ACADEMIC OPTIMISM IN MIDDLE SCHOOLS:

A STUDY OF FACTORS THAT APPEAR TO

CONTRIBUTE TO ITS DEVELOPMENT

By

Zachary Allen Best

John A. Freeman
Professor of Education
(Chair)

Ted L. Miller
Professor of Education
(Committee Member)

Vicki N. Petzko
Professor of Education
(Committee Member)

Hunter M. Brimi
External Reviewer
(Committee Member)

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ABSTRACT

The need to increase student academic achievement has been established and well-documented in the literature. With a heightened focus on accountability measures, school personnel are under significant pressure to find ways to increase student achievement. Research suggests that academic emphasis, collective teacher efficacy, and faculty trust in students and teachers actually work in concert and form a newly-identified construct – academic optimism – that has been shown to have a positive relationship with student achievement. The purpose of this study was to determine those factors that may be present in middle schools with high levels of academic optimism.

Ten middle schools in a large, southeastern school district participated in this mixed-methods study. Faculty and staff members were invited to complete the School Academic Optimism Scale survey, the results of which were calculated to determine the academic optimism (AO) level of each school. Two schools were selected as case studies – a high-SES/high-AO and a low-SES/high-AO school. Two retired teachers conducted open-ended interviews of six teachers at each school, and the researcher also utilized document analysis and observations to corroborate the interview responses. Additionally, a number of quantitative factors that have been shown in the literature to be related to student achievement were examined to determine if they, too, were related to the academic optimism of schools.

Quantitative analysis revealed a positive relationship between a school's SES and attendance rate and its level of academic optimism, and a negative relationship between number of suspensions and academic optimism. A review of the interviews, documents, and

observations revealed three themes that appeared to be prevalent in middle schools with high academic optimism: communication, collaboration and support, and a culture of excellence. Teacher communication with parents and with one another is evident in schools with high academic optimism. Also evident in schools with high academic optimism is a strong focus on teacher collaboration and a strong network of community, parent, and administrative support. Finally, those schools high in academic optimism were characterized by a culture of excellence grounded in the teachers' expectations for students to be academically successful.

DEDICATION

To the students, teachers, and school leaders with whom I have had and continue to have the pleasure to work.

To my wife, Kelley, who supported and encouraged me during this process.

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LIST OF ABBREVIATIONS

AO, Academic Optimism

AVID, Advancement Via Individual Determination

HLM, Hierarchical Linear Model

IEP, Individualized Education Program

ISS, In School Suspension

NCLB, No Child Left Behind

PLC, Professional Learning Community

SAOS, School Academic Optimism Scale

SES, Socioeconomic Status

SWOT, Strengths/Weaknesses/Opportunities/Threats

TELL, Teaching, Empowering, Leading, and learning

TVAAS, Tennessee Value-Added Assessment System

CHAPTER I

INTRODUCTION

Background to the Problem

In 1966, the perception of public education in the US was negatively impacted by the release of the comprehensive government study, Equality of Educational Opportunity Report (Coleman et al., 1966) – commonly known as the Coleman Report. The findings reported by this study suggested that schools had little, if any, impact on a student's ability to achieve academically (Rutter, Maughan, Mortimore, Ouston, & Smith, 1979). Equally controversial was the reauthorization of the 1965 Elementary and Secondary Education Act in 2001, commonly known as the No Child Left Behind Act of 2001 (No Child Left Behind [NCLB], 2003), which placed the responsibility of student achievement more squarely on schools than ever before. The glaring irony between the findings of the first document and the decree of the latter did not go unnoticed as educational researchers continued to try to identify school-related variables that do, in fact, contribute to student success.

Despite efforts to dispute the findings of the Coleman Report, one key conclusion drawn from the data remains unchanged: the single best predictor of student achievement was and remains the socio-economic status (SES) of the students (Sanders, 1998). Since schools and districts cannot change the SES of their students, researchers have aimed to identify those factors which, at the school level, make the largest impact on student achievement while controlling for the SES of the students (McGuigan & Hoy, 2006). Thus far, a sizeable amount of research has

been focused on identifying instructional strategies that impact student achievement. For example, according to an extensive meta-analysis of student achievement research, a teacher can increase student achievement in all contents and grade levels by regularly reinforcing effort and providing recognition, using non-linguistic representations, and setting objectives and providing feedback (Marzano, Pickering, & Pollock, 2001).

While research on instructional strategies is certainly productive and worth conducting, such research emphasizes behavioral components of the educational process and ignores cognitive and affective dimensions. With the relative value of research regarding the relationship between instruction and student achievement, examining other types of research might appear counterintuitive. However, Burlando (1969) criticized teacher preparation programs for shunning the development of teacher affective belief systems in favor of training only in areas of instruction, and several subsequent studies have shown that a school's impact on student achievement is not limited to instruction only. For example, research indicates that teachers' expectations of students' performance are related to student achievement (Holtzman, 1970; Jacobs & Harvey, 2010; van den Bergh, Denessen, Hornstra, Voeten, & Holland, 2010). Additionally, the academic emphasis of a school, collective efficacy of the faculty, and faculty trust in students and parents, have all been independently suggested to have a strong relationship to student achievement. Indeed, collectively these factors form a newly-identified construct – academic optimism – that has also been suggested to have a significant and positive relationship with student achievement.

Hoy, Tarter, and Hoy (2006) chose the term *academic optimism* in order "to reflect beliefs about control in schools" (p. 144); the three components – academic emphasis, collective efficacy, and faculty trust – individually reflect the possibility of success. Unique to academic

optimism is the notion that optimism is not solely a cognitive characteristic (W. K. Hoy et al., 2006), but contains affective and behavioral elements as well. While cognitive influence is present through the collective efficacy component, academic optimism embraces the belief that optimism is additionally influenced by emotions. Peterson (2000) stated that "if we forget the emotional flavor that pervades optimism, we can make little sense of the fact that optimism is both motivated and motivating" (p. 45). Therefore, academic optimism contains an affective component present in faculty trust. Because certain teacher behaviors are reflected in the academic emphasis of schools, Hoy and colleagues (2006) identified a behavioral component of academic optimism as well.

Statement of the Problem

There exists a significant and well-documented need to increase achievement among America's students. The 1983 government report, *A Nation at Risk* (United States National Commission on Excellence in Education, 1983), revealed that the once-dominant United States was falling behind in many measures of academic success. Commissioned by then-Secretary of Education Terrel Bell, the report detailed how the academic achievement of US students had declined steadily since the 1960s. Scholastic Achievement Test (SAT) scores decreased 40 (mathematics) and 50 points (verbal) from 1963 to 1980, and science scores of 17-year-olds declined on tests administered in 1969, 1973, and again in 1977. At the same time, the number of remedial math courses offered at four-year colleges nearly doubled. United States students failed to compete internationally, placing last in seven different tests given to students from industrialized nations (United States National Commission on Excellence in Education, 1983).

A recent follow-up to that report showed few signs of improvement. According to *A Nation Accountable* (U.S. Department of Education, 2008), of every 20 students born in 1983 – the year of the initial report – 14 graduated high school on time and only five finished a four year degree by the spring of 2007. Reading scores for 17-year-olds in 2007 were the same as the scores in 1983. In 2006, only 35 percent of American nine-year-olds were proficient in reading, and 40 percent were proficient in math. When compared to other countries in 2006, US fourth graders ranked below 17 other countries in literacy (Manzo, 2007). In the same year, American 15-year-olds ranked 17th on a science exam administered to students in 30 industrialized nations (Cavanagh, 2007).

Those students who do graduate high school are not necessarily prepared for college. A survey of freshmen mathematics professors revealed that nearly 60% of college freshmen were, in their estimation, not prepared for the demands of college mathematics. Specifically, the researchers cited a lack of algebraic knowledge among incoming students (Corbishley & Truxaw, 2010). Data from the National Assessment of Educational Progress (NAEP) (National Center for Education Statistics, 2001, 2010) supported those findings.

The need to increase achievement is exemplified not only by a decrease in academic achievement, but by an increase in educator accountability as well. The link between achievement and accountability is found in recent reform efforts, most notably the *Race to the Top* initiative. In order to be eligible for *Race to the Top* funding, states were required to have no law prohibiting the use of student achievement data in teacher evaluations (U.S. Department of Education, 2009) In fact, to strengthen their proposals, 11 states actually created laws requiring student achievement data to be used in teacher retention and evaluation decisions (McGuinn, 2012). In order to adequately prepare students for post-secondary study and meet

rigorous accountability measures, it is imperative to reverse the negative academic achievement trends of US students.

Purpose of the Study

Throughout the past half century, educational research has examined through a variety of investigatory lenses factors which impact student achievement. In the late 1960s, educational research utilized the *production function* model from economics to attempt to understand the effects that schools had on the ability of students to achieve (Hanushek, 1989). The premise of the production function model was that the outcome of education (student achievement) could be measured as a function of an observable input (process). Later, educational research expanded to the cognitive domain with the examination of teacher efficacy, the belief of teachers that they can overcome challenges to help students (Berman, McLaughlin, Bass, Pauly, & Zellman, 1977). Two studies conducted by the RAND organization in 1976 and 1977 were the first to link individual teacher efficacy to student achievement (Tschannen-Moran, Hoy, & Hoy, 1998). Subsequently, building upon Bandura's (1997) assertion that collective efficacy at the organizational level is related to the organization's performance, Goddard (2001) and others demonstrated a connection between the collective efficacy of teachers and student achievement. Research in the affective domain has suggested that faculty trust in parents and students is positively related to student achievement (W. K. Hoy, 2002). Not surprisingly, academic emphasis – the pursuit of academic excellence – is positively related to student achievement as well (Goddard, Sweetland, & Hoy, 2000). Noting the interconnectedness of collective efficacy, faculty trust, and academic emphasis and their effect as a collective on student achievement,

Hoy, Tarter, and Hoy (2006) coined the term *academic optimism* to "provide an explanation of collective behavior in terms of cognitive, affective, and behavioral dimensions" (p. 143).

The purpose of this study was to determine some school characteristics that may be associated with academic optimism. While research supports a relationship between academic optimism and student achievement (W. K. Hoy et al., 2006), little research identifies specific characteristics of schools rich in academic optimism (McGuigan & Hoy, 2006). Research of academic emphasis, collective efficacy, and faculty trust is somewhat more helpful in that it reveals some school characteristics associated with each component, as well as occasional recommendations as to how schools might cultivate a particular component. However, most research regarding academic emphasis, collective efficacy, and faculty trust is based on survey results rather than case studies. Therefore, the characteristics associated with each component of academic optimism are most often described in the survey questions themselves, and not through specific, observed examples.

While the survey questions have provided general descriptions of academic emphasis, collective efficacy, and faculty trust, some examples of more specific characteristics may be found within the research. For example, faculty trust is high where parental collaboration is strong. Hoy and Tschannen-Moran (1999) and Hoy (2002) therefore recommended the creation of a parent-teacher advisory board tasked with making curricular decisions as a means to increase faculty trust. Early research revealed several characteristics common among schools with high academic press, including high expectations for students, an orderly environment, and an emphasis on acquisition of basic skills (Edmonds, 1979). Goddard, Hoy, and Hoy (2004) hypothesized, based on self-efficacy theory, that teachers in schools with high collective efficacy are more likely to accept ownership of student achievement.

Based upon the findings that suggest a relationship between academic optimism and student achievement, and the dearth of research into factors that contribute to the academic optimism of schools, it seems that further research into the organizational and inter relational factors found in schools with high levels of academic optimism would be a logical next step. Therefore, the purpose of this study was to identify middle schools that have high levels of academic optimism and to examine these schools quantitatively and qualitatively to determine what factors may be contributing to their academic optimism.

Significance of the Study

This study aims to add to existing research by identifying characteristics that are most prevalent when the components of academic optimism are working in concert with one another. Additionally, this study provides the opportunity to identify characteristics that might not have been previously identified as being indicative of the individual components of academic optimism: academic emphasis, collective efficacy, and faculty trust in parents and students. By identifying those characteristics most associated with academic optimism, school leaders can attempt to develop those characteristics within their own schools.

Main Research Questions

With the discovery that three factors – academic emphasis, collective efficacy, and faculty trust in students and parents – in fact work in concert to form a single construct to impact student achievement, Hoy and his colleagues coined the term *academic optimism* to unify the separate factors. A school with high academic optimism is described as "a collectivity in which the faculty believes that *it can* make a difference, that *students can* learn, and academic

performance *can be* achieved" (W. K. Hoy et al., 2006, p. 145). Research Question 1utilizes School Academic Optimism Scale (SAOS) survey results to determine the level of academic optimism in the participating middle schools. Research Question 2 uses the same survey results to determine the sub-scores of the individual components of academic optimism. Research Question 3 seeks to determine whether certain factors known in the literature to have an impact on student achievement are related to academic optimism. Research Question 4 seeks to qualitatively identify emergent themes in schools that display high levels of academic optimism.

Research Question 1: Based on the results of the AO survey, what are the overall scores of academic optimism for participating middle schools in an eastern Tennessee school district?

Research Question 2: Based on the results of the AO survey, what are the overall scores in three specific key areas of academic optimism for participating middle schools in an eastern Tennessee school district?

Research Question 2A: Based on the results of the AO survey, what is the sub-score in the area of academic emphasis for participating middle schools in an eastern Tennessee school district?

Research Question 2B: Based on the results of the AO survey, what is the sub-score in the area of faculty trust for participating middle schools in an eastern Tennessee school district?

Research Question 2C: Based on the results of the AO survey, what is the sub-score in the area of collective efficacy for participating middle schools in an eastern Tennessee school district?

Research Question 3: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and specific attribute independent variables identified in this study?

Research Question 3A: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and student enrollment?

Research Question 3B: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and length of tenure of the school's principal?

Research Question 3C: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and whether the school uses teams?

Research Question 3D: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and student attendance rate?

Research Question 3E: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and number of suspensions in the school?

Research Question 3F: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and age of the school facilities?

Research question 3G: Is there a relationship between the AO survey scores of the participating middle schools in eastern Tennessee and socio-economic status?

Research Question 3H: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and Value-Added scores in content areas?

Research Question 4: What themes emerge from case studies of schools with high levels of AO that might help explain why the schools exhibit high AO?

Rationale for the Study

With an increase in accountability for student achievement, school districts throughout the US are working to identify ways to improve student achievement. As one of only two states to initially win federal funding under the *Race to the Top* initiative in 2010 (Heitin, 2011), Tennessee committed to educational reform measures that placed increased accountability on educators with the intent of increasing student achievement. In fact, at the time of this study,

student achievement contributed a full 50% to a teacher's evaluation score. Schools and districts were held accountable for increasing student achievement 3-5% per year, with an emphasis on decreasing achievement gaps between underperforming subgroups and the district as a whole (Tennessee Department of Education, 2012).

With a number of options for improving student achievement available to educational officials, one might question the focus on identifying factors associated with academic optimism. According to Hoy, Tarter, and Hoy (2006), "Academic optimism gives a rich picture of human agency because it provides an explanation of collective behavior in terms of cognitive, affective, and behavioral dimensions" (p. 143). Hoy and his colleagues chose the term "academic optimism" to describe their new construct because it serves as a reminder that it can be *learned*. The goal of this study was to identify factors associated with academically optimistic schools, thus increasing the opportunity for others to develop academic optimism.

Definition of Terms

For the purpose of this study, the following terms will be defined as noted.

Academic emphasis: Academic emphasis is

> the extent to which the school is driven by a quest for academic excellence. High but achievable goals are set for students; the learning environment is orderly and serious; teachers believe in their students' ability to achieve; and students work hard and respect those who do well academically. (W. K. Hoy, Tarter, & Kottkamp, 1991, p. 73)

Academic optimism: "A school with high academic optimism is a collectivity in which the faculty believes that *it can* make a difference, that students *can learn*, and academic performance *can be* achieved" (W. K. Hoy et al., 2006).

Collective efficacy: The "perception of teachers in a specific school that the faculty as a whole can execute courses of action required to positively affect student achievement" (Goddard, Hoy, & Hoy, 2000).

Middle School: For the purpose of this study, a middle school is a school serving students in grades 6-8.

Socioeconomic status (SES): For the purpose of this study, socio-economic status will be based on the school-wide rate of students receiving free and reduced meals.

Student achievement: For the purpose of this study, student achievement is academic success as measured by student scores on standardized achievement tests.

Trust: Trust is "an individual's or group's willingness to be vulnerable to another party based on the confidence that the latter party is benevolent, reliable, competent, honest, and open" (W. K. Hoy & Tschannen-Moran, 1999).

Delimitations of the Study

A large school district in a southeastern state was selected for this research study. In addition to being the district in which the researcher served as an assistant principal, it is a district that was well-represented by rural, urban, and suburban populations. The district was comprised of 14 middle schools, in addition to two alternative schools serving middle and high school students and an adaptive education center serving students in all grades. Operating under the assumption that academic optimism manifests differently in regular schools as compared to alternative schools, only the principals of the 14 regular middle schools were invited to participate in the study. Because they have regular contact with students, all faculty and staff who were present at the faculty meetings at which the surveys were given were invited to

participate in the first phase of the study. Because the elements of academic optimism deal in large part with the faculty, only teachers were selected to participate in the interview portion of the study. The interview was limited to five open-ended questions in order to be respectful of the participants' time, yet still provide sufficient opportunity for teachers to expand upon their answers. In an effort to be as minimally invasive, the researcher made only one trip to each school.

Limitations of the Study

While the district was well-represented by urban, suburban, and rural populations, it is unclear whether the findings can be generalized to smaller or more homogeneous districts, or districts in other geographic locales. Of the 14 middle schools that were approached to participate, principals at four of them either declined to participate or did not respond to multiple requests. Of the non-participating schools, one served a primarily rural population, while the 10 participating schools served primarily urban or suburban populations, or a mix of both. Although the methodology called for a combination of qualitative approaches to the case studies, including interviews, document analyses, and observations, it was ultimately not possible to conduct an observation of School G due to the date made available to the researcher. The principals at the two case study schools were asked to assist the researcher by selecting volunteers representative of all grades and multiple disciplines to participate in the interview portion of the study. Whereas one principal made a solicitation to all teachers during a staff meeting, the other principal asked her PLC (Professional Learning Community) leaders to participate in the interview following their end of the year check out meeting with her. Interviewees at both schools represented all three grade levels and multiple instructional

disciplines. Seven teachers were initially identified at each school to participate in the interviews, however only six teachers were interviewed. At School A, a teacher was scheduled to participate in an IEP meeting, and there was an overlap in interview times at School G.

