and based too much on survey responses. Witziers et al. (2003) furthered the examination of the effects of principal leadership based on studies done ten or more years after what Bridges (1982) studied. Witziers et al. (2003) also did a meta-analysis. Like Bridges (1982), Witziers et al. (2003) concluded that further research using more insightful tools was needed. Witziers et al. (2003), Leithwood and Jantzi (2008), and Leithwood, Patten, and Jantzi (2010) found slight indirect impacts from leadership on student outcomes, but Sebastian and Allensworth (2012), Robinson, Lloyd, and Rowe (2008) and ten Bruggencate, Luyten, Scheerens, and Sleegers (2012) expanded their conceptions of influence and found that there were direct influences from principal leadership on student achievement. Bossert et al. (1982) looked specifically at the actions of the principal rather than leadership style. Bossert and colleagues found slight effect on student outcome based on principal actions around instructional leadership, school climate, and principal management behavior. This study had similarities to Bryk et al. (2010) in that both examined how the principal established the possibility for school improvement. Hallinger and Heck (1996) found theoretical and methodological weakness in the studies they examined. Through Bridges (1982), Bossert et al. (1982), and Hallinger and Heck (1996), it has been shown
that researchers have developed more insightful methods and theoretical constructs over time but that more work in these areas was needed.

Jacobson (2011) acknowledged that teacher quality has a far stronger effect on student outcomes than leadership does. However, Jacobson (2011) also found that the principal impacted teacher motivation and teacher quality. This conclusion was similar to Bryk et al. (2010) and the Effective Leader strand of 5E. Jacobson (2011) examined the results of the ISSPP, an examination of successful principals in over a dozen nations. The ISSPP examined what happened in successful schools three years after the successful administrator left. Jacobson (2011) examined the principal role in an international study. Jacobson (2011) also acknowledged that the ISSPP continued to be revised and to address the gaps in the previous versions.

Where Bryk et al. (2010) and Sebastian and Allensworth (2012) focused only on an urban context, Witziers and colleagues (2003), Leithwood and Jantzi (2008), Leithwood, Patten, and Jantzi (2010), and Robinson, Lloyd, and Rowe (2008) examined a more diverse context. Bryk et al. (2010) and Sebastian and Allensworth (2012) found that leadership had a clear impact on the likelihood of school improvement taking place in the specific context of CPS. Witziers et al. (2003), Leithwood and Jantzi (2008), Leithwood et al. (2010) and Robinson et al. (2008) all found limited or negligible influence on student achievement but that principals had an impact on the school climate. Done internationally, the studies of Jacobson (2011) and ten Bruggencate, Luyten, Scheerens, and Sleegers (2012) found similar questions. All studies suggested a need for a better tool to measure the impact of leadership. In summary, the research shows the leadership does impact student achievement but not as directly as teacher quality influences student outcomes. Illinois has included 5E and student achievement in public school report cards. This
suggested that the state valued the results of 5E and student achievement in telling families about their local schools. Examining the relationship between 5E and student achievement helps further the study of leadership’s impact on student learning and provides a contextual examination of this relationship in schools outside CPS.

The following research questions guided my study:

1. What are the associations among the 5E Effective Leader scores and student achievement?
2. Do 5E scores at Time 1 relate to student achievement at Time 2?
3. What are the associations among the 5E Effective Leader scores and demographic factors?
4. Does principal leadership moderate the association between demographic factors and student achievement?
CHAPTER 3

METHODOLOGY

Research Design

This study was conducted using a longitudinal design. My primary research question asked how the 5E Effective Leader score relates to student achievement on ISAT or PARCC in suburban elementary schools in Illinois.

Sample

The sample for this study was 265 suburban elementary schools in Cook, Lake, Kane, DuPage, and Will Counties in Illinois. In keeping with Bryk and colleagues’ (2010) examination of CPS elementary schools, this survey only examined K-5 elementary schools, but my sample included schools specifically outside of the CPS. Student achievement data contained ISAT scores for 2014 and PARCC scores for 2015. Data for both 5E Effective Leader strand scores and student achievement scores on state assessments by individual school was publicly available and published by Illinois School Report Cards annually. Eight hundred ninety schools administered the 5E Survey in both 2014 and 2015 and those schools served as the population for
this study. Schools were further narrowed by selecting only elementary schools in Cook, Lake, Kane, DuPage, and Will Counties in Illinois. This produced a sample of 265 suburban elementary schools. In addition to demographic data requested from ISBE, principal turnover data and teacher retention data, which are present on Illinois School Report Cards as number of principals who worked at that school in the previous six years and as the turnover rate of teachers, was requested also.

Instrumentation

The Five Essentials Survey

For this study, extant data was obtained from the 5Essentials (5E) Effective Leader strand and student data from the Illinois State Assessments in Illinois Scholastic Achievement Test (ISAT) and Partnership for Assessment of Readiness for College and Careers (PARCC) tests. The 5E Survey was mandated in 2013 by Illinois’s governor as part of the response to PERA. Results from 2013 were not made public and the first time 5E results appeared on school report cards was the fall of 2014. In 2014, all schools were required to administer the 5E Survey, but it was optional in 2015. Following a request to Matthew Moore, project manager for the University of Chicago Impact 5Essentials, 5E scores from the 2014 and 2015 statewide administration were compiled and sent. The schools chosen for this study were the elementary schools in districts that
administered the 5E Survey in both 2014 and 2015 in Will, DuPage, Kane, Cook, and Lake Counties.

The Illinois 5E Survey was given to all teachers and parents as well as to students in Grades 6 through 12. All 5E scores were school-level results, and 5E Effective Leader scores were generated by aggregate from teacher responses. The items that are combined to create the Effective Leader score were answered solely by teachers (Klugman, Gordon, Sebring, & Sporte, 2015). The four subsections of the Effective Leader strand were Teacher Influence, Principal Instructional Leadership, Program Coherence, and Teacher-Principal Trust. Each subsection had items that were rated by teachers on a 3-point scale *Strongly Disagree, Disagree, Agree, Strongly Agree* (Klugman, et al., 2015, p. 42) by teachers. There were six items on the Teacher Influence section (e.g., how much influence do teachers have over determining which books and other instructional materials are used in the classroom); eight items on the Principal Instructional Leadership (e.g., a member of the leadership team participates in instructional planning with teams of teachers); five items on the Program Coherence (e.g., once we start a new program in this school, we follow up to make sure that it’s working); and eight items on the Teacher-Principal Trust subscales (e.g., the principal has confidence in the expertise of the teachers), respectively. The researchers at the University of Chicago Consortium of Chicago School Research (CCSR) combined the items from each of these subscales into the overall strand score using a Rasch analysis, which gave researchers a measure score at the individual student level as well as a standard error at the individual level. To create the school-level score for the measure, researchers “weight students by the inverse of the standard error” (5Essentials Client Services, 2014, p. 1). Students who have missing data or unusual response patterns were weighted down in this way. After producing a raw score, researchers adjusted the average score by the average
respondent’s standard error. The adjusted score was created by giving a statistically more accurate score greater weight than a less accurate score. This became the adjusted score. After subsection measure scores were calculated, the CCSR researchers compared these scores against the 2013 Illinois state average, which served as the benchmark for schools outside CPS. To compare scores over time, CCSR researchers “standardize the adjusted scores to the benchmark” (5Essentials Client Services, 2014, p. 1). Figure 1 shows the CCSR researchers’ formula (5Essentials Client Services, 2014) used to determine the measure score for the school.

