ACADEMIC OPTIMISM AND ORGANIZATIONAL CLIMATE

AS PREDICTORS OF ACADEMIC ACHIEVEMENT

AND SCHOOL EFFECTIVENESS

by

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ABSTRACT

An investigation into the relationship of organizational climate and academic optimism as predictors of student achievement and school effectiveness was conducted. A total of 67 elementary schools in the Northern portion of Alabama participated in the study, and any information that would compromise respondent or school anonymity was removed. The instrumentation for this study included School Academic Optimism Survey (SAOS), Organizational Climate Index (OCI), the Index of Perceived Organizational Effectiveness (IPOE) which is now known as the SE Index (School Effectiveness Index), a composite score for Academic Achievement (AA), and socioeconomic status (SES). Ordinary Least Squares Block Regression method was used to test the effects of the independent variables separately and together on school effectiveness and academic achievement. The results suggested that all variables had a moderate correlation with each other. Also, when controlling for SES both optimism and climate served as independent predictors for achievement and effectiveness. When entered into a regression model together while controlling for SES, climate predicted achievement while optimism did not. This was likely due to the small sample size as compared to the number of predictors in the model. Both climate and optimism served as predictors for effectiveness when in the regression model. The results of this study lend further support to the importance of school academic optimism and organizational climate as predictors of academic achievement and organizational effectiveness.

DEDICATION

This dissertation is dedicated to my grandma Angie, who taught me that knowledge is the one item we possess in life that can never be taken away, no matter what we may endure.

LIST OF ABBREVIATIONS AND SYMBOLS

a	Cronbach's index of internal consistency
df	Degrees of freedom: number of values free to vary after certain restrictions have been placed on the data
F	Fisher's *F* ratio: is a value computed using ANOVA; it is an index of the departure from the chance model
M	Mean: the sum of a set of measurements divided by the number of measurements in the set
N	Sample: is a subset of the population
B	Beta weight: is a regression weight, an unstandardized regression coefficient of an independent variable which indicates the strength of that variable in explaining the variance in the dependent variable, controlling for the effects of all the other independent variables in the regression
SE B	Standardized error beta: the probability of making a Type II error
β	Standardized Beta: beta weights are typically standardized regression weights, and so they can be easily compared
R^2	Represents the percentage of the variation in the outcome that can be explained by the model
Adj. R^2	Adjusted R^2: a measure of the loss of predictive power or shrinkage in regression. Tells how much variance in the outcome would be accounted for if the model had been derived from the population from which the sample was taken
CI	Confidence interval: is a range of values around that statistic that are believed to contain, with a certain probability (e.g., 95%), the true value of that statistic (i.e., the population value)
p	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value

r	Pearson product-moment correlation: a number that indicates the magnitude of the relation between two continuous variables such that the higher the absolute value of the correlation, the stronger the relation
t	Computed value of *t* test
z	*z* score: is a standard score that indicates how many standard deviations a score is above or below the mean
<	Less than
=	Equal to

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CHAPTER I:

INTRODUCTION

This study investigates the relationship between organizational climate and academic optimism and seeks to identify their individual and joint contribution to the explanation of academic achievement and organizational effectiveness. Prior research suggests that academic optimism, which is made up of collective efficacy, faculty trust, and academic emphasis is a predictor of both academic achievement and school effectiveness (Hoy & Hannum, 1997; Hoy & Sabo, 1998; Hoy, Tarter, & Bliss, 1990; Hoy, Tarter, & Kottkamp, 1991). Research has also demonstrated the connection between school climate (represented by the openness and health of the school) and both achievement and perceptions of effectiveness (Hoy & Miskel, 2001; Hoy, Smith, & Sweetland, 2002). However, there is little empirical evidence linking academic optimism and school climate as predictors of academic achievement and effectiveness. Given their individual contributions to the explanation of achievement and effectiveness it is likely they will be correlated with each other and will work together to better explain these outcomes. Therefore, this study theorizes that there is a relationship between organizational climate and academic optimism and seeks to test their ability to individually and jointly predict academic achievement and organizational effectiveness.

Organizational climate studies have steadily been conducted by researchers for decades (Halpin & Croft, 1963; Hoy & Hannum, 1997; Hoy & Miskel, 2001; Hoy, Smith, & Sweetland, 2002; Miles, 1969). Studies on academic optimism are emergent, as the construct was developed within the past decade (Bevel & Mitchell, 2012; Hoy & Miskel, 2008; Hoy & Smith, 2007; Hoy,

Tarter, & Woolfolk Hoy, 2004, 2006a, 2006b; Kirby & DiPaola, 2011; McGuigan & Hoy, 2006; Wagner & DiPaola, 2011). While there is emerging evidence that links academic optimism to achievement, no studies to date have explored the effects of academic optimism on school effectiveness.

Academic optimism is a collective set of beliefs about strengths and capabilities in schools in which optimism is the overarching theme that unites efficacy and trust with academic emphasis (Hoy & Miskel, 2013). Schools with high academic optimism define a culture in which the faculty believes *it can* make a difference, that *students can* learn, and academic performance *can be* achieved [*sic*] (Hoy, Tarter, & Woolfolk Hoy, 2006b). While academic emphasis (Goddard, Sweetland, & Hoy, 2000; Hoy & Miskel, 2005; Hoy, Tarter, & Kottkamp, 1991; Shouse, 1996), school collective efficacy (Adams & Forsyth, 2006; Goddard, Hoy, & Woolfolk Hoy, 2000, 2004), and faculty trust in parents and students (Hoy, Smith, & Sweetland, 2002; Smith, Hoy, & Sweetland, 2001) have abundant studies as individual variables, research on the collective latent variable academic optimism, within the context of elementary schools, warrants further study. For the purposes of this study, academic optimism will serve as an independent variable.

A second independent variable of this study is school climate. School climate is a general concept that captures the atmosphere of a school (Hoy & Miskel, 2001; Hoy, Smith, & Sweetland, 2002) and is experienced by participants, affects their behavior, and is based on their collective perceptions of behavior in schools (Hoy & Miskel, 2013). A school with a healthy organizational climate is one that "successfully copes with its environment as it mobilizes its resources and efforts to achieve its goals" (Hoy & Miskel, 2013, p. 214). In keeping with this definition of organizational climate in schools, the Organizational Climate Index (OCI) was

created to measure the four aspects relating to school climate: institutional vulnerability, professional teacher behavior, collegial leadership, and achievement press. Earlier attempts were made to measure the openness of schools (Halpin & Croft, 1963) by looking at school's climate, and also by measuring the health of schools by calling attention to conditions that facilitate growth and development, as well as to those that impede healthy organizational dynamics (Miles, 1969). Although health and openness are different, the overlap that occurs within the two frameworks and their measures allowed Hoy, Smith, and Sweetland (2002) to develop the OCI.

Statement of the Problem

Today's schools are inundated with demands for high stakes accountability measures. As a result, Federal and State mandates such as No Child Left Behind (2002), Race to the Top (2010), Common Core Standards (2010), and the like intensify the pressure on schools to not only ensure goals are being met, but also to prove gains are being made year to year. The press for schools to reach effective, measurable outcomes, while meeting the learning needs of all students often appears daunting for school leaders, no matter their schools size, resources, culture, or economic background. As schools are not only being measured on their overall effectiveness, but also on their ability to increase student achievement, it is necessary for there to be a leveling of the playing field so to speak. This study aimed to close an apparent gap in literature as there appears to be a lack of research that has looked at how organizational climate and academic optimism work together to foster student achievement and perceptions of organizational effectiveness.

Purpose of the Study

The purpose of this study was to examine the relationships between organizational climate and academic optimism to determine whether or not they predict academic achievement and organizational effectiveness. Put another way, this study explored the perceptions of teachers and principals regarding the climate of the school to further explore the ability to predict achievement and effectiveness. Prior research suggested school effectiveness can be predicted by collective efficacy, faculty trust, and academic emphasis (academic optimism) (Hoy & Hannum, 1997; Hoy & Sabo, 1998; Hoy, Tarter, & Bliss, 1990; Hoy, Tarter, & Kottkamp, 1991) independently, and that openness and health of a school (organizational climate) (Hoy & Miskel, 2001; Hoy, Smith, & Sweetland, 2002) are also associated with effectiveness. However, there is little empirical evidence showing that both academic optimism and organizational climate can collectively work to explain achievement and effectiveness. Nevertheless, I anticipated these concepts are interrelated, thus a study of their relationships were warranted. Therefore this study looked at relationships among theory, while testing a theoretical framework. The findings of this study demonstrated a potential application proving an effective tool for administrators in the advancement of academic achievement and organizational effectiveness at schools across a variety of cultures and climates.

Definition of Concepts

Academic Achievement—Academic achievement is a measure of student success in the classroom environment and can be evaluated through teacher judgment or some form of testing. Academic achievement is commonly measured by schools through state testing, and this researcher neither agrees nor disagrees with this practice for the purposes of this study. Academic standards are measured through mandated state and/or federal legislated related to

annual student performance benchmarks, as well as yearly school progress gains in mathematics, science, reading, social studies, and/or writing. For the purposes of this study, mathematic and reading scores will be used as the operational measurement component for academic achievement. However, the OCI and academic optimism results will also provide information regarding teacher perceptions of academic achievement.

Organizational Effectiveness—Organizational effectiveness is constitutively defined as "the extent to which any organization as a social system, given certain resources and means, fulfills its objectives without incapacitating its means and resources and without placing undue strain upon its members" (Hoy & Ferguson, 1985, p. 122). Organizational effectiveness is concerned with means and ends, as most formal organizations are, such as schools, in order to achieve goals. Organizational effectiveness incorporates the goal model as well as the systems model, which share the commonality of being goal-directed (Hoy & Ferguson, 1985). The goal model is functional and rests on the assumption that rational decision makers are guided by specific goals, fewer in number and clearly defined, to be taken on and understood by participants (p. 118). The systems model proposes that demands placed on organizations are so numerous, complex, and dynamic that defining goals in any meaningful way would prove impossible. While the goal model stresses the attainment of specific objectives, the systems model focuses on internal consistency, the ability to adapt, and the optimization of resources, especially scarce ones.

Much of the proposed conceptualization of organizational effectiveness follows Parsons' (1960) belief that social systems simply would not survive if they did not follow four critical functions: adaptation, goal attainment, integration, and latency. Parsons (1967) further noted that all organizations, including schools have three basic functions – technical, managerial, and

institutional. Parsons's broad perspective became known as the "Parsonian perspective" and provided the theoretical foundation for school health (Hoy, Tarter, & Bliss, 1990).

Mott (1972) developed a multi-faceted perspective for measuring organizational effectiveness. Mott extended Parsons's concepts and proposed the following effectiveness criteria to determine the degree to which an organization has the "power for production and adaptability: quantity and quality of the product, efficiency of production, and the adaptability and flexibility of the organization" (Hoy & Ferguson, 1985, p. 124). Like Parsons, Mott was concerned with both environmental and internal problems; and his instrument also addressed both production and adaptation as highly complex processes. The Parsonian perspective differed in that it "provided a theoretical framework evolving directly from the imperative functions of social system" (Hoy & Ferguson, 1985, p. 125). Mott's Index of Organizational Effectiveness was later modified by Miskel and his associates (1983) for use in schools and would become known as the Index of Perceived Organizational Effectiveness (IPOE).

Academic Optimism—Academic optimism of schools is a collective construct that includes the cognitive, affective, and behavioral facets of collective efficacy, faculty trust, and academic emphasis; a latent construct (Hoy, Tarter, & Hoy, 2006a). The theoretical foundations of academic optimism are Bandura's social cognitive and self-efficacy theories (Bandura, 1986, 1997), Coleman's social capital theory (1990), Hoy and his colleagues' work on culture and climate (Hoy, Tarter & Kottkamp, 1991), and Seligman's study (1998) of learned optimism. All three elements have transactional relations with one another to form a culture of academic optimism.

Academic optimism is comprised of three school properties: academic emphasis, collective efficacy, and faculty trust in students and parents. The construct is based on results

from several previous studies that focus on academic emphasis (Alig-Mielcarek & Hoy, 2005; Goddard, Sweetland, & Hoy, 2000; Hoy & Hannum, 1997; Hoy & Sabo, 1998; Hoy, Tarter, & Bliss, 1990; Hoy, Tarter, & Kottkamp 1991), collective efficacy (Goddard, Hoy, & Woolfolk Hoy, 2000, 2004; Goddard, LoGerfo, & Hoy, 2004; Hoy, Sweetland, & Smith, 2002), and faculty trust in students and parents (Goddard, Tschannen-Moran, & Hoy, 2001; Hoy, 2002) as properties related to student achievement.

Academic emphasis is "the extent to which a school is driven by a quest for academic excellence" (Hoy, Tarter, & Woolfolk Hoy, 2006a, p. 427). In a press for academic achievement, schools set high but achievable academic goals for students, the learning environment is orderly and serious; students are motivated to work hard; and students respect academic achievement (Hoy, Tarter, & Woolfolk Hoy, 2006a). Collective efficacy is the perception of teachers in a school that the efforts of the faculty can and will have a positive effect on students. Faculty trust in students and parents is based on feelings that students and their parents are benevolent, reliable, competent, honest, and open (Hoy & Tschannen-Moran, 1999).

Organizational Climate Index (OCI)—The Organizational Climate Index is a 27-item descriptive questionnaire that measures four critical aspects of school climate: institutional vulnerability, collegial leadership, professional teacher behavior, and achievement press (Hoy, Smith, & Sweetland, 2002). Hoy, Smith, and Sweetland created the Organizational Climate Index (OCI) by combining the works of many researchers and instruments before them (Halpin & Croft, 1963; Hoy & Feldman, 1987; Hoy & Miskel, 2001; Hoy, Tarter, & Kottkamp, 1991; Miles, 1969). A more detailed description of the OCI and its operational use in this study will be discussed in the literature review. Four critical measures of school climate captured within the

OCI include institutional vulnerability, professional teacher behavior, collegial leadership, and achievement press (Hoy, Smith, & Sweetland, 2002).

Institutional Vulnerability—Institutional vulnerability looks at the relationship between the school and the community. Institutional vulnerability is the extent to which the school is susceptible to a few local parents and citizen groups (Hoy, Smith, & Sweetland, 2002). High vulnerability suggests that both teachers and principals are unprotected and put on the defensive. According to Hoy, Hannum, and Tschannen-Moran (1998), institutional vulnerability appears to be an aspect that is least related to building trusting relationships in schools; it plays only a secondary role.

This factor has gone through several name changes as researchers have attempted to express the direction of press from the inside (academic) and press from the outside (environmental). Thus, for a period of time Hoy and colleagues had labeled this factor environmental press. However, this label raised the question of whether it still remained an aspect of school health. As a result of conceptual refinement, the name was changed from environmental press, which had a neutral or even positive connotation in early work, to institutional vulnerability, which researchers noted better described the tone of the current set of items (Hoy, Smith, & Sweetland, 2002).

Professional Teacher Behavior—Professional teacher behavior looks at the openness of teacher-teacher interactions. Professional teacher behavior is marked by respect for colleague competence, commitment to students, autonomous judgment, and mutual cooperation and support of colleagues (Hoy, Smith, & Sweetland, 2002). Initially this was referred to as teacher affiliation (Ames & Miller, 1994; Rosenholtz, 1989) and emphasized the commitment of teachers to both their students and school, meaning they were likely to spend the extra time and

effort needed to motivate and nurture students (Hoy & Hannum, 1997). Teacher affiliation also meant a commitment to colleagues, as collegial teachers help and support one another, are open to change, and are eager to learn and try new things (Johnson, 1990). As research emerged, the terminology used quickly changed from teacher affiliation to teacher professionalism.

Hoy and colleagues (1998) found four variables strongly loaded on the factor they referred to as teacher professionalism: teacher commitment, teacher collegiality, and teacher affiliation loaded in a positive direction while teacher disengagement loaded negatively (p. 105). These four variables meant teachers are committed to students, respect the competence of one another, like each other, and regard their work as serious. Now this construct is known as professional teacher behavior (PTB). Hoy and colleagues found that faculty trust in colleagues is relatively unaffected by collegial leadership, but that professional teaching behavior is the key to developing trust in colleagues (Hoy, Smith, & Sweetland, 2002).

Collegial Leadership—Collegial leadership looks at the openness of the leader behavior of the principal. In other words, this aspect looks at the relationship between the principal and the teachers. Collegial leadership is principal behavior directed toward meeting both social needs of the faculty and achieving the goals of the school (Hoy, Smith, & Sweetland, 2002). In this regard the principal treats teachers as colleagues, is open, egalitarian, and friendly, and yet has the wherewithal to set clear teacher expectations and standards of performance. This factor is defined by four variables as found by Hoy and colleagues (1998): loading strongly and positively are supportive and collegial leadership; loading strongly and negatively are directive and restrictive principal behaviors (p. 105). Therefore, the factor of collegial leadership is one that denotes collegial behavior that is supportive and neither directive nor restrictive.

Achievement Press—Achievement press looks at the relationship between the school and the students. Achievement press describes a school that sets high but achievable academic standards and goals (Hoy, Smith, & Sweetland, 2002). In these schools students persist, strive to achieve, and are respected by students and teachers for their academic success (p. 42). Parents, teachers, the principal, and sometimes their own peers, all exert pressure for high standards and school improvement. The three variables strongly loading on this factor are: academic emphasis, resource support, and principal influence (Hoy et al., 1998, p. 107). In this aspect of school climate teachers set high goals, students step up to the challenge, and principals supply the resources necessary while exerting influence on the teachers' behalf.

Index of Perceived Organizational Effectiveness (IPOE)—The Index of Perceived Organizational Effectiveness (IPOE) is an 8 item instrument used to measure school effectiveness (Miskel, Fevurly, & Stewart, 1979). Originally, Mott (1972) developed a multi-faceted perspective for measuring organizational effectiveness which proposed the following effectiveness criteria: quantity and quality of the product, efficiency of production, and the adaptability and flexibility of the organization (Hoy & Ferguson, 1985). He argued that effective organizations "are those that produce more and higher quality outputs and adapt more effectively to environmental and internal problems than do other, similar organizations" (Mott, 1972, p. 17). Mott's perspective (1972), the Parsonian framework (1960), and the goal and systems model share attributes. All three frameworks are concerned with both environmental and internal problems; recognize the broad range or organizational outcomes; and address both production and adaptation as highly complex processes (Hoy & Ferguson, 1985, p. 124).

To find overall school effectiveness, Miskel, Fevurly, and Stewart (1979) modified Mott's Index of Organizational Effectiveness to create the Index of Perceived Organizational

Effectiveness, the IPOE. Similar to Mott's original index, the IPOE can be seen as a measure of efficiency: How well is the organization using the resources it has? Miskel, McDonald, and Bloom (1983) extended the work of the IPOE to measure overall effectiveness of the school along the dimensions of quantity and quality of the product, efficiency, adaptability, and flexibility (as cited in Hoy & Ferguson, 1985, p. 127).

Organizational effectiveness is a multidimensional construct. Hoy and Ferguson (1985) concluded in their study that:

> The components of the Mott index are similar to the dimensions of effectiveness in the proposed model. The index is consistent with a multidimensional definition of effectiveness that includes organizational productivity as well as the organization's ability to adapt to both internal and external changes and the absence of strain and conflict within the organization. Accordingly, effective schools should produce higher student achievement, demonstrate more efficient use of resources, adapt better to internal and external constraints, and produce greater satisfaction with schools. Mott's perspective fits with the proposed synthesis and his index seems to be a useful subjective measure of school effectiveness for both researchers and practitioners. Its advantages are obvious. The index is short, simple, easy, and inexpensive to use… Although it is presumptuous to suggest that the proposed model will bring order to the chaotic character of research on effectiveness, the framework is a modest first step toward providing theoretical direction for those interested in studying the organizational effectiveness of schools. (p. 130, 131)

The index is consistent with the multidimensional definition of effectiveness that includes organizational productivity, adaptability, and the absence of strain and conflict within the organization. According to Hoy and Ferguson, effective schools should produce higher student achievement, demonstrate more efficient use of resources, adapt better to internal and external constraints, and produce greater satisfaction with schools. The creation of the index has made it possible for school leaders to administer the instrument to their staff and have a viable subjective measure of school effectiveness.

Socioeconomic Status—Socioeconomic status (SES) is perhaps the most widely used contextual variable in educational research (Sirin, 2005, p. 417). Conceptually, SES is an

environmental constraint, thus "attempts to explain student achievement or organizational effectiveness must consider the positive and negative consequences of SES" (Tarter & Hoy, 2004, p. 540). Researchers have consistently noted the relationships between school outcomes and the social and economic resources of the community. Although SES is employed frequently as a research variable in the field of education, there is an ongoing dispute about its conceptual meaning and empirical measurement in studies involving children (Sirin, 2005). The assessment of the SES variable can be found in a number of different variable combinations, which creates ambiguity in findings. Many researchers use SES and social class interchangeably, without any rationale or clarification, to refer to social and economic characteristics of students (Ensminger & Fothergill, 2003). According to Mueller and Parcel (1981), a general understanding of SES is when it describes an individual's or a family's ranking on a hierarchy according to access to or control over some combination of valued commodities such as wealth, power, and social status.

SES is important in educational research because studies have found that SES has been proven to be correlated with trust variables, climate variables, and most other school variables (Forsyth, Adams, & Hoy, 2011). SES is invariably a strong predictor of student success (Coleman et al., 1966), and no study of student achievement of schools is complete without considering the effect of SES on student achievement. However, SES is not amenable to change, in the short run or the long term; therefore understanding its meaning and measure for research purposes is imperative. For the purposes of this study, SES was included in my model as a control variable. SES will be looked at as a school variable. School reported percent of eligible free and reduced lunch students serves as a proxy in this study for SES, as SES is the reverse of the percent of free and reduced lunch eligible students in the school. In other words, a school with a high percentage of free and reduced lunch equates to the school having a low SES. While

this variable is problematic, it is often used as a proxy for SES in school studies, as a control variable, to account for SES's effects and correlations on other variables.

Research Questions

(1) What is the relationship between Academic Optimism, Organizational Climate, Academic Achievement, and Organizational Effectiveness?

(2) Will Academic Optimism serve as a predictor to Academic Achievement and Organizational Effectiveness while controlling for the effects of SES?

(3) Will Organizational Climate serve as a predictor to Academic Achievement and Organizational Effectiveness while controlling for the effects of SES?

(4) Will Academic Optimism and Organizational Climate serve as individual and joint predictors to Academic Achievement and Organizational Effectiveness while controlling for the effects of SES?

Limitations

The most notable limitation is that this study deals with archived secondary data. Also, this study deals with a convenience sample comprised of sixty-seven public elementary schools in Northern Alabama. Granted the schools were not random, efforts were made to select a reasonably representative cross-section of elementary schools and teachers. While attempts were made to survey all teachers, some may not have been in attendance, or may have experienced a less than normal day or dramatic events that may have changed their behavior. This study assumes that teachers gave honest responses to survey questions as the survey instruments used have been shown in previous studies to be valid and reliable measures of the constructs tested. The study was limited to elementary schools in Northern Alabama that contained at least the fourth grade for the purposes of obtaining common student achievement data in math and

reading. Schools in the sample were drawn from a group of school districts that consented to participate in this study. The final sample is only meant to provide a snapshot and does not take into consideration changes over time, and the sample means may not represent the entire region or be universal. Generalization of results to any other sample or state should be done with caution as the sample for this study was not random.

Significance

This study aims to contribute to the research of organizational effectiveness and academic achievement through the examination of the relationships of academic optimism and overall organizational climate, which have been proven to have an impact on student achievement.

Summary

This study aims to test the relationships of variables: climate, academic optimism, effectiveness, and achievement. Each framework presented is commonly identified with schools that are labeled effective. Terms were defined in this chapter to provide the reader with a better understanding of the concepts that will be used. Moreover, the individual variables have been elucidated as to their individual importance and combined influence in student achievement and overall effectiveness.

CHAPTER II:

REVIEW OF THE LITERATURE

Introduction

This study is about the relationships of climate, optimism, effectiveness, and academic achievement using regression analysis. A conceptual framework will be established and theories developed to explain how climate and academic optimism work together as predictors of achievement and effectiveness. The theoretical perspectives, which underlie the relationships being investigated in this study, are rooted in social cognitive theory, self-efficacy theories, social capital theory, trust theory, culture and climate, and learned optimism. Hypothesis and rationale, derived from theories and existing research findings, will guide the empirical investigation used to test the theoretical explanation.

Conceptual Framework

Climate is regarded as a general concept to "capture an enduring quality of organizational life" (Hoy, Hannum, & Tschannen-Moran, 1998, p. 337). Meaning personality is to an individual what climate is to the organization, thus organizational climate is a characteristic of the entire organization making it a descriptive term, rather than an evaluative term. As climate is based on collective perceptions of its members, and arises from routine organizational practices, climate influences members' behavior and attitudes. Research has continually shown that organizational climate is the set of internal characteristics that distinguishes one organization from another while influencing the behavior of organizational members. Hoy and Miskel (1996)

highlighted in their research that school climate is an enduring quality of the entire school experienced by members through their collective perceptions of routine behavior, and affects their attitudes and behavior in school. The climate of a school helps one understand and identify the organizational culture, the "system of shared orientations that hold the unit together and give it a distinctive identity" (Hoy & Miskel, 2013, p. 180). The relationship of climate and culture, with culture being identified through the collective beliefs comprising academic optimism, have consistently shown to positively effect student achievement.

Academic optimism is a construct that evolves from the general work of positive psychology, which goes beyond focusing on illness and pathology to look at areas of the human experience including well-being, hope, and fulfillment; meaning academic optimism is rooted in humanistic psychology (Beard & Hoy, 2010). Academic optimism is a collective set of beliefs about the strengths and capabilities in schools in which optimism is the overarching theme uniting efficacy and trust with academic emphasis. Schools with high academic optimism can define a culture of optimism. The interaction of the three concepts creating the shared set of beliefs tied to high achievement in academic optimism: collective efficacy, faculty trust in clients, and academic emphasis, create a school culture imbued with a sense of the possible (Hoy & Miskel, 2013). The theoretical foundations of academic optimism are Bandura's social cognitive and self-efficacy theories (Bandura, 1986, 1997), Coleman's social capital theory (1990), Hoy and his colleagues' work on culture and climate (Hoy, Tarter, & Kottkamp, 1991), and Seligman's study (1998) of learned optimism.