Assumptions

For the purpose of this study, the following assumptions were made:

- Student achievement is an appropriate measure of the educational process. Although arguments can be made that any correlation between education and success in life is minimal (Cohen, 1970; Holtzman, 1970), student achievement is the method by which the government and schools measure success. Therefore, it was appropriate that this study utilized the same measure.
- Similarly, standardized tests were assumed to be an accurate measure of student achievement.
- Participants answered truthfully and honestly to all questions posed by the researcher.

Summary

The need to increase student achievement is well-documented. Academic optimism is an emerging construct suggested to be positively correlated with student achievement. The following chapter will examine the history of school effects research, as well as the individual components of academic optimism – academic emphasis, collective efficacy, and faculty trust. Research showing the relationship between academic emphasis, collective efficacy, and faculty trust are examined, in addition to the individual and collective relationship with student achievement.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Based on the theory that three organizational factors positively associated with student achievement in fact operate in concert, Hoy, Tarter, and Hoy (2006, 2006) identified the emergent construct that they call academic optimism. Individually, the components of academic optimism are the academic emphasis of schools, collective efficacy of teachers, and faculty trust in parents and students. Hoy and his colleagues contended that each has a reciprocal effect on the other. Like each individual construct, academic optimism is also an organizational factor intended to measure impact at the organizational rather than individual level. The following review of literature provides a brief background to school effects research, then examines academic emphasis, collective efficacy, and faculty trust as unique school factors before revealing how they combine to form a single construct related to student achievement known as "academic optimism."

Background of School Effects Research

Since the release of the Coleman Report (1966), school effects research has occupied the pages of countless books and journals, thus making a comprehensive review of the subject impossible within these pages. Instead, the following section reviews the history of school effects research, highlights some of the problems inherent with school effects research, reveals

advances in school effects research, and demonstrates how academic optimism has the potential to affect student achievement.

Following the release of the Coleman Report (1966), the results of which seemed to suggest schools had little, if any, impact on a student's ability to achieve, a great deal of effort was spent in the attempt to identify school factors that impact student achievement. In the late 1960s and early 1970s, a type of educational research emerged known as the process-product approach (Taylor, Pressley, & Pearson, 2000). Essentially, the educational process is represented by an equation in which a desired output, usually student achievement, is related to a number of variables, or inputs. In those instances when a variable is positively related to the desired outcome, we say that that input is positively associated with student achievement (Hanushek, 1989). Noting the challenges in using mathematical equations to explain human behavior, however, the authors of a study prepared by the Rand Corporation pointed out that, "So long as production-function research is based on data generated by natural experiments, it will be difficult, if not impossible, to isolate completely the relative contributions of school resources, background factors, and peer group influences" (Averch, Carroll, Donaldson, Kiesling, & Pincus, 1971, p. 44). Murnane (1975) echoed similar concerns when he noted that ultimately, reducing students and teachers to a series of inputs in mathematical equations diminished their complexity. As researchers attempted to isolate certain variables thought to contribute to student achievement, their lack of control over the research groups made this task nearly impossible, providing results that were often inconclusive, and at best inconsistent. Even as some early studies found that certain inputs were correlated to student achievement, other studies found no correlation among the same variables (Averch et al., 1971).

This variance among conclusions was not surprising when one considered subsequent advances in methodological approaches to school effects research. While school effects research continued to rely on the use of natural experiments, there were significant improvements in how research data were analyzed. These improvements in school effects research led to studies that tended to dispute Coleman's claim that schools and teachers have little to do with student achievement. Rutter et al. (1979) noted that the Coleman study was flawed because it relied on a single measure of student achievement (verbal aptitude), a variable that was not representative of the content directly taught at the schools which were the subject of the study. The reliance on a single variable that bore little relevance to the schools' actual impact on student achievement skewed the results of the study, making it appear as if schools had little impact on student achievement. In their own longitudinal study, Rutter et al. (1979) improved on earlier methodologies by studying multiple variables over time, and found that a number of factors did, in fact, contribute to student achievement.

For example, although Hanushek found that neither years of teacher experience, level of teacher education (1971, 1989), teacher salary, nor class size (1989) were related to student achievement, a more recent study revealed that each of those variables *was* in fact positively related to student achievement (Greenwald, Hedges, & Laine, 1996; Raudenbush & Bryk, 1986). Greenwald and his colleagues used much of the same data from the Hanushek meta-analysis, but eliminated those studies that did not meet their more stringent inclusion rules. Additionally, nearly two-thirds of the equations and coefficients from the remaining studies were eliminated from consideration for failure to meet more stringent decision rules, such as the inclusion of either a control for socioeconomic status or the presence of longitudinal or quasi-longitudinal measures of achievement.

One of the most significant advances in the mathematical approach to examining school effects data was the development of hierarchical linear modeling (HLM). Developed by Raudenbush and Bryk (1986), HLM was created in response to the need for improved statistical models for the evaluation of school effects data. Citing problems with the existing approach to interpreting school effects data, Cronbach and colleagues (1976) stated, "The majority of studies of educational effects…have collected and analyzed data in ways that conceal more than they reveal. The established methods have generated false conclusions in many studies" (p. 1). The false conclusions were a result of interpreting multi-level data with a single-level linear statistical approach. For example, variances in student data (one level) were found to be greater between classrooms (another level) than within them. Bryk and Raudenbush's (1988) improved model for statistical analysis overcame the problems of existing techniques by allowing for examination of effects data over time and within the context of the organizational structures in which the students are nested (Stringfield & Herman, 1996).

Political Impact on School Effects Research

It is important to acknowledge the impact of political influence on school effects research throughout the years. While it can be difficult to conduct research completely free of bias, political influence can cause a significant shift in the focus of research. Consider, for example, the trend in educational research following the Sputnik era of the 1950s. The general concern across the country was that America was at risk of falling behind in the Cold War. Efforts were systematically targeted at regaining the pivotal advantage in the space race, and the impact was especially felt in America's schools. Federal initiatives were aimed at reforming the curriculum to be more science-centric, which impacted educational research as well. Whereas previous

studies had focused primarily on the impact of the teacher in the classroom, the post-Sputnik era of effects research was marked by a dramatic shift in focus to curriculum (Brophy & Good, 1986).

Decades later, politics continued to play a role in education and school effects research. Former President George W. Bush campaigned on a platform of school reform, and in 2001 made good on his promises by leading the bipartisan reauthorization of the 1965 Elementary and Secondary Education Act, now commonly known as No Child Left Behind. The Act (NCLB, 2003) mandated that by the year 2014, all students must be proficient in mathematics and language arts. As a result, lawmakers placed increased accountability on teachers to raise student test scores. Consequently, the focus of school effects research once again shifted back to the importance of teacher instruction on student achievement. Of particular note was the hugely popular and widely referenced meta-analytical research of Robert Marzano and his colleagues. Based on years of research, Marzano and his team found that the instructional strategies with the greatest impact on student achievement were identifying similarities and differences (between topics), summarizing and note taking, and reinforcing effort and providing recognition (Marzano et al., 2001).

Instrumental versus Expressive Activities

A final problem with school effects research is that it usually focused on instrumental rather than expressive activities. According to Uline, Miller, and Tschannen-Moran's (1998) interpretation of Etzioni's (1975) research, instrumental activities "serve as the means for organizational agency," (p. 466) and include academic achievement and the teaching/learning function. Examples of expressive activities, those that "convey organizational meaning," (p.

466) include trust and morale. Because instrumental activities are more tangible and thus more easily measured, they tended to garner the bulk of research attention. As a result, expressive activities, though potentially as influential as instrumental activities, tended to be ignored in the field of school effects research.

School Size

For years, studies attempted to determine what effect, if any, school size had on the academic achievement of its students. In the 1960s, smaller schools gained favor over their larger counterparts, and became the norm (Lindahl & Cain, 2012). Later, proponents of the theory of economy suggested that larger schools, like other larger organizations, could benefit from the advantage of size. Driven primarily from a concern for cost savings, proponents of the theory of economy defended the construction of large schools, noting that a large school would benefit from the advantages of buying supplies and materials in large quantities (Lee & Smith, 1997; Walberg & Walberg, 1994). Furthermore, large schools were more likely to have sufficient enrollment to justify academic programs tailored to multiple student interests or needs (Lee & Smith, 1997). Recent reforms have seen a return to a focus on smaller learning environment size, such as the opening of more than 200 smaller high schools in urban areas with support from the Bill and Melinda Gates Foundation (Hursh, 2011). Additionally, the schools-within-schools movement has gained popularity as a way to create multiple small learning environments within a single large school (Lee & Smith, 1997), allowing students and teachers to develop stronger relationships, creating a sense of family within the school (Lee, Smith, & Croninger, 1997).

Despite current and past trends, research produced inconsistent results when it came to determining the optimal size for a school. Several studies revealed a positive and linear relationship between school size and academic achievement, suggesting that larger schools have a positive impact on academic achievement. Schreiber (2002), for example, noted a relationship between high school size and achievement in advanced mathematics. Larger schools were often perceived as superior because of their ability to offer such advantages as more class choices, diverse student populations (Leithwood & Jantzi, 2009), and teachers with specializations in certain content areas (Lee et al., 1997).

In contrast to findings proposing a positive relationship between size and achievement, other studies suggested the opposite was true, that smaller schools are in fact more beneficial. Roberts (2002) found that students from smaller middle schools were less likely to score below basic, the lowest of four designations, on the state achievement test. A 2002 review of existing studies on school size found that "decreasing returns to size may begin to emerge for high schools above 1000 students and elementary schools above 600 students" (Andrews, Duncombe, & Yinger, 2002, p. 255). Smaller schools tended to promote increased student engagement (Weiss, Carolan, & Baker-Smith, 2010), and engagement was positively related to student grades (Chase, Hilliard, Geldhof, Warren, & Lerner, 2014). Smaller schools tended to have better attendance, lower dropout rates (Werblow & Duesbery, 2009), and a stronger sense of community (Zoda, Combs, & Slate, 2011).

A third, curvilinear, relationship between school size and achievement has been proposed, suggesting that achievement increases with size, to a point, then begins to decrease (Leithwood & Jantzi, 2009). Werblow and Duesbery (2009) also found a curvilinear relationship that suggested that size had a small but positive impact on achievement, with only five percent of

the variance in mathematics achievement attributable to size, but for very small and very large schools. In contrast to the six studies reviewed by Leithwood and Jantzi (2009) that showed an optimal size somewhere in the mid-range, the Werblow and Duesbery (2009) study suggested the best schools are either very small or very large, with a dip rather than bump in achievement for the mid-sized schools.

With such variance in findings, one might question the importance of school size research. As a single variable, school size did not appear to be a consistent predictor of student achievement, based on conflicting study results. Zoda, Combs, and Slate (2011) recommended the question be reframed from one of optimal school size, to one of optimal school size *for a particular group of students*. Schools that serve large populations of students in poverty have been shown to benefit from a smaller size (Johnson, Howley, & Howley, 2002), whereas large schools serving a more affluent population tended to perform better (Friedkin & Necochea, 1988). This suggests that, when examined in the context of other variables, school size can prove to be an important factor for student achievement.

Age of Building

Various aspects of the condition of school buildings have been studied with respect to their relationship to student achievement. Factors such as the temperature, lighting, acoustics, and even the color of a building have been shown to have an impact on student achievement (Earthman & Lemasters, 1996). One variable of particular interest to those involved in facilities planning is the age of the building. With significant costs associated with both refurbishing an existing school building or constructing a new one, the question of what impact, if any, the age of a building has on the educational process is an important one.

Research spanning multiple decades suggested that the age of the school building appears to have a negative relationship with student achievement, such that older buildings were associated with lower achievement scores (Earthman & Lemasters, 1997). A regression analysis revealed that math scores of students attending schools that had been renovated within the past ten years were higher than those of students studying in older buildings in the same district (Maxwell, 1999). Multiple measures of academic achievement were compared between students attending the oldest and newest schools in a rural Tennessee district. The schools were otherwise alike, with students from similar socio-economic backgrounds and each having similarly qualified administration. In all measured areas of achievement, the students from the newest school outperformed their peers in the district's oldest building (Bowers & Burkett, 1988). In a Texas school district, building age was moderately related to the number of eighth graders who passed reading class ($\alpha = 0.01$, $r = .320$) (O'Neill & Oates, 2001). In a Georgia school district, building age accounted for approximately 1% of the variance in vocabulary scores, and nearly 2% of the variance in math scores on standardized tests (Chan, 1979). And while an older study found the age of the building appeared to have no impact on student achievement in Chicago and Atlanta schools, in small communities, the age of the building was almost as strong a predictor of reading scores as was SES (Burkhead, Fox, & Holland, 1967).

It is possible that the age of the building is a proxy representative of improvements in environmental variables, such as better lighting, climate control, and building condition (McGuffey & Brown, 1978). Earthman and Lemasters (2011) noted that even when an older building is updated with new features such as air conditioning and lighting, etc., the changes were often not sufficient to positively impact student learning.

Length of Principal Service

While typically not in charge of a class as a teacher of record, modern principals are the instructional leaders of their schools, and their actions have an impact on student learning, with a .25 correlation between school leadership and student achievement (Waters, Marzano, & McNulty, 2004). As the demands of the principalship have escalated in response to increased accountability for schools, fewer qualified applicants are available to fill school leadership positions (Whitaker, 2001). To fill vacancies, particularly in underperforming schools, district leaders often turned to experienced school leaders, a move which ultimately causes a vacancy in the seasoned principal's former school. District leaders faced the difficult decision of keeping experienced leaders in their buildings for an extended period of time, or moving them to fill vacancies.

On the one hand, it is important for organizations, including schools, to have stability in leadership roles (Weinstein, Jacobowitz, Ely, Landon, & Schwartz, 2009). School leaders pointed to certain advantages of a long tenure within an organization, such as a connection with the community and an understanding of the decision-making process (Fidler & Atton, 2004). Three to six years is needed to realize change in elementary school and secondary school students' performance, respectively (Fullan, 2000). Despite some advantages of a lengthy tenure, research also has suggested a plateau of effectiveness, usually identified after a principal has served in the same building between seven and ten years (Earley & Weindling, 2007). It should also be noted that the length of a principal's tenure in a building has not appeared to have any effect on her performance evaluation (Ballou & Podgursky, 1995).

Despite the potential for performance plateau, however, studies have shown a relationship between the length of a principal's service at a school, and the achievement of that

school's students. In schools where the principal had served at least seven years, achievement scores were higher than schools in which the principal had served between two and six years (Vanderhaar, Muñoz, & Rodosky, 2006). Math scores increased with the length of a principal's tenure at the school (D. Clark, Martorell, & Rockoff, 2009). In a study that examined principal turnover in new schools, results showed a slight decrease in graduation rate following the appointment of the school's second leader, and a more severe decline followed the appointment of the third and subsequent principals (Weinstein et al., 2009). Although Brewer (1993) found no independent effect of principal tenure on student achievement, he did note that student scores were positively related to an increase in the number of teachers hired by the current principal.

Attendance

Although the majority of US students attend school on a regular basis, the effects of chronic absenteeism highlight the importance of regular school attendance. Reasons for excessive absences have included favorable weather, vacations, and peer pressure (Kube & Ratigan, 1992). Males and females were chronically absent from school with equal frequency (Hockert, Harrington, Vaughn, Kelly, & Gooden, 2005); however, students from poverty and those who are disabled had higher frequencies of chronic absence (Buehler, Taponga, & Chang, 2012). Often defined as missing 10% or more of an academic school year (Balfanz & Byrnes, 2012; Spradlin, Cierniak, Shi, & Chen, 2012), chronic absenteeism impacted a student's academic achievement and likelihood of graduation.

Several studies suggested a positive relationship between attendance and academic achievement. In a study of 3,171 Ohio schools, building level attendance was correlated to Ohio Proficiency Test results at each grade level tested (r = .57, fourth grade, r = .54, sixth grade, r =

.78, ninth grade, and $r = .55$, twelfth grade) (Roby, 2004). Third, fourth, and fifth graders in an urban Tennessee elementary school who missed more than 10 days scored lower on the Terra Nova reading achievement test than their counterparts who were not absent for ten or more days (Hockert et al., 2005). A longitudinal study of Broward County (Florida) students differentiated between excused and unexcused absences, finding a negative relationship between total absences and achievement on the Florida Comprehensive Assessment Test in math and reading, and a stronger negative relationship between unexcused absences and achievement (Clement, 2006). No relationship, however, was found between excused absences and achievement, which could be explained by the allowance of make-up work for excused absences. The relationship between attendance and achievement remained strong and significant even when regressed against the free and reduced variable (Lamdin, 1996).

Regular attendance has had a significant influence on a student's likelihood of graduating high school. A study of Indiana high school students revealed that 88% of those who missed fewer than five days graduated, whereas only 24% of those who missed more than 18 days per year received their diploma (Spradlin et al., 2012). In Chicago, students who missed between 15 and 19 days their freshman year had only a 21% chance of graduating (Allensworth & Easton, 2007). Barrington and Hendricks (1989) found that absences could be used as a predictor of high school dropouts with 70% accuracy as early as the third grade.

While research has consistently shown a relationship between attendance and achievement, it is important to acknowledge that attendance could potentially be indicative of other underlying issues. In a study of the effects of attendance policies on college students, Levine (1992) found that attendance accounted for nearly 11% variance in achievement, and suggested that attendance might actually be a proxy for an untested variable, such as motivation.

Lamdin (1996) suggested parental concern and teacher engagement may also have been proxies for the attendance variable. Whatever the underlying cause, regular attendance was agreed to be important enough that legal action, including removal of the student from the home, could be taken against parents of chronically absent students, and teenagers could have their driving privileges revoked if they accumulated excessive absences (Clement, 2006). School districts have adopted a number of programs to combat chronic absences, such as Project GRAD, Project PACT, and Check and Connect (Chang & Romero, 2008).