\[
\text{Measure score for school } A = \left[ \frac{\text{meas}_{\text{School}} - \text{meas}_{\text{Benchmark}}}{\text{stderr}_{\text{School}}/\text{stddev}_{\text{Benchmark}}} \right] \times 20 + 50
\]

Figure 1: CCSR formula for school measure score (5Essentials Client Services, 2014).

Scores range from 1 – 99 and were neither a percentile rank nor a percentage (5Essentials Client Services, 2014). “Every twenty points is exactly one standard deviation wide and has a different color” (5Essentials Client Services, 2014, p. 1). Essential scores were determined by the average of the measure scores and “are also on a 1-99 scale” (5Essentials Client Services, 2014, p. 1). The overall 5E score was “a summary indicator” (5Essentials Client Services, 2014, p. 1) and was calculated by adding together the numeric values assigned to each color category. The individual essential was given a net score of +1 if its color was light green (strong) or dark green (very strong), 0 if it was yellow (neutral) or gray, and -1 if it was orange (weak) or dark red (very weak) (5Essentials Client Services, 2014). Each of the separate essentials were then added together. A school was labelled Well Organized and coded dark green if the total was +3 or higher, Organized and coded light green with a score of +1 or +2, Moderately Organized and
yellow if total score of 0, Partially Organized and coded orange with a score of -1 or -2, or Not Yet Organized and coded red with a score of -3 or lower (5Essentials Client Services, 2014).

Klugman et al. (2015) examined reliability for each of the measures used in each Essential in Table 3. Of particular note is the fact that Klugman and colleagues (2015) found most measures have reliability levels of .70 or higher (see Table 3).

Table 3. 5E Reports of Reliability Coefficients

<table>
<thead>
<tr>
<th>Essential</th>
<th>Measure</th>
<th>Outside CPS</th>
<th>CPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective Leaders</td>
<td>Principal Instructional Leadership</td>
<td>0.85</td>
<td>0.83</td>
</tr>
<tr>
<td>Effective Leaders</td>
<td>Program Coherence</td>
<td>0.82</td>
<td>0.81</td>
</tr>
<tr>
<td>Effective Leaders</td>
<td>Teacher Influence</td>
<td>0.83</td>
<td>0.82</td>
</tr>
<tr>
<td>Effective Leaders</td>
<td>Teacher-Principal Trust</td>
<td>0.86</td>
<td>0.83</td>
</tr>
</tbody>
</table>

(Adapted from Klugman et al., 2015)

Student Achievement Scores

Measuring student achievement in elementary schools in Illinois changed between 2014 and 2015. In 2012, a third-grade student in reading met state standards with a scale score between 191 and 226. In 2014 and still on ISAT, the third-grade student needed a scale score between 207 and 235 to meet standards. Elementary grade levels had an average increase in the lowest scale score to meet standards of 14 points. For the 2015 test, the state moved to the Partnership for Assessment of Readiness for College and Careers (PARCC) as the new measure and alignment to new standards. Student achievement scores were school-level results...
aggregated from performance by students in Grades 3, 4, and 5 within those schools. The combined percentage of students in the *Meets* and *Exceeds* categories was used as the student achievement data.

The 2014 Illinois Standards Achievement Test (ISAT) assessments for math and reading “contain items that have been aligned to Common Core State Standards” (Illinois State Board of Education, 2014). For mathematics, the assessment contained “65 multiple-choice items, two short-constructed response items (SCR), and one extended-response item (ER)” (ISBE, 2014b, p. 1). In addition, there were seven field test items that were not part of the student’s score. Math was administered in three sessions, the rubrics for the SCR and ER were the same as in past years, and the calculator policy was unchanged. For reading, the test design was unchanged. There were 50 multiple-choice items and one extended-response item. Ten of the multiple-choice items were used to equate the assessments. These items were not identified in the student book and did not affect a student’s score. The assessment contained paired and stand-alone reading passages with a mixture of fiction and non-fiction. As with math, the rubric for the ER item was kept the same as in previous years.

For student assessment in spring 2015, the state unveiled the PARCC assessment. Illinois is a member of the PARCC Consortium and had Illinois educators involved in the writing of the PARCC assessment. Unlike with ISAT, PARCC started with two parts of a “summative exam: the Performance-Based Assessment (PBA) and the End-of-Year Assessment (EOY)” (Illinois State Board of Education, Student Assessment Division, 2014, p. 1). According to this ISBE press release (2014), PARCC would allow “for a better measure of students’ skills and abilities” (p. 2). Pearson (2014) released unit testing times in September for both testing windows and their
unit testing times. Testing times for elementary students were grouped into third grade and then
fourth and fifth together. Third grade had 75 minutes for each of the two tests for mathematics,
75 minutes for two of the three tests for ELA, and 60 minutes for the third ELA test focusing on
narrative writing during the PBA window (Pearson, 2015). Fourth and fifth grades had 80
minutes for one mathematics test and 70 minutes for the other. These two grades also had three
different time allotments for their ELA tests. Literary Analysis was 75 minutes, Research
Simulation was 90 minutes, and Narrative Writing was 60 minutes. For the End-of-Year
assessment, all three grade levels had two 75 minute math tests and one 75 minute ELA test
(Pearson, 2015).

Procedure

5E data came in a file of extant data sent by Matthew Moore, project manager at the
University of Chicago. Mr. Moore contacted Jake Thornton at the ISBE, who had to get approval
from the ISBE Race to the Top attorney so that they could provide this publically available data
to me in a single file. The ISBE Race to the Top attorney approved Matthew Moore sending full
state results for 2014 and 2015. Ultimately, these data were obtained through a series of Freedom
of Information Act (FOIA) requests over the course of about six months.

The unit of analysis of 5E data was school level and the data were aggregated from
teacher responses. Given the full state dataset for 5E, schools that were not elementary schools
and schools lacking data for both 2014 and 2015 were eliminated. Once the schools with two
years of 5E data were identified, a FOIA request was submitted to the ISBE for the student
achievement results on ISAT and PARCC for third, fourth, and fifth grade students for tests
given in 2014 and 2015. The student achievement data was also school-level data and was
aggregated from student scores on the respective assessments. These were the only three grades that took state tests within the elementary school years. I submitted an IRB for extant data and was informed that my study was exempt on April 12, 2017.