Determining organizational effectiveness is complicated in research and results are not obvious. Essentially organizational effectiveness works towards achieving goals, usually through the work of formal organizations concerned with means and ends. For the most part

researchers now generally agree that effectiveness is a multidimensional construct rather than a unidimensional construct (Hoy & Ferguson, 1985). However, effectiveness must be placed within a conceptual context to make sense, as without a theoretical guide it is not possible to state whether one school or district is more effective than another. Nor would it be practical to devise plans or implement ways to make schools more effective. Researchers have found two contemporary theoretical models that have proven useful in making judgments about effectiveness in schools – the goal model and the systems model. The goal model is a functional model providing organizational goals that deliver direction and motivation while reducing uncertainty for participants while also representing standards for assessing the organization (Hoy & Miskel, 2013). The systems model has organizations concerning themselves with survival and growth through the procurement of essential resources from their environment, as it proposes demands placed on organizations are so numerous and complex that defining goals in any meaningful way would prove impossible (Hoy & Ferguson, 1985).

To look at the relationships of climate, optimism, effectiveness, and academic achievement there will first be an examination of organizational climate as it relates to openness and closedness of school climate. Organizational health and its importance in schools will then be explored. Next, culture will be discussed in regards to how organizational culture is applied to school culture. School culture will then be addressed in terms of academic optimism and the latent variables that comprise the construct: trust in clients, academic emphasis, and collective efficacy. Following will be an assessment of organizational effectiveness that delves into achievement and school effectiveness. Socioeconomic status will be explored in regards to the aforementioned concepts. Finally, through hypothesis and rationale a synthesis of climate, academic optimism, and SES as they relate to effectiveness and achievement will be presented.

Organizational Climate

Social Scientists began studying the variations in work environments in the late 1950s, which is how the concept of organizational climate originated (Hoy & Tarter, 1997). According to Hoy and Tarter, climate was first used as a "general notion to express the enduring quality of organizational life" (p. 5). Scholars of business organizations, such as Tagiuri (1968), recognized the usefulness of the concept and explained that much like persistent characteristics of any social system established a climate, personal characteristics comprised a personality. This notion helped explain why early definitions of climate resembled descriptions of personality types. In plain terms, the climate of an organization "may roughly be conceived of as the 'personality' of the organization; that is, climate is to organization as personality is to individual" (Hoy & Tarter, 1997, p. 6).

Although other fields and scholars first took an interest in researching organizational climate, many notable researchers realized the positive effects it could have on educational organizations (Halpin & Croft, 1963; Pace & Stern, 1958). As noted by Halpin (1966), administrators became increasingly aware of the role of theory after the postwar period, and began to recognize the contributions social scientists could make to educational administration. Halpin explained that those responsible for training administrators welcomed research findings on leadership and group behavior, and thus drew heavily upon insights into administration derived from other disciplines. However, the researchers of the time were "appalled by the poverty of theory within our field and dismayed by the extent to which our own research has been anchored to 'naked empiricism'" (p. 3). From this realization grew the attempt to develop theory in educational administration, and from that research the theory of school climate was born.

Through the years school climate has become a general term that refers to teachers' perceptions of their work environment; even though it is influenced by formal and informal relationships, personalities of participants, and the leadership of the organization (Hoy & Tarter, 1997). The organizational climate of schools is how one school distinguishes itself from another through its set of internal characteristics, and how this results in influencing the behaviors of its members. More specifically, the concept of organizational climate can be summarized as a relatively enduring quality of the school environment that "(a) is affected by the principal's leadership, (b) is experienced by teachers, (c) influences members' behavior, and (d) is based on collective perceptions" (Hoy & Clover, 1986, p. 94). Analyzing and describing school climate is important as the atmosphere of a school greatly affects organizational behavior, can be influenced by the administrator of a school, and can have a positive (or negative) effect on the development of the 'personality' of the school.

Openness / Closedness

The open climate is marked by "cooperation and respect within the faculty and between the faculty and principal" (Hoy & Miskel, 2013, p. 212). Open school climates are not preoccupied with task achievement nor social needs, but both freely emerge. In other words, behavior of both the principal and the faculty are authentic. In comparison to closed schools, open schools have stronger principals that portray confidence, are secure, sociable, cheerful, and resourceful (Anderson, 1964). Teachers who work under principals in open schools are found to express greater confidence in their own effectiveness, as well as the school's effectiveness (Andrews, 1965). As a result, principals in open schools have more loyal and satisfied teachers (Kanner, 1974, as cited in Hoy & Miskel, 2013).

A comparative analysis study conducted by Hoy, Tarter, and Bliss (1990) demonstrated there are eight dimensions that determine the extent of openness or closedness within a school. The eight dimensions had four describing faculty characteristics and four involving principal and teacher interaction: disengagement, hindrance, esprit, intimacy, aloofness, production emphasis, thrust, and consideration. Six continuum profiles were created based on the work from Halpin and Croft (1962): open, autonomous, controlled, familiar, paternal, and closed (Hoy, Tarter, & Kottkamp, 1991). Table 1 shows the patterns of the six prototypic profiles according to the eight climate dimensions (Hoy & Sabo, 1998, p. 13).

Table 1

Characteristics of Prototypic Profiles for Each Climate Type (OCDQ)

	Climate Type					
Climate Dimension	Open	Autonomous	Controlled	Familiar	Paternal	Closed
Disengagement	Low	Low	Low	High	High	High
Hindrance	Low	Low	High	Low	Low	High
Esprit	High	High	High	Average	Low	Low
Intimacy	Average	High	Low	High	Low	Average
Aloofness	Low	High	High	Low	Low	High
Production emphasis	Low	Low	High	Low	High	High
Thrust	High	Average	Average	Average	Average	Low
Consideration	High	Average	Low	High	High	Low

a. Salient characteristics of open and closed climates.
(Hoy and Sabo, 1998, p. 13)

Based off the original work of Halpin and Croft (1962), a factor analyses study conducted by Hoy and Clover (1986) determined six dimensions, not eight, divided into three behaviors of the principal and three behaviors of the teachers: supportive, directive, restrictive, collegial, intimate, and disengaged. Hoy and Clover's study revealed two other types of climate besides

open and closed: disengaged and engaged. The six dimensions now fell into four climate profiles: open, closed, engaged, and disengaged.

Open principal behavior reflects "genuine relationships with teachers" where the principal makes an effort to create supportive environments for teachers efforts, encourages their "participation and contributions", and frees teachers from mundane tasks so they may concentrate on teaching (Hoy & Clover, 1986, p. 106). On the other end of the continuum, closed principal behavior is "rigid, closed, controlling, and nonsupportive" (p. 106). Falling on the same continuum of open to closed, open teacher behavior was characterized by "sincere, positive, and supportive relationships among the teaching staff; interactions are close, friendly, and warm; and teachers have mutual respect for each other and are tolerant of divergent ideas and behaviors" (p. 107). In contrast, closed teacher behavior was marked by "meaninglessness, divisiveness, apathy, isolation, nonsupport, and intolerance" (p. 107). They found it possible for openness of teacher interactions to be independent of openness in principal behavior. Therefore schools may have principals who demonstrate concern, support, flexibility, and facilitation (i.e., open) and yet they have a faculty that is uncommitted, divisive, apathetic, and intolerant of others (i.e., closed).

Regardless of the principal's leadership and openness, the closedness of the faculty results in what is termed a disengaged climate. Schools may have strict, controlling, nonsupportive principals (i.e., closed), yet the faculty is engaged, committed, supportive, and sincere (i.e., open). As a result the faculty may choose to ignore the negativity and closedness of their leader and engage in successful teaching practices; a practice of climate termed engaged climate. Simply put, disengaged climates are ones where the behavior of the principal is open,

but behavior of teachers is closed. Engaged climates are schools where the principal is closed, but the teachers are open.

There are two general factors in the arrangement that are relatively independent – one the degree of openness of teacher interactions and one the degree of openness (or closedness) of principal leadership behavior (Hoy, Tarter, & Kottkamp, 1991). Meaning a school can possibly be open in terms of principal leadership, yet closed in teacher relations, or vice versa. Therefore, four contrasting school climates are possible, as shown in Figure 1 (Hoy & Clover, 1986, p. 108).

		PRINCIPAL BEHAVIOR	
		OPEN	CLOSED
TEACHER BEHAVIOR	OPEN	OPEN CLIMATE	ENGAGED CLIMATE
	CLOSED	DISENGAGED CLIMATE	CLOSED CLIMATE

Figure 1. Typology of school climates (Hoy & Clover, 1986, p. 108)

One possibility is for both factors to be open, making an equivalency of openness between the principal's and teachers' behavior (Hoy, Tarter, & Kottkamp, 1991). A second possibility lies in both factors being closed, with an equivalency of closedness. Two incongruent patterns emerge as well as the principal's leadership behavior can be open with the teachers, yet teachers may be closed with each other; or perhaps the principal is closed with teachers, but the teachers are open with each other. Each of the four school climate types (open, closed, engaged, and disengaged) can be measured as high or low in regards to their association and combination with the six climate dimensions. Meaning leadership styles of principal and faculty can be measured in respect to the openness, closedness, engagement, and disengagement captured

within their schools. The prototypic profile patterns of climate types is summarized in Table 2 (Hoy, Tarter, & Kottkamp, 1991, p. 39).

Table 2

Prototypic Profiles of Climate Types (OCDQ-RE)

	Climate Type			
Climate Dimension	Open	Engaged	Disengaged	Closed
Supportive	High	Low	High	Low
Directive	Low	High	Low	High
Restrictive	Low	High	Low	High
Collegial	High	High	Low	Low
Intimate	High	High	Low	Low
Disengaged	Low	Low	High	High

(Hoy, Tarter, & Kottkamp, 1991, p. 39)

To fully understand organizational climate, the instruments used to measure climate in schools, their conceptualizations, and empirical findings must be explained. First the Organizational Climate Description Questionnaire will be discussed, then the revised instrument, the OCDQ-R.

Organizational Climate Description Questionnaire (OCDQ). Some of the first researchers of school climate, and developers of the Organizational Climate Description Questionnaire (OCDQ), were Halpin and Croft (1963). Perhaps the most well-known conceptualization and measurement of organizational climate derived from the initial study of elementary schools by Halpin and Croft (1962). In the original Organizational Climate Description Questionnaire (OCDQ) the distinctive character of an open climate "is its high degree of thrust and esprit and low disengagement" which suggested a climate in which both the

principal and faculty are genuine in their interactions (Hoy & Sabo, 1998, p. 12). The original OCDQ described closed climate as thrust and esprit low with high disengagement.

Initially, the study by Halpin and Croft (1962) was administered to 71 elementary schools with the purpose of identifying and measuring key interactions between teacher-teacher as well as teacher-principal. The development of the OCDQ was prompted by four factors (Hoy, Tarter, Kottkamp, 1991):

(1) Schools differ markedly in their feel;
(2) Morale does not adequately capture this difference in feel among schools;
(3) Talented principals who take jobs in schools where improvement is necessary often are immobilized by a recalcitrant faculty; and
(4) The notion of the "personality" of a school is intriguing in itself. (p. 12)

The 64-item instrument, known as the OCDQ, asked teachers to respond to items along a 4-point Likert-type scale ranging from rarely occurs (RO) to very frequently occurs (VFO). A guiding assumption researchers used was that a desirable organizational climate was one in which leadership acts emerged easily, from whatever source. Leadership is essential for any school or organization to accomplish its tasks; whether the leadership acts were initiated by the formal leader or by teacher leaders. Therefore items were written in a manner that described behaviors of teacher-teacher interactions as well as teacher-principal interactions. To receive an accurate assessment teachers and administrators were asked to indicate the extent to which each statement occurred in their schools. Sample items for the OCDQ are

(1) The principal is in the building before teachers arrive;
(2) Teachers ask nonsensical questions at faculty meetings;
(3) The rules set by the principal are never questioned;
(4) Most of the teachers here accept the faults of their colleagues; and
(5) Teachers talk about leaving the school. (p. 12)

The earlier studies involving the OCDQ also demonstrated that the openness of a school's climate related to the emotional tone of the school in ways that were predictable, such

as less student alienation toward the school and its personnel in schools that were open rather than closed (Harley & Hoy, 1972). The closed climate is virtually the antithesis of the open climate (Hoy & Sabo, 1998; Hoy & Miskel, 2013). Closed climates have principals who are "nonsupportive, inflexible, hindering, and controlling and a faculty that is divisive, intolerant, apathetic, and uncommitted" (Hoy & Miskel, 2013, p. 212). Research stemming from the original OCDQ, and subsequent revised versions known as the OCDQ-R, proved openness in climate is positively related to open and authentic teacher and principal behavior (Hoy, Hoffman, Sabo, & Bliss, 1996; Hoy & Miskel, 2013; Hoy & Sweetland, 2001).

Organizational Climate Description Questionnaire – Revised. Hoy and Clover (1986) revised the OCDQ, based off the original Halpin and Croft (1962) measure. While results for the revisions were different from the original Halpin and Croft questionnaire, in deference to the original researchers many terms were retained to create the OCDQ-R. Although the OCDQ was still a widely used measure of school climate, the researchers noted a number of weaknesses that needed attention (Hoy & Clover, 1986). First, the instrument had not undergone any revisions, as had already been suggested by Halpin and Croft, in over two decades which meant it failed to account for changes in society and schools. When the OCDQ was given a comprehensive empirical analysis, many of the instrument items were found to no longer measure what they were intended to measure, thus some of the subtests were no longer valid (e.g., aloofness). Hoy and Clover also revealed in their analyses that the reliabilities of many subtests were low, and many of the items had weak construct validity. The instrument needed a major revision.

A major limitation of the OCDQ was that it described the climate of the school without dealing with students (Hoy & Clover, 1986). Instead, concern was restricted to social interactions among professional personnel; excluding students from the analysis restricted the

scope of the climate measure. The unit of analysis for the OCDQ was wrongly placed at the individual level, whereas the unit of analysis for the OCDQ-R was the school. The revised instrument had 42 total items opposed to the original 64, and correlated with six, rather than eight, dimensions. The six dimensions divided into three behaviors of the principal and three behaviors of the teacher: supportive, directive, restrictive, collegial, intimate, disengaged (Hoy & Clover, 1986).

The revised questionnaires were conducted through second-order factor analysis studies in a series of revisions from Hoy and his colleagues to create the OCDQ-RE (Revised Elementary) (Hoy, Tarter, & Kottkamp, 1991; Hoy & Tarter, 1997), OCDQ-RM (Revised Middle) (Hoy & Sabo, 1998; Hoy & Tarter, 1997), and OCDQ-RS (Revised Secondary) (Hoy, Tarter, & Kottkamp, 1991; Hoy & Tarter, 1997). The OCDQ-R, which is germane to this study, individual items were originally reviewed for validity by Hoy and Clover (1986), and 24 of the original 64 items were removed from the questionnaire. However, new items were developed by researchers independently and jointly, but no item was included unless consensus was reached on the following criteria: "(1) the statement reflected a property of the school (the unit of analysis was the school); (2) the statement was clear and concise; (3) the statement had content validity; and (4) the statement had discriminatory potential" (Hoy & Clover, 1986, p. 97).

Hoy and Clover's (1986) study consisted of seventy elementary schools in New Jersey, with a total of 1,071 educator respondents. The new questionnaire followed the same simple statements as the previous OCDQ and asked teachers to respond to items along a 4-point Likert-type scale ranging from rarely occurs (RO) to very frequently occurs (VFO). A copy of the instrument can be found in Appendix A. Samples of the new items added to the OCDQ-R instrument included the following (Hoy & Clover, 1986, p. 97):

(1) The principal checks lesson plan;
(2) The principal treats teachers as equals;
(3) Teachers are burdened with busywork;
(4) Faculty meetings are useless;
(5) Teachers socialize with each other;
(6) Teachers help and support each other;
(7) Teachers are friendly with teachers;
(8) Teachers praise pupils who do good work; and
(9) The learning environment is orderly and serious.

Each climate aspect was examined further to confirm the measures represented organizational rather than individual phenomena. Sample items for each of the six dimensions are provided in Figure 2.

Supportive Principal Behavior:
The principal uses constructive criticism.
The principal compliments teachers.
The principal listens to and accepts teachers' suggestions.
Directive Principal Behavior
The principal monitors everything teachers do.
The principal rules with an iron fist.
The principal checks lesson plans.
Restrictive Principal Behavior
Teachers are burdened with busywork.
Routine duties interfere with the job of teaching.
Teachers have too many committee requirements.
Collegial Teacher Behavior
Teachers help and support each other.
Teachers respect the professional competence of their colleagues.
Teachers accomplish their work with vim, vigor, and pleasure.
Intimate Teacher Behavior
Teachers socialize with each other.
Teachers' closest friends are other faculty members at this school.
Teachers have parties for each other.
Disengaged Teacher Behavior
Faculty meetings are useless.
There is a minority group of teachers who always oppose the majority.
Teachers ramble when they talk at faculty meetings.

Figure 2. Selected items for each subscale of OCDQ-R (Hoy & Clover, 1986, p. 104)

Subsequent to Hoy and Clover's (1986) study, the aloofness dimension was eliminated. Another change was the merging of trust and consideration to form the leadership dimension, supportive behavior. The final modification to the dimensions was the reformulation and measurement of hindrance to restrictive principal behavior. Combined, these three dimensions of principal behavior "provided the components of a second-order construct, closedness; that is, principal-teacher interactions were conceived along a continuum from open to closed" (p. 106). In terms of teacher interaction, the revision of the OCDQ also resulted in the replacement of the esprit subtest with the concept of collegial teacher behavior. The original intimacy and disengagement dimensions remained basic subtests of the OCDQ-R, but were "refined to improve internal consistency" (p. 106). A comparison of the dimensions and climates of the original OCDQ and the revised OCDQ-R is provided in Table 3.

Table 3

Comparison of Original OCDQ and OCDQ-R

	OCDQ VS. OCDQ-R	
Number of Items	64	42
Unit of Analysis	Individual	School
Subtests/Dimensions	*Behavior of the Leader* Aloofness Production emphasis Thrust Consideration	*Principal Behavior* Supportive Directive Restrictive
	Characteristic of the Group Disengagement Hindrance Esprit Intimacy	*Teacher Behavior* Collegial Intimate Disengaged
Climate/Continuum Profiles	Open Autonomous Controlled Familiar Paternal Closed	Open Engaged Disengaged Closed

As noted in Hoy and Miskel (2013), more recent research (Tarter & Hoy, 1988; Reiss, 1994; Reiss & Hoy, 1998) using the new climate instruments showed that open school climates are categorized by higher levels of loyalty and trust (faculty trust in both the principal and in colleagues), than closed climates. Also, more organizational commitment to school (identification and involvement in school) is generated by principals in open schools than in closed schools (Tarter, Hoy, & Kottkamp, 1990). Barnes (1994) noted that openness of the climate is positively related to teacher participation in decision making. Ratings of school effectiveness are also positively correlated (Hoy, Tarter, & Kottkamp, 1991) with openness of the climate. Halpin and Croft (1963) posited that openness might be the best criterion of a school's effectiveness, and research has shown over the years openness is likely important in fostering effective organizational change (Hoy & Miskel, 2013). Therefore, improving instructional effectiveness is more likely to be successful if principals first develop an open and trusting climate (Hoy & Forsyth, 1987).

Organizational Health

Miles (1969) is associated with the metaphor of health and school climate. One approach to organizational climate came from the literature on organizational health (Miles, 1969) and the school as a social system (Hoy, Tarter, & Bliss, 1990; Parsons, 1967; Parsons, Bales, & Shils, 1953; Parsons & Smelser, 1956). Miles (1969) defined a healthy organization as one that "not only survives in its environment, but continues to cope adequately over the long haul, and continuously develops and expands its coping abilities" (p. 378). Granting the overlap in the frameworks, openness and health are unique and different. However, studies have shown that open schools tend to be healthy ones, and healthy schools tend to be open (Hoy, Smith, & Sweetland, 2002).

Miles (1969) created a framework that described ten dimensions of organizational health: goal focus, communication adequacy, optimal power and equalization, resource utilization, cohesiveness, morale, innovativeness, autonomy, adaptation, problem-solving adequacy. The original ten dimensions for evaluating school health provided no basis for quantifying school health and were based on task, maintenance, and growth needs of an open social system. The dimensions and needs are summarized in Table 4 (Hoy & Feldman, 1987, p. 30). Miles argued that steadily ineffective organizations would not be healthy although short-run operations may be effective or ineffective on any given day, and that "health implies a summation of effective short-run coping" (p. 30).

Table 4

Characteristics of Healthy Organizations

Task Needs

1. *Goal Focus* – goals are clear to members, acceptable, and achievable.
2. *Communication Adequacy* – distortion-free communication produces good and prompt sensing of internal strain.
3. *Optimal Power Equalization* –the distribution of influence is relatively equitable; subordinates can exert influence upward, and they perceive their boss can do likewise.

Maintenance Needs

4. *Resource Utilization* – personnel is used effectively – neither overloaded nor idling. The fit between needs and demands is good.
5. *Cohesiveness* – members are attracted to the organization, want to stay, and are influenced by it.
6. *Morale* – the organization displays a general sense of well-being and group satisfaction

Growth and Development Needs

7. *Innovativeness* – the organization invents new procedures and moves toward new goals.
8. *Autonomy* – the organization does not respond passively to the environment; it demonstrates some independence from the environment.
9. *Adaptation* – the organization has the ability to bring about corrective changes to grow and develop.
10. *Problem-Solving Adequacy* – problems are solved with minimal energy and the problem-solving mechanism is not weakened.

(Hoy & Feldman, 1987, p. 30)

The concept of organizational health of schools was defined and conceptualized mainly using the theoretical foundations of Parsons in a factor analytic study conducted by Hoy and Feldman (1987). At first attempts were made to operationalize Miles's ten dimensions of organizational health and apply them to schools. However, once their attempt was unsuccessful they turned their attention to Parsons (1953) and Etzioni (1975), as well as empirical literature on school effectiveness. This was not a large theoretical leap as Miles' (1969) notion of organizational health, survival, and coping stemmed from Parson's imperative functions (Hoy, Tarter, & Bliss, 1990).

Parsons (1961) identified four basic problems all social systems must solve if they are to endure and prosper: adaptation, goal attainment, integration, and latency. Put another way, organizations must solve the following four needs: "(a) the problem of acquiring sufficient resources and accommodating to their environment, (b) the problem of setting and implementing goals, (c) the problem of maintaining solidarity within the system, and (d) the problem of creating and preserving a distinctive value system" (Hoy, Tarter, & Bliss, 1990, p. 263). Table 5 illustrates the manner Etzioni (1975) took Parsons (1961) four basic functions and simplified them by condensing them into two: "(a) the instrumental needs of input and allocation, and (b) the expressive needs of social and normative integration" (Hoy, Tarter, & Bliss, 1990, p. 263).

Table 5

Comparison of Parsons's and Etzioni's Basic Problems of Social Systems

Parsons (1961) 4 Basic Functions	vs.	Etzioni (1975) 2 Basic Functions
Adaptation + Goal Attainment	=	Instrumental Needs
Integration + Latency	=	Expressive Needs

In understanding school health, and organizations in general, Parsons's (1967) three levels of authority must be explored. Consistent with Parsons, all schools and successful organizations have three levels of authority: technical, managerial, and institutional (Hoy, Tarter, & Bliss, 1990). At the technical level, critical ingredients of good school health are found with faculty morale and the academic press of the school. At the managerial level, "the leadership and support of the principal in terms of considerations, initiating structure, influence with superiors, and resource support are key elements" (Hoy & Feldman, 1987, p. 35). Lastly, healthy schools are found to have institutional integrity, meaning they cope with disruptive external forces while directing their energies toward their educational goals. Put simply, the technical level concerns itself with the teaching and learning process, the managerial level controls the internal administrative function of the organization, and the institutional level links the school with its environment. According to Hoy and colleagues (1990), this broad Parsonian perspective, based on social systems theory, is the underpinning for school health. Table 6 demonstrates how the original school health framework illustrated the practicality of looking at schools in terms of four functions - it had instrumental and expressive function of the organization that were manifested in seven factors, or dimensions (Hoy, Tarter, & Bliss, 1990, p. 264).

Table 6

Dimensions of School Health in Terms of Organization Level and Function

Dimensions of School Health in Terms of Organizational Level and Function		
Level	Function	Dimension
Institutional	Instrumental	Institutional Integrity
Managerial	Instrumental	Initiating Structure
	Instrumental	Resource Allocation
	Instrumental	Principal Influence
	Expressive	Consideration
Technical	Instrumental	Academic Emphasis
	Expressive	Moral

(Hoy, Tarter, & Bliss, 1990, p. 264)

In their comparative analysis study Hoy, Tarter, and Bliss (1990) addressed the meaning of instrumental and expressive functions by examining how they worked with each dimension. For institutional integrity the instrumental function is the school's ability to maintain educational integrity of its programs while coping with any environmental issues. Initiation of structure, resource allocation, and principal influence "describe the respective managerial instrumental functions of task and achievement-oriented leadership, the procurement of resources for instructional activities, and the ability of the principal to influence superiors on behalf of subordinates (p. 264). Expressive managerial behavior is designated by consideration, or the ability of the administrator to exhibit support and concern for their teachers' welfare. The technical instrumental function of academic emphasis is the magnitude of the schools quest and drive for academic excellence. Lastly, the technical expressive dimension of the school, morale, is the collective sense of "affinity and pride." According to Hoy, Tarter, and Kottkamp (1991), the school health framework is a classification that "allows the administrator to look at school behavior in terms of the level (i.e., technical, managerial, or institutional) or the nature of the

activity, whether it is instrumental or expressive" (p. 105). Put simply, the framework provides a conceptual guide for analysis.