Suspensions

As part of the disciplinary process, school administrators have two types of suspension they can use if it becomes necessary to remove a student from the classroom. The first, commonly referred to as in-school suspension (ISS), provides an opportunity for the student to be removed from the classroom while still remaining at school. Students might serve ISS for a single class period up to several days, staying in a designated classroom isolated from the students' peers. School administrators also have the option of suspending a student out of the building, a consequence requiring the student to remain out of the school for a designated period of time.

The frequency with which students are being suspended from school has drawn significant attention from policymakers and within academic research literature. A recent study of over 26,000 secondary students estimated that one out of every nine pupils was suspended during the 2009-2010 school year (Losen & Martinez, 2013). Noting that suspensions decreased the likelihood of graduation as well as increased opportunities for students to misbehave, the American Pediatrics Association called on its physician members to discourage disciplinary

actions that require students to miss school (Lamont, 2013). Of particular concern was the disproportionate number of African-American male students who have been suspended from school as compared to their counterparts (Anderson, Howard, & Graham, 2007). Davis and Jordan (1994) noted that for African American males in middle and high school, suspensions were associated with academic failure.

The consequences of being suspended from school, regardless of race, are significant. A ninth grader who was suspended even once from school was twice as likely to drop out as a freshman who avoids suspension (Balfanz, Byrnes, & Fox, 2012). In a review of suspension literature, Dupper (1994) noted that suspensions, rather than leading to improved behavior, were often followed by subsequent suspensions and eventually led to increased rates of dropout.

Students who were suspended from school and did not drop out still experienced negative effects from the suspensions. Reading achievement was significantly and negatively related to the number of days a student was suspended (Arcia, 2006), and reading achievement in the sixth grade could predict suspensions in the seventh grade (Anderson et al., 2007). Schools with higher rates of suspension and expulsion had lower state achievement scores, even when controlled for demographic influences such as poverty and school locale (Rausch & Skiba, 2004). O'Neill and Oates (2001) found an inverse relationship at the .01 level between out of school suspensions and seven different measures of eighth grade student achievement.

Miles and Stipek (2006) offered a possible explanation for the relationship between suspensions and academic achievement, noting that aggressive behavior in adolescents is associated with low academic motivation and increased learning difficulties. Interpreting the Miles and Stipek (2006) study, Gregory, Skiba, and Noguera (2010) posited that "underperforming students may become frustrated and disaffected and have lower self-

confidence, all of which may contribute to a higher rate of school disruption" (p. 61). This suggests a cyclical nature of the suspension process. As mentioned in the previous section, achievement suffered when students missed school.

Interdisciplinary Teams

Introduced in the 1960s as an alternative to the departmentally-focused organization indicative of the junior high model (S. N. Clark & Clark, 1994; Walsh & Shay, 1993), interdisciplinary teams became the primary means of organization for middle grades (Hackmann et al., 2002). Clark and Clark (1994) defined interdisciplinary teaming as

> two or more teachers from different subject areas working together to plan, instruct and evaluate groups of students in two or more classrooms while making use of a wide variety of instructional strategies and learning resources in large group, small group, and directed study settings. (p. 124)

While there was some variation in individual schools' implementation of interdisciplinary teams, certain features have characterized the majority of teaming scenarios. Interdisciplinary teams have been characterized by a group of teachers, most commonly four (Hackmann et al., 2002), teaching the same group of students, which promotes the development of interpersonal relationships between students and teachers (Muth & Alvermann, 1992). A primary function of utilizing the team organizational model has been to provide for common planning time among a team of teachers (Juvones, Le, Kaganoff, Augustine, & Constant, 2004). In addition to affording the teachers an opportunity to discuss students' progress and individual student needs, those teaching teams that maximize their common planning time have been able to plan cross-curricular units of study (Arhar, 1992; Flowers, Mertens, & Mulhull, 1999). Schools that implemented high levels of common planning time as part of their teaming had higher gains in

achievement scores than schools that implemented teaming with low levels of common planning time and those that did not have teams (Flowers et al., 1999).

The interdisciplinary team model provided a number of advantages over the department-centric junior high model. Teachers who worked in a school organized by teams experienced higher job satisfaction than their non-teamed counterparts (Flowers et al., 1999). Sinclair noted that students felt the benefits as well, finding a more supportive environment in teamed schools (as cited in Arhar, 1992). Teaming appeared to have had a positive impact on discipline, with the implementation of teaming related to a reduction in behavior referrals. In one case study, discipline referrals for seventh graders dropped by 25% during the initial year of teaming (Kokolis, 2007). Students interviewed in the same case study remarked that the change to teaming at their school had somewhat alleviated the fear that had been traditionally associated with moving to junior high, a fear that Clark and Clark (1994) attributed to feelings of anonymity and isolation. A study of 155 Michigan middle schools revealed higher seventh grade reading and math achievement scores in teamed versus non-teamed schools (Flowers et al., 1999). The impact of teaming on student achievement could be explained by the increased sense of efficacy and satisfaction felt by the teachers as a result of working with their colleagues (Williamson, 1996).

Despite the numerous advantages to interdisciplinary teaming, some potential disadvantages should be noted. Clark and Clark (1994) noted that for a team to be successful, its members must get along with one another. In situations where the teachers were not compatible as a unit, the effectiveness of the team was diminished. The teaming structure can breed competition among teachers, with successful teams unwilling to share their successes with colleagues in other teams within the same school (Ames & Miller, 1994). For teams to have

their maximum impact, they must be implemented with fidelity. Although teaming became the most common organizational structure for middle schools, many schools did not take full advantage of the common planning time afforded them, and thus diminished the impact that teaming could have (Rottier, 2000).

Socioeconomic Status and Academic Achievement

Despite the changing landscape of educational research throughout the decades, there is one factor that has been consistently shown to be related to student achievement – socioeconomic status (Averch et al., 1971; Coleman et al., 1966; Sirin, 2005; White, 1982). While the relationship between socioeconomic status and academic achievement is clear, the cause for the connection has been the subject of much discussion. Bond (1981) cited several studies hypothesizing various links, such as low birth weights among the poor, differences in genetic quality resulting in higher IQ scores for those with higher SES, the influences of cultural factors such as motivation and language, and an educational system that tends to favor the wealthy. The American Psychological Association (APA) (2014) noted that, "Families from low-SES communities are less likely to have the financial resources or time availability to provide children with academic support" (SES and Family Resources, para. 1). The APA pointed to research that suggested a strong literary influence in the home is related to students' reading ability upon entering school (Aikens & Barbarin, 2008), noting also that 62% of parents in the highest-earning quintile read to their children, while only 36% of those in the lowest quintile read to theirs (Coley, 2002).

While the SES of a student's family is the most significant contributor to initial reading success, the SES as measured at the school level has been a more significant contributor to the

rate at which students acquired reading skills once in school (Aikens & Barbarin, 2008). In fact, schools located in high-SES areas did a better job of preparing their students for high school, and a better job of educating them once in high school (Palardy, 2008). Thus, research has shown that SES can be examined at both the family and school level, and in both cases, SES had an impact on student achievement.

Not only can SES be examined at both individual and group levels, but a review of SES literature revealed a number of different measures by which SES can be identified (Konstantopoulos, 2006). While there is disagreement as to an exact definition, there does seem to be agreement that parental income, education, and occupation are the three primary measures of SES (Sirin, 2005). Although there is a correlation between the three measures, each is a separate construct and should be treated as such for research purposes (Bollen, Glanville, & Stecklov, 2001). Therefore, because socio-economic status is operationally defined inconsistently throughout the research literature, there is some debate regarding the degree to which student achievement can be attributed to SES.

Here, two noteworthy studies bear mentioning due to their impressive scope and related findings. The first was a meta-analysis of literature that found an average correlation between SES and school achievement of .343 (White, 1982). The second study (Sirin, 2005) aimed to replicate the White study, and therefore employed similar statistical analyses to research published throughout the 1990s. While the more recent study did find a slightly lower correlation of .299 (Sirin, 2005), these studies are significant in that they confirmed, using varied methods and measures and covering large periods of time, that SES is related to student achievement.

A Reason to be Optimistic

While there are certainly a number of reasons to be cautious when it comes to school effects research, it has still proven to be a valuable area of inquiry. With each new study, results have inspired scholars to delve deeper into specific areas of analysis. For example, Purkey and Smith (1983) discovered that the culture and climate of a school are related to student achievement. Since then, much has been learned about the myriad ways a school's culture and climate can specifically affect student achievement. For instance, variables such as trust in the principal, trust in teachers, and school health, have been shown to be related to the effectiveness of a school (Uline et al., 1998). In fact, these elements provided, at least to some degree, the framework upon which academic optimism is built.

Ultimately, teachers and schools do make a difference, and their relationship to student achievement has been demonstrated throughout the literature (Creemers, 1994). The danger, then, when examining the literature, is to not place too much emphasis upon the changing of a single variable, since simply changing one or two variables will not, in the absence of other improvement efforts, improve student achievement (D. U. Levine & Lezotte, 1995). Instead, an integrated approach in which a number of variables are improved upon is the best way to effect a meaningful change in student achievement (Creemers, 1994). By focusing on the improvement of several variables – both instrumental and expressive – academic optimism has the potential to yield valuable insights in the field of school effects research.

Academic Optimism

Intrigued by findings that three individual constructs, each separately found to affect student achievement, in fact appear to work in concert with one another, Hoy and his colleagues

named the new collective construct academic optimism (W. K. Hoy et al., 2006). Similar to its individual components – academic emphasis, collective teacher efficacy, and faculty trust – academic optimism is a group level construct, an organizational factor intended to measure impact at the organizational rather than individual level. Unique to academic optimism as a theory to explain group behavior is its composition of cognitive, affective, and behavioral components. This triadic collective is crucial in supporting Hoy's notion that, unlike traditional concepts of optimism, academic optimism can be learned.

Without an understanding of its three separate components, the term *academic optimism* could potentially be misunderstood when described as a characteristic that can be learned. "Optimism," according to Hoy, Tarter, and Hoy (2006) "is an appropriate overarching construct to unite efficacy, trust, and academic press because each concept contains a sense of the possible" (p. 145). However, optimism is defined as an attitude associated with an advantageous expectation about the future (Tiger, 1979), and is usually associated with the cognitive rather than the behavioral or affective domain. Hope theory serves to bridge the gap between cognition and behavior, noting that a high-hope individual will create alternative paths to a desired outcome when the initial path fails (Snyder, 1995). And while he noted that optimism is often considered a part of the cognitive domain, Peterson (2000) articulated that an emotional component is evident as well, as optimism is both "motivated and motivating" (p. 45).

Academic Emphasis

Definition of construct. The academic emphasis of a school is one of seven components essential to the promotion of healthy secondary schools (W. K. Hoy & Feldman, 1987). Of those components (institutional integrity, initiating structure, consideration, principal influence,

resource support, and morale), academic emphasis was the best predictor of student achievement (W. K. Hoy et al., 1991). Hoy and his colleagues (1991) defined academic emphasis as:

> the extent to which the school is driven by a quest for academic excellence. High but achievable goals are set for students; the learning environment is orderly and serious; teachers believe in their students' ability to achieve; and students work hard and respect those who do well academically. (p. 73)

Put simply, "Academic emphasis is the extent to which the school is driven by a quest for academic excellence" (W. K. Hoy & Hannum, 1997).

It is important to note that academic emphasis, along with collective efficacy and faculty trust, are organizational components and are not reflections of any single member within an organization. Therefore, students, teachers, and administrators are responsible for the collective attitude towards academics in any given school (Goddard et al., 2000).

Theoretical background. Although Hoy and his colleagues were the first to coin the term academic emphasis, the framework upon which they formed the construct had been in existence prior to their work. Murphy, Weil, Hallinger, and Mitman (1982) had previously identified academic press as an important contributor to school effectiveness. Defined by Murphy and his colleagues as the "…degree to which environmental forces press for student achievement on a school wide basis…specifically, to work hard in school and do well academically" (p. 22), academic press laid the groundwork upon which Hoy and his colleagues were able to build the construct of academic emphasis. Specifically, they identified several behaviors that, when adopted by teachers, contributed to the academic press of the school. Many of these behaviors, including placing high academic demands upon students and conducting orderly classrooms, are incorporated into academic emphasis as well.

Following the Coleman Report, research revealed several components of academic emphasis related to effective schools. Much of the research during this time was conducted by categorizing schools as either effective or ineffective, and then identifying characteristics shared among the effective schools. Such studies revealed a number of characteristics associated with effective schools, including the setting of high expectations for students (Weber, 1971), increased emphasis on mathematics and reading skills, increased time spent on new topics, and comparatively more time spent on the teaching of reading skills than ineffective schools (Brookover & Lezotte, 1979). A 1979 meta-analysis was the first to actually link student achievement to an emphasis on academics and a learning environment in which structure is emphasized (Moos, 1979). Student scores appeared to increase when instructional time was protected, which in turn placed an emphasis on academics (Stallings & Mohlman, 1981).

Research on the construct. Early research into the relationship between academic emphasis and student achievement tackled the very real problem of the interconnectedness of academic emphasis and socio-economic status. In a study of 58 secondary schools in an industrial Eastern state, Hoy, Tarter, and Bliss (1990) found that academic emphasis was correlated with academic achievement ($r = .63$, $p < .01$). The same study showed that socioeconomic status was also correlated with academic achievement ($r = .82$, $p < .01$), and, not surprisingly, academic emphasis and socioeconomic status were also strongly correlated. Therefore, the researchers continued their investigation to determine whether or not the relationship between academic emphasis and academic achievement was a byproduct of their shared relationship with socioeconomic status. A multiple regression analysis showed that academic emphasis (beta = .62, $p < .01$) was one of only two school health variables tested to

generate a unique and independent effect on student achievement, the other being institutional integrity.

Subsequent studies validated initial findings by repeatedly showing a strong relationship between academic emphasis and student achievement in high schools (W. K. Hoy et al., 1991), middle schools (W. K. Hoy & Hannum, 1997; W. K. Hoy, Sabo, Barnes, Hannum, & Hoffman, 1998), and elementary schools (Goddard et al., 2000), all while controlling for socioeconomic status. The validity of these studies is noteworthy not only due to their control for SES, but because of the multiple ways in which the researchers examined the data. Using a variety of regression techniques, most notably hierarchal liner modeling, researchers were able to accurately examine the between-school effect of academic emphasis, thus providing a reliable interpretation of the data.

Collective Efficacy

Definition of construct. Collective efficacy, the second component of the academic optimism construct, is the "perception of teachers in a specific school that the faculty as a whole can execute courses of action required to positively affect student achievement" (Goddard et al., 2000). Like academic emphasis, collective efficacy is an organizational-level construct meant to contribute to the understanding of an entire school's impact rather than that of individual teachers. Unlike academic emphasis, however, efficacy had been studied in depth at the individual level prior to its application at the organizational level, thus providing a rich theoretical framework for a deeper understanding of the construct at the organizational level.

Theoretical background. Bandura (1993, 1997) was the first to highlight the relationship between collective efficacy and student achievement, and it was his work on social cognitive theory that provided the theoretical framework upon which the concept of collective efficacy is built. In order to understand the complicated relationship between the emergent construct and an established psychological theory, it is important to first define efficacy at the individual level and then examine its impact on social cognitive theory.

Self-efficacy refers to "peoples' judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). A future-oriented belief about one's capacity to achieve a goal, self-efficacy is concerned with perceptions of ability, not one's actual ability (Goddard et al., 2004). An important distinction must be made at this point, however, between self-efficacy and locus of control. Although they appear to be related – if not identical – constructs, they are, in fact, distinct from one another. Tschannen-Moran, Hoy, and Hoy (1998), interpreting Bandura's (1997) work, noted that whereas *self-efficacy* addresses beliefs about one's ability to produce actions, *locus of control* is concerned with one's perception of his ability to affect an outcome.

The impact of efficacy beliefs has been studied at length, with results demonstrating positive relationships to a number of self-improvement activities, athletics, and political participation (Bandura, 1997). But how does a strong sense of efficacy explain success in such activities? Social cognitive theory clarifies the connection by proposing a strong relationship between the efficacious judgments of a person and that person's willingness to put forth the effort necessary to accomplish challenging and difficult tasks (Pajares & Miller, 1994). Social cognitive theory, then, reveals how a person with a high sense of self-efficacy would be more

inclined to perform tasks necessary to affect outcomes, thus promoting the achievement of said outcomes.

Based on an understanding of social cognitive theory, it is not surprising that research also showed that a sense of self-efficacy has a direct and positive relationship to student achievement (Bandura, 1997). In fact, three types of efficacy beliefs have been found to have a significant relationship with student achievement (Goddard et al., 2004). First, a student's own efficacy beliefs are positively related to student achievement. According to a meta-analytic study conducted by Multon, Brown, and Lent (1991), student self-efficacy beliefs accounted for 14% of variance in their academic performance. In addition to finding a .57 and .59 correlation between students' self-efficacy and achievement in mathematics over the course of two semesters, Pajares and Graham (1999) also found that self-efficacy does in fact make an independent contribution to student achievement. Second, a teacher's efficacy beliefs in his or her instruction were related to student achievement (Akbari & Allvar, 2010; Tschannen-Moran et al., 1998). Third, a teacher's beliefs about the efficacy of the faculty of his or her school were also related to student achievement. Due to the relationship between efficacy and achievement at the organizational level, it is the third type which is of interest to this research.

Research on the construct. The importance of establishing the construct at the group level should not go unnoticed. While individual efficacy has been repeatedly tested as a viable construct, James (1982) warned against extrapolating data to a group when the unit of measure describes the individual without first establishing the existence of the construct at the group level. Goddard (2001) proposed several examples of how efficacy likely works at the

organizational level in schools. He noted, for example, that when a school experiences a high degree of success, teachers are apt to expect continued success.