Data Analysis

Research Question One

What are the associations among the 5E Effective Leader scores and student achievement?

**Hypothesis:** There will be a moderate correlation between the 5E Effective Leaders strand and student achievement. This will illustrate that effective leaders in suburban schools in the collar counties surrounding Chicago have a slightly positive association with student achievement.

Bryk and colleagues (2010) found that a strong score in the Effective Leader strand was the primary driver for school improvement and the other four essentials in CPS. However, CPS has some unique characteristics not found in suburban schools, such as Local School Councils and a CEO instead of a superintendent. As Marks and Printy (2003) found, the collaboration between principal and teacher is essential to improvement. Their research along with Bryk and colleagues (2010) led to a likely measurable significance between the Effective Leader score and student achievement.
This research question was analyzed via a correlation table. There were two correlation tables, one for each year. This was due to the fact that the student achievement measures changed between ISAT in 2014 and PARCC in 2015.

**Research Question Two**

Do 5E Effective Leader scores at Time 1 relate to student achievement at Time 2?

**Hypothesis:** This longitudinal examination of the relationship between Effective Leader scores and student achievement results over time can show how the effective leader is changing the school environment and indirectly impacting student achievement. The ISBE’s PEAC (2013) provided guidance in their 2013 release about using 5E data in principal evaluations. In this press release, the PEAC suggested that 5E data can be used in setting goals but should not be tied directly to student achievement. In schools with consistent leadership in the form of the same person for multiple years, that continuity can allow for the shaping of a vision about how the school operates, as defined by Fullan (2001a), which can translate into positive gains in student achievement.

This research question was analyzed via a correlation table. This included a correlation table containing 2014 5E data and 2015 achievement data and another table containing 2015 5E data and 2016 achievement data.
Research Question Three

What are the associations among the 5E Effective Leader scores and demographic factors?

**Hypothesis:** Socioeconomic status will have the most significant relationship with 2014 ISAT Meet + Exceed and 2015 PARCC Proficiency. This relationship will be directly proportional. White % will have a positive relationship while Black % and Hispanic % will have a negative relationship with 2014 ISAT Meets + Exceeds and 2015 PARCC Proficiency. Principal Turnover will have a negative relationship with 2014 ISAT Meets + Exceeds and 2015 PARCC Proficiency.

This research question was analyzed via a correlation table.

Research Question Four

Does principal leadership moderate the association between demographic factors and student achievement?

This was an exploratory research question, therefore there was no a priori hypothesis.

This research question was analyzed via a moderation analysis. Statistical moderation is a technique whereby the association between three variables is examined. In this case, the moderator (effective leadership) was examined to determine how it influenced the strength of the relationship between SES and student achievement.
CHAPTER 4

RESULTS

This chapter provides findings and preliminary analysis of data for each research question. Four research questions drove this study. Question one examined the association between 5E Effective Leader scores and student achievement. Question two sought the relationship between 5E Effective Leader scores at time one and student achievement scores at time two. Question three investigated the associations between 5E Effective Leader scores and demographic factors. Question four examined how principal leadership impacted the relationship between demographic factors and student achievement.

Preliminary Analysis

The sample for this study was 265 elementary schools in Cook, Lake, Kane, DuPage, and Will Counties in Illinois that gave the 5E Survey in both 2014 and 2015. Student achievement data for those 265 schools came from the Illinois State Board of Education and represents 2014 ISAT and 2015 PARCC assessments.

Instruments

Three assessments were used to examine the research questions. ISAT and PARCC provided information about student achievement for 2014 and 2015, respectively, while the
Illinois 5Essentials Survey provided information about effective leaders in the same years. A correlation table was developed using these data sources. Please see Table 4.

**Research Question One**

What are the associations among the 5E Effective Leader scores and student achievement?

_Hypothesis_: There will be a moderate correlation between the 5E Effective Leaders strand and student achievement. This will illustrate that Effective Leader scores in suburban schools in the collar counties surrounding Chicago have a slightly positive association with student achievement. -Supported

Analyses were conducted using SPSS v24 to determine if associations between the study variables exist, as well as the direction and magnitude of the associations. As seen in Table 4, significant correlations were found between both the 2014 Effective Leader score and 2014 ISAT Meets + Exceeds and the 2015 Effective Leader score and 2015 PARCC Proficiency. Specifically, the 2014 5E score and 2014 ISAT M/E had a correlation of .405 while the 2015 5E score and 2015 PARCC Proficiency percentage had a slightly lower but still significant correlation of .334. Both correlations were statistically significant. This suggests that effective leadership has a slight relationship with student achievement and may be reflected in principals who are effective leaders and also hired by high-achieving school districts.

Subscores on 5E were also significantly correlated with student achievement. For both 2014 and 2015, the Teacher Influence subscore had the highest correlation with student
### Table 4. Correlations Among 2014 and 2015 5E Scores and Student Achievement

<table>
<thead>
<tr>
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<th>10</th>
<th>11</th>
<th>12</th>
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<tbody>
<tr>
<td>1. 2014 Effective Leader Score</td>
<td>1</td>
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<tr>
<td>2. 2015 Effective Leader Score</td>
<td>.738**</td>
<td>1</td>
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<tr>
<td>3. 2014 Teacher Influence</td>
<td>.770**</td>
<td>.548**</td>
<td>1</td>
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<tr>
<td>4. 2014 Instructional Leadership</td>
<td>.907**</td>
<td>.671**</td>
<td>.532**</td>
<td>1</td>
<td>---</td>
<td>---</td>
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<tr>
<td>5. 2014 Program Coherence</td>
<td>.830**</td>
<td>.690**</td>
<td>.551**</td>
<td>.667**</td>
<td>1</td>
<td>---</td>
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</tr>
<tr>
<td>6. 2014 Teacher-Principal Trust</td>
<td>.861**</td>
<td>.581**</td>
<td>.524**</td>
<td>.868**</td>
<td>.541**</td>
<td>1</td>
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<tr>
<td>7. 2015 Teacher Influence</td>
<td>.586**</td>
<td>.798**</td>
<td>.584**</td>
<td>.468**</td>
<td>.527**</td>
<td>.398**</td>
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<td>---</td>
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</tr>
<tr>
<td>8. 2015 Instructional Leadership</td>
<td>.664**</td>
<td>.928**</td>
<td>.514**</td>
<td>.641**</td>
<td>.584**</td>
<td>.506**</td>
<td>.691**</td>
<td>1</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>9. 2015 Program Coherence</td>
<td>.647**</td>
<td>.872**</td>
<td>.440**</td>
<td>.551**</td>
<td>.768**</td>
<td>.411**</td>
<td>.692**</td>
<td>.721**</td>
<td>1</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>10. 2015 Teacher-Principal Trust</td>
<td>.653**</td>
<td>.853**</td>
<td>.439**</td>
<td>.625**</td>
<td>.484**</td>
<td>.673**</td>
<td>.587**</td>
<td>.752**</td>
<td>.583**</td>
<td>1</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>11. 2014 ISAT Meets + Exceeds</td>
<td>.405**</td>
<td>.359**</td>
<td>.482**</td>
<td>.236**</td>
<td>.416**</td>
<td>.231**</td>
<td>.408**</td>
<td>.277**</td>
<td>.346**</td>
<td>.286**</td>
<td>1</td>
<td>---</td>
</tr>
<tr>
<td>12. 2015 PARCC Proficiency</td>
<td>.382**</td>
<td>.334**</td>
<td>.456**</td>
<td>.222**</td>
<td>.374**</td>
<td>.239**</td>
<td>.361**</td>
<td>.248**</td>
<td>.331**</td>
<td>.276**</td>
<td>.939**</td>
<td>1</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
achievement at .482 in 2014 and .361 in 2015. The lowest correlations were .231 for 2014 Teacher-Principal Trust and ISAT M/E and .248 for 2015 Instructional Leadership and PARCC.