A healthy school climate is instilled with positive interpersonal relationships between teachers and administrators, as well as among teachers (Hoy, Smith, & Sweetland, 2002). According to Hoy and Feldman (1987), in healthy schools teachers enjoy their job, colleagues, students, and their school. The resulting effect is teachers believe in themselves as well as their students. Supportive principal behavior exists, meaning they are friendly and supportive towards all in their school. Also, high expectations exist throughout the building and are shared by all stakeholders and community members. Stated simply, overall dynamics of the school are positive while the school is protected from unreasonable community pressures; these concepts help define a healthy school climate. Hoy, Tarter, and Bliss (1990) asserted that health is likely to be a "better predictor of goal achievement, innovativeness, loyalty, and cohesiveness – variables directly linked to the functional necessities of Parsons (1961)" (p. 275). Hoy and colleagues further stated that healthy schools and climates may well be their own desirable ends, even if unrelated to other outcome variables, as the constructs are important enough on their own. In order to assess a schools health or climate profile at a given point in time, researchers may need to employ one of the following index's to be discussed: Organizational Health Index, Organizational Climate Index, and School Climate Index.

Organizational Health Index (OHI). The original OHI tested the reasonableness of looking at schools in terms of four functions that were expressed in seven dimensions. From the work of Miles (1969) and his ten dimensions, Hoy and Feldman (1987) attempted to frame and measure the concept of organizational health into the Organizational Health Index (OHI). Unfortunately, Miles' framework provided no basis for quantifying school health. Therefore a

second attempt was required in Hoy and Feldman's factor analytic study, relying heavily on Parsons's theories to drive the conceptualization of the index. As a result the OHI is closely tied to a Parsonian perspective, based on social systems theory, and a theoretical framework explaining organizational behavior (Hoy, Tarter, & Bliss, 1990). According to Hoy and Feldman (1987), since the approach was deductive, the OHI is an example of theory directing the construction of a measure.

The development of the measurement of organizational health, the OHI, came through item generation and evaluation. Next a pilot study was performed to refine and reduce the number of items. Finally, a final version of the OHI was tested and the stability of its factor structure and its validity were evaluated. Items were written to tap Parsons three levels of the organization: technical, managerial, and institutional (Hoy & Feldman, 1987). In all 95 items were selected for testing in the pilot, but no item was included unless there was consensus on the following criteria: (1) the statement reflected a property of the school; (2) the statement was clear and concise; (3) the statement had content validity; and (4) the statement had discriminatory potential.

Hoy and Feldman's (1987) pilot study contained 95 potential, mostly untested items that they wished to reduce to a workable instrument. A random sample of 72 secondary schools was identified and data was aggregated at the school level for each item to reduce the number of items and determine the factor structure of the instrument. All items were simple descriptive statements along a four-point, Likert scale ranging from rarely occurs to very frequently occurs. Ultimately forty-four items remained in the refined OHI, after a series of exploratory factor analyses of the pilot data was performed, which defined seven dimensions of school health. The pilot study led to the measure of seven dimensions of organizational health: institutional

integrity, principal influence, consideration, initiating structure, resource support, morale, and academic emphasis. According to Hoy and Feldman, "these critical aspects of organizational life meet the instrumental and expressive needs of the school social system, and they fall into Parsons' three levels of responsibility and control within the school" (p. 32). Institutional integrity serves as an indicator of health at the institutional level. Principal influence, consideration, initiating structure, and resource support provide measures of the health of the managerial system. Morale and academic emphasis are indices of health at the technical level. A copy of the instrument can be found in Appendix B. Sample items for each subtest are provided in Table 7 (Hoy & Feldman, 1987, p. 33).

Table 7

Sample Items from the OHI

Institutional
Institutional Integrity
• Teachers are protected from unreasonable community and parental demands.
• The school is vulnerable to outside pressures.*
• A few vocal parents can change school policy.*
Managerial
Principal Influence
• The principal gets what he or she wants from superiors.
• The principal is able to work well with the superintendent.
• The principal is impeded by superiors.*
Consideration
• The principal is friendly and approachable.
• The principal treats all faculty members as his or her equal.
• The principal puts suggestions made by the faculty into operation.
Initiating Structure
• The principal makes his or her attitudes clear to the school.
• The principal lets faculty members know what is expected of them.
• The principal maintains definite standards of performance.
Resource Support
• Extra materials are available if requested.
• Teachers have access to needed instructional materials.
• Supplementary materials are available for classroom use.
Technical
Morale
• Teachers in this school like each other.
• Teachers accomplish their jobs with enthusiasm.
• Teachers in this school are cool and aloof from each other.*
Academic Emphasis
• The school sets high standards for academic performance.
• Students respect others who get good grades.
• The learning environment is orderly and serious.

*Reverse Score (Hoy & Feldman, 1987, p. 33)

The pilot study produced a 44-item instrument that was ready to be tested with a new data set in order to demonstrate stability of the factor structure and to confirm the seven subtests. Seventy-eight secondary schools in New Jersey agreed to participate in the study. A separate, new random sample of at least five teachers was drawn from each of the 72 pilot schools and from 6 additional schools that were added to the sample (Hoy & Feldman, 1987). In total, 1,131 teachers and principals in 78 secondary schools participated in the study. The results strongly supported the factor structure discovered in the pilot study; items loaded on the appropriate subtests and the factor structures for both data sets were virtually identical. The stability of the factor structure of the OHI also supported the construct validity of the seven dimensions of school health. Thus, through their study, Hoy and Feldman constructed seven dimensions of organizational health that consistently held up as theoretically expected.

The OHI has provided practical research results for school organizations over the years. As expected, the healthier the organizational dynamics of a school, the greater the degree of faculty trust in the principal, trust in colleagues, and trust in the organization itself (Hoy & Ferguson, 1987). The OHI and its subtests can be analyzed to describe the school, which can not only identify those schools that may be found unhealthy, but can also pinpoint aspects of school health that are undesirable and in dire need of immediate enrichment. Researchers must take care in relaying that the profile of school climate is merely a snapshot of the school at a given instant; the picture does not explain the how's and why's for the current state of affairs. Rather the profile simply describes what exists in the school climate at that moment. Therefore profile results shared by researchers with administrators and teachers must first explain the purpose of the OHI; to provide a snapshot of the schools climate at a specific point in time.

If results are undesirable members of the school must then take it upon themselves to assess the causes of poor health and diagnose them in order to develop strategies for improvement. The purpose of the OHI is to not only enable principals and superintendents to determine the health of theirs schools, but to "compare their own perceptions of the working atmosphere with the perceptions of their teachers" (Hoy & Feldman, 1987, p. 36). Proper administration of the OHI can yield a rough measure of the success of strategies employed to improve the school; however, Hoy, Tarter, and Kottkamp (1991) advise against using the OHI as a tool for summative evaluation. To do so, they assert, would probably diminish the usefulness of the measure in self-improvement and organizational development activities. Research stemming from the original OHI, dimensions of climate, openness, and health led to the development of the Organizational Climate Index (OCI). As Hoy and Miskel (2013) posited, knowing which lens to view school climate from, including openness, closedness, health, and citizenship, provided researchers with a valuable set of conceptual capital and measurement tools to analyze, understand, map, and change the work environment of schools.

Organizational Climate Index (OCI). Hoy, Smith, and Sweetland created the OCI in their 2002 study by combining the works of several researchers and instruments before them. The OCI was developed in hopes of capturing the general dimensions of both health and openness; in other words, climate. In general terms, school climate captures the atmosphere of the school and is experienced by teachers and administrators while describing their collective perceptions of routine behavior, and affecting their attitudes and behavior in the school (Hoy & Miskel, 2001). Hoy, Smith, and Sweetland (2002) performed a study to develop a parsimonious perspective and measure of school climate that incorporated existing frameworks, and the result

was the currently used OCI. In its current form the OCI is a conglomeration of sorts of the OCDQ and the OHI.

In the development of the OCI Hoy and colleagues (2002) cited the well-known conceptualization of school climate from Halpin and Croft (1963). They referred to Miles' (1969) definition of a healthy organization, and the resultant framing and measuring of the concept of organizational health from Hoy and Feldman (1987). In their study they noted that both openness and health climate perspectives have been useful in analyzing the working environment of schools (Hoy & Sabo, 1998; Hoy, Tarter & Kottkamp, 1991; Tarter, Bliss, & Hoy, 1989; Hoy, Smith, & Sweetland, 2002). Also, both frameworks measured related aspects of the school workplace while using metaphors to examine school climate. The openness of organizational climate is typically measured by examining open and authentic relationships between teachers and principals and among teachers themselves (Hoy et al., 2002) through the six dimensions of the OCDQ-R (Hoy & Clover, 1986) that were originally derived from the eight dimensions of the OCDQ (Halpin & Croft, 1963). Miles' (1969) identified ten dimensions for evaluation and organizational health, but Hoy and Feldman (1987) borrowed from Miles and found seven dimensions of school health falling with Parsons's (1963) three levels of responsibility and control which resulted in the OHI. The health of organizational climate is concerned with positive interpersonal dynamics among teachers and principals, as well as among teachers. The OHI measured those components, but the framework also considered relationships between the school and students, and the school and the community (Hoy & Tarter, 1997). The dimensions of climate and health have changed and adapted as empirical research instruments have improved over the years. Table 8 illuminates the dimension changes climate and health have gone through leading up to the creation of the OCI.

Table 8

Iterations of Climate and Health Dimensions

Climate Dimensions	
OCDQ 8 Dimensions (Halpin & Croft, 1963)	OCDQ-R 6 Dimensions (Hoy & Clover, 1986)
Behavior of the Leader	*Principal Behavior*
Aloofness	Supportive
Production emphasis	Directive
Thrust	Restrictive
Consideration	
Characteristic of the Group	*Teacher Behavior*
Disengagement	Collegial
Hindrance	Intimate
Esprit	Disengaged
Intimacy	
Health Dimensions	
Miles' 10 Dimensions (1969)	OHI 7 Dimensions (Hoy & Feldman, 1987)
Task Needs	*Institutional Level*
Goal Focus	Institutional Integrity
Communication Adequacy	
Optimal Power and Equalization	
Maintenance Needs	*Technical Level*
Resource Utilization	Morale
Cohesiveness	Academic Emphasis
Morale	
Growth and Development Needs	*Managerial Level*
Innovativeness	Principal Influence
Autonomy	Consideration
Adaptation	Initiating Structure
Problem-Solving Adequacy	Resource Support

Though openness and health are unique, there is some overlap in the frameworks and measures. Research has shown "open schools tend to be healthy ones and healthy schools tend to be open" (Hoy, Smith, & Sweetland, 2002, p. 39). Earlier attempts to develop a concise yet thorough measure found the six dimensions of the OCDQ-R and the six aspects of the OHI reducible to four dimensions. Hoy and colleagues posited the following four general dimensions of climate captured both openness and health: "(1) environmental press: the relationship between the school and community, (2) collegial leadership: the openness of the leader behavior of the principal, (3) teacher professionalism: the openness of teacher-teacher interactions, and (4) academic press: the relationship between the school and students" (p. 39). Figure 3 provides an illustrative glimpse of the reduction of dimensions from the OCDQ and the OHI to create the four dimensions of the OCI. These four dimensions described the relationships between school and community, teachers and principal, and school and students, as well as the interpersonal relationships among teachers themselves. Therefore, three vertical linkages (institutional, administrative, and teacher) are assessed as well as horizontal relationships among teacher colleagues.

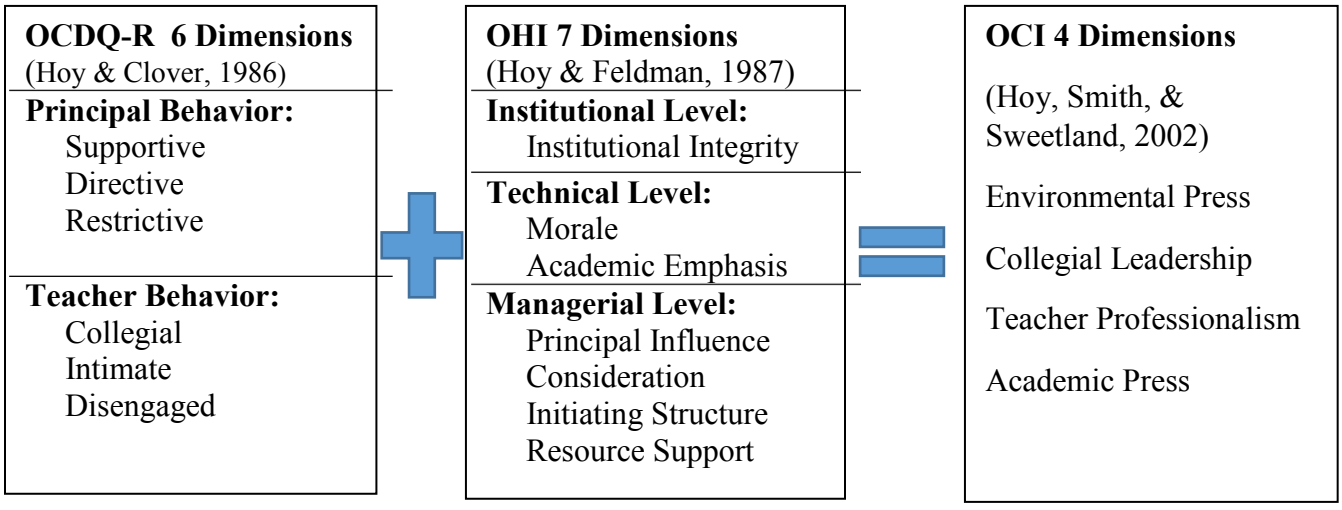

Figure 3. Reduction of dimensions to create OCI

In order to assess the four aspects of climate in one concise climate instrument a study was conducted by Hoy, Smith and Sweetland (2002) among 97 high schools in Ohio. Data from the Ohio Department of Education supported the representativeness of the sample in terms of size, SES, and urban-rural balance. The development of the instrument had several phases including selection of items, factor analysis of items, refinement of conceptual framework, identification of the subtests of the OCI, and a check of the reliability of each dimension of organizational climate. Thirty items were selected from both the OCDQ and the OHI that the researchers hypothesized would measure the four dimensions of climate (environmental press, collegial leadership, teacher professionalism, and academic press). The items were selected based on research conducted by Hoy and his colleagues (Hoy, Hannum, & Tschannen-Moran, 1998) on school climate in which they identified 95 items to measure these four general dimensions (Hoy et al., 2002). The goal was to reduce by two-thirds the original 95 items, with at least 7 items for each dimension; all 30 selected items were unanimous choices.

After a principal-axis factor analysis specified four factors to be extracted Hoy and colleagues (2002) used a varimax rotation, yielded interesting effects. Items were not loading as researcher's had hoped and the result was two factors receiving name changes; academic press became achievement press, and environmental press became institutional vulnerability. The OCI is a 30-item descriptive questionnaire (although only 27 items are scored) that measures four critical aspects of school climate: "the relationship between the school and community (institutional vulnerability), the relationship between the principal and teachers (collegial leadership), the relationship among teachers (professional teacher behavior), and teacher, parental, and principal press for achievement (achievement press)" (p. 42).

The first of four dimensions of the Organizational Climate Index (OCI), institutional vulnerability looks at the relationship between the school and the community. Institutional vulnerability is the extent to which the school is susceptible to a few local parents and citizen groups (Hoy, Smith, & Sweetland, 2002). High vulnerability suggests both teachers and the principal are unprotected and put on the defensive. According to Hoy, Hannum, and Tschannen-Moran (1998), institutional vulnerability appears to be an aspect that is least related to building trusting relationships in schools; it plays only a secondary role.

This subscale has undergone several name changes as researchers attempted to express the direction of press from inside of the school (academic), and press from outside of the school (environmental). Thus, for a period of time Hoy and colleagues (2002) had labeled this subscale environmental press. However, further research and study raised an important question of whether environmental health remained an aspect of school health. Further, researchers reexamined the environmental press items and found the tone for the items negative, meaning respondents could be made to feel vulnerable and defensive. As a result, the name changed from environmental press, which had a neutral or even positive connotation in early work, to institutional vulnerability, which researchers noted better described the "tone" of the current set of instrument items (Hoy, Smith, & Sweetland, 2002).

A second dimension of the OCI is collegial leadership, which looks at the openness of the leader behavior of the principal. In other words, this aspect looks at the relationship between the principal and the teachers. Collegial leadership is principal behavior directed toward meeting both social needs of the faculty and achieving the goals of the school (Hoy, Smith, & Sweetland, 2002). In this regard the principal treats teachers as colleagues, is open, egalitarian, and friendly; yet the principal has the wherewithal to set clear teacher expectations and standards of

performance. This factor is defined by four variables as found by Hoy and colleagues (1998): loading strongly and positively are supportive and collegial leadership; loading strongly and negatively are directive and restrictive principal behaviors. Therefore, the factor of collegial leadership is one that denotes collegial behavior that is supportive and neither directive nor restrictive (Hoy, Smith, & Sweetland, 2002).

A third dimension of the OCI, professional teacher behavior, looks at the openness of teacher-teacher interactions. Professional teacher behavior is marked by respect for colleague competence, commitment to students, autonomous judgment, and mutual cooperation and support of colleagues (Hoy, Smith, & Sweetland, 2002). Initially, this item was referred to as teacher affiliation (Ames & Miller, 1994; Rosenholtz, 1989) and emphasized the commitment of teachers to both their schools and their students, meaning they were likely to spend the extra time and effort needed to motivate and nurture students (Hoy & Hannum, 1997). Teacher affiliation also meant a commitment to colleagues, as collegial teachers helped and supported one another, are open to change, and are eager to learn and try new things (Johnson, 1990). As research emerged, the terminology used quickly changed from teacher affiliation to teacher professionalism.

Hoy, Hannum, and Tschannen-Moran (1998) found four variables strongly loaded on the factor they referred to as teacher professionalism. Teacher commitment, teacher collegiality, and teacher affiliation all loaded in a positive direction, while teacher disengagement loaded negatively. These four variables meant teachers were committed to students, respected the competence of one another, liked each other, and regarded their work as serious (Hoy, Smith, & Sweetland, 2002). Now this construct is known as professional teacher behavior (PTB).

The final dimension tested in the OCI is achievement press, which looked at the relationship between the school and the students. Initially the dimension was known as academic press. However, items were not loading to academic press as researchers had predicted, yet press was indeed shown to come from the community, while other items described press from within. Therefore the researchers changed academic press to "achievement press because all earlier research used 'academic press' to describe *internal* press for achievement" (Hoy, Smith, & Sweetland, 2002, p. 40). Achievement press described a school that sets high but achievable academic standards and goals. In these schools students persisted, strove to achieve, and are respected by students and teachers for their academic success. Parents, teachers, the principal, and sometimes their own peers, exerted pressure for high standards and school improvement. Three variables strongly loaded on this factor: academic emphasis, resource support, and principal influence (Hoy, Hannum, & Tschannen-Moran, 1998, p. 107). In this aspect of school climate teachers set high goals, students step up to the challenge, and principals supplied the resources necessary while exerting influence on the teachers' behalf. A copy of the instrument can be found in Appendix C. Sample items for each subtest are provided in Table 9 (Hoy, Smith, & Sweetland, 2002).

Table 9

Sample Items from the OCI

Institutional Vulnerability
• A few vocal parents can change school policy.
• The school is vulnerable to outside pressure.
• The principal responds to pressure from parents.
Collegial Leadership
• The principal treats all faculty members as his or her equal.
• The principal puts suggestions made by faculty into operation.
• The principal lets faculty know what is expected of them.
Professional Teacher Behavior
• Teachers help and support each other.
• Teachers respect the professional competence of their colleagues.
• Teachers in this school exercise professional judgment.
Achievement Press
• Parents exert pressure to maintain high standards.
• Students respect others who get good grades.
• The school sets high standards for academic performance.

(Hoy, Smith, & Sweetland, 2002)

The factor analysis provided strong support for the construct validity of organizational climate (Hoy, Smith, & Sweetland, 2002). The confirmation of all hypothesis provided strong predictive validity of the OCI, demonstrating the OCI is a short, reliable, and valid measure of the climate of schools that tapped the four critical dimensions of organizational life in high schools. The four aspects of climate foster a culture of trust according to Hoy and colleagues (2002), which in turn promotes high levels of student achievement regardless of SES of a school (Forsyth, Adams, & Hoy, 2011). As noted in Hoy and Miskel (2013), the openness and health of schools (as measured by the OCI) have positive associations with change orientations of teachers (Kearney & Smith, 2010; Miaka, 2007), with strong community relations (Smith & Miaka, 2008), and with school mindfulness (Ferguson, 2006), and a negative correlation with student bullying (Gonzales, 2006).

Even though studies have demonstrated a link between school climate and student achievement, results are often difficult to interpret due to the "array of dimensions and the different characteristics of the measures at different levels of schooling" (Tschannen-Moran, Parish, & DiPaola, 2006, p. 396). Researchers continue to refine the instruments used to measure organizational climate, and one result of such refinement is the school climate index.

DiPaola and Tschannen-Moran (2005) created a pilot study where they made modifications to Hoy and colleagues (1991) climate measure that included items that had a bias, as the climate measure had items that considered external forces as negative. According to DiPaola and Tschannen-Moran, they investigated school's success at buffering disruptive elements of their environments using the dimension of institutional integrity. Institutional integrity is a sub dimension of a larger school health index and is defined as "the school's ability to cope with its environment in a way that maintains the educational integrity of tis programs and in which teachers are protected from unreasonable community and parental demands" (Hoy et al., 1991 as cited in DiPaola & Tschannen-Moran, 2005, p. 64). DiPaola and Tschannen-Moran posited that researchers have consistently found that institutional integrity, or in other words buffering, was negatively related to student achievement in middle and high schools (Hoy & Sabo, 1998; Hoy et al., 1991).

Organizations, such as schools, respond to environmental strain through organizational self-control and independent strategies to increase independence and autonomy levels (DiPaola & Tschannen-Moran, 2005). Independent strategies call for the organization to draw on its own resources and ingenuity to reduce uncertainty and dependence on external factors. Buffering is one way principals attempt to keep their school independent from the environment, thus employing independent strategies by proactively moving to control environmental factors rather

than reacting to environmental pressures. Bridging strategies are cooperative ones that schools employ to increase the organizations interdependence with elements in the environment, such as parents and the community.

Their pilot study sought to explore principal's use of bridging or buffering strategies to determine which was the more useful guide to practice. To do so DiPaola and Tschannen-Moran (2005) investigated the relationships between the bridging and buffering in 74 middle schools throughout the state of Virginia. A total of 1,083 teachers were surveyed across a diverse sample size. Three measures were employed in the study to measure buffering, bridging, and student achievement. Buffering was measured using the institutional integrity sub-scale of the Organizational Health Index (Hoy & Sabo, 1998). The five items were assessed on a five-point Likert-type scale ranging from never to always. The scale had a relatively high alpha reliability score of 0.87. Sample items included "(1) the school is vulnerable to outside pressure; (2) a few vocal parents can change school policy" (DiPaola & Tschannen-Moran, 2005, p. 66).

Bridging was assessed using the community engagement measure developed for the study. The measure consisted of seven items on a five-point Likert-type scale ranging from never to always. The reliability score for the scale was relatively high, with an alpha of 0.87. Sample items included "(1) parents and other community members are included on planning committees; and (2) school people are responsive to the needs and concerns expressed by community members (DiPaola & Tschannen-Moran, 2005, p. 66). Student achievement was measured by the state developed Virginia Standards of Learning test. Data were drawn from two of the eight grade tests: (1) mathematics; and (2) English, reading, research, and literature. The SOL test was considered a valid measure of state standards by the Content Review Committee process.

DiPaola and Tschannen-Moran (2005) posited that bridging and buffering are separate constructs and strategies, they are not two ends of a single continuum as they function independently of one another. They found the extent to which a school engaged in one of the strategies had no predictive power as to the extent to which it used the other. Meaning a school may be high in both bridging and buffering, as in building bridges of involvement in the parent community, but at the same time is able to withstand attempted influence of negative community elements. Schools could be high in bridging but low in buffering, or the reverse, low bridging and high buffering. Also, schools might not be able to successfully bridge or buffer, thus positive parent and community members sharing in the schools goals are never brought into the relationship in any meaningful way.

The pilot study by DiPaola and Tschannen-Moran (2005) indicated theories that guide school leaders to view parents and community members as potential resources are more likely to help if school leaders can find a way to build bridges to productively engage these people in the work and life of the school. As long as the overarching goal of all involved is fostering student learning, parents and community members have the potential to be assets; however, balance is key.

Culture

Organizational culture has drawn themes from anthropology sociology, social psychology, and cognitive psychology (Schein, 2010). It distinguished one organization from another and provides members with a sense of organizational identity (Hellriegel, Slocum, & Woodman, 1992; Daft, 1994). Culture provides members with "a commitment to beliefs and values beyond themselves; individuals belong to a group that is larger than themselves. When the culture is strong, so is their identification with the group and the influence of the group" (Hoy

& Miskel, 2013, p. 29). Being a part of a culture makes one part of a collective dimension of the system and blends the formal with the personal to create a system of shared beliefs.

Schein (2010) argued that leaders as entrepreneurs are the main architects of culture, and after cultures are formed they influenced what kind of leadership is possible. Lastly, that if elements of the culture become dysfunctional, leadership can and must do something to speed up cultural change. Yet Schein asserted that culture is an abstraction, and forces that are created in social and organizational situations deriving from culture are powerful. Not understanding cultural forces, and the operation of them, means leaders and members become victim to them as they are powerful forces that operate outside of our awareness.

Hoy and Miskel (2013) noted that schools, like many other organizations have structure representing the formal dimension of their school social system, often in the form of politics. It is often the political dimension where informal power relations emerge, often to "resist other systems of legitimate control" (p. 29). Structure provides formal authority; culture generates informal authority; and the individual brings the authority of expertise to the organization. Politics in contrast, is typically informal and frequently illegitimate. Subsequently, most politics is divisive and conflictual, pitting individuals and groups against each other and against the organization at large (Mintzberg, 1983).