Based on Bandura's assertion that "perceived collective efficacy is an emergent group-level attribute rather than simply the sum of members' perceived personal efficacies" (1997, p. 478), researchers made the decision to compile individual teachers' opinions about the collective efficacy of the faculty in order to best measure collective efficacy (Goddard et al., 2004). To do this, Goddard, Hoy, and Woolfolk-Hoy (2000) adapted the Gibson and Dembo (1984) instrument in order to assess teacher efficacy at the group rather than individual level. Because the original instrument was found to contain only two of the four categories of collective efficacy identified by Goddard et al., redundant items were eliminated and new items were added in order to reflect an accurate measure of collective teacher efficacy. Additionally, items were reworded to address efficacy at the collective rather than individual level. The new instrument was subjected to critical review and extensive field testing before being piloted. Researchers examined the newly created measure of collective teacher efficacy to measures of conflict, sense of powerlessness, trust in colleagues, and individual efficacy, all of which were theorized to be related to collective efficacy. Significant correlations were found in all cases, and final minor changes were made to the instrument prior to the commencement of research. Goddard (2001) performed a follow-up analysis using 47 schools, and found that the instrument yielded collective efficacy scores that appeared to be distributed normally across all schools, with an alpha coefficient of .96.

Use of the revised instrument has produced promising results in a variety of academic settings. The collective efficacy of high schools was found to be positively related to student achievement in mathematics ($r = .61$, $p < .01$), even when controlling for SES (W. K. Hoy, Sweetland, & Smith, 2002). Additional research at the high school level found significant

positive relationships between collective efficacy and achievement on twelfth grade achievement tests in five subjects. An increase of 1-SD of collective efficacy equated with an increase of .23-SD in the mathematics domain and .24-SD in the verbal domain (Goddard, LoGerfo, & Hoy, 2004). The collective efficacy in urban elementary schools was similarly related to gains in mathematics and reading achievement, with an increase of one unit of collective efficacy equated to a gain of .42-SD in student achievement in math and reading (Goddard et al., 2000).

SES and race have not been found to be predictive of differences in collective efficacy between schools. Instead, past achievement seemed to be the best predictor of collective school efficacy (Goddard, 2001). In fact, a reciprocal relation had been shown to exist between collective efficacy and student achievement (W. K. Hoy et al., 2002). This is to be expected, since teachers may tend to feel better or worse about their abilities depending on the historical performance of their students, thus affecting their future teaching in a cyclical manner.

Faculty Trust in Parents and Students

Definition of construct. The final component of academic optimism is faculty trust in parents and students. Although faculty trust in parents and students might appear to be referring to two separate elements of trust, a faculty's trust in parents has been shown to be analogous to their trust in students; the two are effectively inseparable (Goddard, Tschannen-Moran, & Hoy, 2001; W. K. Hoy & Tschannen-Moran, 1999; Smith, Hoy, & Sweetland, 2001; Van Maele & Van Houtte, 2009). Like academic emphasis and collective efficacy, faculty trust is concerned with the collective trust of a faculty unit rather than the trust of individual members of the faculty. Van Maele and Van Houtte (2009) found that faculty trust in parents and students (as well as the principal and other teachers) is in fact "shared at the school level" (p. 573). In an

attempt to identify the multiple facets that combine to form the construct of trust, Hoy and Tschannen-Moran (1999) conducted a meta-analysis of trust literature. In their review of over 150 articles, they identified five components that were meaningfully examined regularly in the literature, noting that, although each component was not referenced in every piece of the literature, all but one of the writings did cite multiple facets of trust in the definition. The five components were combined with respect to a person's propensity towards vulnerability to form a working definition of trust. After revisions resulting from additional research, Hoy and Tschannen-Moran (1999) determined that "trust is an individual's or group's willingness to be vulnerable to another party based on the confidence that the latter party is benevolent, reliable, competent, honest, and open" (p. 189). These five components of trust, in addition to vulnerability, will be discussed with regards to their relationship with schools in the following section.

Theoretical background. There is no shortage of research on trust, of which much comes from fields other than education. In particular, economists have been measuring the impact of trust within organizations for decades. Although he was referring to trust between employees and not with clients, Ouchi (1981) noted that where trust is prevalent, productivity increases. Coleman (1988), referring to trust as a form of social capital, noted a similar relationship between trust and productivity. Based on this employee/trust model, it is no surprise that student achievement was high in schools where trust among faculty was high ($r = .72$; $p < .01$) (Tarter, Sabo, & Hoy, 1995). After all, faculty trust in colleagues was an important contributor to the health of a school (W. K. Hoy, 1996).

Trusting relationships in organizations are not limited to employees only. Greenwood and Van Buren (2010) noted that organizations often have more power than their stakeholders, thus requiring the stakeholder to be vulnerable to the organization by entering into a trusting relationship. When considering trust relationships between parents and students and a school's faculty, it is easy to see how the former must trust the latter to provide a quality education. After all, it is the responsibility of the school to serve the needs of the students, and both parents and students are vulnerable to the faculty's competency to accomplish their task. However, Hoy (2002) noted that teachers must also place their trust in parents and students. Not only do they have the ability to "make life difficult for teachers" (p. 89), but parents and students must actively engage in the educational process for learning to occur. It is clear that parents, students, and teachers must all work together to be successful; and in order for any group to be successful, trust must be present (Cunningham & Gresso, 1993).

Research on the construct. Faculty trust in parents and students, as measured by a fifteen-question survey with strong reliability and validity (W. K. Hoy & Tschannen-Moran, 1999), has been shown to have a direct and positive relationship with student achievement in urban elementary schools, even after controlling for student characteristics (Goddard et al., 2001). Subsequent research found similarly strong correlations when faculty trust was examined at the high school level (W. K. Hoy, 2002). Even after controlling for SES, faculty trust was strongly correlated to student achievement (partial $r = .55$; $p < .01$). Using a different instrument, Bryk and Schneider (2002) found greater teacher-parent trust in higher achieving schools, thus echoing a positive correlation between trust and achievement.

Academic Optimism and Student Achievement

Research into the areas of academic emphasis, collective efficacy, and faculty trust revealed more than their relationships with student achievement; the constructs were found to be related to one another as well. Academic emphasis and faculty trust in parents and students were strongly related ($\beta = .51$, $p < .01$) (Smith et al., 2001). A strong relationship also existed between collective efficacy and faculty trust ($r = .91$, $p < .01$) (2002).

These findings led Hoy et al. (2006) to postulate that academic emphasis, collective efficacy, and faculty trust worked in concert to form a single construct in which they "are tightly woven together and seem to reinforce each other as they positively constrain student performance" (p. 426). First and second-order factor analyses were performed, and the results strongly supported the hypothesis that the three constructs were related and together formed a unique factor that Hoy identified as academic optimism.

Initial studies of academic optimism utilized three separate surveys, each mentioned in the prior sections of this review of literature. Results revealed that academic optimism was in fact directly related to student achievement in high schools (W. K. Hoy et al., 2006). In a study of forty non-urban elementary schools, academic optimism was found to be related to math and reading achievement (partial $r = .45$ and .38, $p < .01$, respectively), even when controlling for SES (McGuigan & Hoy, 2006). In urban elementary schools, academic optimism was significantly correlated with math achievement ($r = .60$, $p < .01$). When controlled for SES and school size, academic optimism was still a strong predictor of success in mathematics (beta = .03, $p < .01$) (Smith & Hoy, 2007). While research in the area of academic optimism is limited, initial results were promising and indicated there was a strong need for future research into ways

in which schools might foster academic optimism and thus, ultimately, contribute to student achievement.

Summary

This review of literature provides a brief history of school effects research, and establishes that, despite early flaws, continued improvements in methodology and analyses have led to findings which suggest that schools do in fact contribute to student achievement. One promising new group-level construct that has been shown to positively impact achievement is academic optimism. Combining elements from the cognitive, affective, and behavioral domains, academic optimism is so named because it serves as a reminder that schools can make a difference in overcoming those factors, such as low SES, which negatively impact achievement. The following chapter details the mixed-methods research design and data collection methods that will be used in this study.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

Introduction

This study utilized a mixed-methods design comprised of three phases. The first phase of the study consisted of a quantitative examination of teacher survey results from the School Academic Optimism of School Score (SAOS) (Appendix A) survey given to the faculty and staff of 10 middle schools in a large and diverse school district in eastern Tennessee. The SAOS, a 30 question survey developed by Dr. Wayne Hoy and his colleagues, has been shown to provide valid and reliable measures of academic optimism (W. K. Hoy et al., 2006, 2006). Once the survey data were compiled, an analysis was performed to determine the ranking of each school in terms of its academic optimism, as well the mean and standard deviation of the sample.

The second phase of the study consisted of a correlational analysis between the academic optimism scores of the 10 participating middle schools and variables that appear in the literature to have an impact on student achievement (i.e., Arcia, 2006; Walberg & Walberg, 1994), as well as the Value Added scores for both Math and Reading/Language Arts. Tennessee Value-Added Assessment System (TVAAS) Value Added scores were selected as the measure of student achievement because they reflect student growth during a given school year, rather than overall achievement (Sanders, 1998). Despite some criticism that TVAAS does not adequately control for SES and other confounding variables (Ballou, Sanders, & Wright, 2004), with students serving as their own controls (Sanders, 1998), TVAAS scores were the most appropriate method

to measure academic progress between schools of differing backgrounds. Access to these variables was obtained exclusively through survey responses and data provided to the researcher by the Research and Evaluation, Enrollment, and Nutrition departments of the participating school district. Some variables, such as the age of the building and number of students enrolled, are beyond the immediate control of the principal or teachers, but may prove to be of interest to district personnel as they examine the long-term plans of the district.

Phase three of the study utilized a multiple case study method to identify characteristics that emerged from qualitative data collected onsite from observations, interviews, and document analysis, and that may be unique to schools that ranked high in academic optimism, based on the results of the SAOS. From the results of the first phase of the study, a purposive sampling procedure was used to select schools with high and low SES populations to conduct case studies. Through observations, interviews, and document analysis, narrative data were analyzed through a constant comparative method to identify themes and patterns that emerged in these schools. By comparing these themes across school SES, it was determined which variables were most common in schools with high academic optimism, and which were more prominent in high and low SES schools.

Research Questions

Research Question 1: Based on the results of the AO survey, what are the overall scores of academic optimism for participating middle schools in an eastern Tennessee school district?

Research Question 2: Based on the results of the AO survey, what are the overall scores in three specific key areas of academic optimism for participating middle schools in an eastern Tennessee school district?

Research Question 2A: Based on the results of the AO survey, what is the sub-score in the area of academic emphasis for participating middle schools in an eastern Tennessee school district?

Research Question 2B: Based on the results of the AO survey, what is the sub-score in the area of faculty trust for participating middle schools in an eastern Tennessee school district?

Research Question 2C: Based on the results of the AO survey, what is the sub-score in the area of collective efficacy for participating middle schools in an eastern Tennessee school district?

Research Question 3: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and specific attribute independent variables identified in this study?

Research Question 3A: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and student enrollment?

Research Question 3B: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and length of tenure of the school's principal?

Research Question 3C: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and whether the school uses teams?

Research Question 3D: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and student attendance rate?

Research Question 3E: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and number of suspensions in the school?

Research Question 3F: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and age of the school facilities?

Research question 3G: Is there a relationship between the AO survey scores of the participating middle schools in eastern Tennessee and socio-economic status

Research Question 3H: Is there a relationship between the AO survey scores of participating middle schools in eastern Tennessee and Value-Added scores in content areas?
Research Question 4: What themes emerge from case studies of schools with high levels of AO that might help explain why the schools exhibit high AO?

Setting

The 10 schools selected for this study were chosen from a large, diverse school district in eastern Tennessee. The district was home to rural, urban, and suburban schools, where the percentage of students receiving free and reduced meals, as an indicator of socioeconomic status (SES) ranged from a low of 18.1% to a high of 100%. This information was obtained from the Nutrition Department of the cooperating district and refers to the number of students who qualified for free or reduced meals during the month of March of the school year in which the research was conducted. Permission was granted by the district's supervisor of research and evaluation (Appendix B) to conduct the research described in this chapter. After approaching the principals of all 14 middle schools in the district (three alternative schools were not contacted to participate), 10 agreed to participate. Although the district served rural, urban, and suburban communities, no school serving a primarily rural population was represented in this study. Following the approval of the proposal by the dissertation committee, an application for IRB approval was completed, and permission to conduct the research was granted (Appendix C).

Instrumentation

The research instrument for the quantitative phase of the study was the School Academic Optimism Scale (SAOS) survey developed by Dr. Wayne K. Hoy and colleagues. Although the

second-order latent construct (academic optimism) was identified in 2006, studies have tested the hypothesis that academic emphasis, collective efficacy, and faculty trust of students and teachers together yield a single factor (academic optimism) that accounts for a large percentage of the variance in student achievement among schools (W. K. Hoy et al., 2006, 2006; Smith & Hoy, 2007).

The SAOS actually measures three components; the collective efficacy, academic emphasis, and faculty trust of a school. When the scores for each section are computed, the result is a school's academic optimism score. An additional normalized score yields a standard score with a mean of 500 and a standard deviation of 100; therefore, those schools with a score of 500 are said to have an average level of academic optimism when compared to the norming group. A score of 600 denotes a level of academic optimism higher than 84% of schools, and a score of 700 indicates academic optimism greater than 97% of schools. However, it is important to note that this equation relies on comparison to a single normed data set from Ohio. While the data are representative of a diverse group of schools, there was no guarantee that the data from the schools included in this study would conform to the same pattern. Therefore, the design of the study allowed for the possibility that no schools would have an AO score that is particularly high or low when compared to the Ohio data.

Because of this, the researcher initially labeled those schools with a SOAS score at least one standard deviation above the mean as possessing a high degree of academic optimism, and those that scored one or more standard deviations below the mean as possessing a low level of academic optimism. Comparisons were made to determine if the data from this study conformed to a similar normative distribution as the Ohio data. By standardizing the AO scores against the data set unique to this study, the researcher operationally defined high and low AO schools.

Administration of the SAOS Survey

The study surveyed 10 middle schools in a large, diverse school district. Although the district was well-represented by rural, urban, and suburban schools, the 10 participating schools served primarily urban and suburban communities. Nevertheless, the results provided a rich contrast for collecting data from a diverse population. Prior to conducting the research, permission was obtained from the district's supervisor of research, and subsequently from the principal of each participating school. In order to obtain the highest possible percentage of returned surveys, the researcher attempted to distribute them personally during regularly scheduled faculty meetings. In those situations where it was not possible for the researcher to personally distribute the surveys, an administrator agreed to distribute the surveys in accordance with a detailed script provided by the researcher.

The instrument used for the quantitative portion of the study was the SAOS (School Academic Optimism Scale). The survey's author, Wayne K. Hoy, granted the researcher permission to use the survey for the purposes of generating data for this study (Appendix D). The 30-question survey measures the collective efficacy (12 items), faculty trust in students and parents (10 items), and academic emphasis (eight items) of a school as perceived by individual members of a school's faculty. A Likert-style scale is used for all three components. Responses to both the collective efficacy and faculty trust questions range from 1 (strongly disagree) to 6 (strongly agree), and the responses to the academic emphasis questions range from 1 (rarely) to 4 (very often).

The surveys were administered to every teacher and staff member in attendance at the meetings in which the surveys were distributed. The survey solicited personal information in the

form of the following demographic and personal data: position of respondent (teacher, administrator, or non-certified staff), and length of service in participant's current building. At the conclusion of the research, all data collected for the study were destroyed. Survey results were entered into SPSS in order to establish academic optimism rankings, mean, and standard deviation. Using the research data from the first phase, schools with high academic optimism representing schools with high and low SES were identified and selected for case studies.

Data Collection Procedures

Survey Administration

The researcher applied for and received IRB approval to distribute the surveys in all 14 of the district's middle schools. The researcher obtained permission from the school district's central office to utilize the surveys for research purposes, and obtained IRB approval to do the same following the dissertation committee's approval of the proposal. Finally, permission to distribute the surveys was obtained from the principals of 10 of the 14 middle schools. Once permission had been granted by the principals to distribute the surveys within the schools, appointments were made to do so. In order to maximize the return rate, every effort was made to distribute the surveys during scheduled faculty meetings. On three occasions, the researcher was unable to personally distribute the surveys, usually due to having already committed to distributing the surveys at a different school on the date and time that was made available. On those occasions, one of the school's administrators distributed the surveys using a detailed script provided by the researcher.

Consent forms (Appendix E) were provided to faculty members of each participating school detailing the purpose of the study as well as informing participants that they were not

compelled to participate and could elect to discontinue participation at any time prior to returning the confidential survey. The surveys were administered by the researcher or a school administrator within a 90 day window in the fall semester in order to eliminate potential fluctuation in results which might occur from distributing the surveys to different schools at different points throughout the school year.

Quantitative Data Analysis

Survey results were entered into SPSS. Answers to the first 12 questions, those dealing specifically with the perceived collective efficacy of the faculty, were reverse scored, summed, then divided by the total number of responses to yield an average collective efficacy score for each teacher. The collective efficacy scores of each teacher were averaged to generate an overall average collective efficacy score ranging from 1 – 6. Answers to the next ten questions, those dealing specifically with the faculty trust in parents and teachers, were reverse scored, summed, then divided by the total number of responses to yield an average faculty trust score for each teacher. The faculty trust scores of each teacher were averaged to generate an overall average faculty trust score ranging from 1 – 6. Answers to the final eight questions, those dealing specifically with the academic emphasis of the school, were scored, summed, then divided by the total number of responses to yield an average academic emphasis score for each teacher. The academic emphasis scores of each teacher were averaged to generate an overall academic emphasis score ranging from 1 – 4. The overall collective efficacy, faculty trust, and academic emphasis scores were converted to scale scores, summed, and divided by three to yield each school's academic optimism scale score.

During the survey collection process, 12 surveys became separated from their group prior to being labeled. Because surveys from two schools were in close proximity, it was not possible to determine with certainty which school the surveys belonged to, and they were therefore excluded from the study. In some cases, it was necessary for the researcher to make certain coding decisions when survey responses were partial or incomplete. The following is a list of those situations and the coding decisions:

- When two answers were provided for a single question, that question was left blank.
- On the two occasions the length of employment was listed in months, the number of months were divided by 10 and entered as a decimal.
- Four teachers circled a range of service (provided only for administrators), therefore that category was left blank.
- When a response appeared to be erased and no other response was marked, that question was left blank.
- Two teachers reported <1 years of service. One reported 0-1 years of service. Those responses were coded as 0 years of service.
- One survey arrived in an envelope after the others from the same school. The specific survey was from a teacher at a school where the surveys were distributed by a school administrator. That survey was included in the total for the respondent's school.
- Two respondents indicated they were teacher interns. Those respondents were coded as teachers. One intern circled a range of 0-1 years of experience (a category intended for administrators), and was categorized as 0 years of experience.
- Six respondents did not select an employment category, and therefore none was coded.