Other subscores were also significantly correlated with the overall Effective Leader score for both years. In 2014, the Effective Leader score had correlations of .770 with Teacher Influence, .907 with Instructional Leadership, .830 with Program Coherence, and .861 with Teacher-Principal Trust. The correlation for Teacher Influence in 2014 was the lowest for both 5E Effective Leader and ISAT M/E scores. In 2015, the Effective Leader score had correlations of .798 with Teacher Influence, .928 with Instructional Leadership, .872 with Program Coherence, and .853 with Teacher-Principal Trust. Though Teacher Influence had the weakest correlation to overall Effective Leader scores, the correlation was still strong.

Taken together, this shows that both the 2014 Effective Leader score and the 2015 Effective Leader score had strong correlations with each of the subscores and the overall Effective Leader strand score. The subscores also had strong correlations with student achievement. This is important because these results suggest that the overall Effective Leader score, as well as the substrands, are related to student achievement even as tests change from year to year. These results also indicate a pattern of results similar to those found by Bryk and colleagues (2010).

**Research Question Two**

Do 5E Effective Leader scores at Time 1 relate to student achievement at Time 2?

*Hypothesis:* It is predicted that 5E Effective Leader scores in 2014 will be associated with student achievement in 2015. - Supported
This research question was analyzed via correlations. Table 4 above, which was also used to answer Research Question One, includes correlations among 2014 5E data and 2015 achievement data. As seen in Table 4, 2014 Effective Leader scores were significantly correlated with 2015 PARCC Proficiency with a value of .382. This is a higher correlation than is seen between 2015 Effective Leader scores and 2015 PARCC Proficiency, which had a correlation of .334. This suggests that it is possible that effective leadership has relationships over time with student achievement as principal leadership impacts the school.

**Research Question Three**

What are the associations among the 5E Effective Leader scores and demographic factors?

*Hypothesis 1*: SES will have the strongest relationship with academic achievement. - Supported

*Hypothesis 2*: White % will have a positive relationship while Black % and Hispanic % will have a negative relationship with achievement. - Supported

*Hypothesis 3*: Principal Turnover will have a negative relationship with achievement. - Partially Supported

*Hypothesis 4*: Teacher Retention will have a positive relationship with student achievement. –Supported

In order to examine this research question and the corresponding hypotheses, correlations were conducted among the 5E scores and selected demographics for both the 2014 and 2015 school years. Table 5 contains data from 2014 and Table 6 contains data from 2015. Of the
demographic variables examined, SES had the strongest correlation with academic achievement in both 2014 (2014 Meets + Exceeds) and 2015 (2015 PARCC Proficiency) and the relationship is negatively correlated, meaning that as the percentage of low-income students in a school increases, test scores decrease, a pattern present in both the 2014 and 2015 data. The percentage of White students in a school (White %) had a positive, though less strong, relationship with student achievement, such that as the number of White students in a school increases, test scores increase as well. Conversely, the greater number of Black students (Black %) and Latino students (Hispanic %) both had negative correlations with student achievement, such that as the number of Black students or Latino students in a school increases, test scores tend to decrease. Principal turnover was slightly positively correlated with test scores in 2014. Last, teacher retention was positively correlated with test scores.

![Table 5. Correlations Among 2014 5E Scores and Demographics](image)

<table>
<thead>
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<th></th>
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</thead>
<tbody>
<tr>
<td>2014 Effective Leader Score</td>
<td>-0.282**</td>
<td>0.225**</td>
<td>-0.070</td>
<td>-0.301**</td>
<td>-0.086</td>
<td>0.030</td>
<td>-0.162**</td>
</tr>
<tr>
<td>2014 Teacher Influence</td>
<td>-0.356**</td>
<td>0.329**</td>
<td>-0.130*</td>
<td>-0.355**</td>
<td>-0.163**</td>
<td>0.169**</td>
<td>-0.108</td>
</tr>
<tr>
<td>2014 Instructional Leadership</td>
<td>-0.133*</td>
<td>0.085</td>
<td>-0.014</td>
<td>-0.163**</td>
<td>-0.009</td>
<td>-0.030</td>
<td>-0.148*</td>
</tr>
<tr>
<td>2014 Program Coherence</td>
<td>-0.297**</td>
<td>0.201**</td>
<td>-0.017</td>
<td>-0.350**</td>
<td>-0.113</td>
<td>-0.065</td>
<td>-0.124*</td>
</tr>
<tr>
<td>2014 Teacher-Principal Trust</td>
<td>-0.173**</td>
<td>0.156*</td>
<td>-0.097</td>
<td>-0.135*</td>
<td>0.000</td>
<td>0.033</td>
<td>-0.167**</td>
</tr>
<tr>
<td>2014 ISAT Meet + Exceed</td>
<td>-0.884**</td>
<td>0.803**</td>
<td>-0.449**</td>
<td>-0.689**</td>
<td>-0.546**</td>
<td>0.308**</td>
<td>-0.034</td>
</tr>
</tbody>
</table>

Note: ** Correlation is significant at the 0.01 level (2-tailed), *. Correlation is significant at the 0.05 level (2-tailed).
In 2015, SES had the strongest correlation with student achievement in 2015 PARCC Proficiency. The relationship was negatively correlated, meaning that as the percentage of low-income students in a school increases, test scores decrease. The percentage of White students in a school (White %) had a positive, though less strong, relationship with student achievement, such that as the number of White students in a school increases, test scores increase as well. At the same time, the greater number of Black students (Black %) and Latino students (Hispanic %) both had negative correlations with student achievement, such that as the number of Black students or Latino students in a school increases, test scores tend to decrease. This suggests that a school’s demographics have an impact on student achievement. Principal turnover had a slightly negative correlation with test scores in 2015. Also in 2015, teacher retention was positively correlated with test scores. Taken together, these two relationships suggest that retaining teachers has a greater positive relationship with test scores than principal turnover.