All organizations, including schools, have a technical core that is concerned primarily with the major mission of the social system (Hoy & Miskel, 2013). Through the technical core the teaching-learning process is the core of the organization, creating a culture of learning in a sense. As such learning occurs when there is a stable change in an individual's knowledge base or behavior; the cognitive process is complex. Therefore behavioral, cognitive, and

constructivist perspectives of learning provide the setting for school decision making due to the different theories and implications of teaching and learning.

Environment is everything that is outside the organization (Hoy & Miskel, 2013), yet culture can be guided and constrained by the members of a group through the shared norms that are held within that group (Schein, 2010). Schools are open systems that are affected by external forces as they are comprised of individuals each possessing their own personalities and character that guide and constrain their behavior. Yet schools, like all organizations, attempt to reduce uncertainty and control their environments; often with administrators resorting to strategies to minimize external effects.

Culture and leadership go hand in hand as leaders first start the process of culture creation when they create groups and organizations (Schein, 2010). After cultures exist, a determination is made for leadership, often in terms of who should be a leader, or remain a leader. Once a leader the focus is on keeping a culture functional and optimal, because if elements of a culture become dysfunctional, it is the unique function of leadership to "perceive the functional and dysfunctional elements of the existing culture and to manage cultural evolution and change in such a way that the group can survive in a changing environment" (Schein, 2010, p. 22). However, changing school culture can be anxiety provoking as cultures tell their members who they are, how to behave toward each other, and how to feel good about themselves. Often culture provides its members with a basic sense of identity and defines the values that provide self-esteem (Hatch & Schutz, 2004).

Leaders must realize that if they do not become conscious of the cultures in which they are embedded, those cultures will manage them (Schein, 2010). Cultural understanding is not only desirable, but essential to leaders if they are to lead. Therefore, leaders with an

understanding of the culture of their school, and the ability to observe and influence positive change in their environments will succeed in creating schools with an encouraging culture. In turn this will create school environments with an ability to positively affect their student achievement and overall school effectiveness.

Academic Optimism

Conceptual need for academic optimism. There are three organizational properties that have consistently proven to make a difference in student achievement: academic emphasis of the school, collective efficacy of the faculty, and faculty's trust in students and parents. When put together, these three organizational properties create a general latent concept known as academic optimism, which is related to student achievement even after controlling for previous achievement, SES, and other demographic variables (Hoy, Tarter, & Woolfolk Hoy, 2006a). The construct is based on results from several previous studies that focus on academic emphasis (Alig-Mielcarek & Hoy, 2005; Goddard, Sweetland, & Hoy, 2000; Hoy & Hannum, 1997; Hoy & Sabo, 1998; Hoy, Tarter, & Bliss, 1990; Hoy, Tarter, & Kottkamp, 1991), collective efficacy (Goddard, Hoy, & Woolfolk Hoy, 2000, 2004; Goddard, LoGerfo, & Hoy, 2004; Hoy, Sweetland, & Smith, 2002), and faculty trust in students and parents (Goddard, Tschannen-Moran, & Hoy, 2001; Hoy, 2002) as properties related to student achievement. The relationships between the three major dimensions are graphically presented as a triadic set of interactions with each element functionally dependent on the others (Hoy, Tarter, & Woolfolk Hoy, 2006b). Hoy et al. postulated reciprocal causality between each pair of elements as shown in Figure 4 (p. 144).

AE = Academic Emphasis
FT = Faculty Trust in Students and Parents
CE = Perceived Collective Efficacy of the Faculty

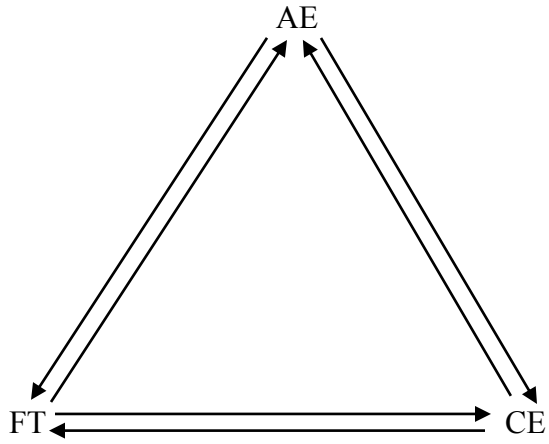

Figure 4. The relationships between the three major collective properties in reciprocal causality with each other

Academic optimism of schools is a collective construct of three elements that includes the behavioral dimension demonstrated by academic emphasis, the cognitive dimension exhibited by collective efficacy, and the affective dimension displayed by faculty trust in students and parents (Hoy, Tarter, & Woolfolk Hoy, 2006a). All three elements have transactional relations with one another to form a culture of academic optimism. For example, a sense of collective efficacy, in turn, develops trust. When trust is evident, teachers encourage one another and place higher emphasis on academic standards, as well as their students, as they have confidence in receiving parental support. This reinforcement in trust positively effects student achievement because faculty has the freedom and expertise to implement changes that will positively effect student achievement; thus academic achievement underlines the outcome of the faculty as a whole experiencing a sense of collective efficacy. Hoy and colleagues theorized these three dimensions actually work together to form "a single powerful force" which could explain school performance (Hoy, Tarter, & Woolfolk Hoy, 2006a, p. 427). This force forms a

collective belief among school faculty that not only do conditions for student improvement performance exist, but student performance will actually increase. Stated briefly, "academic optimism creates a culture with collective beliefs and norms that view teachers as capable, students as willing, parents as supportive, and academic success as achievable" (Hoy & Miskel, 2013, p. 200).

Despite the fact the academic optimism construct is considered to be relatively new, its individual elements have been researched by scholars for decades. The theoretical foundations of academic optimism employed Bandura's social cognitive and self-efficacy theories for collective efficacy (Bandura, 1977, 1986, 1989, 1993, 1997), Coleman's social capital theory for faculty trust (1990), and Hoy and his colleagues' work on culture and climate for academic emphasis, which was based on Parsons's theory of organizational health (Hoy, Tarter, & Kottkamp, 1991; Parsons, Bales, & Shils, 1953). Some of the first researchers to highlight the significance academic emphasis has on student achievement were Lee and Bryk (1989), while Hoy, Tarter, and Kottkamp (1991) identified academic emphasis as possibly the single most significant predictor of student achievement in their organizational climate model. Notions of trust, and behavioral models of trust, can be traced back to the beginnings of the Cold War in relation to events surrounding Sputnik and other politically motivated issues surrounding trust and distrust (Deutsch, 1958; Loomis, 1959; Osgood, 1959). A final theoretical approach was added to the academic optimism construct based on the work of Seligman's study (1998) of learned optimism. His study argued that optimism is a collective property that can be learned and developed, mattering as much as talent and motivation in regards to achievement. Accordingly, all schools are capable of excellence, regardless of SES, if they can raise their level of academic optimism, as it can be learned.

Hoy and his colleagues continued to expand the initial theories related to academic optimism (Hoy, Tarter, Woolfolk Hoy, 2006a, 2006b) to better fit school models. Hoy and colleagues looked at academic optimism as it related to schools and the influence the single powerful force would have on explaining school performance. A copy of the current school academic optimism (SAOS) scale can be found in Appendix D. Studies are continually performed on the individual elements comprising academic optimism, expanding what researchers know and understand about academic emphasis, teacher trust, and collective efficacy. These studies continue to further improve the research concerning the academic optimism construct, adding to a growing body of research literature.

Elements of academic optimism. The elements of academic optimism include *collective efficacy, faculty trust,* and *academic emphasis*.

Collective efficacy. Efficacy expectation is the belief one can execute the behavior required to produce desired outcomes (Bandura, 1977; Zimmerman, Bandura, & Martinez-Pons, 1992). Individuals with a strong sense of their ability to achieve will set challenging goals to attain, both individually and within a group setting, which results in a firmer commitment to completing tasks on a positive level (Bandura, 1993). Efficacy expectations determine "how much effort people will expend and how long they will persist in the face of obstacles and adverse situations" (Bandura, 1977, p. 194).

In 1977, Bandura first examined group actions based on the individual reactions of members that make up the group hierarchy. He identified the groups' shared belief in its ability to organize and execute courses of action necessary to yield specified levels of attainment. Bandura further posited that a person will estimate a given behavior that will lead to a particular

outcome; thus defining self-efficacy as a person's belief they could perform appropriate tasks resulting in the attainment of desired satisfaction.

According to Bandura (1986, 1993, 1997), individuals with high self-efficacy are more likely to seek challenges, set higher goals, put forth higher levels of exertion to accomplish goals, and give up less easily as they have visualized positive results. Those with low self-efficacy will struggle; they tend to dwell on things that can and will go wrong, which increases self-doubt and makes success difficult. By focusing on possible negative outcomes these individuals may tend to overlook actual scenarios leading to success and goal achievement. Bandura believed humans make intentional choices based on beliefs of expected results, as individuals have the ability to exercise control over events and actions in daily life (Bandura, 1977; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996). Essentially, individual self-efficacy is at the very core of our self-control and our self-image.

Individual self-efficacy is characterized by Bandura (1993) as four major processes which included cognitive, motivational, affective, and selection. The cognitive process is achieved through the complexity of the human thought process and implicit goal setting. The motivational process occurred as individuals form beliefs in their abilities, motivated themselves, and guided their actions through forethought (Bandura, 1993). The affective process is the emotional mediator behind Bandura's (1977) self-efficacy model; people's perceptions of their abilities determined their aptitude to handle stress and anxiety, as well as the load of such negative events. The selection process provided individuals the opportunity to avoid potentially negative occurrences, while leaving the prospect of engaging in less threatening situations (Bandura, 1993).

People use four sources of information, according to Bandura (1993), to judge their level of self-efficacy: performance accomplishments, vicarious experience, social (verbal) persuasion, and emotional arousal (affective). Performance accomplishments occurred when repeated success increased ones mastery expectations, while repeated failures, especially early on in one's career or schooling, tended to lower efficacy levels. Vicarious experiences occurred when individuals observed others positive performances in seemingly adverse situations, and as a result tackled obstacles they observed others conquering. This modeled behavior allowed one to believe they could accomplish what others had; thus vicarious experiences became an inferred motivator. With verbal (social) persuasion, individuals utilize words of encouragement as a reason to believe they could achieve tasks. Other's belief in their ability, along with their vocalization, added to one's belief they can succeed. Lastly, emotional (affective) arousal could influence one's decision making. Stress, fear, and anxiety could cripple an individual's ability to perform and may steer the direction of their self-efficacy towards the negative. If one is unable to overcome negative emotions they could theoretically permanently influence their own self-efficacy as well as the collective efficacy of the group.

Inquiring into the role of self-efficacy beliefs and personal goal setting in terms of the academic setting, Zimmerman, Bandura, and Martinez-Pons (1992) conducted a study that found parents' academic goals and their students' academic goals often did not match. Researchers learned that simply setting high standards for students was not sufficient, instead parents and/or teachers needed to improve student's self-efficacy through structured academic experiences. They determined that "self-regulated learners direct their learning processes and attainments by setting challenging goals for themselves, by applying appropriate strategies to achieve their goals, and by enlisting self-regulative influences that motivate and guide their efforts"

(Zimmerman et al., 1992, p. 664). Learners who influenced the knowledge and goals they set for themselves exhibited a higher sense of efficacy in their capabilities and their commitment to fulfill challenges.

A major development in Bandura's (1993) research occurred when he formally linked efficacy to student achievement. He found students struggling with academics and low efficacy could attribute their issues to stress and anxiety, especially in test-taking scenarios. If students with low efficacy were not directly attended to in a timely manner, they may become chronic underachievers and find later success elusive. Conversely, students with high self-efficacy tended to deal with stressful situations better in academic settings as they had learned to manage, control, and even redirect their stress into energy to find success. However, simply willing a student with skill and knowledge to perform well did not mean they would do so; students must have a self-belief they could effectively use their skills and knowledge when necessary. In Bandura's words, "There is a marked difference between possessing subskills and being able to use them well under diverse circumstances" (1986, p. 391). In other words, students may perform poorly due to their lack of skills, or they may simply lack the confidence necessary to believe their capability to accomplish tasks. Bandura's study revealed that student beliefs or efficacy become predictors for academic performance.

Bandura's (1993) study also examined the effects of self-efficacy on classroom teachers. He noted teachers with a high sense of instructional efficacy devoted more time in the classroom to academics, while those with low instructional efficacy spent more time on non-academics. The study showed teachers willingness to give up quickly on students, even criticizing their failures, when experiencing low instructional efficacy. Increased instructional efficacy is achieved when a task is accomplished with a level of persistence and effort, that it then becomes

the past; thus allowing teachers to draw upon past experiences to develop future efficacy. Control over one's behavior and the resultant outcomes of such behavior were used as an early theoretical basis for teacher efficacy (Adams & Forsyth, 2006; Tschannen-Moran & Woolfolk Hoy, 1998). Adams and Forsyth (2006) believed the notion of the perceived outcome control stemmed from Rotter's (1954) social learning theory.

Tschannen-Moran, Hoy, and Woolfolk Hoy (1998) noted many similarities between self-efficacy and teacher efficacy, with the exception being teacher efficacy specifically related to certain beliefs they had concerning their individual capabilities as teachers. When teachers placed emphasis on success and positive behavioral models they exhibited a belief they could and would influence student learning in a positive way. Gibson and Dembo (1984) found a teacher's efficacy beliefs played a significant role in the academic achievement of their students, as they could hinder or enhance the learning environment.

The influence of efficacy levels, individually and collectively, on school organizations is an important matter as efficacy levels will affect teachers' ability to cope with any given situation. Bandura (1977) illustrated that if teachers perceive an event, task, student, or classroom setting as negative, or having negative consequences, they may avoid the situation at all costs. However, if teachers perceived themselves as capable of handling a situation, they are more likely to challenge themselves and approach the task with assuredness. Once efficacy beliefs are established, they contribute greatly to the level and quality of an individual's functioning, no matter the task they may be presented with (Bandura, 1993).

The foundation for the development of *collective efficacy* was based off Bandura's (1977, 1986, 1989, 1993, 1997) social cognitive theory in relation to the notion of human agency, as well as his self-efficacy research. Collective efficacy is the perception of teachers in a specific

school that the faculty as a whole can complete courses of action necessary to positively affect student achievement (Hoy, Sweetland, & Smith, 2002).

Through his work with self-efficacy, Bandura developed the conceptual framework of collective efficacy (1986), which proved essential to the development of the teacher collective efficacy construct. In order to actively promote something to a group level, an individual must first, to some degree, value it on a personal level. Beliefs concerning efficacy are highly influential to the formation of self as these beliefs influence the way an individual feels, thinks, approaches tasks, and sets goals (Bandura, 1977). Goals and objectives are met when efficacy beliefs are strong, whereas objectives are not met when efficacy beliefs are limited. This holds true at both the individual and collective level. When teachers, not just students, become self-directed and motived believers then collective efficacy can result (Tschannen-Moran, Hoy, & Woolfolk Hoy, 1998). Now researchers were challenged with the task of finding a way to determine how to measure if teachers believed they worked in an environment with a strong sense of collective efficacy or a low sense of collective efficacy.

Gibson and Dembo (1984) were among the first researchers to attempt to develop a teacher efficacy scale. The result was a 30-item Likert type scale with items that were individually based. Recognizing the importance of Bandura's (1993) assertion that collective teacher efficacy is an important school property because it correlates to student achievement, Goddard, Hoy, and Woolfolk Hoy (2000) developed a 21-item scale that would accurately measure collective teacher efficacy. A key difference from Gibson and Dembo's scale is the Goddard et al. scale used group-oriented items. For example, Gibson and Dembo's individual based question would state, "I can get through to difficult students," whereas Goddard et al. would state, "Teachers in this school can get through to difficult students." The change in how

questions were phrased by Goddard and colleagues served to provide feedback on the overall measure of the group, not just how teachers perceived their own individual abilities. Much of the change in questions was achieved by changing the object of the efficacy items from *I* to *we*. Conducting the study in this manner provided a school with group feedback on improvement to teachers.

The 21-item instrument developed by Goddard, Hoy, and Woolfolk Hoy (2000), known as the Collective Efficacy Scale (CE-Scale), asked teachers to respond to items along a 6-point, Likert-type scale ranging from strongly agree (1) to strongly disagree (6). A sample was conducted on 452 teachers in 47 randomly selected elementary schools in a large urban district in the Midwest to confirm validity and reliability. The criterion variables examined were personal teaching efficacy (Hoy & Woolfolk Hoy, 1993), faculty trust in colleagues (Hoy & Kupersmith, 1985), and environmental press (Hoy & Sabo, 1998). The collective teacher efficacy measure directly assessed perceptions of both perceived competence and task whereas the personal teacher efficacy measure included only items about competence (Goddard, Hoy, & Woolfolk Hoy, 2000). A copy of the instrument can be found in Appendix E. Sample items of the CE-Scale are

- Teachers in this school have what it takes to get the children to learn;
- Teachers in this school are able to get through to difficult students;
- If a child doesn't want to learn teachers here give up;
- Teachers in this school really believe every child can learn; and
- Teachers in this school are skilled in various methods of teaching.

Goddard (2002) built on the work of Goddard, Hoy, and Woolfolk Hoy (2000) to develop and test a 12-item short Collective Efficacy Scale. Half of the items in this scale are reversed,

meaning a 1 is scored 6, 2 is score 5, etc. Thus a score of a strongly agree (6) on "If a child doesn't want to learn teachers here give up," is actually scored as (1), suggesting low efficacy. The psychometric properties of the short form are impressive and at least equivalent to the longer 21-item form; the validity and reliability of the short form are strong (Goddard, 2002). While some of the previously shared sample items are included in the shortened version, sample items of the short form CE-Scale are

- These students come to school ready to learn;
- Home life provides so many advantages that students here are bound to learn;
- Teachers in this school do not have the skills to deal with student disciplinary problems;
- Learning is more difficult at this school because students are worried about their safety; and
- Drug and alcohol abuse in the community make learning difficult for students here.

Through the creation and implementation of the Collective Efficacy Scale in their study of 47 schools, Goddard, Hoy, and Woolfolk Hoy (2000) confirmed Bandura's (1993) assertion that collective teacher efficacy perceptions could be used to predict student achievement. Results from their study also explained differences in reading and math achievement between schools while controlling for students SES. Other researchers in the field conducted studies that supported Goddard and colleagues findings, as study after study suggested that collective efficacy could be used to predict student achievement (Adams & Forsyth, 2006; Goddard, 2002; Goddard, Hoy, & Woolfolk Hoy, 2004; Goddard, LoGerfo, & Hoy, 2004; Goddard & Skrla, 2006; Hoy, Sweetland, & Smith, 2002).

Bandura (1993) found that schools exhibiting a strong sense of collective efficacy performed at higher rates than schools with low collective efficacy and could be perceived for effects on the home environments and parental roles. What affects students at home certainly affects them in the classroom. Goddard, Hoy, and Woolfolk Hoy (2000) furthered Bandura's work with collective efficacy by integrating individual, teacher, and group efficacy to explain a teacher's ability to positively influence student achievement. Confirming Bandura's (1993) theory that collective teacher efficacy perceptions could be used to predict student achievement, Hoy, Sweetland, and Smith (2002) found student achievement could be explained with collective efficacy as the central variable. Actually, they found collective efficacy was a stronger determinant for student achievement than SES or academic achievement. Hoy et al. concluded that, "School norms that support academic achievement and collective efficacy are particularly important in motivating teachers and students to achieve … however, academic press is most potent when collective efficacy is strong" (p. 89).

Many researchers have conducted studies confirming that collective efficacy could be used to predict student achievement in any school, whether high school or elementary, and regardless of the methodology employed: path analysis, structural equation modeling, or hierarchical linear modeling (Adams & Forsyth, 2006; Goddard, 2002; Goddard, Hoy, & Woolfolk Hoy, 2004; Goddard, LoGerfo, & Hoy, 2004; Goddard & Skrla, 2006; Hoy, Tarter, & Woolfolk Hoy, 2006a, 2006b). Employing previous research, Hoy, Tarter, and Woolfolk Hoy (2006b) found positive relationships among student performance and three types of efficacy beliefs. These links were established in the self-efficacy beliefs among students (Pajares & Miller, 1994; Pajares, 1997), self-efficacy beliefs among teachers (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998), and the collective efficacy beliefs of teachers about the school (Goddard,

Hoy, & Woolfolk Hoy, 2000). To sum up, teacher efficacy may explain the effects the teacher has on the classroom and student achievement, but from an organizational perspective, collective efficacy has a larger influence on the differential effect that schools have on student achievement (Goddard, Hoy, & Woolfolk Hoy, 2000; Tschannen-Moran, 1999).

Faculty trust. A second aspect, or measure, of academic optimism is faculty trust. Trust is an individual's or group's willingness to be vulnerable to another party based on the confidence the latter party is benevolent, reliable, competent, honest, and open (Hoy & Tschannen-Moran, 2003). All five facets of trust vary together to form an integrated construct known as faculty trust in schools, whether the schools are elementary (Hoy & Tschannen-Moran, 1999; Hoy & Tschannen-Moran, 2003; Hoy, Tarter, & Woolfolk Hoy, 2006a, 2006b) or secondary (Smith, Hoy, & Sweetland, 2001). According to Tschannen-Moran and Hoy (2000), there are many organizational influences that effect the importance of each facet of trust, such as structures, policies, leadership, and culture (Hoy & Tschannen-Moran, 1999).

Faculty trust can be perceived as another view of school culture, as the collective shared beliefs of teachers (Hoy & Miskel, 2013). Like collective efficacy, faculty trust has consistently shown itself to be a variable that predicts student achievement, especially when present in and among open and healthy school environments (Hoy & Tarter, 1992; Tschannen-Moran & Hoy, 1998, 2000, 2001; Hoy, Smith, & Sweetland, 2002). As Forsyth, Adams, and Hoy (2011) noted, the initial definition of trust based on the work of Rotter (1967), and Golembiewski and McConkie (1975), was as follows, "Trust is a generalized expectancy held by the work group that the word, promise, and written or oral statement of another individual, group, or organization can be relied upon" (Hoy & Kupersmith, 1985, p. 2, as cited in Forsyth et al., 2011).

Trust is necessary for effective cooperation and communication to occur, which are the basis for productive relationships (Baier, 1985). Nanus (1989) described trust as the "mortar that binds the leader to the follower" and formed the basis for leaders' legitimacy (p. 101), although Baier (1985) complained that much of the philosophical work on trust and morality was based on "contractual relationships between people of roughly equal power" (Baier, 1998, p. 340). In order for organizations to be successful, they must continually extend trust to employees at all levels of the organization, not just those with authority and power.

Empirical studies involving trust stemmed from the Cold War era and space exploration related to Sputnik. Deutsch (1958) defined trust in a behavioral perspective, unrelated to education as "expectations with regard to an event whose occurrence is not detrimental to the individual, i.e., in reference to a benevolent or desired event" (p. 266). Meaning no one gained when people chose to behave in untrustworthy behavior. Zand (1971), also from a behavioral perspective, defined trust as a mode of actions increasing an individual's vulnerability to or acceptance of another. Tschannen-Moran and Hoy (1998) had observed previous psychologists and philosophers, and asserted the catalyst for research on organizational trust began during the Cold War due to the nationwide phenomenon of disinterest and detachment from the government. Effective schools research prompted the study of trust between schools and families, although the research did not clearly establish the link between schools, student achievement, and school-parental relationships (Hallinger & Murphy, 1986). The need to study trust was clear, but defining it was not. Hosmer (1995) postulated there could be a consensus on the importance of human trust in human conduct, but did not feel a suitable definition would ever be agreed upon unanimously. The concept of trust proved incredibly complex and difficult to define (Tarter, Bliss, & Hoy, 1989), but eventually a consensus was reached among researchers.

Over the years research has shown trust in schools to be important for numerous reasons, such as facilitating cooperation (Tschannen-Moran, 2001), enhancing openness (Hoffman, Sabo, Bliss, & Hoy, 1994), promoting group cohesiveness (Zand, 1997), supporting professionalism (Tschannen-Moran, 2009), building organizational capacity (Cosner, 2009), and improving student achievement (Bryk & Schneider, 2002; Goddard, Tschannen-Moran, & Hoy, 2001; Hoy, 2002; Hoy & Miskel, 2013; Tschannen-Moran, 2004). As such, trust is defined at the collective level, as it is the trust of the work group that can be viewed in relation to any number of reference groups such as administrators or the school organization (Forsyth, Adams, & Hoy, 2011). Faculty trust is also a collective form of trust because the faculty has the expectation that the "word, promise, and actions of another group or individual can be relied on and that the trusted party will act in the best interests of the faculty" (Forsyth et al., 2011, p. 4). Many researchers believed trust was an essential school characteristic influencing student learning (Bryk & Schneider, 2002; Goddard, Tschannen-Moran, & Hoy, 2001; Hoy & Tschannen-Moran, 1999) as well as effective schools research (Tschannen-Moran & Hoy, 1998; Tschannen-Moran, 1999). According to Newcombe and McCormick (2001), the overall environment of schools must be one of trust where fairness, openness, consistency, and integrity are apparent.

Acknowledging trust as a complex notion (Tschannen-Moran & Hoy, 1998), an attempt was made to demystify the concept by conducting a meta-analysis on more than four decades worth of research in hopes of providing some clarity (Tschannen-Moran & Hoy, 2000). Even though trust had been called the "foundation of school effectiveness" (Cunningham & Gresso, 1993) few studies existed for Tschannen-Moran and Hoy (2000) to examine trust in reference to schools; thus their review of definitions included various disciplines and contexts concerning philosophy, society, economics, the individual, and organizations. Recurring themes emerged

from their study, regardless of the discipline, leading them to conclude that building trust required attention to what they deemed the five facets of trust. The resultant definition of trust shared many similarities with Mishra's (1996) definition of trust, which he conceptualized as a moderator of three key organizational behaviors that may occur in response to crisis: top management group, organization, and interorganization. Tschannen-Moran and Hoy (2000) posited Mishra's (1996) formation of trust raised several questions, and thus focused their study on faculty trust in schools; they also looked at trust at the collective, not the individual level. Trust, in relation to education, was one party's willingness to be vulnerable to another party based on the confidence that the latter party was (a) benevolent, (b) reliable (predictable), (c) competent, (d) honest, and (e) open (Hoy & Tschannen-Moran, 1999, 2003; Hoy, Gage, & Tarter, 2006; Tschannen-Moran & Hoy, 2000). Researchers now acknowledged trust as a global concept based on at least five facets, with these elements based on "common beliefs that individuals or groups act in ways that are in the best interest of the concerned parties" (Hoy, Gage, & Tarter, 2006, p. 240). Other facets of trust found to be important in relation to schools were confidence and the willingness to risk vulnerability (Tschannen-Moran & Hoy, 2000).