- Three respondents did not indicate years of service, and therefore that category was left blank.
- One respondent indicated 30+++ years of service, and another indicated 20+. Those responses were coded as 30 and 20 years of experience, respectively.

School Characteristics

In order to answer Research Question 2, several pieces of data were gathered which were readily available for public use. The size of the student population, attendance rate, number of suspensions by year, free and reduced meal information, and the Value-Added Scores by content (Reading/Language Arts and Math) were available on the publicly viewable Tennessee Department of Education website (http://www.tn.gov/education/data/report_card/2013.shtml). Because the publicly available data was from the previous school year, the researcher obtained the Value-Added scores, school size, attendance rate, suspensions, and free and reduced meal information from the school district's central office. School size was reported as the average daily enrollment for the current school year. The attendance rate was calculated by dividing the average daily enrollment by the average daily attendance. The suspension rate was calculated by dividing the number of out of school suspensions by the average daily enrollment for each school. The age of the building, including any renovations, was provided by the school district. Free and reduced meal rates, also provided by the school district, reflect the percentage of the school's students who qualified for the program during the month of March. Survey respondents were asked to provide their length of service as teachers in their current building, and each school principal was asked to provide the total years of service in his/her current building. Finally, an administrator from each school was asked to select from the following choices the

descriptor that best represented the use of teams within their building: Students and teachers are not divided into teams; Teachers are divided into teams, but significant cross-teaming occurs for many students; Teachers are divided into teams, and most students remain on a single team throughout the day

Qualitative Data

According to (Yin, 1994), the strength of a case study is increased when multiple sources of evidence are used. For this study, three qualitative methods were utilized: interviews, observations, and document analysis.

Sampling technique. Purposive sampling was used to select two schools for multiple cross-sectional case studies. In order to better understand academic optimism from multiple perspectives (Creswell, 2007), both a high- and a low-SES school with a high degree of academic optimism within their respective SES designations were selected for case studies. While it was the intention of the researcher to select two schools scoring at least one SD above the mean, only one school (School A) scored in that range, causing the researcher to amend selection criteria to include schools scoring above the mean, with an emphasis on finding a low-SES school to contrast with School A, a high-SES school. The second-highest Academic Optimism scores belonged to two schools, School D and School I. School D had a free and reduced lunch rate below 50%, and thus was excluded as a case study. School I also had a free and reduced lunch rate below 50% in addition to being the school at which the researcher was employed as an assistant principal, thus precluding it from consideration as a case study. School C had the fourth-highest AO score, but its low free and reduced lunch rate excluded it as a case

study as well. With an AO score only .01 points lower than School C, School G was ultimately chosen as the second case study due to its above-average AO score and its free and reduced lunch rate of 55.4%. Principals at both schools assisted the researcher by selecting teachers representing multiple grades and content areas to participate in interviews. At School A, volunteers were solicited in a staff meeting, and at School G, the principal asked PLC leaders to participate following their end of year check-out.

Interview procedures and protocol. Care was taken to make the interview as comfortable an experience as possible for those participating in the process. For this reason, the researcher trained two retired teachers to conduct the interviews, with the hope that participants would be more forthcoming with responses to an individual who was not an authority figure within the school district. In order to prepare the interviewers, electronic copies of a draft of the first three chapters of this study were provided prior to a meeting with the researcher. At the face to face meetings, the interviewers were provided hard copies of the research as well. The research on academic optimism was reviewed, and the interview process was thoroughly discussed. Potential guiding prompts were created in the event that a participant needed assistance in responding to any of the open-ended questions. The researcher answered any questions the interviewers had at that time.

At the interviews, the researcher greeted each participant and introduced the interviewer. After explaining the purpose of the study and providing a brief explanation of academic optimism, the researcher reviewed the consent form (Appendix F) and obtained signatures from each participant before leaving the vicinity. All participants consented to having their interviews recorded. Every effort was made to ensure the interviews took place in well lighted and

otherwise inviting rooms during times that were convenient for the participants. Interviews at School A were conducted in a small room inside the school's library during the participants' planning periods, and interviews at school G were conducted following brief meetings with the principal in the school's library. Snacks and water were offered to all participants. The following interview protocol was based on the outline suggested by Creswell (2007).

Time of interview:

Date:

Place:

Interviewer:

Interviewee:

Position of interviewee:

Brief introduction and explanation: Thank you once again for agreeing to participate in this interview. The purpose of this study is to attempt to determine which characteristics are associated with academic optimism in schools. Faculty members were invited at random to participate in the interview process because of this school's high degree of academic optimism.

Questions:

1. What qualities about this school do you believe contribute to students' academic achievement?

2. In what ways do the school's organizational structure, rules, policies, and procedures enable your work as a teacher?

3. What qualities about this school's faculty cause you to believe that students can achieve?

4. In what ways does your school place an emphasis on academics?

5. What systems are in place to foster faculty trust in parents and students?

Question 1 was designed as an open-ended question to gain an understanding of the participant's general attitude towards the school. In a study linking principal leadership with academic optimism, McGuigan and Hoy (2006) suggested that principals examine their schools' organizational structures as outlined in Question 2 in order to increase academic optimism. Responses to Question 2 could have potentially highlighted ways in which a principal might impact the academic optimism of his/her school. Questions 3, 4, and 5 were designed to determine characteristics associated with academic optimism in academically optimistic schools, and the characteristics that differentiate schools with high and low academic optimism.

Observations. In order to gain firsthand knowledge of the characteristics associated with academic optimism, the researcher initially planned to conduct observations in the two schools from which participants were be selected for interviews. Unfortunately, the time made available for interviews at School G was on the final day of the teachers' contract, long after students had departed for the summer, making an authentic observation of the school impossible. The purposeful selection of schools allowed the researcher to document the characteristics of two schools with high levels of academic optimism. When selecting the two schools with high academic optimism, a high SES school and a low SES school-with high levels of academic optimism were selected.

Once the two schools were identified as candidates for case study, the principal of each school was contacted in order to obtain permission to conduct an observation and arrange a mutually agreed upon date for the observations. As mentioned previously, the researcher was unable to conduct an observation in School G. During a break between interviews at School A, the researcher listened to two interviews and took notes. Based on the information obtained from

the interviews, the researcher was able to search for evidence to corroborate the interviews. With the understanding that the presence of any outside observer has the potential to create a sense of unease among the faculty of a school, and that any such presence has the potential to change the behavior of those in the presence of the observer, the researcher took all possible precautions to be as minimally invasive as is possible. Permission to visit their classes was obtained from several of the interview participants, and the researcher was able to visit two of those classes in addition to a reading/language arts class held in the library. The researcher was able to take a lengthy tour of the entire building and took notes and photographs for review. While the observer did visit classrooms, no identifiable information about students or teachers was documented.

Document collection and analysis. A review of documents in isolation provides limited data at best. However, when used in conjunction with interviews and observations, documents can yield valuable information. Caution must be taken to interpret the documents through a contextual lens rather than taking each document at face value (Flick, 2009). Because the primary function of document analysis was to "corroborate and augment evidence from other sources" (Yin, 1994, p. 81), some interviews took place prior to the review of documents at School A, and all interviews took place prior to the review of documents at School G.

The following documents were used to augment the evidence gained from interviews and observations:

- Teaching, Empowering, Leading, & Learning (TELL) Surveys: These surveys have been completed by the faculties of all schools in the state every two years. The most recent data available were from the previous school year. The surveys

were completed anonymously and measure the degree to which "positive teaching and learning conditions" exist within schools.

- Faculty Handbook: The faculty handbook identified the policies, procedures, and expectations unique to each school.
- Newsletters and school websites: These served as various ways to communicate with parents.
- District teacher survey, completed during the current school year.

Qualitative data analysis. Quantitative data were analyzed using the constant comparative method. Originally devised by Glaser and Strauss (1967) as a method for analyzing data in the field of sociology, it was later adapted for use in the natural sciences by Lincoln and Guba (1985). Essentially, the constant comparative method acknowledges that the gathering of multiple types of data in the field is an ongoing process, and by gathering and analyzing the data simultaneously, the researcher can categorize the data into meaningful themes.

Summary

This study involved 10 middle schools in a large southeastern school district, well-represented by rural, urban, and suburban populations. The participating schools, however, served primarily urban and suburban areas. Surveys results were used to determine the level of academic optimism of each school, and comparisons were made to other schools in the district as well as to an existing data set of schools in Ohio. Two schools were chosen for case study, in which interviews, observations, and document analyses was utilized to identify those characteristics found in schools high levels of academic optimism.

Chapter four presents the data collected from the SAOS surveys, identifying the characteristics – but not the names – of the schools, and their corresponding level of academic optimism. Data collected from interviews, observations, and document analyses are organized into meaningful themes and will also be presented.

CHAPTER IV

PRESENTATION OF DATA AND RESULTS

Introduction

In order to obtain an accurate description of the academic optimism of an entire school district, the principals of all 14 middle schools in the district, with the exception of three alternative schools, were approached to participate in the survey portion of the study. Ten of the 14 principals agreed to participate. The 10 participating schools were representative of the district as a whole, with the exception of the lack of inclusion of a primarily rural school. While the district did not identify schools as uniquely rural, urban, or suburban, the geographic location of one of the non-participating schools was known by residents of the county to be primarily rural. While many schools in the district did not fit neatly into a single category, the 10 participating schools served students residing in predominantly urban and suburban areas.

Quantitative analysis of the SAOS surveys was used to answer Research Questions 1 through 3. While it was the intention of the researcher to first determine if the SAOS results from this sample were statistically comparable to the results of the Ohio data used in the Hoy study, such a comparison was not possible due to lack of access to the Ohio data. Although the Ohio data would have allowed for the researcher to make a comparison between the Academic Optimism scores of two districts, the lack of access to that data in no way interfered with the ability of the researcher to answer this study's research questions.

In order to answer Research Question 4, two schools were selected to participate in case studies. The researcher initially set the selection criteria for the case studies as having an Academic Optimism score equal to or greater than one standard deviation above the mean of the sample. Only one of the 10 schools, School A, met the initial criteria, therefore that school was selected as the first case study. In fact, when the AO scores were converted to a scale score using Hoy's formula, the results placed school A in the 99th percentile of Academic Optimism. In order to select a second school for the qualitative portion of the study, the selection criteria was amended to include schools that scored above the mean, with an emphasis on finding a low-SES school to contrast with School A, a high-SES school. The second-highest Academic Optimism scores belonged to two schools, School D and School J. School D only had 16 staff members respond to the survey, as well as a free and reduced lunch rate below 50%, and thus was excluded as a case study. School J also has a free and reduced lunch rate below 50% in addition to being the school at which the researcher was employed as an assistant principal, thus precluding it from consideration as a case study. School C had the fourth-highest AO score, but its low free and reduced lunch rate excluded it as a case study as well. With an AO score only .01 points lower than School C, School G was ultimately chosen as the second case study due to its above-average AO score and its free and reduced lunch rate of 55.4%.

Research Questions and Data Analysis

Research Question 1

Based on the results of the AO survey, what are the overall scores of academic optimism for the participating middle schools in an eastern Tennessee school district?

The academic optimism scores were obtained through Likert-style surveys given to faculty and staff members of the participating middle schools in a large eastern Tennessee school district. The academic optimism scores ranged from 3.12 to 4.44, with a standard deviation of .35914. Scale scores ranged from 398.68 to 804.08, with a standard deviation of 107.23 (see Table 4.1 below). Hoy (2013) offered the following description of the scale scores:

> If the score is 200, it is lower than 99% of the schools.
> If the score is 300, it is lower than 97% of the schools.
> If the score is 400, it is lower than 84% of the schools.
> If the score is 500, it is average.
> If the score is 600, it is higher than 84% of the schools.
> If the score is 700, it is higher than 97% of the schools.
> If the score is 800, it is higher than 99% of the schools. (Interpreting the School Academic Optimism Score (SAOS), para. 2)

Table 4.1 Individual School Means for Academic Optimism

School	N	Academic Optimism	Academic Optimism Scale Score
A	49	4.44	804.08
B	43	3.77	593.28
C	67	3.83	612.74
D	16	3.89	628.36
E	59	3.12	398.68
F	51	3.79	605.52
G	51	3.82	611.07
H	52	3.69	577.74
I	59	3.89	632.98
J	42	3.32	461.77
Mean for all Schools		3.76	592.62
SD for all Schools		.36	107.23

Research Question 2

Based on the results of the AO survey, what are the overall scores in three specific key areas of academic optimism for the participating middle schools in an eastern Tennessee school district?

Research question 2A. Based on the results of the AO survey, what is the sub-score in the area of academic emphasis of the participating middle schools in an eastern Tennessee school district?

Table 4.2 Individual School Means for Academic Emphasis

School	N	Academic Emphasis
A	48	3.50
B	43	2.86
C	67	2.91
D	16	2.97
E	59	2.45
F	51	2.99
G	51	3.00
H	51	3.02
I	59	3.00
J	42	2.67
Mean for all Schools		2.9370
SD for all Schools		.26891

Research question 2B. Based on the results of the AO survey, what is the sub-score in the area of faculty trust of the participating middle schools in an eastern Tennessee school district?

Table 4.3 Individual School Means for Faculty Trust

School	N	Faculty Trust
A	49	4.70
B	43	4.08
C	67	4.02
D	16	4.29
E	59	3.21
F	51	3.91
G	51	4.09
H	52	3.80
I	59	4.11
J	42	3.37
Mean for all Schools		3.9580
SD for all Schools		.42851

Research question 2C. Based on the results of the AO survey, what is the sub-score in the area of collective efficacy of the participating middle schools in an eastern Tennessee school district?

Table 4.4 Individual School Means for Collective Efficacy

School	N	Collective Efficacy
A	49	5.13
B	43	4.38
C	67	4.56
D	16	4.41
E	59	3.71
F	51	4.48
G	51	4.37
H	52	4.26
I	59	4.57
J	42	3.92
Mean for all Schools		4.3790
SD for all Schools		.38252

Research Question 3

Is there a relationship between the AO survey scores of the participating middle schools in an eastern Tennessee district and specific attribute independent variables in this study?

Research question 3A. Is there a relationship between the AO survey scores of the participating middle schools in an eastern Tennessee district and school's average daily enrollment?

There is no relationship between the AO survey scores and the average daily enrollment among the participating middle schools. Tests for correlation were run using both average daily enrollment (r = .184, n.s.) and a range of average daily enrollment (r = .460, n.s.).

Research question 3B. Is there a relationship between the AO survey scores of the participating middle schools in an eastern Tennessee district and length of tenure for the school's principal?

There is no relationship between the AO survey scores and the length of a principal's tenure within his current building among the participating middle schools. Tests for correlation were run using both years of service (r = -.203, n.s.) and a range of years of service (r = -.236, n.s.).

Research question 3C. Is there a relationship between the AO survey scores of the participating middle schools in an eastern Tennessee district and whether the school uses teams?

There is no relationship between the AO survey scores and the use of teams among the participating middle schools (r = -.625, n.s.).

Research question 3D. Is there a relationship between the AO survey scores of the participating middle schools in an eastern Tennessee district and student attendance rate?

There is a strong and significant relationship between the AO survey scores and the attendance rate of the participating middle schools ($r = .934$, $p < .01$). The positive relationship indicates that Academic Optimism is higher in schools where students attend more frequently.

Research question 3E. Is there a relationship between the AO survey scores of the participating middle schools in an eastern Tennessee district and number of suspensions in the school?

There is a strong and significant relationship between the AO survey scores and suspension rate as expressed as a ratio of number of suspensions to average daily enrollment in the participating middle schools ($r = -.874$, $p < .01$). The negative relationship indicates that Academic Optimism is higher in schools with fewer suspensions.

Research question 3F. Is there a relationship between the AO survey scores of the participating middle schools in an eastern Tennessee district and age of the school facilities?

There is no relationship between the AO survey scores and the age of the school building among the participating middle schools. Tests for correlation were run using both age of the building ($r = -.400$, n.s.) and a range of building ages ($r = .468$, n.s.).

Research question 3G. Is there a relationship between the AO survey scores of the participating middle schools in an eastern Tennessee district and socio-economic status?

There is a strong and significant relationship between the AO survey scores and the socio-economic status of the participating middle schools ($r = -.905$, $p < .01$). The negative relationship indicates that Academic Optimism is higher in schools that serve a lower percentage of free and reduced meals.

Research question 3H. Is there a relationship between the AO survey scores of the participating middle schools in an eastern Tennessee district and Value-Added scores in content areas?

There is a strong and significant relationship between the AO survey scores and the Value-Added scores in math ($r = .785$, $p < .01$). However, there is no relationship between the AO survey scores and the Value-Added scores in reading and language arts ($r = .525$, n.s.).

Research Question 4

What themes emerge from case studies of schools with high levels of AO that might help explain why the school exhibits high AO?

The case studies consisted of three major components: interviews, document analysis, and observations. Principals at both schools assisted the researcher by selecting teachers representing multiple grade levels and content areas to participate in interviews. At School A, volunteers were solicited in a staff meeting, and at School G, the principal asked PLC leaders to participate following their end of year check-out. In order to ensure participants would be comfortable participating in the interview process, two retired educators were trained to conduct the interviews, one at each school. The interviewers were sent electronic copies of the research on academic optimism prior to meeting with the researcher, at which time they were provided

hard copies as well. The researcher described academic optimism to the educators and explained the interview process. The meeting with each educator lasted approximately 30 minutes. By utilizing retired educators, participants did not have to be concerned with revealing information that might reflect negatively on their school directly with the researcher, who was employed as an assistant principal at another school within the district. The interviews were recorded with the consent of all participants, and were later transcribed by the researcher.