<table>
<thead>
<tr>
<th></th>
<th>2015 SES</th>
<th>2015 White %</th>
<th>2015 Black %</th>
<th>2015 Hispanic %</th>
<th>2015 Mobility</th>
<th>2015 Teacher Retention</th>
<th>2015 Principal Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015 Effective Leader Score</td>
<td>-0.236**</td>
<td>0.162**</td>
<td>-0.021</td>
<td>-0.268**</td>
<td>-0.115</td>
<td>0.000</td>
<td>-0.090</td>
</tr>
<tr>
<td>2015 Teacher Influence</td>
<td>-0.306**</td>
<td>0.273**</td>
<td>-0.092</td>
<td>-0.311**</td>
<td>-0.179**</td>
<td>0.064</td>
<td>-0.093</td>
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<tr>
<td>2015 Instructional Leadership</td>
<td>-0.152*</td>
<td>0.078</td>
<td>0.064</td>
<td>-0.238**</td>
<td>-0.060</td>
<td>-0.013</td>
<td>-0.103</td>
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<tr>
<td>2015 Program Coherence</td>
<td>-0.218**</td>
<td>0.128*</td>
<td>-0.047</td>
<td>-0.221**</td>
<td>-0.081</td>
<td>-0.050</td>
<td>-0.076</td>
</tr>
<tr>
<td>2015 Teacher-Principal Trust</td>
<td>-0.215**</td>
<td>0.173**</td>
<td>-0.047</td>
<td>-0.213**</td>
<td>-0.127*</td>
<td>0.037</td>
<td>-0.044</td>
</tr>
<tr>
<td>2015 Achievement</td>
<td>-0.862**</td>
<td>0.733**</td>
<td>-0.455**</td>
<td>-0.634**</td>
<td>-0.580**</td>
<td>0.294**</td>
<td>0.021</td>
</tr>
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</table>

Note: **. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).
Research Question Four

Does principal leadership moderate the association between demographic factors and student achievement?

This was an exploratory research question; therefore, there was no a priori hypothesis. In order to better understand the associations among student achievement, SES, and principal leadership, a moderation analysis was conducted. Specifically, Hayes’s PROCESS model 1 was conducted to examine if principal leadership may act as a moderator in the association between SES and achievement. The conceptual model for this analysis is depicted in Figure 2.

![Diagram](percentage_of_frlunch_principal_leadership_student_achievement.png)

Figure 2. Conceptual model of mediation analysis,

The overall regression analysis was significant, R=.87, F (3, 259) = 279.63, \( p<.001 \). Further examination of the model indicates that SES was a significant predictor of student achievement. Similarly, principal leadership was also a significant predictor of student achievement. The interaction term of SESxPrincipal Leadership was not significant, indicating moderation was not present. Taken as a whole, results of this analysis suggest that SES impacts
achievement and principal leadership impacts achievement, but principal leadership does not change the direction or the magnitude of the relationship between SES and student achievement. The results of this analysis also suggest that even the most effective leader cannot overcome the SES impact on a school’s test scores.
CHAPTER 5

DISCUSSION

The purpose of my study was to understand how the 5E Effective Leader strand relates to student achievement in suburban contexts. The origin of my idea for this study was the Illinois State Board of Education’s 2011 decision, as part of Illinois’s Race to the Top funding application, to administer the 5E Survey statewide starting in 2013. Bryk and colleagues (2010) developed the 5E Survey while working with the Chicago Public Schools in the 1990s in efforts driven by the Chicago School Reform Act of 1988. Both Race to the Top and the Chicago School Reform Act of 1988 were a result of the age of accountability that increased focus on student achievement in schools.

In their work in CPS, Bryk and colleagues (2010) found that “a system of five organizational elements combine to support improvements in student learning. School Leadership functions as the driver” (p. 79). To that end, Bryk and colleagues examined elementary buildings in the Chicago Public Schools system that were typical for Chicago in demographics but unlike schools in the rest of the state of Illinois. Bryk and colleagues specifically assessed whether school leadership, among other factors, led to improved schools. Bryk and colleagues found strong correlations among school leadership, organizational change,
and student achievement, but their work did not extend beyond elementary schools in the Chicago Public Schools system.

Bryk and colleagues found that schools with strong scores in the five essential areas identified in his work – effective leaders, collaborative teachers, involved families, ambitious instruction, and a supportive environment – were nearly ten times more likely to improve student achievement than schools where three or more indicators were weak. They also found that even a single low score reduced the likelihood of improvement. Another finding was that sustained weakness in an essential category undermined all other efforts at improvement.

When Race to the Top led Illinois to search for a school climate survey that would enhance the application, ISBE adopted the 5Essentials Survey statewide, based solely on the results from Bryk and colleagues (2010). This is not to say that 5E measurement is faulty. For example, Hallinger and Heck (1996) found an interesting concept in their meta-analysis of studies done between 1980 and 1995. They found that context, especially socioeconomic status, influences the type of leadership implemented by principals. Where Bryk and colleagues acknowledged the unique context for their study, Hallinger and Heck (1996) found that the context influenced leadership, yet the premise of 5E is that leadership influences context. It is likely that the relationship is much more nuanced. Bryk and colleagues also acknowledged that “relationships are the lifeblood of activity in a school community” (p. 137), just as Fullan (2001a) identified “building relationships” (p. 7) as a key facet of leading change with a moral purpose. Bryk and colleagues asserting that effective leaders are necessary for improving schools, however, even Bryk et al. admit that the context in which they conducted their study was unique, and they go so far as to state, “There is literally no relevant comparison school in most other districts in Illinois” (p. 14). Yet the state of Illinois chose the 5E as the leadership
indicator for all schools: CPS, urban, suburban, and rural. Because Bryk et al.’s work did not include examinations of leadership effects on achievement outside of CPS, I was interested in how the 5E Survey would relate to schools outside CPS that have (sometimes very) different contexts from where Bryk and colleagues did their work. In order to conduct my study of the associations among leadership and student achievement in contexts outside of CPS, I used the statewide assessment for 2014 and 2015 for the following counties: Cook, Lake, DuPage, Kane, and Will. Please note that Illinois changed assessments from ISAT in 2014 to PARCC in 2015.