Benevolence may be the most common element of trust; it is confidence that those things one cared about will not be harmed (Baier, 1986; Cummings & Bromily, 1996) and is the "accepted vulnerability to another's possible but not expected ill will" (Baier, 1986, p. 236). When there is no trust in the benevolence of the principal, teachers become excessively concerned about both real and imagined harm (Hoy, Gage, & Tarter, 2006), as teachers must often rely on the goodwill of principals as they experiment with new teaching strategies and make inevitable mistakes (Hoy & Sabo, 1998). Reliability is the extent to which behavior is predictable and benefits the other party, which is, consistency of behavior and knowing what to

expect from others (Butler & Cantrell, 1984; Hosmer, 1995). Reliability is not simply consistent behavior, it is behavior that combines with benevolence to be predictably well intentioned or benevolent (Hoy, Gage, & Tarter, 2006) providing a sense of confidence that one's needs will be met; thus alleviating the need to exert energy worrying whether the person will come through or make mental provisions in case he or she does not (Tschannen-Moran & Hoy, 2000).

Competence is the ability to perform according to appropriate standards, however at times good intentions are not enough. When a person is dependent on another to fulfill some level of skill involved to meet an expectation, an individual who means well may nonetheless not be trusted (Baier, 1986; Butler & Cantrell, 1984; Mishra, 1996). Honesty refers to an individual's character, integrity, and authenticity, with the "expectancy that the word, promise, verbal or written statement of another individual or group can be relied upon" (Rotter, 1967, p. 651). The implication is that statements made are truthful and conform to "what really happened," at least from that person's perspective, and that commitments made about future actions will be kept (Tschannen-Moran & Hoy, 2000). Authentic behavior neither distorts the truth nor shifts responsibility. Openness is a process in which relevant information is not withheld; it is a process by which people make themselves vulnerable to others by sharing personal information (Butler & Cantrell, 1984; Mishra, 1996). Principals and teachers who guard information, as well as students or parents, provoke suspicion rather than openness and trust (Hoy, Gage, & Tarter, 2006; Hoy, Tarter, & Woolfolk Hoy, 2006b).

The willingness to risk vulnerability highlights a necessary condition of trust, which is interdependence, wherein the interests of one party cannot be achieved without reliance upon another (Rousseau, Sitkin, Burt, & Camerer, 1998). For example, principals who involve teachers in important decisions not only risk losing control of the decision but remain responsible

for the outcome (Hoy & Tarter, 1997). Where there is no interdependence, there is no need for trust. Confidence was more of a puzzle concerning trust as to whether it was an individual's behavior or attitude in a situation of vulnerability. Deutsch (1960) suggested that when a person engaged in an action that increased vulnerability to another, it was difficult to infer the motivation for such a choice. There was growing consensus that trust resided in the degree of confidence one held in the face of risk rather than in the choice or action that increased one's risk (Rousseau et al., 1998). Confidence extends across a gap of time as there is a lag between when a commitment is made and when the recipient knows that it has been fulfilled. The degree to which a person can rest in that uncertainty with a certain amount of confidence is the degree to which that person can be said to trust (Kee & Know, 1970 as cited in Tscannen-Moran & Hoy, 2000).

Building collective trust within an organization requires skill. Kramer, Brewer, and Hanna (1996) recognized that trust operates between individuals as well as within and between groups. They identified three processes of trust that serve to maintain solidarity and trust in a group: elicitative trust, compensatory trust, and moralistic trust (Tschannen-Moran & Hoy, 2000). In elicitative trust, one takes the initiative to make oneself vulnerable "with the hope it will build more trust in the collective" (p. 574). The belief or expectation is that, by engaging in acts of trust oneself, one may be able to induce others to do the same (Kramer et al., 1996). A reputation of trustworthiness is a valuable asset to individuals and organizations. Individuals engaged in compensatory trust are willing to act to offset the behavior of other individuals they think might threaten the stability or survival of the collective trust (Tschannen-Moran & Hoy, 2000). Whereas moralistic trust emphasizes the beliefs held by members of a collective about what responsible membership in a social group entails. Tschannen-Moran and Hoy posited that

"Although there is virtually no research on elicitative trust on the part of principals and teachers, it seems reasonable to hypothesize that elicitative trust could have a powerful effect in instituting trusting norms within a school" (p. 574). The solidarity and trust of a group leads to a reputation of trustworthiness, which can serve as a valuable asset to individuals and organizations alike.

The judgment, observations, and gossip of others can take root and deeply affect relationships at positive and negative extremes (Burt & Knez, 1996). In any organization, including schools, individuals tended to grasp on to negative information, perhaps even prefer negative gossip to positive (Tschannen-Moran & Hoy, 2000). Hoy and Tarter's (1997) research suggested that trust is a direct link to school effectiveness and successful leadership. Therefore, a school culture that fostered trust would be conducive to working and learning. Without a culture of trust schools are susceptible to a great deal of suspicion, personal agendas, and manipulation.

Employing the two trust scales developed by Hoy and Kupersmith (1985), Tschannen-Moran and Hoy (1998) discovered teachers trust in one another had little to do with principal behavior. However, trust in the principal stemmed directly from the professionalism displayed by the principal. Therefore, Hoy and Tschannen-Moran (1999) worked to develop a 26-item instrument called the Omnibus Trust Scale (Omnibus T-Scale) to measure trust along a 6-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (6). They pilot tested the instrument in both elementary and secondary schools to ensure they created a reliable and valid instrument that could serve to measure trust at any school level. Results of Hoy and Tschannen-Moran's (1999) study showed questions loaded strongly on three factors: trust in the principal, trust in colleagues, and trust in students and parents. Trust in students and trust in parents aligned in a single construct now known as trust in clients. A copy of the instrument can be

found in Appendix F. Sample items of the trust in clients' portion of the scale, pertinent to this study, are

- Teachers in this school trust their students;
- Teachers in this school trust the parents;
- Students in this school care about each other;
- Parents in this school are reliable in their commitments; and
- Students in this school can be counted on to their work.

Trust in clients became the measure of trust used to gauge faculty trust in academic optimism. Their study revealed a correlation among faculty trust in the principal, faculty trust in colleagues, and faculty trust in clients; each helped predict student achievement.

Faculty trust had been found to have a direct influence on student achievement (Goddard, Tschannen-Moran, & Hoy, 2001; Tschannen-Moran & Hoy, 2000). Research has continually shown that the greater the faculty trust in clients, the higher the level of school achievement in reading and math (Tschannen-Moran & Hoy, 2000). The validity of trust and its effectiveness on school improvement was substantiated in Tschannen-Moran and Hoy's (2000) study. They found trust was related to a positive school climate, productive communication, participative decision processes, and organizational participants' willingness to exceed job expectations. The study confirmed that trust made a difference in student achievement, teachers' collective sense of efficacy, and overall school effectiveness, even when controlling for SES. Their findings lead researchers to believe that trust is a necessary component if schools are to function well. Forsythe, Barnes, and Adams (2005) noted the "strength of relational trust inherent in role groups … of the organization does indeed appear to predict school effectiveness and thus student achievement" (p. 137). Elevated levels of trust within and among the various groups of a school

organization do appear to positively effect student achievement (Goddard, Tschannen-Moran, & Hoy, 2001; Hoy & Tarter, 1997; Hoy, Gage, & Tarter, 2006; Hoy, Smith, & Sweetland, 2002; Tschannen-Moran & Goddard, 2000; Tschannen-Moran & Hoy, 1998, 2000, 2001).

Academic emphasis. The final organizational property of academic optimism, academic emphasis, is sometimes referred to as academic press. Academic emphasis is defined by Goddard, Sweetland and Hoy (2000) as "the extent to which a school is driven by academic excellence," or in other words, a press for academic achievement (p. 684). Throughout educational literature academic emphasis is often tantamount with academic press, achievement press, and academic rigor. In this quest for academic excellence high, but achievable goals are set for students; students respect intellectual accomplishments; and students are conscientious about their school work; meaning they are cooperative in class activities and in completion of homework (Hoy & Miskel, 2005; Hoy, Tarter, & Kottkamp, 1991; Hoy, Tarter, & Woolfolk Hoy, 2006b). An organizational trait, academic emphasis is often embedded in the perceptions of individuals within the organization.

As Hoy and Miskel (2013) posited, "Academic emphasis is the enacted behavior prompted by collective efficacy and faculty trust – an emphasis on intellectual pursuits and academic success" (p. 314). Essentially, it is the belief that academics are important and the schools, meaning the administrators, faculty, and students, are taking steps to demonstrate that view. As Goddard, Hoy, and Woolfolk Hoy (2000) theorized, the beliefs of the group exceed the beliefs of the individuals, and thus exhibit special characteristics. A strong sense of academic emphasis will have teachers setting high but achievable learning goals and expectations, putting student learning and achievement as central themes, and ensuring instructional time is protected and sacred (Goddard, Sweetland, & Hoy, 2000). In schools with high levels of academic

emphasis, academic success is protected and pursued by all in the school, the principal, faculty, and students. Also, students who devalue or demean their peer's pursuits of academics are quickly reprimanded (Goddard, Sweetland, & Hoy, 2000).

Hoy and his colleagues were among the first to conduct studies that suggested a collective organizational property, the academic emphasis of the school, was positively and directly related to student achievement in high schools while controlling for SES (Hoy, Tarter, & Bliss, 1990; Hoy, Tarter, & Kottkamp, 1991; Hoy, Tarter, & Woolfolk Hoy, 2006b). Researchers later demonstrated the same positive relationship for middle schools, again controlling for SES (Hoy & Hannum, 1997; Hoy & Sabo, 1998; Hoy, Tarter, & Bliss, 1990). For elementary schools, the results are the same as for middle and high schools (Hoy, Tarter, & Woolfolk Hoy, 2006a, 2006b).

Hoy and colleagues found the foundational theory for academic emphasis in Parsons, Bales, and Shils (1953) research in the area of social systems. Parsons et al. determined there are four imperative functions necessary in order to solve basic problems: adaptation, goal attainment, integration, and latency. If social systems are to survive, grow, and develop, these four functions must be in place. Parsons (1967) also established three levels of authority noting that schools have the ability to control, even attain, these functions he placed into three distinct levels of control: technical, managerial, and institutional. The technical level focused on the learning process achieving goals and standards. The role of administrative functions within the organization was the emphasis of the managerial level. The institutional level connected the school with the community and necessary support. Academic emphasis emerged at the technical level according to Hoy, Tarter, and Kottkamp (1991), partly due to student achievement being the primary function of the school.

Academic emphasis has always been measured as a subscale in various instruments. First, it was a subscale measured in the Organization Health Inventory (Hoy & Miskel, 2008, Hoy & Tarter, 1997; Hoy et al.,1991) in looking at academic emphasis of the school for the purposes of organizational climate before being added as a subscale measure in the Organizational Climate Index (Hoy, Sweetland, & Smith, 2002). Later academic emphasis was added as a subscale to the academic optimism instruments: Elementary Teacher Academic Optimism (TAOS-E), Secondary Teacher Academic Optimism (TAOS-S), and School Academic Optimism (SAOS). For the purposes of this study, the SAOS was the instrument administered and academic emphasis as a subscale is an 8-item subscale on a 4-point, Likert-type scale from *rarely occurs* to *very often occurs*. Sample items of academic emphasis are

- The school sets high standard standards for performance;
- Students respect others who get good grades;
- Academic achievement is recognized and acknowledged by the school; and
- The learning environment is orderly and serious.

Lee and Bryk (1989) reiterated the effect academic emphasis could have on student achievement by concluding a school's academic focus was linked to student achievement regardless of race and SES. Their findings suggested orderly and disciplined learning environments with a focus on academics would prosper in student success and achievement. Goddard, Sweetland, and Hoy (2000) found that academic emphasis was a critical collective property of schools explaining higher achievement in both math and reading. They concluded, "elementary schools with strong academic emphases positively affect achievement for poor and minority students" (p. 698).

A more recent study conducted by Alig-Mielcarek and Hoy (2005) used structural equation modeling to examine the influence of the instructional leadership of the principal and the academic emphasis of the school. Their findings, like previous research, demonstrated the significance of academic emphasis in explaining student achievement while controlling for SES; academic emphasis, not instructional leadership, was the critical variable explaining achievement. Actually, Alig-Mielcarek and Hoy established in their study that instructional leadership worked indirectly through academic emphasis, not directly, to influence student achievement. According to Hoy, Tarter, and Woolfolk Hoy (2006b), regardless of the methodology or settings of schools, results are consistent, "academic emphasis is a key variable in explaining student achievement, even controlling for socioeconomic status, previous achievement, and other demographic variables" (p. 137).

Organizational Effectiveness

Miles (1969) defined a healthy organization as one that not only survives its environment, but continues to successfully manage disruptive outside forces while effectively directing its energies toward the mission and objectives of the organization (Hoy, Hannum, & Tschannen-Moran, 1998). Operations at an organization may change on a day-to-day basis from effective to ineffective, but the healthy organization tends to have a long-term prognosis as favorable. Also noted previously, all social systems, if they are to grow and prosper, must attend to the four basic problems of adaptation, goal attainment, integration, and latency (Hoy, Hannum, & Tschannen-Moran, 1998; Parsons, Bales, & Shils, 1953; Parsons, 1967; Scott, 1992). Meaning organizations must resolve problems of acquiring sufficient resources while accommodating to the environment, setting and attaining goals, maintaining solidarity within the system, as well as creating and preserving the values of the system (Hoy, Hannum, & Tschannen-Moran, 1998).

Hoy et al. (1998) posited the organization must be concerned with "the instrumental needs of adaptation and goal attainment as well as the expressive needs of integration and latency; in fact, we postulate that healthy organizations efficiently meet both sets of needs" (p. 339). This Parsonian perspective created a guideline, or definition, of effectiveness that researchers came to accept and integrate into their research. Using the Parsonian framework, Hoy and Ferguson (1985) asserted that the proposed conceptualization of organizational effectiveness subsumed the following general dimensions:

> (1) organizational adaptation in the form of successful accommodation to internal and external forces, (2) organizational productivity in terms of the extent to which the organization is successful in setting and accomplishing its internal goals, (3) organizational cohesiveness in the form of the absence of intraorganizational conflict, and (4) organizational commitment in the form of members' motivation and commitment to the organization. These dimensions are concerned with both means and ends; they are consistent with the proposed definition of effectiveness; they are guided by a t theoretical framework; and they are concerned with goals as well as system requirements for existence and growth. (p. 122)

Parsons (1967) suggested formal organizations exhibited three distinct levels of responsibility and control over such needs: the technical, managerial, and institutional levels. This Parsonian perspective provided an integrative scheme for conceptualizing and measuring the organizational health of a school (Hoy, Hannum, & Tschannen-Moran, 1998; Hoy, Tarter, & Kottkamp, 1991). According to Hoy, Hannum, and Tschannen-Moran (1998), there are qualitative breaks in line and authority relations at each of the two places where the levels are linked, yet interdependence and pressures for effectiveness make cooperation among levels necessary. They asserted healthy organizations are ones in which "the technical, managerial, and institutional levels are in harmony, and the organization is meeting both its instrumental and expressive needs as it successfully copes with disruptive outside forces and directs its energies toward its mission" (p. 340). While there are a multitude of possible definitions and viewpoints

of effectiveness, for the purposes of this study the Parsonian perspective will be used to satisfy two views of effectiveness: goal attainment and efficiency.

Effectiveness, especially in relation to schools, has proven difficult to conceptualize as it is complex. Measurement for schools often included standardized tests of student achievement as mastery of basic skills has been shown an important component of effective schools by researchers (Uline, Miller, & Tschannen-Moran, 1998). Uline et al. noted that other factors were important as well, such as "administrative functioning; leadership behaviors; morale; level of trust; culture and climate; parent involvement; community support; teachers' efficacy; and the commitment, loyalty, and satisfaction of teachers" (p. 462). Miskel, Fevurly, and Stewart (1979) cited perceived organizational effectiveness, loyalty, and job satisfaction as representative of a variety of outcomes used to approximate organizational performance. Steers (1975) found adaptability-flexibility, productivity, and job satisfaction to be frequently occurring concepts in organizational effectiveness models. As Miskel and colleagues (1979) asserted, Steers' (1975) three independent variables were similar to Hage's (1965) organizational ends of adaptiveness, production, efficiency, and job satisfaction. However, measures of school effectiveness can be complicated and difficult to administer if attempts were made to include all of these variables (Ostroff & Schmitt, 1993). Therefore, it could be argued that the criterion variables of climate and academic optimism in the present study constitute an acceptable composite of performance indicators.

Hoy and Miskel (2013) posited three main issues surround school effectiveness, and each fundamentally challenged issues of school effectiveness. First, there was no agreed upon definition of school effectiveness, as different clienteles demanded different learning outcomes (Hoy & Miskel, 2013). Some felt effective schools should emphasize basic life skills, while

others believed in cultivating a desire for lifelong learning. Second, any semblance of a definition for organizational effectiveness faltered because clientele continually influenced and altered definitions in order to reflect new social norms. For example, in the 1970s schools emphasized social and emotional growth, while in the 1980s the focus became an emphasis on efficiency, academic achievement, and employment skills (Cuban, 1990; Wimpelberg, Teddlie, & Stringfield, 1989; as cited in Hoy & Miskel, 2013, p. 301). During the 1990s and 2000s, the focus again shifted to a thrust to ensure accountability in schools, therefore altering how effectiveness is judged, as in what worked today may not work tomorrow (Cameron, 1984, 2005).

A third and final main challenge emerged from the multiple stakeholders (clients, faculty, school board members, policy makers, community members, etc.) often proposing diverse and commonly conflicting effectiveness preferences. While money allocation and teacher evaluation was emphasized by administrators and board members, teachers preferred to focus on teaching and learning, noting that effectiveness was rooted in instructional methods, positive classroom climates, and positive student relations. An accurate, although somewhat pessimistic observation was provided by Cameron (2005), "Consensus regarding the best, or sufficient, set of indicators of effectiveness is impossible to obtain" (p. 312). In sum, the three basic challenges surrounding school effectiveness were developing a working definition, coping with shifting definitions, and responding to multiple stakeholders with varying definitions (Hoy & Miskel, 2013).

Achievement

As posited by DiPaola and Hoy (2005), student achievement in academic disciplines is one of the hallmarks of school effectiveness. The manner in which student's achievement is measured is often subjective, left to the judgments of teachers, teacher-made tests, grades, and

standardized tests. We now live in an era of standards and accountability due to No Child Left Behind Act (2003), Race to the Top Act (2010), and Core Curriculum (2013) along with numerous other government mandates. As a result most states employ standardized tests to assess the performance of schools. Over the years research has shown mathematics and reading achievement to be two strong indicators of students' achievement, as well as some of the criteria for school effectiveness; though they are not the only indicators available they do prove to be reliable (DiPaola & Hoy, 2005).

Administrators, teachers, school boards, educational researchers, and policy makers all strive to identify characteristics of schools that improve student achievement. The task seems reasonable and clear enough, yet has proven elusive for decades. One of the persistent underlying influences on student achievement was identified in a landmark study of schools (Coleman et al., 1966) and effected public education in a major way. Coleman concluded the characteristics of a school mattered little, having only a negligible effect on student achievement. He further asserted that variations in student learning were a product of social factors. One of the main factors influencing student learning, according to his study, was differences in family background with socioeconomic status having the overriding influence on achievement. The controversy stemming from this study was immediate and long-lasting.

Edmonds (1979) was a main detractor of Coleman's (1966), and Edmonds was forthright in his challenges to Coleman's findings. Edmonds was one of the first researchers to assert achievement is influenced by factors other than solely SES. He revealed six effective school characteristics he believed influenced student achievement, with five of those six school properties predicting a significant correlation in student achievement: strong administrative leadership, an orderly learning environment, high expectations for students, emphasis on basic

skills, and frequent evaluation of students. Simply put, Edmonds asserted good schools were the result of good administrators and leadership. He also concluded that student learning was imperative, and thus a basis for future success. Edmonds further posited that student learning should take precedence over all school activities if schools wished to increase student achievement. His list of effective school characteristics became the basis for a school effectiveness movement that wished to show the significance of school characteristics in improving student performance (Smith & Hoy, 2007). Although the connection may have seemed simple, Edmonds (1979) demonstrated a direct administrative influence on student achievement which had previously remained elusive (Hoy, Tarter, & Woolfolk Hoy, 2006a). The connection Edmonds made from administrative influence to student achievement required some empirical validation.

Strong leadership makes for strong schools with high achieving students. At least this is the logical conclusion that is appealing for administrators. Yet the "empirical demonstration of a direct relationship between principal leadership and student achievement has been elusive" (Smith & Hoy, 2007, p. 556). Smith and Hoy asserted that it is one thing to identify high-performing schools in poor, urban districts and attribute their success to principal leadership or school climate, or even an orderly environment. However, it is quite another matter to demonstrate a priori that such characteristics are directly related to student achievement in controlled, quantitative studies of large samples. According to Hallinger and Heck (1996), the weight of evidence suggested there to be little or no direct relationship existing between principal leadership and student achievement. The one consistent finding on school effects was the strong influence of SES on achievement when controlling for the school as the unit of analysis (Smith & Hoy, 2007).

Research has shown three organizational properties seem to make a difference in student achievement: the academic emphasis of the school, the collective efficacy of the faculty, and the faculty's trust in parents and students (Beard, Hoy, & Woolfolk Hoy, 2010; Hoy, Tarter, & Woolfolk Hoy, 2006a, 2006b; Kurz, Woolfolk Hoy, & Hoy, 2007; McGuigan & Hoy, 2007; Smith & Hoy, 2007). As indicated earlier in the section on academic optimism, academic emphasis, collective efficacy, and faculty trust are interconnected and have reciprocal causality that positively constrained student performance. According to Hoy, Tarter, and Woolfolk Hoy (2006a), administrators and teachers have a reason to be optimistic, as academic optimism shows they can be empowered; neither they nor their students are irrevocably trapped by socioeconomic factors.

As noted in Hoy and Hannum (1997), researchers have suggested that school climate makes a difference in school learning environments, as well as the achievement of students (Bossert, 1998; Brookover, Schweitzer, Schneider, Beady, Flood, & Wisenbaker, 1979; Purkey & Smith, 1983; Stedman, 1987). School climate is a relatively stable property of the school environment that is experienced by participants and affects their behavior, and is based on their collective perceptions of behavior in schools (Hoy & Hannum, 1997; Hoy & Miskel, 1996; Tagiuri, 1968). Teacher affiliation, otherwise known as teacher commitment to their colleagues, helps promote teacher cooperation and collaboration (Little, 1987), attributes that enhance the learning environment and student achievement (Hoy & Hannum, 1997).

School Effectiveness

According to Hoy and Ferguson (1985), the traditional view of effectiveness has been a functional one, meaning an organization is successful to the extent that it achieved its goals. This referenced the assumptions rational decision makers in organizations are guided by as they

set specific goals, as well as the need for those decision makers to keep the goals few enough in number and clearly defined to be understood and taken on by participants. Having these two conditions met the evaluation of organizational effectiveness to determine goal achievement may begin with developing measures.

Most organizations have three types of organizational goals: official, operative, and operational goals. Official goals are formal statements of purpose concerning the organizations mission, often abstract and seeking to garner public support rather than guiding behavior. Operative goals are the organizations actual intentions and guide the tasks and activities performed in schools, regardless of official statements. Operational goals are the most specific in terms of criteria and procedures for evaluation, and are concrete and measurable goals used to evaluate the organizations success.

The goal model stressed achievement of specific objectives, with behavior being explicitly or implicitly goal-directed (Hoy & Ferguson, 1985). Schools would attempt to evaluate student achievement using certain objectives and frameworks; hence, the study of effectiveness is concerned with both organizational means and ends. Therefore, organizational effectiveness is defined "as the extent to which any organization as a social system, given certain resources and means, fulfills its objectives without incapacitating its means and resources and without placing undue strain upon its members" (Georgopoulos & Tannenbaum as cited in Hoy & Ferguson, 1985, p. 121).

When looking at student achievement and the goal model, it is once again necessary to draw upon Parsons Theory of a social system's four critical functions necessary for survival: adaptation, goal attainment, integration, and latency. As these four general problems are central to resource acquisition, they may be considered goals for a schools administration and provide

direction for goal attainment in terms of student achievement. According to Hoy and Ferguson (1985), using the Parsonian framework, the proposed conceptualization of organizational effectiveness subsumed the following "general dimensions: (1) organizational adaptation, (2) organizational productivity, (3) organizational cohesiveness, and (4) organizational commitment" (p. 122). These dimensions, concerned with both means and ends, are consistent with the proposed definition of effectiveness; are guided by a theoretical framework; and are concerned with goals and system requirements for existence and growth.

Motts measure IPOE. Paul Mott (1972) developed a multi-faceted perspective for measuring organizational effectiveness in hospitals and the National Aeronautics and Space Administration (NASA). Mott argued that effective organizations "produce more and higher quality outputs and adapt more effectively to environmental and internal problems than other, similar organizations" (Hoy & Ferguson, 1985, p. 124; Hoy & Miskel, 2013, p. 17; Mott, 1972, p. 17). To determine the extent to which the organization had mobilized its powers for production and adaptation, Mott proposed the following criteria for organizational effectiveness: quantity and quality of outputs, efficiency of production, adaptability and flexibility of the organization (Hoy & Ferguson, 1985; Hoy & Miskel, 2013). All three frameworks recognized organizational outcomes broad range; all are concerned with both environmental and internal problems; and all addressed both production and adaptation as highly complex.