The observation at School A consisted of three class visits – one in the library and two in teachers' classrooms – in addition to a lengthy tour of the building, during which notes and photographs were taken for later review. Unfortunately, due to scheduling conflicts encountered at School G, it was necessary to conduct the interviews on the final day of teachers' contract after students had been dismissed for the summer; therefore, an authentic observation of the building was not possible. Various documents were reviewed, including staff handbooks and TELL Survey results. The most recent TELL Survey results are from 2013, as the survey is only administered once every two years. Because fewer than 50% of teachers at School A responded, results of the TELL Survey were not published for that school and were therefore only available for School G.

With the interviews serving as the primary source of data, the document analysis and observation served to reinforce the interview responses. Great care was taken to accurately code the interview responses into descriptive categories. The researcher began the coding process by reviewing the transcripts, one question at a time, one school at a time. In other words, the interview responses to Research Question 1 for all participants in School A were reviewed, and key words, phrases, and themes were highlighted. After reviewing the responses from all six participants, the themes were consolidated on a single document (School A Question #1). When

multiple respondents discussed the same theme, the repetition was denoted next to the item. A portion of School G Question #1 is included below to clarify the process:

1,2,5,6 Teachers work together/support each other/get along

1,2,3,5,6 Determine student deficits and work on them/meet students where they are at/all students can learn

2,5 Dedicated teachers who go above and beyond

It was not uncommon for themes to recur in multiple questions. For example, the following is a sample of School G Question #3:

2,3,4,5 Teachers work together

Therefore, themes emerged holistically, rather than by question. After coding the interview responses, three themes emerged that might help explain why School A and School G exhibit higher than average levels of Academic Optimism: communication, collaboration, and a culture of excellence.

Communication.

With parents. Communication with parents was identified by teachers as an expectation at both schools. The School A teacher handbook stated teachers should, "Communicate with parents by telephone, letter, email, or conferences. Strive for balance by communicating good news to parents also." As a one-to-one technology school, School A benefited from having access to CANVAS to increase communication with parents. An online learning management system, CANVAS allowed teachers to post information related to what is being covered in class. Teachers placed assignments and other valuable information online so that parents could remain aware of what was being covered in class. Although School G was not a one-to-one technology

school, teachers there were still able to use the class webpages to post testing and homework information.

Teachers at both schools regularly utilized email to communicate with parents. Teacher G1 noted that for "people that do not have computers, I'll write notes to them, and then that builds trust." And even though parents began the year unsure about their student's transition to middle school, Teacher G1 noted that, "by the end of the year they love us because they know we've communicated all year with them." Meetings held at the school provided an opportunity for parents to meet with teachers face to face. Teacher G1 added that "all the teachers are around, and they can develop a trust there…in person." She continued, "That way, as long as you have that open communication and that you're willing to work with the parent that trust can build…"

Principals at both schools utilized a phone messaging system to communicate with parents on a regular basis. "(Principal G) is phenomenal about using communication to…ask for parent volunteers, to let parents be aware of what's going on, so I don't think parents could ever say they were not informed of any type of event" (Teacher G3). TELL Survey results showed that 93.3% of teachers at School G agreed that "Parents/guardians know what is going on at this school," and 93.8% agree that, "This school maintains clear, two-way communication with parents/guardians and the community." In apparent contrast to the information obtained from interviews, the results of a SWOT (Strengths/Weaknesses/Opportunities/Threats) Analysis at School A identified communication with parents as a weakness. Although included in the "Weakness" quadrant of the analyses, the reference to communication with parents appeared to reinforce the teacher's understanding of its importance. Teachers recognized that

communication with parents contributed to the school's success, and acknowledged there was room for improvement.

Within the school. Teachers at Schools A and G highlighted the strong communication within their buildings. "There's a lot of good communication here," according to Teacher A2, a practice that he said was modeled by the principal who, "sees all the emails and she responds quickly." Teacher G1 appreciated the administration informing the staff of new initiatives or policies, "in advance, so we'd know what to plan for in the school." Teacher G3 added, "(The principal) keeps us very informed about things that are changing…I think she likes for us to be a part of those changes and not be the last one to know about something." Teacher G2 appreciated the structures that were in place to enhance communication, including the requirement to "check your email two or three different times a day." School A's teacher handbook required teachers to check email three times each day, and School G's Expectations for Faculty and Staff document required teachers to check twice daily. Several teachers at School G praised the degree to which "everything is electronically organized" (Teacher G5), referencing the digital scheduling of meetings, in particular. School announcements were made daily at School G, and teachers were encouraged in the Faculty Expectations document to forward anything they wished to share with the school to the staff member in charge of the announcements. Several teachers mentioned the importance of consistency, particularly in regards to disciplinary issues, noting that communicating with one another regularly contributed to a consistent approach among colleagues.

Collaboration and support.

Teacher collaboration. Collaboration among teachers was frequently cited during the interviews as a critical element of both schools' success. Each school in the district was required to designate a block of time each weak to be used by teachers as a Professional Learning community (PLC). The PLC meetings provided a structure for teachers to collaboratively plan lessons, create and review the results of common assessments, and examine student achievement data. Teachers in Schools A and G regularly collaborated beyond the required PLC meetings and relied on one another for help. "We officially meet once a week," said Teacher A3 of the PLC meetings, who added that in reality she communicated with her colleagues multiple times throughout the day to discuss ways to improve the day's lesson. Several teachers at School A were observed meeting in the hallway during their plan period.

Teachers also shared resources through email. Teacher A4 said his colleagues "work so well together," and praised his colleagues for sharing ideas with him when his efforts at teaching a particular concept may have failed. "There is no competition here between teachers," according to Teacher A4, despite the high stakes testing for which they were all held accountable. He attributed student achievement to teacher collaboration. Teacher A6 explained that teachers' "strengths and weaknesses complement each other." Teacher collaboration was almost a tradition at School G, according to Teacher G6 who noted that, "it's just expected that this is what happens when you come into this school."

Administrative support. Teachers in both schools received a high degree of administrative support. In School A, the administrators provided support by frequently asking teachers what they could do for them. In response to teacher concerns that the eighth graders

were becoming increasingly disruptive in the cafeteria as the school year began to draw to a close, Teacher A2 stated the principal "sent out an email saying, 'We'll take care of that.'" Principal A's responses to staff concerns were immediate. She had an open door policy and was very approachable. The administrators at School A were frequently seen out in the building and in classrooms. "They come in my room all the time," says Teacher A3, who no longer thought they came to the room to talk to her. Teacher A6 described an environment where it was "okay to make mistakes, but the expectation is to do the absolute best you can." According to the TELL survey, 80.0% percent of teachers in School G agreed that, "The school leadership consistently supports teachers."

Administrative support was also provided in the ways in which teachers were treated as professionals at Schools A and G. Teacher A6 described her principal's approach: "She doesn't micromanage, but she's hands on." Despite a number of requirements mandated by the school district's central office, teachers in schools A and G appreciated being afforded a measure of autonomy. In School A, teachers were permitted to choose their own discipline procedures for their classrooms. Teachers in School A felt valued because the principal solicited their ideas and input, describing her job as servant leadership. Teacher G3 said her principal "gives us the feeling that we're competent," and "asks for our input." TELL Survey results supported a feeling of administrative respect in School G, as 92.3% agreed that, "Teachers are recognized as educational experts," whereas only 77.0% of teachers in the district agreed with the statement.

Describing how many teachers in the state felt constrained by a new evaluation system, Teacher A6 explained that

> Here, you don't feel like anybody's out to get you. You feel like it's, for the most part, a school climate in which we want everybody to be better. It's not a competition; it's more collaborations. It's a good place to be, I'm telling you!

Parental support. Several of School A's committees had parental representation, and teachers at both schools described support from strong parent organizations. The PTSA at School A sent home a monthly newsletter to all parents. Teacher A1 described the PTSA as "active" and "supportive," noting that the teachers and PTSA parents actually supported one another. In addition to providing meals to the teachers throughout the year, parents supported the teachers in other ways as well. Parents at school G could be counted on to assist with extra-curricular activities and even tutoring, and Teacher G3 appreciated the "willingness of parents to be involved." Describing the lack of parental involvement at a previous teaching job, Teacher G4 recognized the benefit of parental presence, noting that, "parents are involved, and that they are aware, and once again, they set the bar high for their students." Teachers at School G appreciated that parents were responsive when called for meetings.

Community support. Regarding the academic achievement of its students, "(the) whole community is extremely supportive," (Teacher A4). Teacher A6 agreed: "Our community, for the most part, values education." An opportunity identified at School A by one of the groups' SWOT Analyses was community support, suggesting that not only did community support exist, but there were opportunities to better capitalize on the support that was available. Although community support was not mentioned during any of the interviews at School G, TELL Survey results reveal that 80.0% of teachers at School G agree that, "The community we serve is supportive of this school."

Sense of family. Teachers at Schools A and G repeatedly referred to their colleagues as a family. "(The principal) refers to us as the (School A) family. Not just the teachers – the

teachers, the students, the community" (Teacher A4). Teacher A3 added, "I feel like we're a family. In a family, sometimes you have to deal with the dirty stuff, but you deal with it and you move on." "We've got each other's backs, you know. If the teacher next to me is going through a difficult time, everybody else is going to rally around the teacher and, you know, do everything we can to temporarily pick up the slack" (Teacher A6). The eighth grade team decorated the workroom for holidays, leading to what Teacher A5 describes as a "warm feeling."

Teacher G1 indicated that the students noticed how well the teachers get along, which contributed to the positive culture of the building. "We have a family situation on the team where we could get together with the student and talk privately and so it was a warm, fuzzy feeling they got with us." The sense of family within the schools fostered feelings of trust. "There's a lot of trust between the teachers and the administration, which is probably the biggest factor (for) success for the teachers, therefore for the students" (Teacher G4). Teacher G5 appreciated the parents throwing her a baby shower, and described the school as having a "loving environment."

Culture of excellence.

High expectations. Academic achievement was an expectation in Schools A and G. High expectations for achievement were articulated in School A's motto: Quest for the Best, a phrase so important it was included in the principal's emails. A large mural in the hallway of School A read, "Strive for Academic Excellence," and a large banner hung from the ceiling proclaimed "HIGH ACHIEVEMENT." Interviews revealed that the majority of parents at School A valued education, not surprising since many were college graduates themselves. This was confirmed by the SWOT Analysis, in which one group identified "Parents who value

education (college educated)" as a strength within the school. Using the PTSA newsletter to communicate with parents, Principal A wrote an article explaining to parents the high expectations associated with the Common Core. Principal A visited classrooms and communicated the importance of academics to the students as well. Even though School A was a high-achieving school, tutoring was offered before and after school to meet the needs of the students. Large posters in the halls informed students of when those tutoring opportunities were available. Tutoring was offered at School G as well, and students were regularly encouraged by their teachers to attend.

Teachers at both schools articulated a belief that students can achieve. Teacher A5 framed her belief about students' ability to achieve as something that the students already possessed: "The teachers believe it (that students can achieve). They're not saying they can't do it. You know, they can. Do some of them struggle? Yes. But as a whole, they're capable and you can do it." In School G, teachers framed their belief about student achievement around their ability to grow. Noting that "failure's not an option," Teacher G4 described how "every single student" at School G had "every opportunity possible" to achieve success, including tutoring and opportunities to make up work. Teacher G6 added: "We will not take any students that say, 'I can't do this.' We won't accept that. You can do something, so we won't accept anything less than their best, and we push for that best."

Schools A and G communicated and reinforced the culture of excellence in multiple ways. Each morning, students at School A recited the school's mission statement, which was also on display in each teacher's room. Teachers at School G mentioned the consistency of the high expectations contributed to the students' ability to achieve. Because School G was an AVID (Advancement Via Individual Determination) school, college was regularly promoted by

the teachers. The hallways were decorated with college posters and teachers regularly talked with the students about attending college.

Expectations were high not just for the students, but for the staff as well. Expectations for teacher performance were linked to a demanding rubric and were addressed in staff meetings at School G. "When we're evaluated, if we do not use higher-order thinking skills or critical thinking, you know, you're counted down, so it's (emphasis on academics) stressed in that way." (Teacher G1). Additionally, teachers were held accountable for the high expectations. According to teacher G4, "Whether it be teaching, having meetings, cooperative learning – you name it, we're accountable for it!"

Focus on the student. Students were the focus of the teachers at Schools A and G. According to Teacher A1, "the student is at the foremost – they're why we're here." Teacher A4 adds: "The policies are kid-centered." School A's teacher handbook required teachers to, "Instruct students according to their individual needs." Teacher A6 attempted to target her lessons to the various interests of her students, and teachers in School G incorporated technology into their lessons to excite students. Teacher G1 described how teachers fostered trust with their students:

> With sixth graders, it's tough enough coming into sixth grade, so we really catered to them a lot – got them used to being in a middle school and that made them want to learn. They trusted us, and they got more confidence that way, too, because we all had high expectations.

Teachers at School G were committed to meeting the individual needs of their diverse learners by, "meet(ing) the students where they're at, and…identifying the needs of students and just focusing on those academic needs" (Teacher G2). He added: "We're focused on student growth and we look for ways we can be successful with student growth, both…individually, but

also as…departments." School G "has the vision of all students to succeed," according to Teacher G4, who added, "We push every single student no matter what their background is, what their ability level is, the expectation's still high. We push them as far as we can go." Teacher G5 described the "drive that teachers have to teach any child…even if they're high-achieving or low-achieving students." "And if a student's not achieving at the rate we feel (he should), then we find out what's going to work for that child. And we don't do it individually – we get with our peers," according to Teacher G6, who added, "We may have to go a whole different route to achieve it, but we will eventually get there."

Dedication of staff. Regardless of the challenges they face, teachers at Schools A and G worked hard to meet the needs of the students. Teacher A3 described arriving at school early in the morning and often not leaving until after 8:00 or 9:00 at night, and there were still cars in the parking lot at that late hour. Teacher A5 also indicated the late hours worked by many of the teachers. The dedication to their students was reflected in the hall of School A, where a large banner hung from the ceiling proclaimed "CARING STAFF." Teacher G2 described the dedication of teachers who, "go above and beyond what you'd normally think a teacher would do." Teacher G5 described how she attended students' extra-curricular activities to build student trust; "I go to the basketball games, I go to – there are different events – to make them feel like…I care about them. I bring my kids and they get to meet them, and they think that's just the coolest thing."

Maximizing instructional time. Teacher A2 highlighted the importance that School A placed on academics by being selective of the activities that could interrupt classroom

instruction: “We try not to have very many assemblies – takes away from academic time.” Students of the month were recognized in the cafeteria during lunch time for this very reason. The School A teacher handbook emphasized the importance of maximizing instructional time: “Instructional time must be protected. Please check with an administrator prior to taking a group outside. Outside time should be limited to activities related to the curriculum or team incentives.” Similar directives were communicated in School G’s Faculty Expectations: “Instructional time is always at a premium. Students need to understand our purpose for being here…be prepared to explain how the outside activity relates to your curriculum. Classes may not be taken outside for recreation purposes.”

Early student departures did not cause disruptions at School A. Rather than interrupting a class with an announcement that a parent has arrived to pick up a student, parents were asked to send in a note the morning of the early dismissal notifying the teacher of when a student needed to leave that day. The focus on instructional time did not go unnoticed by students. Teacher A5 reported a student complained to her, “We don’t do anything fun. This school’s boring.” School G strived to ensure that class time was used for academic instruction as well. School G also maximized instructional time by implementing several programs designed to meet the needs of students, including intervention strategies or enrichment opportunities for honors students. Regardless of their achievement level, “Students are challenged…to maximize their potential,” according to Teacher G2.

Instructional time was protected at both schools by keeping the students in the classrooms. Teacher G3 remarked, “You don’t see a lot of students out in the hallway…you know they’re in a classroom learning.” During a lengthy walk around the campus in the middle of a school day, there was not a single student in the hallway of School A during class time.

When students were in the classrooms, they were engaged in learning for the full duration of the class. Teacher G4 noted that "the teachers are teaching bell to bell." The focus on learning was evident during the observation of three classes in School A. A sixth grade ELA class was in the library diligently preparing research projects which they eventually presented to their class, and instruction was taking place in the math and social studies classes visited by the researcher.

Recognition of achievement. Public recognition of achievement has long been a hallmark of the middle school experience. Because School A eliminated frequent school-wide awards ceremonies and parties, teachers there relied on other methods to celebrate the academic and behavioral successes of their students. In the sixth grade, students avoided marks by completing their homework, arriving to class prepared, and following class rules. Those students with fewer than ten marks in a nine week period received a Hold-up card for not being held up in their quest for success. According to Teacher A1, the students "want those cards on that wall. They like coming out here and seeing if their name is up there." Numerous Hold-up cards were observed during a tour of the building. A brief Hold-up celebration was held at the end of each nine weeks grading period to honor those students who had earned a card. Students of the Month were recognized at School A for academic achievement and improvement. Those selected received a certificate in front of their peers during the lunch period. Teachers in both schools rewarded students individually in their classes by providing tickets for doing great work, and posting great work on the wall.

Both schools had a National Junior Honors Society that recognized students with high grade point averages. School G hosted an annual BELIEVE assembly for students who showed vast improvement. Improvements in areas other than academic achievement were recognized as

well. Students in School G who improved behavior or demonstrated good citizenship were rewarded with a positive referral, an incentive which could "help increase their self-esteem," which in turn impacted academic achievement, according to Teacher G2. School G's website included a section entitled *Tell Me Something Good*, where students' academic and extra-curricular achievements were recognized.

Summary

Quantitative analysis revealed three factors that appeared to be strongly related to the academic optimism of schools: socio-economic status as measured by the percentage of students who qualify for free and reduced meals, the suspension rate, and attendance rate. Two schools that served contrasting SES populations were selected as case studies for further qualitative exploration. During thorough analysis of interviews, documents, and observations, three themes emerged that might explain the above average levels of academic optimism in those schools: communication, collaboration and support, and a culture of excellence. The following chapter includes a detailed summary and discussion of findings, as well as implications for practitioners and recommendations for future research.

CHAPTER V

CONCLUSIONS AND DISCUSSION

Introduction

The purpose of this final chapter is to serve as a guide to the reader by restating the research problem and reviewing the methodology of the study. Following the description of the study, the results of the study are summarized and the findings are discussed. The chapter concludes with recommendations for educators as well as suggestions for future research.