A discussion of my findings is presented below. In addition, Chapter 5 lays out how my study relates to the larger body of research on the impact of effective leaders on student achievement. Organized by research question, this chapter discusses how this study connects to other contemporary research related to each question. As part of this chapter, I also discuss where future research could build on this study and I highlight strengths and limitations of this study.

Discussion of Results for Research Question One

The overarching goal of my study was to examine the relationship of effective leadership to student achievement in suburban elementary schools in Illinois, which is a markedly different context than that of the work by Bryk and colleagues (2010). To that end, Research Question One examined the relationship between 5E Effective Leader scores and student achievement. Recall that my data were from urban and suburban settings outside of CPS. I hypothesized
Effective Leader scores would be positively correlated to student achievement and this hypothesis was supported.

Discussion of Changes in State Assessments

My data suggested that effective leadership is positively associated with student achievement; as teachers rated their principals as more effective, the school also saw students achieving higher test scores. This was true for both years of data in my study. While the relationship with PARCC was slightly lower, this may be explained by the fact that the learning standards being measured were raised in the shift from ISAT in 2014 to PARCC in 2015. My data also showed a strong relationship between each of the substrands of the 5E Survey for each year. These findings were similar to the results found by Bryk and colleagues in their study that led to the creation of the 5E Survey. Using a statistical model developed by Raudenbush and Bryk, Witziers, Bosker, and Kruger (2003) found a relatively weak and indirect impact of leadership on student achievement in their examination of studies prior to 2000. Witziers et al. looked at direct effect studies and both Bryk et al. and my study also examined how leadership directly affected student achievement. My findings are also similar to the work by Klugman, Gordon, Sebring, and Sporte (2015). Gordon and colleagues (2016) presented their findings on the effect of the 5E strands statewide on ISAT by content area based on ISAT results from school years 2010-2011, 2011-2012, and 2012-2013. In K-5 non-CPS schools, Klugman et al. found slight correlation between Effective Leader scores and ISAT Math levels and similarly slight correlation between Effective Leader scores and ISAT Reading levels. My study examined
assessments from 2014 and 2015. Both my study and the work of Klugman et al. (2016) showed a statistically significant correlation between Effective Leader scores and student achievement even though Gordon et al. (2015) focused on earlier years of student achievement than my study did. Having both my study and Gordon et al. find statistical significance when examining different testing years suggests that, despite changes in the assessments used by Illinois, the impact of effective leaders on student achievement remained significant in relation to student achievement.

Discussion of Results for Research Question Two

To investigate Research Question Two, I examined the relationship between 5E Effective Leader scores in 2014 and student achievement a year later, in 2015. For my study, this meant 2014 5E scores and 2015 PARCC assessments were examined. I hypothesized that there would be a positive correlation between 2014 5E Effective Leader scores and 2015 PARCC scores. This hypothesis was supported. Interestingly, 2014 Effective Leader scores had a higher correlation with 2015 student achievement than the 2015 Effective Leader scores did. Part of the impact on student achievement over time comes from the relationships a school leader has with staff. School climate is part of the leader’s responsibilities for helping the school work on improvement. Carpenter (2017) examined how leadership practices impact school climate in a rural area of southern Illinois, also using the 5E as a measurement tool. Carpenter suggested that the most direct link between the overall Effective Leader score and school climate is in the substrand of teacher-principal trust. In her examination of the schools in Collinsville, IL, she
found that principals who previously worked in other fields had lower scores on combined measures of 5E and the Leadership Practices Inventory 360. In Carpenter’s study, the principals with the least amount of time working in schools had the lowest scores, suggesting that there is a relationship between whether a principal had only worked in education or came from a business background and Effective Leader scores in rural schools. Although Carpenter’s research had a slightly different focus than my study, both my findings and Carpenter’s suggest a positive correlation between effective leaders and student achievement over time. Both my study and the work of Carpenter suggest that effective leaders who have more time in their schools have a more positive impact on student achievement than those with less time in their schools. Further investigation is needed in order to fully explore and understand how leadership impacts student achievement over time. In both studies, principals with more time in their roles had higher 5E scores. Both my study and the work of Carpenter show that longevity does play a role in Effective Leader scores. Part of the reason for higher scores over time could be that only success allows principals to serve multiple years in one place; if the principal were not successful, he or she would be removed from the position. Carpenter studied schools in a rural setting and my study examined suburban schools. Gordon, Klugman, Sebring, and Sporte (2016) reviewed 5E scores statewide. In their statewide examination of 5E scores, Gordon et al. (2016) noted that scores on the 5E Survey were generally lowest in rural areas and higher scores in suburban areas. While in a statewide comparison rural scores may be lower than suburban, both my study and the study by Carpenter showed that Effective Leader scores rose for principals with more time in their roles and in education in general. Rural schools may have greater challenges in staffing, but in both rural and suburban schools, effective leader scores increased over time as principals served more time in their buildinga. This suggests that effective leaders, as defined by Bryk et al.
Research Question Three examined the relationship between 5E Effective Leader scores and demographic factors. There are multiple hypotheses for this question. My first hypothesis was that socioeconomic status would have the greatest association with achievement, and it did. Socioeconomic status had the most significant correlation in both years, showing that as the percentage of low-income students decreases, test scores increase. Or conversely, as the percentage of low-income students increases, test scores decreased.

Bryk and colleagues (2010) focused narrowly on the context of CPS. Chicago has unique demographic characteristics compared to suburban schools. Bryk and colleagues acknowledged that there are no comparable schools in most districts and described their modal school as 100% African-American and with low-income enrollment exceeding 90%. While Chicago’s context might be different, that alone may not explain differences in student achievement. Looking at a national context, Berliner (2013) acknowledged that most of the variance in student achievement can be attributed to non-school factors, one of which is socioeconomic status. Berliner further acknowledged that the school impact is one third that of the non-school factors, suggesting that outside factors, such as SES, contribute to the variability in achievement more than in-school factors, such as leadership and teaching. This is not to say that leadership and teaching are not of vital importance. However, as indicated by Berliner, outside factors often exert a stronger
influence on achievement. This pattern is not unique to the United States, but the effect may be more pronounced here. For example, in comparing the United States to other nations, Berliner found that movement between social classes had a greater impact on student achievement in the US than in other nations such as Finland, Korea, and Hong Kong. In those other countries, socioeconomic status was not as widely spread as is in the United States. This shows that demographic factors have a strongly significant impact on student achievement, regardless of context.

My second hypothesis was that the percentage of White students would positively correlate with both 5E Effective Leader scores and student achievement while percentages of Black or Hispanic students would have negative correlations. This hypothesis was supported.