The Parsonian perspective, however, provided a theoretical framework evolving directly from the imperative functions of social systems (Hoy & Ferguson, 1985). Parsons (1960) stressed the importance of the environment on the organization and anticipated a conception of the organization as an open system – a social system dependent on and influenced by its environment (Hoy & Miskel, 2013). Some formal expectations are critical and mandatory;

others are more flexible. Many roles were not precisely prescribed; that is, the expectations associated with most positions were wide ranging. This range of freedom made it feasible for teachers with quite different personalities to perform the same roles without undue tension or conflict (Parsons & Shils, 1951, as cited in Hoy & Miskel, 2013, p. 26).

School Effectiveness Index (SE-Index). Miskel and his colleagues (Miskel, Fevurly, & Stewart, 1979; Miskel, McDonald, & Bloom, 1983) were among the first researchers that made attempts to modify Mott's measure and integrate it successfully for use in schools (Hoy & Miskel, 2013). Hoy and Ferguson (1985) demonstrated that the index "correlated with many other measures of school effectiveness, including cohesiveness, faculty commitment, and student achievement, thus providing validity for the use of the scale in schools" (Hoy & Miskel, 2013, p. 319). Hoy and his colleagues (Hoy & Miskel, 1991; Hoy & Sabo, 1998; Hoy, Tarter, & Kottkamp, 1991; Hoy, Tarter, & Wiskoskie, 1992) demonstrated the validity of the index in the examination of the relationship between faculty trust and school effectiveness in middle and elementary schools (Hoy & Miskel, 2013). Hoy and Miskel asserted it was useful and interesting to compare faculty, parent, and self-perceptions of school effectiveness, and recommended building administrators administer the index to faculty to gauge perceptions of effectiveness. However, worthy of note is the IPOE provided only a quick snapshot of the effectiveness of their school at the particular point the index was administered.

The School Effectiveness Index (SE-Index), adapted from Mott's general model of organizational effectiveness by Miskel and his colleagues (Miskel, Fevurly, & Stewart, 1979; Miskel, McDonald, & Bloom, 1983) was used successfully to study the effectiveness of schools. The latest version of the Index of Perceived School Effectiveness is called the SE-Index and can be found in Appendix G. The 8-item index asks teachers to responds on a 6-point, Likert-type

survey ranging from *strongly agree* (1) to *strongly disagree* (6). Sample items of perceived school effectiveness are

- The *quality* of products and services produced in this school is outstanding;
- The teachers in my school do a good job *coping* with emergencies and disruptions;
- When changes are made in the school, teachers accept and adjust *quickly*; and
- Teachers in this school are well *informed* about innovations that could affect them.

According to Forsyth, Barnes, and Adams (2005), effective schooling relied on cooperation and support between home and school. School decisions must be met with home reinforcement concerning home learning activity, as well as home encouragement for, and interest in, each student's school success. As noted in Forsyth et al., Barnard (1958) had established long ago the general case for the importance of "securing cooperation and compliance for organizational success" (p. 122). However, Barnard intended for these claims to be applied to members inside the organization; therefore parents of school organizations required a more complex examination.

Etzioni (1975) brought attention to who should be considered a "member" of the school organization, feeling that students belonged as "lower participants" due to their intense involvement in school. He also asserted they should be considered "inside" the organization as their subordination and performance obligations were high. Conversely, he saw parents as "outside" the school organization, more like clients of a school, as they scored low on criteria of involvement, subordination, and performance obligations (Etzioni, 1975, p. 20-21). Parents have a profound influence on school outcomes, and even today their role in the organization is not

particularly understood or easily quantified by researchers, however steps to rectify the understanding of faculty trust in clients is making headway and providing insight into achievement and effectiveness. What researchers do seem to agree upon is the ability for SES factors, resultant from students' home life, to overwhelm other school properties in such a manner to continue to be powerful indicators of student achievement and performance.

Socioeconomic Status (SES)

Socioeconomic status (SES) is perhaps the most widely used contextual variable in educational research (Sirin, 2005). Conceptually, SES is an environmental constraint, thus "attempts to explain student achievement or organizational effectiveness must consider the positive and negative consequences of SES" (Tarter & Hoy, 2004, p. 540). While SES is not readily amenable to change (Coleman et al., 1966) other factors of the school culture have proven to be consistently related to student achievement above and beyond the effects of SES. However, when SES factors are included in study analysis on achievement when controlling for the school, they tended to overwhelm other school properties. Any influence those properties may have had on achievement tended to be partially diminished due to SES. Regardless, educational leaders and policy makers are reluctant to conclude that schools have little or no effect on student achievement (Hoy, Tarter, & Woolfolk Hoy, 2006a). Instead, they are working on identifying school characteristics that make a difference in achievement in spite of student SES.

Therefore Coleman's (1966) startling assertion that the characteristics of a school provided only a negligible effect on student achievement was not entirely wrong, as research has continually shown SES factors continue to be powerful indicators of student achievement and performance (Hoy, Tarter, & Woolfolk Hoy, 2006a). SES may have the ability to influence

associations between school properties and achievement. Nevertheless, Coleman was not entirely correct either; few school characteristics consistently predict student achievement, even after controlling for SES factors.

Edmonds (1979) criticized Coleman's findings as he viewed progress as a social order by a way of advancing the interests of the least among us, which in equitable public schooling begins with "teaching poor children what their parents want them to know and ends by teaching poor children at least as well as it teaches middle-class children" (p. 15). According to Edmonds, if American society does not strive to teach its children in such a manner, then inequity emerges and the hopes of education reaching a standard of basic school skills that assure pupils successful access to the next level of schooling is lost.

Weber (1971) also presented alternative theories to Coleman's notion that poor children's inherent disabilities are due to their poor family backgrounds. Weber (1971) and Edmonds (1979) found that effective schools tended to have similar characteristics – strong principal leadership, high expectations for student achievement, an orderly environment, an emphasis on basic skills, and an emphasis on careful and frequent evaluation of student progress. All of their characteristics and studies seemed to detract from Coleman and colleagues (1966) earlier findings. There was a lack of empirical evidence to solidify any connection between SES and school level characteristics as to whether or not they make a difference in student achievement. Researchers needed to determine if direct administrative influences on student achievement could be empirically proven.

Socioeconomic status is most often a control variable that can be described as the reverse order of the percent of free and reduced lunch eligible students in the school. Meaning schools with a low SES have a high percentage of students participating in free and reduced lunch.

Reported free and reduced lunch eligible students serves as a proxy for SES in school studies, as a control variable, accounting for effects and correlations. Such information is public and accessible for researchers to gather, as schools have to report free and reduced lunch information to their State Departments of Education. By taking into account the SES as a control variable by the unit of analysis for a study, researchers are able to determine if SES has the ability to overwhelm any and all associations between school properties and achievement. This means researchers can control for SES factors in explaining their results. More recent research on academic optimism has proven that faculty trust, academic emphasis, and collective efficacy work together to predict student achievement, a measure of effectiveness, over and above the effects of SES.

Theory and Hypothesis

Theory explains and helps us understand some type of phenomenon; theories provide a coherent and connected explanation about why acts, events, and behaviors occur (Higgins, 2004; Hoy & Miskel, 2013; McKinly, 2010; Sutton & Staw, 1995). Theory has concepts (abstract terms or words) and theoretical generalizations (grammar of theory; statements that indicate the relations between two or more concepts) which serve as the basic building block or elements of the theory (Hoy & Miskel, 2013). Concepts help researchers agree on the meaning of terms and their abstractness ensures generality, due to their specific connotations. For example, institutional vulnerability, professional teacher behavior, faculty trust, and collective efficacy are all concepts mentioned in this study that help explain the structure and function of organizations. However, labeling an observation or pattern is not explaining it, so we must not only know what the words mean, but also why and how they relate to each other. This means we need to combine our concepts into coherent theoretical relationships that provide a general explanation,

or theoretical generalization. Theoretical generalization for this study is that optimism and climate work together to produce high achievement and perceptions of effectiveness.

This study explored the relationships between academic optimism, organizational climate, student achievement, and school effectiveness. Evidence from the literature supports the idea that a strong relationship exists between independent variables academic optimism and organizational climate. The dimensions will be reviewed in regards to their relationships with each other, as well as the control variable SES, and the dependent variables effectiveness and achievement. The chief hypothesis for this study are as follows:

H1: Organizational climate (OC) and school academic optimism (SAO) will be correlated with each other and with a measure of academic achievement (AA).

A strong relationship between academic optimism and organizational climate exists through the latent variable academic emphasis (AO) and achievement press (OC). Research has shown that achievement press is strongly related to the faculty trust dimension in AO as well, as trust and achievement press are essential components of achievement. Schools with high levels of achievement press, along with trust evident among students, parents, and teachers, attain greater achievement (Hoy, Sweetland, & Smith, 2002). Hoy et al. (2002) also found in their study that achievement press is most powerful when collective efficacy is strong. When collective efficacy is high schools placed a stronger focus on academic pursuits; teachers also shared a common belief as to how best reach high yet attainable goals. Lastly, academic press was found to work through collective efficacy.

H2: Organizational climate (OC) and school academic optimism (SAO) will be correlated with each other and with a measure of school effectiveness (SE).

Organizational climate, a climate measure, is assumed to correlate with academic optimism, a culture measure. Both of these measures are presumed to correlate with overall school effectiveness, as academic emphasis is the extent to which a school is driven towards academic excellence (Hoy, Tarter, & Woolfolk Hoy, 2006a). Hoy et al. (1991) demonstrated the relationship between faculty trust and school effectiveness in middle and elementary schools.

H3: Organizational climate (OC) and school academic optimism (SAO) will independently and collectively predict academic achievement (AA) while controlling for the effects of socioeconomic status (SES).

H4: Organizational climate (OC) and school academic optimism (SAO) will independently and collectively predict school effectiveness (SE) while controlling for the effects of socioeconomic status (SES).

Hypothesis 3 and 4 deal with SES, as SES is an environmental constraint and a control variable. This study aims to explain the effects OC and SAO will have in predicting student achievement and organizational effectiveness while taking into account the positive and negative consequences of SES. Notwithstanding SES not being amenable to change (Coleman et al., 1966), research has shown that the latent variables comprising AO work together to predict student achievement, a measure of effectiveness, over and above the effects of SES. Edmonds (1979) identified five school characteristics common to effective schools, often present within the variables of organizational climate, which also refuted Coleman's claims that SES could not be overcome in schools.

CHAPTER III:

METHODOLOGY

Overview

The chief objective of this study was to build upon an evolving body of research literature concerning academic optimism and its relationship to school climate when accounting for the effects of socioeconomic status. The relationship between the two independent variables was then examined in tandem with academic achievement and school effectiveness. Academic optimism and organizational climate have both been shown independently to have positive effects on academic achievement, even when controlling for the effects of socioeconomic status. Understanding the relationship between academic optimism and organizational climate when controlling for SES may present an even clearer picture as to how academic achievement and overall school effectiveness are predicted.

Data Collection Procedures

This study used data collected from 67 schools in Northern Alabama, and any information that would compromise respondent or school anonymity was removed. The data from the 2008 - 2009 school year was provided in SPSS 19 software format and included results from seven research instruments encompassing sixteen variables. Five variables were chosen so their relationships could be examined: school academic optimism, organizational climate, perceived organizational effectiveness (now known as school effectiveness), academic achievement, and socioeconomic status.

Sample

The data used in this study was coded so any information that would compromise anonymity of respondents or schools was removed. Out of 80 elementary schools solicited from 20 school districts in Northern Alabama, 67 elementary schools participated in the study (grades 3-6). A total of 1,353 teachers completed the surveys. Participants of this study included K-6 schools or a combination that at least included fourth grade. For this reason, fourth grade SAT scores were used to determine achievement. A minimum of 15 respondents from each school were required in order to count the school in the sample. Teacher participation in survey completion was completely voluntary, confidential, and anonymous. Additionally, respondents were permitted to skip any question or discontinue participation at any time during the survey. No allowances were made for teachers to fill out surveys if they were absent at the time of the original distribution. Due to the selection being predicated upon permission of each districts' superintendent, along with each building's principal, the study was non-random. The school sample was a convenience sample based on proximity to the initial researchers and willingness of schools to participate.

Although not a random sampling, a diverse collection of schools were involved across a multitude of districts varying in socioeconomic status as evidenced by the free and reduced lunch percentages acquired through the Alabama State Department of Education. Of the 67 elementary schools that participated, 41 were Title I schools and 26 were not Title 1 schools. A Title I school is classified as any school where 50% or more of the school's population receives free or reduced lunch. The 26 non-Title 1 schools had free and reduced lunch percentages ranging from 2% to 46%, while the 41 Title 1 schools were ranging from 51% to as high as 92% free and

reduced lunch. Meaning there was a wide range of schools participating in the study that were extremely high in SES to very low in SES.

Variables

The independent variables were academic optimism and organizational climate. The control variable was socioeconomic status. Dependent variables were student achievement and school effectiveness.

This study will test the relationships between independent and dependent variables. In this study there will be an examination of the relationships between academic optimism and organizational climate and their ability to individually and collectively predict both academic achievement and school effectiveness, while controlling for socioeconomic status.

Instrumentation

Factors from three instruments were used to collect the quantitative data used in this study including: (a) the School Academic Optimism Scale (Hoy, Tarter, & Woolfolk Hoy, 2006a; McGuigan & Hoy, 2006; Smith & Hoy, 2007), (b) the Organizational Climate Index (Hoy, Smith, & Sweetland, 2002), and (c) the Index of Perceived Organizational Effectiveness (Miskel, Fevurly, & Stewart, 1979; Mott, 1972). Achievement data was found on the state department of education's website from each school's 4^{th} grade scores on the Stanford Achievement Test (SAT) under mathematics and reading categories. The SAT was given to all fourth-grade students in the state of Alabama. A composite score of the math and reading scores were computed to make the variable academic achievement (AA). Socioeconomic status data was also gathered from the state department of education's website, based on each school's reported free and reduced lunch information for the 2008-2009 academic year. For the purposes

of this study, SES served as a proxy and was calculated as the reverse percent of reported free and reduced lunch students eligible at each school.

Academic Optimism

Academic optimism was measured by the School Academic Optimism Scale (SAOS). The SAOS is a 30-item, Likert-type scale with an alpha coefficient of .95. The measurement of academic optimism is comprised of three subscales to create an index of overall school academic optimism, a single unified construct. The three subscales measured were academic emphasis, faculty trust in students and parents (clients), and collective efficacy. Academic emphasis was measured using the Academic Emphasis subscale of the Organizational Health Inventory (Hoy & Miskel, 2005; Hoy & Miskel, 2008; Hoy & Tarter, 1997), collective efficacy used the Collective Efficacy Scale (Goddard, 2010), and faculty trust in clients was measured using the Trust in Clients subscale of the Omnibus Trust Scale (Hoy & Tschannen-Moran, 2003). The reliability scores for the scales were relatively high: academic emphasis (.87), collective efficacy (.96), and faculty trust in clients (ranges from .90 to .98). Together these three properties have been shown to have a positive effect on student achievement, even when controlling for socioeconomic status, urbanicity, and prior student achievement (Hoy, Tarter, & Woolfolk Hoy, 2006a; McGuigan & Hoy, 2006; Smith & Hoy, 2007). A copy of the School Academic Optimism Scale (SAOS) instrument with the items listed for each factor is found in Appendix D.

Academic emphasis. Academic emphasis, often referred to as academic press, is defined as "the extent to which a school is driven by academic excellence" or its press for academic achievement (Goddard, Sweetland, & Hoy, 2000, p. 684). It is the belief held by administrators, faculty, staff, and students that academics are important, and the school as a whole is driven by a quest for academic excellence. To achieve academic emphasis high, but

achievable academic goals are set for students; the learning environment is orderly and serious; students are motivated to work hard; and students respect academic achievement (Hoy & Miskel, 2005; Hoy, Tarter, & Kottkamp, 1991). The measure was taken from 8 Likert-type items scored on a 4-point scale ranging from *rarely occurs* (1) to *very frequently occurs* (4). In prior research Hoy and colleagues (2013) established reliability and validity with a Cronbach alpha coefficient of .87. Sample items included the following: (a) The school sets high standards for performance, (b) Students respect others who get good grades, (c) Students seek extra work so they can get good grades, and (d) The learning environment is orderly and serious.

Collective teacher efficacy. Collective efficacy is defined as "the perceptions of teachers in a school that the efforts of the faculty as a whole will have a positive impact on student achievement" (Goddard, Hoy, & Woolfolk Hoy, 2000, p. 480). It is marked by respect for colleague competence, commitment to students, autonomous judgment, and mutual cooperation and support. For the purposes of this study, collective efficacy is a group level characteristic based on Bandura's (1977, 1983, 1986) social cognitive theory and self-efficacy research. The construct was measured using the short version of the 12-item Collective Efficacy Scale (Goddard, Hoy, & Woolfolk Hoy, 2000). This shortened instrument was determined reliable and valid with a Cronbach alpha coefficient of .96 (Hoy, 2013). Items were scored on a 6-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (6). Sample items included the following: (a) If a child doesn't want to learn, teachers here give up, (b) Students here aren't motivated to learn, (c) Teachers in this school do not have the skills to deal with student disciplinary problems, and (d) Learning is more difficult at this school because students are worried about their safety.

Faculty trust in students and parents. An agreed upon definition of trust, after decades of research, is one's willingness to be vulnerable to another based upon the confidence that the other participant is benevolent, reliable, competent, open, and honest (Hoy & Tschannen-Moran, 2003; Tschannen-Moran, 1999; Tschannen-Moran & Hoy, 2000). Faculty trust is marked by teachers' trust in students to do their work and reliance on parents to support the effort. For this study trust was measured using the Omnibus Trust Scale (Hoy & Tschannen-Moran, 2003). Items were scored on a 6-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (6). Each of the 10 items on the instrument had high construct reliability and validity as established and supported in previous research with a Cronbach alpha of .94. Sample items included the following: (a) Teachers in this school trust their students, (b) Teachers in this school trust the parents, (c) Students in this school care about each other, and (d) Teachers can count upon parental support.

Organizational Climate Index (OCI)

The Organizational Climate Index (OCI) is a short organizational climate descriptive measure for schools (Hoy, Smith, & Sweetland, 2002). The measure is a combination of the OHI and OCDQ and is comprised of four dimensions – principal leadership, teacher professionalism, achievement press, and institutional vulnerability. The OCI is a 30-item descriptive questionnaire that eventually becomes 27 items, as 3 are rendered filler questions. The resulting 27-item, 4-point Likert-type questions range in scale from *rarely occurs* (RO) to *very frequently occurs* (VFO) to assess the four climate dimensions. Collegial leadership determined the relationship between the principal and the teacher. Professional teacher behavior established the relationship between teachers. Achievement press delineated the press for achievement by parents, teachers, and the principal. Institutional vulnerability explained the

relationship between the school and the community. The alpha coefficients for all four climate dimensions are relatively high and have been previously proven valid and reliable (Hoy, 2013): collegial leadership (.94), professional teacher behavior (.88), achievement press (.92), and institutional vulnerability (.92). The survey items in their entirety are listed in Appendix C. Sample items for the OCI include the following:

Institutional Vulnerability:

- A few vocal parents can change school policy.
- The school is vulnerable to outside pressure.
- The principal responds to pressure from parents.

Collegial Leadership:

- The principal treats all faculty members as his or her equal.
- The principal puts suggestions made by faculty into operation.
- The principal lets faculty know what is expected of them.

Professional Teacher Behavior:

- Teachers help and support each other.
- Teachers respect the professional competence of their colleagues.
- Teachers in this school exercise professional judgment.

Achievement Press:

- Parents exert pressure to maintain high standards.
- Students respect others who get good grades.
- The school sets high standards for academic performance.

Index of Perceived Organizational Effectiveness (IPOE)

The Index of Perceived Organizational Effectiveness (IPOE) is an 8 item instrument used to measure school effectiveness (Miskel, Fevurly, & Stewart, 1979). Mott (1972) developed the original scale to determine organizational effectiveness within hospitals. Later researchers found the scale useful to other organizations, including schools, and adapted the instrument. The IPOE instrument, which has been renamed the School Effectiveness Index (SE-Index), is a 5-point, Likert-type scale with responses varying depending on the individual questions. The reliability

of the scale is consistently high with alpha coefficients ranging from .87 to .89 (Hoy & Ferguson, 1985; Hoy, Tarter, & Kottkamp, 1991; Miskel, Fevurly, & Stewart, 1979). Miskel and colleagues (1979) adapted the instrument with the intent to measure expressive activities, efficiency, and harmony within the school organization. Examples of the SE-Index items include the following: (a) How good is the quality of products or services produced by people you know in your school, (b) How good a job do people in your school do in coping with emergencies and disruptions, (c) How informed are the people in your school about innovations that could affect the way they do their work, and (d) How informed are the people in your school about innovations that could affect the way they do their work? The survey items in their entirety are listed in Appendix J.

Student Performance

Student performance in reading was measured by the Stanford Achievement Test. The Stanford Achievement Test, Tenth Edition (Stanford 10) was administered statewide for the first time in spring 2003. Reading and mathematics are administered yearly by the state to grades 3-8 to assess school's yearly progress and comparison to national norms. For the purposes of this study, the fourth grade was chosen to represent achievement since all participating schools had a fourth grade housed in their building. All achievement data were collected from the state department of education's website.

Socioeconomic Status

Socioeconomic status is a standardized measure maintained by the state. SES is a composite variable using common indicators such as income, educational levels, and residential stability characterizing the neighborhood. For the purposes of this study free and reduced lunch

data was gathered from the state departments website based on information reported from the schools. Free and reduced lunch data then served as the proxy variable for SES.

Research Questions

(1) What is the relationship between Academic Optimism, Organizational Climate, Academic Achievement, and Organizational Effectiveness?

(2) Will Academic Optimism serve as a predictor to Academic Achievement and Organizational Effectiveness while controlling for the effects of SES?

(3) Will Organizational Climate serve as a predictor to Academic Achievement and Organizational Effectiveness while controlling for the effects of SES?

(4) Will Academic Optimism and Organizational Climate serve as individual and joint predictors to Academic Achievement and Organizational Effectiveness while controlling for the effects of SES?

Data Analysis

The analyses used for study data were correlation and regression. The unit of analysis for this study was the school. The data used were coded to ensure respondent and school anonymity, and were entered into Statistical Package for the Social Science (SPSS version 19) where school level descriptive statistics were calculated. Respondents were separated to measure variables both independently and dependently to ensure methodological independence. The data for each school was used to perform a statistical analysis and tested the hypotheses.

The study tested the relationships of variables by looking at the independent and collective effects of predictor variables on outcome variables. This was done by conducting a descriptive analysis, followed by a bivariate correlational analysis of academic optimism, organizational climate, academic achievement, and school effectiveness, while controlling for

socioeconomic status. Several regression iterations were performed. The first two regressions were school academic optimism on academic achievement while controlling for SES, and organizational climate on academic achievement while controlling for SES. Next, a block entry linear regression was performed with SES entered into Step 1, and Step 2 containing school academic optimism and organizational climate on academic achievement.

The process was repeated with the second outcome variable, school effectiveness. First, two regressions were performed with academic optimism on school effectiveness while controlling for SES, and organizational climate on school effectiveness while controlling for SES. A second block entry linear regression was performed with SES entered into Step 1, and Step 2 holding academic optimism and organizational climate to predict school effectiveness.

Summary

The methods for this study on the relationship between academic optimism, climate, and effectiveness were similar to other research studies (Hoy & Hannum, 1997; Hoy & Miskel, 2001; Hoy & Sabo, 1998; Hoy, Smith, & Sweetland, 2002; Hoy, Tarter, & Bliss, 1990; Hoy, Tarter, & Kottkamp, 1991). The focus of this study was on understanding the relationship between academic optimism and organizational climate and examining how they worked jointly with achievement and effectiveness when controlling for SES. The research instruments pertinent to this study were the Schools Academic Optimism Scale (SAOS), the Organizational Climate Index (OCI), and the School Effectiveness Index (SE-Index). Previous research adequately established the theoretical constructs, operational measures, as well as the reliability and validity for all measurement items employed in this research.

CHAPTER IV:

RESULTS

Overview

This chapter reports the findings of the data analyzing the relationship of climate and academic optimism to student achievement and school effectiveness. The first section begins with a summary of the descriptive statistics for the variables in the study. All five variables were tested to provide answers to the four research questions and the four hypotheses posed in this study. The following sections examine reliability, factor analysis testing, bivariate correlational analysis, and block design linear regression analysis. Six sequential regression iterations, otherwise known as block regression, were run and results will be shared in the tested hypothesis section. The final section of this chapter summarizes findings from this study.

Descriptive Analysis

Sample

Out of 80 elementary schools solicited from 20 school districts in Northern Alabama, 67 elementary schools participated in the study (grades 3-6), yielding a participation rate of 84%. The high participation rate is probably best explained by each principal's prior consent to participate. A total of 1,353 teachers completed the surveys with a minimum of 15 respondents required from each school to count in the sample. Participants of this study included K-6 schools, or a combination, that at least included fourth grade. Fourth grade Stanford Achievement Test scores (Reading and Math) were used to determine school achievement.

Even though this study did not elicit a random sampling, a diverse collection of schools were involved across a multitude of districts in Northern Alabama, varying in socioeconomic status, as evidenced by the free and reduced lunch percentages acquired through the Alabama State Department of Education webpage for the 2008-2009 school year. The sample consisted of 41Title I schools and 26 non-Title I schools. The 26 non-Title I schools had free and reduced lunch percentages ranging from 2% to 46%, while the 41 Title I schools ranged from 51% to as high as 92% free and reduced lunch. This means there was a wide range of schools participating in the study that were extremely high in SES to very low in SES.