Statement of the Problem

There has been a strong need for an increase in the academic achievement of US students. This need is exemplified by the gradual decrease in academic achievement of US students when compared to domestic past performance as well as to their international peers. Recent changes to educational policy have placed increased accountability for improving student test scores on teachers and administrators, thus amplifying the sense of urgency associated with increasing student achievement. While the newly-identified construct – academic optimism – has been shown to have a positive relationship with student achievement, there was a need to determine what factors might be associated with schools that exhibit high levels of academic optimism.

Review of the Methodology

Principals at all 14 middle schools in a large Eastern Tennessee school district were asked to allow their faculties and staffs to participate in a survey. The SAOS, a Likert-style survey designed to measure the academic optimism of schools, was given at the 10 schools at which the researcher was able to obtain permission to conduct the research. Academic optimism scores were calculated for the 10 participating middle schools. Using SPSS, Pearson correlations were used to determine the degree to which a number of variables were related to the academic optimism of the schools.

In addition to the quantitative findings, a qualitative analysis of the research was utilized to identify certain factors that contributed to the academic optimism of schools. To do this, two schools were selected as case studies based on their academic optimism score and their SES, as measured by the rate of free and reduced meals served at the schools. With only one school having an academic optimism score more than one standard deviation above the mean, the initial selection criteria for the second school was adjusted to include schools that simply scored above the mean. In order to contrast with the high SES of the first school, a school with a free and reduced meal rate of more than 50% was sought for the second case study. The case studies were comprised of interviews and document analyses, and an observation was conducted at one school as well. The interviews were coded and reviewed alongside the documents and observation notes. Three themes emerged from the findings that might help explain the comparatively high levels of academic optimism at both schools: communication, collaboration, and culture of excellence.

Summary of the Results

Quantitative Results

Results of quantitative analysis revealed three factors that are related to the academic optimism of schools. The attendance rate ($r = .934$, $p < .01$), suspension rate ($r = -.874$, $p < .01$), and SES ($r = -.912$, $p < .01$) of the participating schools were found to be strongly related to the schools' academic optimism scores. Additionally, academic optimism was related to math achievement as measured by Value Added scores ($r = .785$, $p < .01$). There was no statistically significant relationship between the academic optimism of schools and the average daily enrollment, average daily attendance, length of principal tenure within his current building, use of teams, or the age of the school building.

Qualitative Results

Throughout the review of the interviews, documents, and observations, three themes emerged that might help explain the higher than average levels of academic optimism in the two schools selected for case study: communication, collaboration and support, and a culture of excellence. Communication with parents as well as communication from the administration and with one another was cited by teachers as important to the academic success of their schools. Teachers from both schools emphasized the importance of collaboration with one another, noting their reliance on their colleagues and the impact that the interdependence with one another had on their instruction. Teachers at Schools A and G benefited from a supportive administration, supportive parents, and a community that values education. A culture of excellence was evident at both schools, a theme made apparent by high expectations, a focus on each student, and a dedicated teaching staff employed at each school.

Discussion of the Results

Interpretation of the Findings

The three themes that emerged during the qualitative phase of the research – communication, collaboration and support, and a culture of excellence – are concepts with which educators were already familiar. Without overstating the obvious, schools A and G were not in possession of a previously undiscovered secret to success. In fact, the five year strategic plan recently adopted by the cooperating school district identified components of the three themes found in high AO schools. The following language was included in the plan's executive summary: "Focus on the student," "Improve customer service and communication," "Value our hardworking people," and "Culture of excellence." It is not a stretch, therefore, to suggest that schools, regardless of their level of academic optimism, could have exhibited one or more of the identified themes to some degree or another. Communication might have been a high priority in one school and a low priority in another, collaboration might have been frequent and beneficial in one school and viewed by teachers as an interruption to their day in another, and one school might have experienced a strong culture of excellence whereas a negative culture may have been more pervasive in another school. In other words, increasing academic optimism did not appear to be a matter of simply adding something or taking something away from a school; rather, academic optimism seemed to be stronger in schools where communication and collaboration were utilized most effectively, and a culture of excellence was strong and prevalent.

Communication. Participants at both schools cited communication as a major factor in developing trusting and collaborative relationships with parents. While the interview questions were designed to explore faculty trust in parents and students, teachers frequently mentioned that

regular communication from teachers fostered parent trust in teachers. Teacher communication with parents, therefore, might initially appear to contribute to a trusting relationship that is directionally opposite to that which was of interest to this study; rather than promoting teacher trust in parents, communication appeared to promote parent trust in teachers. However, the trusting relationship created by frequent teacher-to-parent communication appeared to have an indirect effect on faculty trust in parents. Parents at Schools A and G appeared to be very responsive and willing to assist teachers in addressing their students' needs. Participants described how they could rely on parents to partner with them when there was a problem in the classroom, and attributed the willingness of parents to do so due to the trust earned by the teachers, a trust built and strengthened by regular communication.

Communication both from the principal and with the principal was highly valued by teachers at both schools. Teachers at School A described their principal as approachable, noting they felt comfortable approaching her with concerns. Teachers at School G appreciated knowing about any forthcoming changes in advance so they could prepare appropriately. The rapid pace with which changes occurred in the field of education likely magnified the need for frequent communication regarding any such change, while making such communication that much more difficult to accomplish in a timely manner. At both schools, the principals solicited teacher input, which contributed to a sense of belonging for the teachers. It appeared as if the frequent and meaningful communication at the school level provided a sense of comfort to the teachers, and fostered a feeling of trust with the administration that the teachers appreciated. Furthermore, frequent communication with the schools' administration appeared to contribute to a sense of belonging – one teacher even drew a connection between the quality communication and sense of family within the building.

Collaboration and support. Teacher collaboration was not unique to schools A and G. The school district leaders required all teachers to attend a weekly Professional Learning Community (PLC) meeting, the purpose of which was to collaborate on instructional strategies, review student data, and prepare common assessments. However, teacher collaboration, including PLC meetings, was not necessarily equally effective for all schools. A 2013 survey of teachers in the school district revealed that only 40% of middle school teachers believed that PLC meetings enhanced their instructional practice. When compared to the interview responses of teachers from School A and School G, it appeared as if teachers at these schools were benefiting more from the collaborative process than their colleagues across the district. (Unlike the TELL survey results, the district survey was disaggregated by instructional level only, and not by individual school.) The same 2013 survey revealed that only 21% of the district's middle school teachers felt like they had autonomy to make instructional decisions, suggesting a feeling of micromanagement district-wide that was not indicative of the feelings of the teachers at Schools A and G. In fact, multiple teachers at School A indicated their principal was not a micromanager, and a teacher at School G felt like the principal had faith in the competency of her teachers to educate the students. It appeared as if the focus of teacher collaboration at Schools A and G was truly on improving teacher instruction and student achievement. Teacher interviews at Schools A and G revealed a focus on meeting the educational needs of their students, suggesting those teachers viewed the PLC meetings and the entire collaborative process as a valuable tool rather than an intrusive district mandate.

Teachers at both schools mentioned being supported by their principals, and interestingly, that support appeared to be tailored to the specific needs of each faculty. At School A, teachers seemed to appreciate the administrators being visible and approachable, and at School G,

teachers appreciated organization and structure and being informed of changes as early as possible. Teachers at both schools appreciated consistency from the administration, especially in matters of discipline. Two possible explanations appeared to exist: The principals at Schools A and G have tailored their support strategies to meet the unique needs of their schools' teachers, or teachers have responded positively to the principals' brands of support, which were successful irrespective of the unique needs of the teachers. Whether attributable to the first, second, or a combination of both explanations, the principals at both schools have successfully provided support that was highly valued by their teachers.

Culture of excellence. Teachers at Schools A and G articulated a belief that students could succeed. This belief was perhaps best captured by Teacher G4, who stated, "At (School G), I think the main difference is we believe that everyone can achieve." While it is easy to include a reference to excellence in a school's vision or mission statement, those words do not always translate into a belief held by the teachers. In both schools, the expectation for student achievement was real. School A served students from an affluent community, and the teachers noted that the community expected their students to be academically successful. Although School G served students from both high and low socio-economic backgrounds, the teachers described an expectation for success there as well. One teacher at School G described the expectation for success as almost a tradition, although the community expectations evident at School A were lacking at School G. While teachers at School G felt like they were supported by their community and the students' parents, the high expectations were never attributed to the community or parents as they were at School A.

Strong leadership. Although it did not emerge as a unique theme, it is important to highlight the impact of the principal on both schools. Teachers at School A explicitly attributed the positive climate and culture of their building to their principal. Teachers described how she visited classrooms regularly and showed a sincere interest in the learning that occurred. Her strength, according to the interview responses, was developing strong relationships. This was evident not only in her interactions with students, but with adults as well. While relationships were not highlighted during the interviews as an attribute of Principal G, teachers nonetheless described how she met their needs by providing information in a timely manner. Teachers at both schools professed their admiration for their respective principals and a strong desire to continue working at their respective school, reinforcing the impact of principal leadership in a school.

Relationship of the Current Study to Previous Research

Quantitative analysis revealed a strong relationship between the Value Added math scores and the academic optimism of schools ($r = .785$, $p < .01$), but found no relationship between academic optimism and Value Added reading and language arts scores. Prior research had revealed a relationship between academic optimism and both math (partial $r = .45$, $p < .01$) and reading (partial $r = .38$, $p < .01$) in elementary schools (McGuigan & Hoy, 2006). Quantitative analysis also revealed a strong negative relationship between SES and academic optimism at the school level ($r = -.905$, $p < .01$). These results were aligned with previous research that suggested a negative relationship between SES and academic optimism at the school level ($r = .76$, $p < .01$) (McGuigan & Hoy, 2006), and at the classroom level ($r = -.43$, $p < .01$) (A. W. Hoy, Hoy, & Kurz, 2008). Unlike previous research that revealed a positive

relationship between academic optimism and school size in urban elementary schools ($r = .36$, $p < .01$) (Smith & Hoy, 2007), this study found no relationship between school size and academic optimism ($r = .184$, n.s.) in middle schools.

This study revealed a relationship between attendance and suspension rates and academic optimism that might, at first glance, appear to be arbitrary. However, the significance of the relationship is clarified when examined through a specific component of academic optimism – academic emphasis. Specifically, schools with high academic emphasis are characterized by students who value their learning, and therefore, to the degree possible, might be more likely to avoid missing school. Similarly, it is reasonable to believe that students who value their learning choose to avoid behaviors that are known to result in out of school suspension, and thus lost instruction.

Communication was heavily discussed by teachers during the interview process. Hoy (2002) highlighted the importance of communication in building faculty trust: "Faculty trust in students and parents can be cultivated by openness in communication between teachers and students and between teachers and parents" (p. 100). As mentioned earlier, the trusting relationship created by frequent teacher-to-parent communication appeared to have an effect on faculty trust in parents. When parents received frequent communication from teachers, they were more likely to partner with those teachers in the educational process, thus impacting the trust teachers have that the parents will be supportive. Interestingly, teachers' trust in their colleagues is related to their trust in parents and students ($r = .57$, $p < .01$) (Smith et al., 2001). Smith and his colleagues attributed the variance in trust in colleagues to morale, and it is therefore not surprising that interviews revealed the teachers at School A and G got along well with one another. It is quite possible that communication with colleagues also had an indirect

impact on teacher trust in colleagues, reinforcing the importance of communication in trusting relationships.

Teacher interviews revealed a degree of teacher autonomy prevalent at high AO schools. Teachers described the freedom to make certain decisions and felt as if they were treated as professionals – experts in their fields. This sense of autonomy is aligned with previous research that suggested a positive relationship between a school's enabling structure and its academic optimism, even when controlling for SES (partial $r = .46$, $p < .01$) (McGuigan & Hoy, 2006), and a negative relationship between teacher powerlessness and collective efficacy ($r = -.51$, $p < .001$) (Goddard et al., 2000). A school's "Enabling structures and procedures invite two-way communication, see problems as opportunities, encourage differences, promote trust, adjust easily to mistakes, and delight in the unexpected" (Sweetland, 2001, p. 581). Unlike a coercive structure which is "characterized by top-down communication, viewing problems as constraints, mistrusting, forcing consensus, suspecting differences, punishing mistakes, and fearing the unexpected" (Sweetland, 2001, pp. 581-582), an enabling structure "is the extent to which the structures and process of the school support and enable teachers' work (McGuigan & Hoy, 2006).

A strong academic emphasis and a sense of collective teacher efficacy were evident in the culture of excellence observed at both schools. Several characteristics of schools with strong academic emphasis were observed in the case study schools: teacher belief in students' ability to achieve, an orderly school environment, and teachers and administrators who pursue academic success (Goddard et al., 2000), and a focus on use of time for instructional activities (Murphy et al., 1982). Not surprisingly, previous mastery experience has been shown to be strongly related to collective efficacy (Goddard, 2001). School A had a history of strong student achievement,

having earned an A in achievement and positive Value-Added in all content areas on the state report card for the previous school year. School G also fared well in the prior school year, scoring two A's and two B's in achievement and positive Value-Added in all content areas except one. Goddard (2001) used Bandura's (1997) social cognitive theory as a lens to explain the relationship between collective efficacy and achievement, noting the importance of an empowered faculty and a strong leader in developing collective efficacy. Schools A and G were characterized by a sense of empowerment – and to the degree possible in a large school district, autonomy – to do the work of educating their students, and both were led by principals who "unite the community for common cause" (Bandura, 1997, p. 501). The relationship between collective efficacy, student achievement, and high expectations could be explained by teachers who, when immersed in a culture of high collective efficacy, "sense an expectation for successful teaching and hence are increasingly likely to put forth the effort required to help students learn" (Goddard et al., 2004, p. 9).

The term academic optimism was chosen to reflect the belief that it can be learned (W. K. Hoy et al., 2006). Fittingly, the three emergent themes from this study – communication, collaboration and support, and a culture of excellence, can be developed. Based on the interview responses, principals bore much of the burden for facilitating that learning for his or her building. Teachers spoke of school-wide stakeholder communication requirements, as well as the strong communication modeled by their principals. They mentioned the variety of supports provided by their principals. Teachers at School A even credited the principal with making significant contributions towards creating a culture of excellence in their building. The question, then, is not *if* academic optimism can be developed, but rather *what* can be done to promote it?

Recommendations

Because academic optimism is composed of three separate elements that have a collective influence on student achievement, it is perhaps not surprising that Hoy and his colleagues "suspect the general way to enhance the academic optimism of a school is to improve its component parts" (W. K. Hoy et al., 2006, p. 441). By closely examining the practices of two schools with high levels of academic optimism, it is the hope of the researcher that the recommendations included in the following pages will do more than simply offer suggestions for improving the academic emphasis, collective efficacy, and faculty trust of schools; instead, the recommendations highlight those practices that are evident in schools with high academic optimism, thus suggesting an impact on more than just one of the individual constructs. Indeed, Hoy and his colleagues cautioned that "Interventions should be supportive of all three aspects of optimism" (W. K. Hoy et al., 2006, p. 442).

Based on the findings of this research, the following recommendations are made for the purpose of providing educational practitioners with information that will enhance their understanding of certain factors that may contribute to higher levels of academic optimism – and therefore the academic achievement – of schools. This information may be valuable to educational leaders at all levels, from boards of education to superintendents to school administrators to teachers, any of whom would have an interest in increasing the academic optimism of a school or schools.

1. Examine attendance and suspension rates. Quantitative analysis revealed a relationship between three factors and the academic optimism of schools: attendance rate, suspension rate, and the socio-economic status of its population as measured by the percentage of students who qualified for free and reduced meals. School leaders

who wish to impact the academic optimism of their schools ought to review their attendance and suspension rates and examine what contributes to any negative trends within those data. Schools with low attendance rates should regularly monitor attendance data and institute early interventions for those students who are frequently absent. Schools might also benefit from adopting a proactive approach by seeking out and implementing strategies that encourage regular attendance. Whenever possible, opportunities to catch up on missed learning should be provided to students in order to diminish the educational impact of being absent.

Schools with a high rate of suspensions might benefit from adopting an approach to discipline that focuses on teaching appropriate behaviors. The local university, for example, has partnered with several schools to educate the faculty on School Wide Positive Behavior Supports, an approach that teaches and rewards appropriate behaviors. Additionally, school leaders could benefit from considering alternative disciplinary consequences, such as In School Suspension, detention, or even Saturday School when appropriate, knowing that fewer suspensions are related to higher levels of academic optimism. Because schools are tasked with educating those students who reside in the community which it serves and have no influence over the socio-economic status of those students or their families, it would be foolish to make a recommendation to somehow increase the SES of a school's students, and therefore no such recommendation will be made. However, schools and school districts could benefit from providing training to teachers that would prepare them to meet the needs of students from low-SES backgrounds. Initial training during new

teacher induction, as well as ongoing professional learning opportunities might impact teachers' success rates with at-risk students.

2. Emphasize frequent, high-quality communication. Schools with high levels of academic optimism were characterized by frequent and meaningful communication between teachers and administrators and between teachers and parents. Communication between teachers and parents was frequent at both case study schools, and appeared to contribute to increased trust among all parties. Teacher collaboration was evident at both schools, and teachers at both schools reported that their principals did an excellent job of communicating with them and the community. Communication from teachers to administrators was mentioned in varying degrees at both schools, with a greater emphasis found in School A, and communication in general was one of the most frequently cited themes during the interview process at both schools.

Knowing the importance of communication, leaders interested in the academic optimism of their schools should place an emphasis on increasing communication with all stakeholders. Principals at Schools A and G successfully utilized their district's telephone messaging system, a communication technique that can be easily duplicated by any principal with access to similar technology. Schools would benefit from adopting some type of policy that promotes regular communication with parents, with an emphasis on ensuring all parents are able to receive communication regardless of whether or not they have access to the most current technologies. Emails and phone calls are effective only when the intended recipients have access to

the devices required to receive them. Schools who wish to excel at communication must strive to meet the individual needs of all parents.