Bryk and colleagues (2010) defined the modal school for their study as “racially isolated, with a 100-percent African-American student body” (p. 14). Because Bryk and colleagues acknowledged “there is literally no relevant comparison school in most other districts in Illinois” (p. 14), it made me consider how demographic factors in suburban schools in Illinois might have similar or different results. Bryk and colleagues (1993) found that CPS implemented reform by giving principals greater control over budgets, buildings, and personnel while also creating Local School Councils that included community, parent, and teacher representation and gave these LSCs the right to select and evaluate principals. The role of the principal in suburban school districts does not have the same circumstances. One other key difference between CPS and suburban elementary schools is that only students in Grades 6-12 respond to the 5E Survey. Most elementary schools in CPS are K-8 buildings where some students would participate while most suburban elementary schools are K – 5 and have no student participation.
Marks and Printy (2003) used results from the School Restructuring Study (SRS) to examine schools that had undergone significant restructuring. Most of the restructured schools were found in urban settings with significant numbers of economically disadvantaged and racial minority students, but they also had NAEP achievement that was at or above the national average. Working in CPS high schools, Sebastian and Allensworth (2012) found that principals who focus on “professional capacity, parent-community ties, and the school’s learning climate” (p. 626) have the buildings with the greatest likelihood for improvement. This is similar to what Bryk and colleagues (2010) found in CPS elementary schools. In this sense, Sebastian and Allensworth were working in the same demographic context as Bryk and colleagues. While those researchers focused on urban contexts and high percentages of low-income students, Leithwood, Patten, and Jantzi (2010) examined schools in a rural Canadian province and found significant relationships between leadership style and the Family path, the Rational path, and the Organizational path. In a rural context for schools, Leithwood et al. found similar results to what Bryk and colleagues (2010) and Jacobson (2011) found in urban settings.

While Bryk et al., Jacobson, and Leithwood et al. examined leadership styles and practices with different groups, Musu-Gillette et al. (2016) reported on trends in racial and ethnic groups on the National Assessment of Educational Progress (NAEP). They examined how NAEP performance changed and achievement gaps narrowed or expanded between 1992 and 2012. In their study, Musu-Gillette et al. (2016) found that all groups scored higher in 2012 than in 1992. They also found that Black and Hispanic students scored lower in reading and math than White students in 1992 and still in 2012. Despite Musu-Gillette et al. finding that none of the achievement gaps have yet been eliminated, the 2012 scores were the highest for each racial group and the achievement gaps were the narrowest.
Lee and Wu (2017) looked at NAEP in the era of the Common Core State Standards and Race to the Top. Lee and Wu found that only eight states, including Illinois, have state assessments with comparable or higher proficiency standards compared to NAEP. They also attributed the decline in student performance to the fact that many states did not align their programs to the new standards until after 2009. Once many states adopted CCSS, each school or district needed to align programming to the more rigorous standards. One reason schools may still be struggling is because their programming has not yet been aligned to CCSS. There are many reasons a school may be slower to realigning programming, including the culture of the district, finite resources, or other district initiatives. Many things in education have changed since NAEP first appeared in 1992 and effective leaders alone cannot overcome the achievement gaps that exist.

Connecting achievement and discipline, DeMatthews (2016) examined the racial disciplinary gap and offered lessons for what he suggested school leaders needed in order to be more effective for all students. Examining national rates of disciplinary referrals, DeMatthews found that African-American students were nearly four times as likely to be referred to the office and to receive suspension or expulsion for the same behavior demonstrated by their White peers. DeMatthews suggested a social justice perspective be part of leadership training programs and cited Theoharis in stating that principals with social justice orientations addressed the achievement gaps as well as the disciplinary gaps. DeMatthews’s (2016) focus on disciplinary gaps in conjunction with Lee and Wu (2017) and Musu-Gillette et al. (2016) focusing on the achievement gaps combines to offer a possibility that in schools where students struggle academically or behaviorally, teachers may rate their principal a less effective leader. With teachers being the source of the Effective Leader score, if behavioral or academic struggles
frustrate or upset classroom teachers, this may be reflected in their survey responses about that leader. That may be a focus for another study.

Next, the third hypothesis was that principal turnover would have a negative relationship with achievement. Hypothesis 3 was only partially supported; in 2014 schools that changed principals had slightly negative correlations with student achievement, whereas in 2015 the change in principal had a very slightly positive correlation. In the state report card, schools report how many principals have been at that school in the previous six. This data could be slightly misleading in that if the change in principal was a retirement four years ago, that might have a different impact than a principal resignation in the previous year. Other researchers have examined principal turnover. For example, Partlow (2007) examined contextual factors related to elementary principal turnover in Ohio. Partlow found the only statistically significant variable in predicting principal turnover was student achievement in reading and math. She found that as student achievement increased, principal turnover decreased. She offered analysis that suggested longer tenure allowed principals to create a shared vision that all stakeholders embraced and that as test scores went down, principals at those schools had greater turnover. These results are similar to mine in that I saw that stability in the principal role made a slightly positive impact in 2015. However, it would take more years of data to determine whether what Partlow found in Ohio was also true in Illinois.

This is important because principals can leave for a variety of positive and negative reasons. Retirement, career advancement, or job loss all are reasons principals leave, but neither my study nor the work of Partlow (2007) could identify which principals left for positive or negative reasons. A principal who leaves because he or she was fired or is a weak leader is likely to have had a negative impact on student achievement. Conversely, a principal who has been at a
school for a number of years and retires in due time may have left a positive impact on student achievement that will be carried over to the new principal for a number of years, although these ideas are mere speculation. Without being able to determine why turnover happened, there is no way to really know how the turnover impacts student achievement. If Fullan (2001b) is correct in saying that it takes more than a couple years for a change to be fully implemented, then the places with less principal turnover are likely to have enough stability to implement longer lasting, systemic change, the kind of change necessary to impact student achievement.

My fourth hypothesis was that higher levels of teacher retention would have a positive relationship with student achievement. My research showed that in schools with high rates of teacher retention, student achievement was correspondingly higher. This suggests that having a stable school staff leads to a more positive school climate and a greater likelihood for increased student achievement within the context of my study; however, there is some evidence to suggest this is also the case in other contexts. For example, Guin (2004) examined, among other factors, how rates of teacher turnover related to student achievement in a large urban district. Guin acknowledged that teacher turnover makes teamwork difficult and slows the momentum the previous team might have had. She also referenced the work of Wirt and colleagues (1998) in acknowledging that majority-minority schools have teacher turnover at twice the rate compared to schools with smaller minority populations. Higher turnover rates negatively impacted students by putting inexperienced teachers in classrooms and having large numbers of new teachers each year. Guin found the schools with the higher rates of turnover had fewer students meeting or exceeding standards on the statewide tests. While teacher turnover may not be linked to the principal’s effectiveness level, high turnover in teachers has a negative effect on student
learning. With all of these questions, my research found that Hypotheses 1, 2, and 4r were supported, but Hypothesis 3 was only partially supported.