Measures

The school was the unit of analysis and items were aggregated to produce a single school-level score. Socioeconomic status was used as a control variable for all six iterations performed. Academic optimism, a latent variable comprised of academic emphasis, faculty trust in clients, and collective efficacy, served as one independent variable. The measurement of academic optimism at the school level was comprised of three parts (http://waynekhoy.com). First measured was sense of collective efficacy, then faculty trust in students and parents, and finally, the school's academic emphasis. Combining the measures of these three components created an index of school academic optimism. This academic optimism score for the school can be interpreted by comparing the school's score with a characteristic set of schools. The scores have been standardized using the earlier formulas created by Hoy and colleagues (2006a) such that the mean for a typical school is 500. Organizational climate also served as an independent variable and was a measure comprised of the following four dimensions: collegial leadership, professional teacher behavior, institutional vulnerability, and academic press. For the purposes of this study, the four dimensions of organizational climate were standardized; thus, the

organizational climate index was an average total score from the standardized subscales of organizational climate, to ensure integrity of analysis.

The School Effectiveness Index (SEI) functioned as a dependent variable measuring effectiveness. The SEI is a measure of school effectiveness, which is a collective (school-level) variable, not an individual one (http://waynekhoy.com). Accordingly, the teachers' scores in each school are aggregated to the school level. For the purposes of this study, the standardized scores of the SEI were used for data analysis. The dependent variable achievement was measured by 4th grade SAT Reading and Mathematics scores. Academic achievement was a composite score that represented the aggregate mathematics and reading achievement for the fourth grade students in each school. A composite score was chosen to represent achievement as mathematics and reading were positively and highly correlated at .92, which at the .01 level meant they were almost perfectly correlated.

Descriptive calculations were figured for each of the variables, and the ranges, means, and standard deviations are shown in Table 10. Means provided an average score based on respondents answers for each instrument, once they are aggregated to the school level, along with the standard deviation, which provided the central location of data to be analyzed. All analyses were performed using IBM SPSS Statistics version 19.

Table 10

Descriptive Statistics of Research Variables

Variable	N	Range	Min.	Max.	M	SD
Socioeconomic Status (SES)	67	.90	.08	.98	.48	.23
School Academic Optimism (SAO)	67	581.15	322.93	904.09	614.34	100.98
Organizational Climate Index (OCI)	67	3.16	-1.61	1.55	.00	.65
Academic Achievement (AA)	67	1.00	.70	1.70	1.28	.27
School Effectiveness Index (SEI)	67	4.76	-2.31	2.45	.00	1.00
Valid N	67					

Reliability

Reliability is important to establish in instrumentation, as it determines whether an instrument can be interpreted consistently across different situations (Field, 2013). Researchers determine instrument reliability by implementing a measure developed by Cronbach (1951) which is loosely equivalent to creating two sets of items and examining them in every way possible to compute the correlation coefficient for each split. The average of these values is equivalent to Cronbach's alpha, α, which has become the most common measure of scale reliability (Field, 2013). Cronbach (1951) suggested that if several factors exist, meaning if the instrument had subscales, then the formula should be applied separately to the items relating to different factors (subscales). Researchers may have differing opinions on the classification of Cronbach's scales, however, Field (2013) noted that the generally accepted value of .7 is appropriate amongst researchers and considered reliable, but prompted that when interpreting alpha, the value of α depends on the number of items on the scale.

Three survey instruments were examined in this study: the School Academic Optimism Scale (SAOS), the Organizational Climate Index (OCI), and the School Effectiveness Index (SEI). The SAOS is a 30-item Likert-type measure comprised of the three subscales collective

efficacy (CE), faculty trust (FT), and academic emphasis (AE). SAOS and all three of its subscales were found to be reliable with Cronbach alpha coefficients of .92 (SAOS), .77 (CE), .91 (FT), and .96 (AE). The Organizational Climate Index is a 30-item Likert-type measure containing fours dimensions: collegial leadership (CL), professional teacher behavior (PTB), institutional vulnerability (IV), and academic press (AP). These measures were also found to be reliable with Cronbach alpha coefficients of .89 (OCI), .94 (CL), .88 (PTB), .87 (IV), and .92 (AP). A final instrument used in the study was the School Effectiveness Index which is an 8-item Likert-type measure with a Cronbach alpha of .88. Table 11 depicts the alpha reliability for each research variable and their subscale, or dimension, along with the number of items. Each variable fell above the Cronbach alpha of .70 needed to determine reliability.

Table 11

Cronbach Alpha Reliabilities by Scale

Scale	Cases	No. of Items	Alpha Coefficients
Academic Optimism (SAOS)	468	30	.92
• Collective Efficacy (CE)	468	12	.77
• Faculty Trust (FT)	468	10	.91
• Academic Emphasis (AE)	468	8	.96
Organizational Climate (OCI)	439	30	.88
• Collegial Leadership (CL)	439	7	.94
• Professional Teacher Behavior (PTB)	439	7	.88
• Institutional Vulnerability (IV)	439	5	.87
• Achievement Press (AP)	439	8	.92
School Effectiveness Index (SEI)	444	8	.88

Outlier analysis. Data scores were converted to a z-score, and since the data were normally distributed the actual z-score was the same as the expected z-score (Field, 2013). Z-scores expressed scores in terms of a distribution with a mean of 0 and a standard deviation of 1. By converting the data to z-scores the benchmarks can be applied to any data set to search for outliers. To look for outliers, this study counted how many z-scores fell within certain important limits. In a normal distribution, research dictates "about 5% to be greater than 1.96 (we often use 2 for convenience), 1% to have absolute values greater than 2.58, and none to be greater than about 3.29" (Field, 2013, p. 179).

Univariate outliers for the continuous variables (both dependent variables and independent variables) were evaluated as being any standardized score (*z*-scores) on the variable in excess of 3.29 or below -3.29. Scores above or below the z-benchmarks indicate the scores are within an area of distribution where less than 1 out of 1000 cases reside ($p < .001$). Data from the five continuous variables; socioeconomic status, academic optimism, organizational climate, school effectiveness, and academic achievement were transformed into standardized *z*-scores and assessed for outliers. All cases had standardized values within the -3.29 to 3.29 range.

Correlations

A bivariate correlational analysis on each of the five variables was run for initial testing of the hypothesis. The zero-order correlations for each of the variables were significant and positive at $p < .01$, providing support of Hypothesis 1 and 2. As predicted, correlations were found between academic optimism and organizational climate ($r = .50$, $p < .01$), academic optimism and academic achievement ($r = .69$, $p < .01$), and academic optimism and school effectiveness ($r = .66$, $p < .01$). Similarly, correlations were found between organizational

climate and academic achievement (r = .53, p < .01), organizational climate and school effectiveness (r = .46, p < .01), and academic achievement and school effectiveness (r = .39, p > .01). Table 12 shows the inter-correlation matrix of the bivariate Pearson Correlation Coefficients for all the variables of the study, with zero-order correlations significant at p < .01.

Table 12

Bivariate Correlations of Variables

	SES	SAOS	OCI	AA	SEI
Socioeconomic Status (SES)	--	.75**	.47**	.79**	.36**
Academic Optimism (SAOS)		--	.50**	.69**	.66**
Organizational Climate (OCI)			--	.53**	.46**
Academic Achievement (AA)				--	.39**
School Effectiveness Index (SEI)					--

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

Block Design Linear Regression Analysis

The research questions addressed the relationship of organizational climate and academic optimism to school effectiveness and student achievement. A block design linear regression analysis was used to assess the linear relationship of many independent variables to a dependent variable. Known predictors, based on previous research and theory, were chosen by the researcher and entered into the model first in order of their importance in predicting the outcome (Field, 2013). For this study, the known predictor was socioeconomic status (SES), a control variable, which was entered into block 1. After entering known predictors, the experimenter added new predictors into the model, either all at once, in a stepwise manner, or hierarchically (Field, 2013). For the three research questions of interest in this study, the two continuous independent variables (academic optimism and organizational climate), were entered into block 2. In terms of data entry, there were two continuous dependent variables (academic achievement

and school effectiveness). To test all possible variations of the independent variables with the dependent variables against the hypotheses, a total of six block regressions were run.

A block entry linear regression analysis carries assumptions about the variables which are necessary to test in order for an accurate modeling of the data to be observed. These fundamental criteria include an adequately large sample size, no outliers in the data, ratio of cases to independent variables and missing data, that independent variables are not highly correlated with each other, and that the distribution of residuals of the final model are normally distributed, linear, and homoscedastic (Tabachnick & Fidell, 2013). Before analysis began the first two of these assumptions were tested, and the others examined after the regression equation had been established.

Sample size. In addition to theoretical considerations, use of regression requires practical matters, such as sample size, be attended to as well. Required sample size depends on a number of issues: desired power, alpha level, number of predictors, and expected effect sizes. Green (1991), noted that researchers want a sample size that ensures a "reasonable" chance of rejecting null hypotheses. He stated sample size can be determined if three values are specified:

> alpha, the probability of committing a Type I error (i.e., incorrectly rejecting the null hypothesis); power, one minus the probability of making a Type II error (i.e., not rejecting a false null hypothesis); and effect size, the degree to which the criterion variable is related to the predictor variables in the population. Although alpha by tradition is set at .05, the choice of values for power and effect size is less clear and, in some cases, seems rather arbitrary. (p. 499)

Some researchers, according to Green, have chosen to offer rules-of-thumb for regression analyses to determine sample size. The rules-of-thumb come in various forms, and by definition should require minimal complexity, and "therefore, in the determination of sample size, it might be argued that the rule-of-thumb should be developed to give accurate answers for typical studies

rather than for all studies" (p. 503). Green asserted that an important question is whether researchers who used rules-of-thumb have designed studies with adequate power.

Green (1991) devised some procedures to help decide how many cases are necessary to have an adequate sample size. Some simple rules-of-thumb are $N \geq 50 + 8m$ (where m is the number of independent variables) in the equation for testing the multiple correlation and $N \geq 104 + m$ for testing individual predictors (Tabachnick & Fidell, 2013). These rules-of-thumb assume a medium-size relationship between the IVs and the DV, $\alpha = .05$ and $\beta = .20$. For example, if a researcher planned six predictors, he or she would need $50 + (8)(6) = 98$ cases to test regression and $104 + 6 = 110$ cases for testing individual predictors. If interested in both the overall correlation and the individual IVs, a second rules-of-thumb would be to calculate N both ways and choose the larger number of cases. A third rules-of-thumb is more complex and takes effect size into account, stating $N \geq (8/f^2) + (m\text{-}1)$, where f^2 is the effect size equaling .02 for detection of a small effect, .15 for detection of a moderate effect, and .35 for the detection of a large effect.

Taking these rules-of-thumb into account, the sample size of this study (n = 67) does not meet all three rules (Tabachnick & Fidell, 2013). For the first rules-of-thumb, the sample size would need to be greater or equal to 74, and the sample for this study is only 67 elementary schools. Close, but not quite large enough to meet the first rule. The sample size for the second rules-of-thumb would need to be greater than 107, and it is not. The third, more complex rules-of-thumb, would require a sample size of N = 402, and according to this formula the study only had 335 participating schools, so sample size was not met here either. It should be noted there were no missing values in this study and no cases were deleted.

As noted by Tabachnick and Fidell (2013), issues of power should be considered in the planning stages of a study when a researcher determines required sample size. In order to define

adequate sample size the researcher estimates anticipated effect (e.g., expected mean difference), expected variability of the effect, desired alpha level (usually .05), and desired power (often .80). Cohen (1988) determined that .02, .13, and .26 represent small, medium and large effect sizes for squared multiple correlation, and for squared multiple partial correlation. Green (1991) noted the importance of power in relation to sample size; therefore this study used the research tool G*Power Version 3.1.7 (Faul et al., 2007) to determine power. With a sample size of 67, medium effect size of .15 (G*Power does not allow the user to choose .13 based on Cohen's findings), an α error probability of .05, G*Power found this study to have power = .88 ($1 - \beta$ error probability). Granted the sample size may appear slightly insufficient based on Green's (1991) rules-of-thumb, the power of .88 for the study is above desired power level of .80, so there was an 88% chance of correctly identifying the effects of the independent variables on the dependent variables.

Block regression. Block design liner regression analyses were conducted for three separate equations using different dependent variables in order to answer three of the four research questions. Linearity, normality, and homoscedasticity of residuals were examined through plots of residuals. Examination of each regression iteration revealed a distribution close enough to a normal curve to be considered not problematic. Scatterplots of standardized residuals by standardized predicted values showed a rather symmetrical plot of residuals and predicted values. Therefore, assumptions of normality, linearity, and homoscedasticity of residuals were met for each of the six regression iterations performed.

Block entry of the three independent variables into a general linear model was conducted by first entering a lone control variable, socioeconomic status. Conceptually, SES is an environmental constraint, but studies have continually found that SES has been proven to be

correlated with trust variables, climate variables, and most other school variables (Forsyth, Adams, & Hoy, 2011). Second, the independent variables academic optimism and organizational climate were entered, either alone, or together, to carry out multiple pairings of the IVs with the DVs. In total six iterations of block entry linear regressions were performed.

Hypothesis Testing

In order to test the first two hypotheses of the study, a bivariate correlation coefficient was computed among all six variables, including dependent variables and independent variables. To answer the third and fourth hypotheses, six iterations of block design linear regression were performed using the independent control variable SES, independent variables academic optimism and organizational climate, and dependent variables academic achievement and school effectiveness. The aim was to test the relationships among the variables, as well as the predictability of the independent variables on the dependent variables.

Hypothesis 1

H1: Organizational climate (OC) and school academic optimism (SAO) will be correlated with each other and with a measure of academic achievement (AA).

Hypothesis 1, which predicted organizational climate and school academic optimism would be correlated with each other and with a measure of student achievement (composite score named academic achievement), was supported. Organizational climate and academic optimism shared a correlation of ($r = .50$, $p < .01$). Organizational climate and academic achievement shared a correlation of ($r = .53$, $p < .01$), while academic optimism and academic achievement had a correlation of ($r = .69$, $p < .01$). All variables in Hypothesis 1 were found to have moderate positive correlations with one another, thus the hypothesis was supported.

Hypothesis 2

H2: Organizational climate (OC) and school academic optimism (SAO) will be correlated with each other and with a measure of school effectiveness (SE).

Hypothesis 2 predicted organizational climate and academic optimism would be correlated with each other and with a measure of school effectiveness. Again, organizational climate and academic optimism shared a correlation of .50 ($p < .01$). Organizational climate and school effectiveness had a correlation of .46 ($p < .01$), while academic optimism and school effectiveness had a correlation of .66 ($p < .01$). With indicators of moderate positive correlations being found between the three variables, Hypothesis 2 was also supported.

Hypothesis 3

H3: Organizational climate (OC) and school academic optimism (SAO) will independently and collectively predict academic achievement (AA) while controlling for the effects of socioeconomic status (SES).

Hypothesis 3 predicted organizational climate and school academic optimism would independently and collectively predict student achievement (using the composite score academic achievement) while controlling for the effects of socioeconomic status. In order to examine multiple pairings of OC and SAO independently and collectively as predictors of SA, three iterations of block design linear regression were performed and will be examined.

H3: Academic optimism and academic achievement. A block design linear regression analysis was conducted to evaluate how well academic optimism predicted 4th grade academic achievement as measured by the SAT. One control variable, SES, was also included in the model. Table 12 displays the variables academic achievement, SES, and academic optimism, the

unstandardized (*B*), standardized error (*B*), standardized regression coefficients (β), the multiple correlation coefficient (R^2), adjusted R^2, 95% confidence intervals, and p values.

After step 1, with SES in the equation, $R^2 = .62$, $F(1, 66) = 105.00$, $p < .01$. The control variable, SES, was found to be significantly related to 4th grade academic achievement. The adjusted $R^2 = .61$ indicated that approximately 61% of the variance in 4th grade academic achievement could be accounted for by the control variable, SES ($\beta = .79$, $p < .01$). After step 2, with academic optimism added to prediction of academic achievement along with SES, $R^2 = .64$, $F(2, 66) = 56.91$, $p < .01$. The linear combination of the independent variables was found to be significant predictors of 4th grade academic achievement. With an adjusted $R^2 = .63$, the findings indicated that approximately 63% of the variance in 4th grade academic achievement could be accounted for by the linear combination of academic optimism and the control variable. Both variables were significant predictors of academic achievement, academic optimism ($\beta = .23$, $p < .05$) and SES ($\beta = .62$, $p < .01$), with SES making the largest contribution to the explanation.

Table 13

Block Design Linear Regression of SES and AO on AA

Step	Variable	*B*	SE *B*	β	95% CI	R^2	Adj. R^2	*F*	*p*
1	(Constant)	.83	.05		[.74, .93]	.62	.61	105.00	.00
	SES	.92	.09	.79	[.74, 1.10]				.00
2	(Constant)	.56	.14		[.28, .85]	.64	.63	56.91	.00
	SES	.72	.13	.62	[.46, .99]				.00
	Academic Optimism	.001	.00	.23	[.00, .001]				.05

Note: CI = confidence interval.

H3: Organizational climate and academic achievement. A block design linear regression analysis was conducted to evaluate how well organizational climate predicted 4th grade academic achievement as measured by the SAT. One control variable, SES, was also included in the model. Table 13 displays the variables academic achievement, SES, and

organizational climate, the unstandardized (*B*), standardized error (*B*), standardized regression coefficients (β), the multiple correlation coefficients (R^2), adjusted R^2, 95% confidence intervals, and p values.

After step 1, with SES in the equation, $R^2 = .62$, $F(1, 66) = 105.00$, $p < .01$. The control variable, SES, was found to be significantly related to 4th grade academic achievement. The adjusted $R^2 = .61$ indicated that approximately 61% of the variance in 4th grade academic achievement could be accounted for by the control variable, SES ($\beta = .79$, $p < .01$). After step 2, with organizational climate added to prediction of academic achievement along with SES, $R^2 = .65$, $F(2, 66) = 60.04$, $p < .01$. The linear combination of the independent variables was found to be significant predictors of 4th grade academic achievement. With an adjusted $R^2 = .64$, the findings indicated that approximately 64% of the variance in 4th grade academic achievement could be accounted for by the linear combination of organizational climate and the control variable. Both variables were significant predictors of academic achievement, organizational climate ($\beta = .21$, $p < .05$) and SES ($\beta = .69$, $p < .01$), with SES making the largest contribution to the explanation.

Table 14

Block Design Linear Regression of SES and OC on AA

Step	Variable	*B*	SE *B*	β	95% CI	R^2	Adj. R^2	*F*	*p*
1	(Constant)	.83	.05		[.74, .93]	.62	.61	105.00	.00
	SES	.92	.09	.79	[.74, 1.10]				.00
2	Constant	.89	.05		[.79, .99]	.65	.64	60.04	.00
	SES	.81	.10	.69	[.61, 1.00]				.00
	Organizational Climate	.09	.03	.21	[.02, .15]				.01

Note: CI = confidence interval.

H3: Academic optimism, organizational climate, and academic achievement. A block design linear regression analysis was conducted to evaluate how well academic optimism and organizational climate predicted 4th grade academic achievement as measured by the SAT. One control variable, SES, was also included in the model. Table 14 displays the variables academic achievement, SES, academic optimism, and organizational climate, the unstandardized (*B*), standardized error (*B*), standardized regression coefficients (β), the multiple correlation coefficients (R^2), adjusted R^2, 95% confidence intervals, and p values.

After step 1, with SES in the equation, $R^2 = .62$, $F(1, 66) = 105.00$, $p < .01$. The control variable, SES, was found to be significantly related to 4th grade academic achievement. The adjusted $R^2 = .61$ indicated that approximately 61% of the variance in 4th grade academic achievement could be accounted for by the control variable, SES ($\beta = .79$, $p < .01$). After step 2, with academic optimism and organizational climate added to prediction of academic achievement along with SES, $R^2 = .66$, $F(3, 66) = 41.43$, $p < .01$. The linear combination of the independent variables was found to be significant predictors of 4th grade academic achievement. With an adjusted $R^2 = .65$, the findings indicated that approximately 65% of the variance in 4th grade academic achievement could be accounted for by the linear combination of academic optimism, organizational climate, and the control variable. Not all of the variables were significant predictors of academic achievement, as academic optimism ($\beta = .17$, $p < .05$) did not predict achievement when included in a linear regression model with organizational climate and the control variable. However, both organizational climate ($\beta = .21$, $p < .05$), and SES ($\beta = .69$, $p < .01$) were significant predictors of academic achievement, with SES making the largest contribution to the explanation.

Table 15

Block Design Linear Regression of SES, AO, and OC on AA

Step	Variable	*B*	SE *B*	*β*	95% CI	R^2	Adj. R^2	*F*	*p*
1	(Constant)	.83	.05		[.74, .93]	.62	.61	105.00	.00
	SES	.92	.09	.79	[.74, 1.10]				.00
2	Constant	.68	.15		[.38, .98]	.66	.65	41.43	.00
	SES	.68	.13	.58	[.42, .94]				.00
	Academic Optimism	.00	.00	.17	[.00, .001]				.15
	Organizational Climate	.07	.04	.18	[.004, .14]				.04

Note: CI = confidence interval.

As was hypothesized, when controlling for the effects of SES, organizational climate and academic optimism were both significant independent predictors of academic achievement. However, contrary to Hypothesis 3, when controlling for SES, school academic optimism did not significantly predict academic achievement when in a linear regression model with organizational climate.

Hypothesis 4

H4: Organizational climate (OC) and school academic optimism (SAO) will independently and collectively predict school effectiveness (SE) while controlling for the effects of socioeconomic status (SES).

Hypothesis 4 predicted organizational climate and school academic optimism would independently and collectively predict school effectiveness while controlling for the effects of socioeconomic status. In order to examine multiple pairings of OC and SAO independently and collectively as predictors of SE, three iterations of block design linear regression were performed and examined.

H4: Academic optimism and school effectiveness. A block design linear regression analysis was conducted to evaluate how well academic optimism predicted school effectiveness. One control variable, SES, was also included in the model. Table 15 displays the variables school effectiveness, SES, and academic optimism, the unstandardized (*B*), standardized error (*B*), standardized regression coefficients (β), the multiple correlation coefficients (R^2), adjusted R^2, 95% confidence intervals, and p values.

After step 1, with SES in the equation, $R^2 = .13$, $F(1, 66) = 9.74$, $p < .01$. The control variable, SES, was found to be significantly related to school effectiveness. The adjusted $R^2 = .12$ indicated that approximately 12% of the variance in school effectiveness could be accounted for by the control variable, SES ($\beta = .36$, $p < .01$). After step 2, with academic optimism added to prediction of school effectiveness along with SES, $R^2 = .47$, $F(2, 66) = 28.80$, $p < .01$. The linear combination of the independent variables was found to be significant predictors of school effectiveness. With an adjusted $R^2 = .46$, the findings indicated that approximately 46% of the variance in school effectiveness could be accounted for by the linear combination of academic optimism and the control variable. Both variables were significant predictors of school effectiveness, academic optimism ($\beta = .88$, $p < .01$) and SES ($\beta = -.30$, $p < .05$), with academic optimism making the largest contribution to the explanation.

Table 16

Block Design Linear Regression of SES and AO on SEI

Step	Variable	*B*	SE *B*	β	95% CI	R^2	Adj. R^2	*F*	*p*
1	(Constant)	-.77	.27		[-1.31, -.28]	.13	.12	9.79	.006
	SES	1.59	.51	.36	[.58, 2.61]				.003
2	Constant	-4.73	.65		[-6.03, -3.44]	.47	.46	28.80	.000
	SES	-1.31	.60	-.30	[-2.51, -.11]				.033
	Academic Optimism	.01	.001	.88	[.01, .01]				.000

Note: CI = confidence interval.

H4: Organizational climate and school effectiveness. A block design linear regression analysis was conducted to evaluate how well organizational climate predicted school effectiveness. One control variable, SES, was also included in the model. Table 16 displays the variables school effectiveness, SES, and organizational climate, the unstandardized (*B*), standardized error (*B*), standardized regression coefficients (β), the multiple correlation coefficients (R^2), adjusted R^2, 95% confidence intervals, and p values.

After step 1, with SES in the equation, $R^2 = .13$, $F(1, 66) = 9.74$, $p < .01$. The control variable, SES, was found to be significantly related to school effectiveness. The adjusted $R^2 = .12$ indicated that approximately 12% of the variance in school effectiveness could be accounted for by the control variable, SES ($\beta = .36$, $p < .01$). After step 2, with organizational climate added to prediction of school effectiveness along with SES, $R^2 = .24$, $F(2, 66) = 9.88$, $p < .01$. The linear combination of the independent variables was found to be significant predictors of school effectiveness. With an adjusted $R^2 = .21$, the findings indicated that approximately 21% of the variance in school effectiveness could be accounted for by the linear combination of organizational climate and the control variable. When combined in a linear regression, SES ($\beta = .19$, $p = .13$) did not significantly predict school effectiveness, as it had when entered into the model independently. However, organizational climate ($\beta = .37$, $p < .01$) did significantly predict school effectiveness and made the largest contribution to the explanation.

Table 16

Block Design Linear Regression of SES and OC on SEI

Step	Variable	*B*	SE *B*	β	95% CI	R^2	Adj. R^2	*F*	*p*
1	(Constant)	-.77	.27		[-1.31, -.28]	.13	.12	9.79	.006
	SES	1.59	.51	.36	[.58, 2.61]				.003
2	Constant	-.41	.28		[-.97, .16]	.24	.21	9.88	.16
	SES	.84	.54	.19	[-.24, 1.92]				.13
	Organizational Climate	.56	.19	.37	[.18, .94]				.004

Note: CI = confidence interval.

H4: Academic optimism, organizational climate, and school effectiveness. A block design linear regression analysis was conducted to evaluate how well academic optimism and organizational climate predicted school effectiveness. One control variable, SES, was also included in the model. Table 17 displays the variables school effectiveness, SES, academic optimism, and organizational climate, the unstandardized (*B*), standardized error (*B*), standardized regression coefficients (β), the multiple correlation coefficients (R^2), adjusted R^2, 95% confidence intervals, and p values.