3. Emphasize teacher collaboration. Teacher collaboration is frequent and meaningful at schools with high levels of academic optimism. Educational leaders must focus not only on establishing requirements for teacher collaboration, but must ensure that collaboration is viewed by the faculty as a meaningful exercise and not just another requirement. Based on the feelings of empowerment and professional worth articulated during the teacher interviews, it appeared as if school and district leaders had to strive to strike a balance between requiring teacher collaboration and trusting teachers to use collaboration time in a manner that would contribute to student academic success. It would be helpful for educational leaders to determine the degree to which a school's faculty feels valued as professionals and believes they have some degree of autonomy in their instructional practices. Smith and Hoy (2007) realized that

> one of the major challenges of school leaders is to cultivate a culture of academic optimism in which the…faculty senses a climate in which they are free to experiment with instruction and learning without fear of retribution if things go wrong. (p. 565).

4. Empower teachers. Empowering teachers can actually increase the collective efficacy of a school. In the environment of increased accountability, principals were often reluctant to release decision-making responsibilities to teachers. While the motivation behind a tight-reigned approach to leadership is ensuring the best decisions are made for students, it leads to not only a sense of powerlessness and devaluation among the teachers, but burnout for the principals as well. A wise school leader hires excellent teachers, and trusts them to do their jobs. Empowerment does

not negate the need for accountability and supervision; rather it provides an opportunity for teachers to utilize their expertise within appropriate guidelines. When teachers experience success in this way, they experience a sense of ownership as well. Goal completion is also important, with even small victories fostering a collective efficacy through mastery experience. School leaders should therefore monitor the assessment data and celebrate with teachers when gains in achievement are realized.

5. Establish a culture of excellence. Finally, it is important for schools to establish a culture of excellence. School A utilized the power of the written word to help establish a culture of excellence. Expectations of excellence were evident in the principal emails, the school's motto, writings in the hallways, and banners hung from the ceiling. Despite evidence of strong branding observed at School A, a strong culture of excellence was evident at School G as well. The common thread seemed to be a genuinely held belief among the teachers that the students could in fact succeed. At the higher-performing School A, the teachers gave the impression that they believed the students had the skills and even the desire to succeed, and it was their job to hold them to high expectations. The teachers at School G also spoke of high expectations, and teachers at both schools emphasized the importance of finding a way to meet the needs of all students.

    How then does a school leader intentionally establish a culture of excellence? Interestingly, a teacher from each school provided some insight into this during the interview process. At School A, one of the teachers mentioned that the expectation for success had been established when the school opened 10 years ago, and that expectation had sustained through subsequent staffing changes. A teacher from

School G, which had been open far longer than School A, mentioned that excellence was an expectation passed on to new teachers, calling it almost a tradition. Educational leaders should take care, therefore, during the staffing process, to hire and retain those teachers who share in the fundamental belief that students can achieve and are committed to perpetuating a tradition of excellence (Goddard et al., 2000). Perhaps the more difficult task for school administrators in creating a culture of excellence is addressing the negative attitudes of some existing teachers. Collective efficacy – and indeed academic optimism – is a group level construct, and is therefore dependent upon the strength of all parties. When one or more teachers do not believe that students can achieve, the collective efficacy of the entire faculty suffers.

Just as teachers must be empowered to make certain decisions regarding their content and instruction, so too must school administrators be permitted to address the negative impact a teacher's attitude has on his or her peers. Nowhere is this more evident than in schools that have undergone reconstitution, a process used to support severely underperforming schools in which no more than half of a staff is permitted to be retained the following year. Using several criteria, including influence on the school's climate, one middle school principal in the district retained only a fraction of the school's staff during a recent reconstitution. Although the school did not participate in this study, anecdotal data revealed a significant, positive change in the culture of the building.

Suggestions for Additional Research

This study highlights factors that contribute to the academic optimism of 10 participating middle schools in a large school district in eastern Tennessee. Although the district was represented by schools serving rural, urban, and suburban populations, the principal of the middle school known to serve a primarily rural population declined to participate in the study. The schools chosen for the case studies served a primarily suburban population (School A) and a suburban/urban mix (School G), and the results of this study, therefore, cannot necessarily be generalized to schools in primarily rural settings. Future research on factors associated with academic optimism in rural middle schools would add to the body of knowledge generated by this research and provide much-needed information for educators serving students in rural communities. Additionally, similar research would be valuable in elementary and high schools.

This study focused on factors and themes found in schools with high levels of academic optimism. As described earlier in both the methodology and results sections, the inclusion criterion had to be adjusted in order to identify a low-SES school with high academic optimism, resulting in the selection of a moderately low-SES school with moderately high academic optimism. If ever an extremely low-SES school is identified as having a level of academic optimism significantly higher than surrounding schools, a case study could potentially reveal additional contributing factors that are unique to a high AO/low-SES school. Additionally, future research in schools with low levels of academic optimism could reveal themes that potentially contrast with those found in high AO schools, perhaps opening the door to explore ways in which school leaders could increase the levels of AO in low AO schools.

Unlike previous research which found a relationship between academic optimism and both math and reading achievement, this study found a relationship between academic optimism

and math but not reading. The participating school district experienced a decline in reading achievement during the year of the study, with 7 of the 10 participating schools experiencing a negative Value Added score in reading. While multiple factors likely contributed to the lower reading scores, it is worth noting that the end of year test assessed the state reading standards and not the Common Core standards that teachers had been instructed to teach. Interestingly, the end of year test also assessed state math standards rather than those of the Common Core, and there was nevertheless a relationship between academic optimism and math Value Added scores. Future research designed to address this issue could potentially yield different results with respect to reading achievement and warrant consideration.

This study utilized teacher surveys, teacher interviews, and faculty-focused documents, which may have had an impact on the faculty-centric nature of the three emergent themes identified. While teachers and administrators are certainly key players in the academic optimism of a school, it is important to remember that without students, there would be no academic optimism. Students are an important factor in each of the three components of academic optimism. The academic emphasis of a school is measured in part by the degree to which students respect the academic success of their peers. The faculty trust of a school involves the trust in students in addition to trust in their parents. Students' home lives and motivations are part of the collective efficacy portion of the survey, and while teachers can certainly speak to those student factors, students would certainly be able to offer a clearer insight into those areas. Future research designed to ascertain what may be done at the student level to impact academic optimism would provide a new and unique perspective to the field of academic optimism.

Conclusion

This study revealed a relationship between academic optimism and math achievement in 10 participating middle schools in an eastern Tennessee school district, as well as identified three emergent themes related to academic optimism. While certain limitations certainly present opportunities for future research, the results are compelling enough to merit the attention of district and school personnel. Of particular interest is the notion that the three emergent themes related to academic optimism – communication, collaboration and support, and a culture of excellence – can be developed. Noteworthy, too, is the direct and indirect impact of the school principal on the academic optimism of his or her school. With a concentrated focus on increasing student achievement, this study offers several recommendations that are likely to be of interest to school leaders. Academic optimism, a construct which can be developed, warrants attention in the ongoing emphasis on improving student achievement.

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APPENDIX A

SCHOOL ACADEMIC OPTIMISM SCALE

SAOS

Directions: Please indicate your degree of with each of the statements about your school from **strongly disagree** to **strongly agree**. Your answers are confidential.	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1. Teachers in this school are able to get through to the most difficult students.	①	②	③	④	⑤	⑥
2. Teachers here are confident they will be able to motivate their students.	①	②	③	④	⑤	⑥
3. If a child doesn't want to learn teachers here give up.	①	②	③	④	⑤	⑥
4. Teachers here don't have the skills needed to produce meaningful results.	①	②	③	④	⑤	⑥
5. Teachers in this school believe that every child can learn.	①	②	③	④	⑤	⑥
6. These students come to school ready to learn.	①	②	③	④	⑤	⑥
7. Home life provides so many advantages that students are bound to learn.	①	②	③	④	⑤	⑥
8. Students here just aren't motivated to learn.	①	②	③	④	⑤	⑥
9. Teachers in this school do not have the skills to deal with student disciplinary problems.	①	②	③	④	⑤	⑥
10. The opportunities in this community help ensure that these students will learn.	①	②	③	④	⑤	⑥
11. Learning is more difficult at this school because students are worried about their safety.	①	②	③	④	⑤	⑥
12. Drug and alcohol abuse in the community make learning difficult for students here.	①	②	③	④	⑤	⑥
13. Teachers in this school trust their students.	①	②	③	④	⑤	⑥
14. Teachers in this school trust the parents.	①	②	③	④	⑤	⑥
15. Students in this school care about each other.	①	②	③	④	⑤	⑥
16. Parents in this school are reliable in their commitments.	①	②	③	④	⑤	⑥
17. Students in this school can be counted upon to do their work.	①	②	③	④	⑤	⑥
18. Teachers can count upon parental support.	①	②	③	④	⑤	⑥
19. Teachers here believe that students are competent learners.	①	②	③	④	⑤	⑥
20. Teachers think that most of the parents do a good job.	①	②	③	④	⑤	⑥
21. Teachers can believe what parents tell them.	①	②	③	④	⑤	⑥
22. Students here are secretive.	①	②	③	④	⑤	⑥

Directions: Please indicate the degree to which the following statements characterize your school from **Rarely Occurs** to **Very Often Occurs.** Your answers are confidential.	Rarely	Sometimes	Often	Very Often
23. The school sets high standards for performance.	①	②	③	④
24. Students respect others who get good grades.	①	②	③	④
25. Students seek extra work so they can get good grades.	①	②	③	④
26. Academic achievement is recognized and acknowledged by the school.	①	②	③	④
27. Students try hard to improve on previous work.	①	②	③	④
28. The learning environment is orderly and serious.	①	②	③	④
29. The students in this school can achieve the goals that have been set for them.	①	②	③	④
30. Teachers in this school believe that their students have the ability to achieve academically.	①	②	③	④

APPENDIX B

SCHOOL DISTRICT PERMISSION

TO CONDUCT RESEARCH

[redacted] SCHOOLS
[redacted]

[redacted] *Superintendent*

[redacted]

August 13, 2013

Zachary Best
9312 Collingwood Road
Knoxville, TN 37922

Mr. Best:

You are granted permission to contact appropriate building-level administrators concerning the conduct of your proposed research study: *The Identification of Factors that Contribute to the Academic Optimism of Schools.*

Final approval of any research study taking place within the [redacted] School system is contingent upon acceptance by the principal(s) at the site(s) where the study will be conducted. Include a copy of this permission form when seeking approval from the principal(s).

In all research studies names of individuals, groups, or schools may not appear in the text of the study unless specific permission has been granted through this office. The principal researcher is required to furnish this office with one copy of the completed research document.

Good luck with your studies. Do not hesitate to contact me at [redacted] if you need further assistance or clarification of the research policies of [redacted] Schools.

Yours truly,

[redacted]
Supervisor
Research and Evaluation

Project Number: 1314006

/pl

[redacted]

APPENDIX C

INSTITUTIONAL REVIEW BOARD PERMISSION

TO CONDUCT RESEARCH

THE UNIVERSITY of TENNESSEE CHATTANOOGA

Institutional Review Board
Dept. 4915
615 McCallie Avenue
Chattanooga, TN 37403-2598
Phone: (423) 425-5867
Fax: (423) 425-4052
instrb@utc.edu
http://www.utc.edu/irb

MEMORANDUM

TO: Mr. Zachary Best **IRB # 13-127**

FROM: Lindsay Pardue, Director of Research Integrity
Dr. Bart Weathington, IRB Committee Chair

DATE: September 25, 2013

SUBJECT: IRB #: 13-127: The Identification of Factors which Contribute to the Academic Optimism of Schools

The IRB Committee Chair has reviewed and approved your application and assigned you the IRB number listed above. You must include the following approval statement on research materials seen by participants and used in research reports:

The Institutional Review Board of the University of Tennessee at Chattanooga (FWA00004149) has approved this research project # *Error! Reference source not found..*

Please remember that you must complete a Certification for Changes, Annual Review, or Project Termination/Completion Form when the project is completed or provide an annual report if the project takes over one year to complete. The IRB Committee will make every effort to remind you prior to your anniversary date; however, it is your responsibility to ensure that this additional step is satisfied.

Please remember to contact the IRB Committee immediately and submit a new project proposal for review if significant changes occur in your research design or in any instruments used in conducting the study. You should also contact the IRB Committee immediately if you encounter any adverse effects during your project that pose a risk to your subjects.

For any additional information, please consult our web page http://www.utc.edu/irb or email instrb@utc.edu

Best wishes for a successful research project.

APPENDIX D

EMAIL FROM DR. WAYNE K. HOY GRANTING PERMISSION TO USE ACADEMIC OPTIMISM SCALES

Wayne Hoy <whoy@me.com> 2/16/11

to me

HI Zach--

You have my permission to use the Academic Optimism Scales in your research. You can find the scales and information on my web page [www.waynekhoy.com].

Good luck.

Wayne

Wayne K. Hoy
Fawcett Professor of
Education Administration

hoy.16@osu.edu
www.waynekhoy.com

APPENDIX E

INFORMED CONSENT FORM FOR PARTICIPATION

IN RESEARCH SURVEYS

UNIVERSITY OF TENNESSEE INFORMED CONSENT FORM (SURVEY)
The Identification of Factors which Contribute to the Academic Optimism of Schools

Dear Faculty Member,

My name is Zachary Best, and I am currently a doctoral student in the EdD in Leadership and Learning program at the University of Tennessee at Chattanooga, as well as an assistant principal in this school system. I am currently researching academic optimism for my dissertation.

Based on the theory that three organizational factors positively associated with student achievement in fact operate in cohort, researchers have identified the emergent construct which they call academic optimism. Individually, the components of academic optimism are the academic emphasis of schools, collective efficacy of teachers, and faculty trust in parents and students. The purpose of this study is to determine which school characteristics are most strongly associated with academic optimism. This study aims to add to existing research by identifying those characteristics which are most prevalent when the components of academic optimism are working in concert with one another. Additionally, this study provides the opportunity to identify characteristics which might not have been previously identified as being indicative of the individual components of academic optimism. By identifying those characteristics most associated with academic optimism, school leaders can adopt those characteristics within their own schools. You have been selected to participate in this study because you are a faculty member at one of the fourteen middle schools in this district.

If you agree to be in this study, you will be asked to complete a survey. Risks to participants are minimal. As with any survey, it is possible that participants might be uncomfortable answering a question or questions on the survey. You will not be asked to sign your survey, therefore results will be anonymous and thus kept confidential to the extent possible. Survey results will be kept at the researcher's private residence and will be destroyed following the publication of the dissertation.

While there are no direct benefits to individual participants in this study, the field could potentially benefit from its findings, but this cannot be guaranteed. There is no cost for you to participate in this study. If you have any additional questions, please feel free to contact Zachary Best at 865-405-4957, or dissertation chair Dr. John Freeman at 423-425-5445. If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Committee, Institutional Review Board at 423-425-4289.

Participation in this research is strictly voluntary. Refusal to participate will not impact your standing with the school district in any way. You have the right to decline to participate, or to discontinue participation at any time. At a later date, two schools will be selected to participate in case studies and five teachers from those schools will be asked to participate in an interview. If you are eventually asked to participate in an interview, you may decline to do so even if you agree to complete this survey.

Thank you for agreeing to participate at this time.
Regards,
Zachary Best

APPENDIX F

INFORMED CONSENT FORM FOR PARTICIPATION

IN INTERVIEWS

Dear Faculty Member,

My name is Zachary Best, and I am currently a doctoral student in the EdD in Leadership and Learning program at the University of Tennessee at Chattanooga, as well as an assistant principal in this school system. I am currently researching academic optimism for my dissertation.

Based on the theory that three organizational factors positively associated with student achievement in fact operate in cohort, researchers have identified the emergent construct which they call academic optimism. Individually, the components of academic optimism are the academic emphasis of schools, collective efficacy of teachers, and faculty trust in parents and students. The purpose of this study is to determine which school characteristics are most strongly associated with academic optimism. This study aims to add to existing research by identifying those characteristics which are most prevalent when the components of academic optimism are working in concert with one another. Additionally, this study provides the opportunity to identify characteristics which might not have been previously identified as being indicative of the individual components of academic optimism. By identifying those characteristics most associated with academic optimism, school leaders can adopt those characteristics within their own schools. You have been selected to participate in this study because you are a faculty member at one of the fourteen middle schools in this district.

If you agree to be in this study, you will be asked to complete a brief, five question, open-ended interview. Risks to participants are minimal. As with any interview, it is possible that participants might be uncomfortable answering a question or questions during the interview. Participants will be asked to sign a consent form, but names will not be used in the dissertation, thus confidentiality will be protected to the degree possible. Interview data will be stored at the researcher's private residence, and will be destroyed following the publication of the dissertation.

Interviews may be recording using audio recording to assist with the accuracy of your responses. You have the right to refuse the audio recording. Please select one of the following options:
I consent to audio recording: Yes _____ No _____

While there are no direct benefits to individual participants in this study, the field could potentially benefit from its findings, but this cannot be guaranteed. There is no cost for you to participate in this study. If you have any additional questions, please feel free to contact Zachary Best at 865-405-4957, or dissertation chair Dr. John Freeman at 423-425-5445. If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Committee, Institutional Review Board at 423-425-4289.

Participation in this research is strictly voluntary. Refusal to participate will not impact your standing with the school district in any way. You have the right to decline to participate, or to discontinue participation at any time.

Thank you for your willingness to participate at this time.

Regards,
Zachary Best

(Participant)

(Zachary Best)

VITA

Zachary Allen Best was born in Knoxville Tennessee to parents Kurt and Mitzi. He attended the University of Tennessee (Knoxville) where he earned a Bachelor of Arts in Theater and a Master of Science in English Education. It was at UT that he met his wife, Kelley, while working on a production of The Crucible. For ten summers, Zach worked at summer camps in North Carolina and Tennessee in a variety of roles, including Boys Hill Director and Assistant Camp Director. He taught high school theater at his alma mater for six years. During that time, he served on the board of directors for the Tennessee High School Speech and Drama League and co-authored the Tennessee state standards for high school theater courses. For the past four and a half years, Zach has served as a middle school assistant principal. He was recently selected to participate in his school district's Leadership Academy. With this dissertation, Zach earns a Doctor of Education in Learning and Leadership from the University of Tennessee at Chattanooga.