Discussion of Results for Research Question Four

Research Question Four examined whether principal leadership moderates the association between demographic factors and student achievement. Because this is an exploratory research question, there was no a priori hypothesis. SES and principal leadership were both significant predictors of student achievement in my study, but principal leadership did not change the effect SES had on achievement. Socioeconomic status has the largest impact of all demographic factors on student achievement. My study found that effective leadership moderates the effect of SES by just less than 2%. While this is not a significant effect, this is the largest effect of any factors after SES. As Berliner (2013) noted, the student achievement gap between families in the 90th percentile for SES and in the 10th percentile for SES is widening since the 1940s. Berliner also found that the number of high-poverty, high-minority, high-achievement schools were exceptionally rare despite reformers wanting to promote these schools. With SES impacting schools and schools being labelled as failing if they did not make AYP, Wieczorek (2017) examined how principals’ perceptions of how schools changed during NCLB. Wieczorek used national data and found that schools with lower SES had principals who were focusing professional development more on school goals, district goals, increasing alignment to standards, student achievement, resources and assessments compared to their higher SES colleagues as a result of NCLB. Effective leadership cannot overcome the influence of SES, but effective leaders can push a school a little bit closer to high achievement for all students.
General Discussion

The findings in my study align with the findings of researchers into the effect of leadership on student achievement like Bridges (1982), Witziers et al. (2003), and Bryk et al. (2010). The first Elementary and Secondary Act in 1965 was a part of President Johnson’s War on Poverty (Social Welfare History Project, 2016). Schools have been struggling to overcome things that are not within schools’ ability to change and looking at how leaders can influence improvements for students. Since passage of the first Elementary and Secondary Act in April 1965 and signed by President Johnson through President Bush and No Child Left Behind and President Obama’s Race to the Top, schools have been challenged to meet the needs of all students and to provide equal access to quality schools. The negative associations found in my study are in line with all the research since 1965. As the importance of assessments grew, examinations of how a school principal impacts overall student achievement has been of greater study. My study, in line with the previous work of Bryk et al., found that principals do have a statistically significant relationship with student achievement. Whether Bryk’s work had relevance outside CPS and in suburban schools was the driver for this study. Effective leaders, as defined with instructional leadership, teacher-principal trust, program coherence, and teacher influence, can help boost student achievement just as ineffective leaders can hinder progress. My study also found very strong correlations between overall effective leader scores and the substrands. This reliability means that the areas identified within the Effective Leader strand are important for student achievement.
In addition to the primary focus of my study, I also found interesting relationships between Effective Leader scores and demographic factors. My study found that SES has the greatest impact on student achievement through a negative correlation. As the number of free or reduced lunch students increases in a school, student achievement decreases. My study also found that effective leadership does have an impact on how SES influences student achievement, but not a strong enough impact to change the effect of SES. My study also found that effective leadership is the strongest other factor after SES among the demographic factors.

Strengths

One strength of this study was using two consecutive years of data. I had consistent information from 5E and the ISBE. Another strength was that I used the same measure as Bryk and colleagues (2010). This meant that I was using the same questions and scoring that Bryk and colleagues used in CPS. My use in suburban schools in addition to the urban context examined by Bryk et al. expands the research and the work of Bryk and colleagues. This study extends the research into how effective leaders impact student learning.

Limitations

Several limitations exist in this study. The biggest limitation is that the study examined only two years. This means that only schools that chose to participate in both the 2014 5Essentials Survey and the 2015 5Essentials Survey could be part of this study. While it still led
to 265 suburban schools being included, there are many more elementary schools than that in Cook, Lake, DuPage, Kane, and Will Counties. An even larger sample might have found some different results.

Another limitation was the fact that Illinois was changing their state assessment to match Common Core State Standards. Between 2012 and 2015, Illinois did not use the same exam from one year to the next. Some of the variations in relationship could be due to the changing assessments. In addition to changing the content of the assessments, Illinois moved from paper to computer assessments during the time of this study. That may have had some impact on some students’ achievement. Another part of this is that teachers and principals were adjusting to new standards and expectations at this time. That stress could have impacted principal leadership or student achievement.

Future Direction for Researchers

Research into principal impact on student achievement has long been imprecise. Studies as early as Bridges (1982) recognized that more precise measures are needed. The 5Essentials Survey includes Instructional Leadership as a subcategory for effective leaders, but that means there are only eight or nine questions about instructional leadership on the survey. This might be an area where a longer time of study would help gain insight into the impact of principal turnover.

Now that the state assessment is more consistent, student achievement may change as teachers and principals adjust to the new expectations. This may impact both Effective Leader scores and student achievement. After shifting from ISAT to PARCC, the state needs now only
to make minor adjustments annually to keep the test valid. This is a typical amount of change for any statewide assessment. The shift from one assessment to the other was a significant change in the format of the test, the rigor of the standards, the types of questions being asked, and the state’s method of scoring the assessment. Now, schools have given PARCC for several years and have begun analyzing trends in their school data. Schools have familiarity with the assessment and can work to ensure students are better prepared. This may lead to improvement in student achievement under the guidance of an effective leader. That’s a question for future research to examine.

Future researchers may also want to take these ideas in a more qualitative direction in order to drill down into principal leadership in a district or county. The statewide administration of 5E does not provide any details about specific actions principals perform within their days. In order to further deepen our understanding of how effective leaders impact student achievement, future research may need to actually go into schools and observe principals in action. This might be more precise in how the principal’s leadership impacts student learning.

Intended Audience

This study is potentially meaningful for principals or district leaders. This may help them use 5Essentials in their districts or buildings. The ISBE stated that 5E could be used for goal setting, and knowing that there is a significant correlation between effective leaders based on 5E and improvements in student achievement might help principals set goals for how each may want to grow in a year. It also can help principals when speaking to the larger community to show
how effective the school and its leader are. Principals might also use it with their teachers to talk about how the principal can improve leadership. Each teacher and principal can view the overall Effective Leader score and the strand scores as long as 50% of eligible teachers respond to the survey. District leaders can also use this to be confident in helping their principals grow professionally. Knowing that the measure has been shown to have a relationship with student achievement in suburban schools can help district officials with specific ways to help a principal grow.

Closing Remarks

I began this study because I wondered if 5E was really as relevant in the suburbs as it was for CPS. The state has included 5E results in public school report cards online visible to anyone and this led to both a research and professional interest in my study. My study demonstrates that effective leaders have a positive impact on student achievement in suburban elementary schools, but there are other factors that may play a more significant role in achievement outcomes. My study expanded the work of Bryk and colleagues and the overall body of research looking at the impact effective leaders can have on student achievement. This also confirms for school principals that while many of us may have left teaching to become administrators, we do still have an impact on the lives of our students.
Bibliography