After step 1, with SES in the equation, $R^2 = .13$, $F(1, 66) = 9.74$, $p < .01$. The control variable, SES, was found to be significantly related to school effectiveness. The adjusted $R^2 = .12$ indicated that approximately 12% of the variance in school effectiveness could be accounted for by the control variable, SES ($\beta = .36$, $p < .01$). After step 2, with academic optimism and organizational climate added to prediction of school effectiveness along with SES, $R^2 = .51$, $F(3, 66) = 21.60$, $p < .01$. The linear combination of the independent variables was found to be significant predictors of school effectiveness. With an adjusted $R^2 = .49$, the findings indicated that approximately 49% of the variance in school effectiveness could be accounted for by the linear combination of academic optimism, organizational climate, and the control

variable. All variables were significant predictors of school effectiveness, academic optimism ($\beta = .81$, $p < .01$), organizational climate ($\beta = .21$, $p < .05$), and SES ($\beta = -.34$, $p < .05$), with academic optimism making the largest contribution to the explanation.

Table 18

Block Design Linear Regression of SES, AO, and OC on SEI

Step	Variable	*B*	SE *B*	β	95% CI	R^2	Adj. R^2	*F*	*p*
1	(Constant)	-.77	.27		[-1.31, -.28]	.13	.12	9.79	.006
	SES	1.59	.51	.36	[.58, 2.61]				.003
2	Constant	-4.20	.68		[-5.57, -2.83]	.51	.48	21.60	.000
	SES	-1.51	.59	-.34	[-2.70, -.32]				.013
	Academic Optimism	.01	.00	.81	[.01, .01]				.000
	Organizational Climate	.33	.16	.21	[.01, .64]				.043

Note: CI = confidence interval.

As was hypothesized in Hypothesis 4, when controlling for the effects of SES, academic optimism and organizational climate both significantly predicted school effectiveness. Also, when controlling for SES, academic optimism and organizational climate significantly predicted school effectiveness when in a linear regression model.

Summary

In this chapter, a statistical test of the relationships among the independent variables SES (control), academic optimism, and organizational climate were examined amongst each other and dependent variables academic achievement (composite score) and school effectiveness. Descriptive statistics, bivariate correlation analysis, and block design linear regression were used to establish these relationships. The results of this study did support all four research hypotheses. All variables in Hypothesis 1, organizational climate, academic optimism, and academic achievement were found to have moderate correlations with one another, thus the

hypothesis was supported. Hypothesis 2 was also supported as organizational climate, academic optimism, and school effectiveness were found to have moderate correlations with one another. Through three iterations of block design linear regression to match multiple pairings of the IVs with the DV academic achievement, Hypothesis 3 was tested. As hypothesized, when controlling for the effects of SES, organizational climate was a significant predictor of academic achievement. However, contrary to Hypothesis 3, when controlling for SES, school academic optimism did not significantly predict academic achievement. Another three iterations of block design linear regression were performed to test the IVs academic optimism and organizational climate with the DV school effectiveness for Hypothesis 4. Hypothesis 4 was fully supported even while controlling for the effects of SES, as both academic optimism and organizational climate significantly predicted school effectiveness.

CHAPTER V:

RESULTS

Introduction

This chapter presents a discussion of the results of the current study. It summarizes the purpose and findings of the study while providing theoretical and practical implications of the research. Finally, recommendations for further research are provided to extend inquiry.

The primary purpose of this dissertation was to examine the relationship among organizational climate and academic optimism to determine whether or not they predicted student achievement and organizational effectiveness. In other words, in an attempt to predict achievement and effectiveness, this study explored the perceptions of teachers regarding the climate and culture of their respective schools. The general problem of the study dealt with the climate and culture frameworks of organizational climate and academic optimism, and their predictive abilities in achievement and effectiveness in the elementary school setting.

Statement of Findings

All variables had significant intercorrelational relationships as zero-order bivariates. Correlations were found between academic optimism and organizational climate ($r = .50$, $p < .01$), academic optimism and academic achievement ($r = .69$, $p < .01$), and academic optimism and school effectiveness ($r = .66$, $p < .01$). Similarly, correlations were found between organizational climate and academic achievement ($r = .53$, $p < .01$), organizational climate and

school effectiveness (r = .46, p < .01), and academic achievement and school effectiveness (r = .39, p > .01).

SES and academic optimism combined to predict academic achievement. The adjusted (R^2 = .63, p <.01) indicated approximately 63% of variance in academic achievement was accounted for by the combination of academic optimism and SES. SES made the largest contribution to the explanation, with academic optimism uniquely accounting for 2% of the variance, for a combined variance of 61%. Given the bivariate correlation was (r = .69, p < .01), there is a chance that the effect may have been greater with a larger sample size. This study was able to detect an effect of academic optimism on academic achievement even given the small sample size. This finding is an important contribution to prior research that has found academic optimism to be predictive of achievement (Hoy, Tarter, & Woolfolk Hoy, 2006a, 2006b)

SES and organizational climate combined to significantly predict academic achievement. The adjusted (R^2 = .64) indicated approximately 64% of variance in academic achievement was accounted for by the combination of organizational climate and SES. SES once again made the largest contribution to the explanation, with organizational climate uniquely accounting for 4% of the variance, for a combined variance of 60%. A variance is an estimate of average variability (spread) of a set of data (Field, 2013), and this study's finding that 64% of the variance in achievement is predictable from organizational climate and SES is significant. This finding is an important contribution to prior research by Hoy, Hannum, and Tschannen-Moran (1998) that found similar results of achievement variance ranging 71% (Math), 66% (Reading) and 57% (Writing), accounted for by the combination of climate and SES. As this study was able to detect variance in achievement accounted for by climate and SES so close to previous research,

there is a chance that the amount of the variance explained may have been greater with a larger sample size.

Academic optimism, organizational climate, and SES combined to significantly predict academic achievement. The adjusted (R^2 = .65) indicated approximately 65% of variance in academic achievement was accounted for by the linear combination of the variables. However, academic optimism no longer served as a significant predictor of achievement when included in the multiple regression model; both organizational climate and SES were predictors for achievement. SES made the largest contribution to the explanation, with organizational climate uniquely accounting for 2% of variance, while academic optimism provided no unique explanation of the variance since it was not significant. According to Tabachnick and Fidell (2013), if block regression is used, more cases are needed. They suggested a cases-to-IV ratio of 40 to 1 as a reasonable sample size for such a model. In this case the current sample was approximately half the recommended sample size given the number of predictors in the model. It is likely that academic optimism may have contributed significantly to the explanation of the variance in achievement if the sample size had been more adequate.

SES and academic optimism combined to predict school effectiveness. The adjusted (R^2 = .46) indicated approximately 46% of variance in school effectiveness was accounted for by the combination of academic optimism and SES, with academic optimism making the largest contribution to the explanation. To this researcher's knowledge, this is the first known study to investigate the effects of academic optimism as a predictor for school effectiveness when controlling for SES. Contrary to achievement findings, SES was not found to make the largest contribution to the explanation. Together, SES and academic optimism explained 46% of variance. Academic optimism was found to make the largest contribution to the explanation,

uniquely accounting for 34% of the variance, while SES only explained 12% of the variance. This is an incredibly significant finding, and one that warrants further investigation as it means strengthening academic optimism may have a significant effect on perceptions of effectiveness.

SES and organizational climate combined to predict school effectiveness. The adjusted (R^2 = .21) indicated approximately 21% of variance in school effectiveness was accounted for by the combination of organizational climate and SES. Organizational climate and SES were found to have a combined variance of 21%, although organizational climate was found to make the largest contribution to the explanation, uniquely accounting for 11% of variance. To this researcher's knowledge, this is the first known study to investigate the effects of organizational climate as a predictor for school effectiveness when controlling for SES. The closest known study is Uline, Miller, and Tschannen-Moran's (1998) study exploring Mott's index of perceived organizational effectiveness as a concise measure capturing instrumental functions and expressive functions, through the measure of the Organizational Health Inventory for Middle Schools (OHI-RM). This is a significant finding that merits further examination, as it means strengthening organizational climate may also have a significant effect on perceptions of effectiveness.

SES, academic optimism, and organizational climate combined to significantly predict school effectiveness. The adjusted (R^2 = .48) indicated approximately 48% of variance in school effectiveness was accounted for by the combination of organizational climate, academic optimism, and SES. Together academic optimism and organizational climate explained 38% of the variance in school effectiveness, with academic optimism making the largest contribution. All variables were significant predictors of school effectiveness, academic optimism (β = .81, $p < .01$), organizational climate (β = .21, $p < .05$), and SES (β = -.34, $p < .05$). However, upon

examining the regression coefficients it became evident that SES had a reversal of sign, which should not have happened given the predictors positive zero order correlation with achievement. It was also noted that the regression coefficient for academic optimism was larger than expected based on the zero order correlation with achievement.

Cohen, Cohen, West, and Aiken (2003) suggested that a sign reversal of a regression coefficient, along with an unexpectedly large regression coefficient of one of the IVs, is an indication of suppression, "The term suppression can be understood to indicate that the relationship between the independent or causal variables is hiding or suppressing their real relationship with Y, which would be larger or possibly of opposite sign were they not correlated" (p. 78). In other words, one would expect a positive zero order correlation to stay positive when run in a regression, when it does not it is evidence of the possibility of suppression. A reversal of sign is just one way to identify suppression, Cohen et al. noted that a second way to identify suppression is through examinations of partial coefficients. Academic optimism's regression coefficient ($\beta = .81$, $p < .01$) is much higher than its zero order correlation with effectiveness ($r = .66$, $p > .01$), and since optimism is not the only predictor in the regression, this is also a possible sign of suppression. It is likely that the relationship between SES and school effectiveness was suppressed due to the high correlation of academic optimism and SES ($r = .75$, $p < .01$). So while academic optimism seemed to have an over-arching effect in this model the result must be interpreted with caution due to the likelihood of suppression.

Once more, to this researcher's knowledge, this is the only known study to combine academic optimism and organizational climate as predictors for school effectiveness when controlling for SES. For these predictors to independently account for such a significant amount of the variance, especially given the small sample size of the study, this is an important finding,

but one that must be interpreted with caution given the small sample size in this study. Moreover, academic optimism's ability to account for the largest amount of variance, when paired with organizational climate and SES is intriguing and warrants further investigation with a larger and more adequate sample size.

Theoretical Implications

The results of this study confirmed the theoretical framework set forth in Chapter II. Academic optimism, organizational climate, SES, academic achievement, and school effectiveness were all found to be positively correlated with each other. The findings of this study also confirmed the hypothesis that academic optimism and organizational climate predict school effectiveness. An analysis of the data partially confirmed the hypothesis that academic optimism and organizational climate predicted academic achievement.

Correlation of Optimism, Climate, and Achievement

Student achievement functions as a measure of accountability and assessment in American education, and remains one of the larger areas in need of attention and improvement from administrators. As schools continually strive to improve, identifying characteristics of school culture that increase Student achievement are vital. Evidence from the literature established in Chapter II, supported the idea of a strong relationship between climate and culture, which contributed to Hypothesis 1. Climate was regarded as a general concept to capture an enduring quality of organizational life (Hoy, Hannum, & Tschannen-Moran, 1998), with culture being identified through the collective beliefs comprising academic optimism (Hoy & Miskel, 2013). Both climate and culture have consistently shown through research to positively influence student achievement. However, to this researcher's knowledge, no studies currently

exist that examine the combination of climate and culture to positively affect student achievement.

Research has shown that a significant contributing factor to the strong relationship between academic optimism and organizational climate exists through the construct academic emphasis (School Academic Optimism Scale), and the dimension of achievement press (Organizational Climate Index). Academic emphasis is a comprehensive construct in schools that set high yet achievable goals, have a serious and orderly learning environment, and high student motivation for academic success exists (Hoy & Miskel, 2005; Hoy, Tarter, & Kottkamp, 1991). Goddard, Sweetland, and Hoy (2000) have argued that achievement press characterized the normative and behavioral environment of the school, so when achievement press is high, teachers devote more time to preparing lessons and colleague collaborations. Hoy, Sweetland, and Smith (2002) found that achievement press is most powerful when collective efficacy is strong, and achievement press is found to work through collective efficacy. Hoy et al. also found that the achievement press dimension of organizational climate is also strongly related to the faculty trust construct in academic optimism. Trust and achievement press are essential components of achievement. Schools with high levels of achievement press, along with trust evident among students, parents and teachers, attain greater achievement.

Although the findings from this study are modest, this study provided support for the hypothesis that academic optimism, organizational climate, and academic achievement are correlated with each other. Academic optimism and academic achievement had a correlation ($r = .69$, $p < .01$), academic optimism and organizational climate correlated at ($r = .50$, $p < .01$), while organizational climate and academic achievement correlated at ($r = .53$, $p < .01$). Bivariate correlation is used to measure the association between variables with no distinction

necessary between independent variables and dependent variables (Tabachnick & Fidell, 2013), and Pearson's correlations coefficient, *r,* is a measure of the strength of that relationship (Field, 2013). As such, it is an effect size. Cohen (1988) suggested the following effects sizes for *r: r* = .10 (small effect, explains 1% of variance), *r* = .30 (medium effect, accounts for 9% of variance), and *r* = .50 (large effect, accounts for 25% of variance). Therefore, a (*r* = .69, $p < .01$) correlation between academic optimism and student achievement is an extremely strong finding in the behavioral sciences. Given such a strong bivariate correlation between academic optimism and academic achievement, it is likely that academic optimism would have been a stronger predictor of achievement had the sample size of the study been larger.

This study supported previous research (Hoy et al., 2006a, 2006b) that schools with high levels of achievement press have higher achievement. Based on previous findings, this study allows us to imply that schools with high levels of achievement press have teachers who will work together to help meet academic goals, and those goals will be high, yet achievable. This will help create a climate where teachers believe in one another and their work, which relates well to collective efficacy. Moreover, it is likely that in the pursuit of academic goals, trust among faculty and parents is stronger, when academic emphasis is evident.

Correlation of Optimism, Climate, and Effectiveness

According to Hoy and Ferguson (1985), the traditional view of effectiveness derives from an organization that is successful to the extent it achieves its goals. Three criteria for achieving effectiveness were outlined by Hoy and Ferguson: organizations were to keep the number of goals set to as few in number as possible, to be clear and concise in goal setting, and to execute specified goals. As schools persistently work to become more effective, identifying characteristics of school culture that improve school effectiveness are essential. Evidence from

the literature established in Chapter II, supported the idea of a strong relationship between climate and culture, which contributed to Hypothesis 2. Organizational climate, a climate measure, is assumed to correlate with academic optimism, a culture measure. Both of these measures were presumed to correlate with school effectiveness, because of their shared emphasis on as academic emphasis and achievement press (Hoy, Tarter, & Woolfolk Hoy, 2006a). Hoy et al. (1991) demonstrated the relationship between faculty trust, one of the variables in SAO, and school effectiveness in their study in middle and elementary schools, lending more support to the likelihood of a relationship between these variables.

Organizational climate, a climate measure, looks at the organization as a whole; while academic optimism, a measure of school culture, examines the strengths and capabilities in schools in which optimism is the overarching theme. Both climate and culture have consistently been shown through research to positively effect school effectiveness. As posited in Hypothesis 2, organizational climate and academic optimism were assumed to correlate with each other, as well as with school effectiveness. This study provided support for the hypothesis that academic optimism, organizational climate, and school effectiveness correlated with each other. Academic optimism and school effectiveness had a correlation of ($r = .66$, $p < .01$), academic optimism and organizational climate correlated at ($r = .50$, $p < .01$), while organizational climate and school effectiveness correlated at ($r = .66$, $p < .01$). According to Cohen (1988), $r = .30$ is a medium effect size accounting for 9% of the total variance and $r = .50$ is a large effect size accounting for 25% of the variance. Finding such a strong bivariate correlation between academic optimism and school effectiveness, it is likely that academic optimism would have been a stronger predictor of effectiveness had the sample size of the study been larger.

Optimism and Climate as Predictors of Achievement

The need for the current study is founded in years of increased demand for schools to improve academic achievement, as well as compliance with federal regulations. Therefore it was important to determine if academic optimism and organizational climate predicted academic achievement, and whether the constructs were better predictors independently or collectively. Organizational climate, academic optimism, and academic achievement were all correlated with one another. Hypothesis 3 tested if climate and optimism independently and collectively predicted achievement while controlling for the effects of SES.

Initially, academic achievement was designed to explain student performance. The three observed variables that comprise the latent variable academic optimism all have theoretical foundations linking them to student achievement. Academic emphasis, collective efficacy, and faculty trust in clients have consistently been shown to be positively associated with or predictive of academic achievement (Goddard, Hoy, & Woolfolk Hoy, 2000; Goddard, Tschannen-Moran, & Hoy, 2001; Hoy, Tarter, & Woolfolk Hoy, 2006a, 2006b). Conversely, organizational climate was designed to look at the organization through broader elements, "The goal of the OCI was to find four general dimensions of climate that link all levels of the school, that is, student-teacher, teacher-teacher, teacher-principal, and school-community interactions" (Hoy et al., 2002, p. 47). The four dimensions of organizational climate all have theoretical foundations linking them to student achievement as well. Collegial leadership, professional teacher behavior, institutional vulnerability, and achievement press have consistently been shown to be positively associated with or predictive of academic achievement (Hoy & Hannum, 1997; Hoy, Hannum, & Tschannen-Moran, 1998; Hoy, Smith, & Sweetland, 2002; Tschannen-Moran, Parish, & DiPaola, 2006). Overlap exists between the culture and climate frameworks, primarily through

their dimensions achievement press and academic emphasis. Organizational culture and climate are primarily viewed as complementary perspectives that describe the collective identity of a school that emerges spontaneously as teachers, administrators, and clients interact with one another (Hoy & Miskel, 2013).

This study found that Hypothesis 3 had some interesting findings. Independently, as was hypothesized, both organizational climate ($\beta = .21$, $p < .05$) and academic optimism ($\beta = .23$, $p < .05$) significantly predicted academic achievement when controlling for the effects of SES. However, contrary to Hypothesis 3, academic optimism ($\beta = .17$, $p < .05$) did not significantly predict academic achievement when in a multiple regression with organizational climate. The small sample size may have considerably contributed to the inability of the researcher's analysis to detect significant effects of both variables. There was not much variance left, so combining these variables did not allow for detection of effects. Effect size reflects the amount of total variance in the DV that is predictable from knowledge of the levels of the IV (Tabachnick & Fidell, 2013). Statistical significance testing asses the reliability of the associations between the IV and the DV, while effect size measures how much association there is. According to Tabachnick and Fidell, experiments in education tend to have smaller effects than found in sociology, economics, and psychology, and ultimately, "the size of the effect desired or expected depends on the context of the research: Is it meaningful? Does it matter?" (2013, p. 55). This researcher believes the answer to both questions is yes, these effect sizes, although not as large as hoped for, most likely due to sample size, are meaningful and do matter.

These findings showed independently, academic optimism and organizational climate are predictors of academic achievement when controlling for SES. It is possible that with a larger samples size, Hypothesis 3 would be fully supported and show that when in a block entry linear

regression model, organizational climate and school academic optimism would significantly predict academic achievement while controlling for SES. This study showed that when controlling for SES, academic optimisms' unstandardized beta became negligible at $B = .00$, allowing organizational climate to become the significant predictor of academic achievement with a $B = .07$. This means that when academic optimism and organizational climate were in the regression model together, academic optimism no longer predicted achievement. By adding organizational climate to the model, the regression coefficient decreased for academic optimism. Given the high correlation between academic optimism and academic achievement, it is possible that the reason for this finding is related to low sample size, as when sample size is small, sampling error is high.

Optimism and Climate as Predictors of Effectiveness

The current study was warranted as school effectiveness looks at overall school performance; from leadership, to teacher behaviors, to press for achievement, and vulnerabilities of the organization. Schools and administrators are continually asked about their effectiveness; are they reaching optimal levels? Therefore, this study sought to understand the individual and collective relationships between academic optimism and organizational climate as predictors for school effectiveness. Organizational climate, academic optimism, and school effectiveness all correlated with each other. Hypothesis 4 tested if climate and optimism independently and collectively predicted effectiveness while controlling for the effects of SES.

This study's findings supported Hypothesis 4. Independently, as was hypothesized, both organizational climate ($\beta = .37$, $p < .01$) and academic optimism ($\beta = .88$, $p < .01$) significantly predicted school effectiveness when controlling for the effects of SES. To this researcher's knowledge, this study's findings that academic optimism served as a predictor for school

effectiveness are new. The closest known study to support the current findings of organizational climate serving as a predictor for school effectiveness is Uline, Miller, and Tschannen-Moran's (1998). The current study also found academic optimism and organizational climate to be significant predictors for school effectiveness, when in a linear regression model controlling for SES. To this researcher's knowledge, these findings are the first of their kind. All variables were significant predictors of school effectiveness, academic optimism ($\beta = .81$, $p < .01$), organizational climate ($\beta = .21$, $p < .05$), and SES ($\beta = -.34$, $p < .05$), with academic optimism making the largest contribution to the explanation.

These findings suggest that both academic optimism and organizational climate are strong predictors of school effectiveness. According to Hoy and colleagues (2006a, 2006b), academic emphasis is a potent force in many school effectiveness models, including teacher commitment, teachers' judgments of the effectiveness of their school, and student achievement. Additionally, faculty trust and collective efficacy, both constructs of academic optimism, serve to strengthen school effectiveness. Further, collegial leadership and professional teacher behavior also strengthen school effectiveness. When the learning environment is perceived as orderly by all stakeholders, students respect achievement and are motivated to work to achieve high standards. Such an environment will tend to have teachers who have high levels of trust, and a belief that they can and will make a difference, which may explain increased levels of school effectiveness.

The suppression of SES is also an important finding, and one that must be explored. The relationship between SES and school effectiveness seemed to be suppressed due to the high correlation of academic optimism and SES ($r = .75$, $p < .01$). Why would this happen? When schools are placed in districts where affluence is higher, parents tend to be more involved in their

children's schools, often because they are not having to work multiple jobs. Also, when parents are more involved they tend to have a better relationship with teachers. This in turn helps faculty trust parents and students, which likely promotes an increase level of collective efficacy further reinforcing trust. When teachers feel trusted by clients, they carry out their roles and engage students in effective instruction, insisting on higher academic standards. This creates an emphasis on academic standards that in turn reinforces trust. When teachers feel successful in their classrooms, and believe they can work together and effect the organization positively, they will likely emphasize academic achievement, and that academic emphasis will reinforce collective efficacy.

While academic optimism may work to help schools in low poverty areas it is not impervious to the effects of SES. For instance the above example of the effects of increased parent involvement in affluent schools illustrates how this relationship works. In like manner, in high poverty schools SES could affect the relationship with academic optimism because the lack of financial resources in the school could cause teachers to have a lower sense of optimism. This would affect teacher's abilities to set high academic standards, which would affect the collective efficacy of the school, as the teachers may perceive their efforts as having little positive effect on their students due to the lack of supplies and technology. The lack of academic emphasis and collective efficacy would undoubtedly reinforce a lack of trust among teachers and parents, as parents would begin to feel teacher's frustrations and react to the negativity.

These examples highlight how the study's finding of the relationship of academic optimism to SES is an important one. Not only did this relationship make it difficult to determine the true effects of our IVs on effectiveness and achievement in the regression analysis,

due to the likelihood of suppression, but this also has practical significance as administrators seek to improve the academic optimism in their schools, particularly in low SES communities.

The findings of Hypothesis 4 showed that independently, both academic optimism and organizational climate are predictors of school effectiveness when controlling for SES. Further, when in a block entry linear regression model, school academic optimism and organizational climate did significantly predict school effectiveness while controlling for SES. This joint contribution to the explanation of variance in effectiveness affords the possibility that these constructs worked together to create an environment where the tenets of effectiveness can thrive. A school would be able to develop a collective identity, which would emerge spontaneously as teachers, administrators, parents, and students interact with one another. An environment might exist where schools focused on shared behavior rather than individual beliefs (Hoy & Miskel, 2013), multiple frames could be used to evaluate school culture, and a climate of openness and health may well exist (Hoy, 2011).

Practical Implications

Academic optimism and organizational climate were positively correlated; when academic optimism was high, levels of organizational climate were also high and vice versa. It is likely that schools that have a strong sense of academic optimism, and a strong climate, are also places that are perceived as being effective. In other words, this means that schools with a strong belief system about the strengths and capabilities in their school provide higher levels of dominant patterns of behavior in the openness and health of their school. While we do not know that either construct caused schools to be more effective, it is likely that strengthening either construct will have a significant effect on perceptions of effectiveness. Also, because this analysis demonstrated that three constructs worked together to predict effectiveness, there is the

possibility of a synergistic effect. For schools this could mean that focusing on both elements of culture and climate to improve effectiveness could have a more potent effect overall than focusing on just one element, despite the effects of SES.

In Alabama, schools' progress are reported in an Annual Yearly Progress (AYP) report that is made available to the public as part of No Child Left Behind. NCLB stated that by the year 2014, all students would be on grade level. That did not happen. According to the New American Foundation (2014) website, "Since February 2012, 43 states and Washington, D.C. have been granted waivers, most of which will be in effect until the end of the 2013-14 school year, when states will have the opportunity to extend their waivers for another two years" (New). This means that states keeping up with, and granted waivers, will have until the end of the 2015-2016 school year to comply with NCLB. For states without waivers, NCLB remains in full effect, and despite these difficulties, the federal government reports that it is likely waivers will continue to serve as de facto federal policy until NCLB is reauthorized. However, administrators' must take yearly progress reports into consideration and adjust their school's vision, planning, and teacher professional development to meet federal guidelines based on their schools' individual report findings.

When schools in Alabama do not meet AYP, they are put on alert, or school improvement, if adequate gains are not made in student achievement. Schools are often required to develop the continuous improvement plan (CIP), which is academic goal-oriented, and intended to look at areas of weak performance of the school to decide how academic goals will be achieved. Despite the fact subject-specific areas of concentration will be highlighted in the CIP, schools would benefit from evaluating climate and culture as well. Results from the current study and related studies suggested that schools not meeting AYP, or those on alert from the

previous year, may also benefit from examining effective school culture and school climate studies such as those that focus on academic optimism and organizational climate as conceptualized in this study. By administrators implementing these climate practices into their schools, the opportunity arises for a positive effects to occur with student achievement and overall school effectiveness. If administrators, teachers, and students feel that academics are not a priority, then they are less likely to work towards meeting specific goals. It is likely that school climate determines a school's effectiveness, regardless of whether or not the course of study has been completely and efficiently covered.

Academic optimism is a measure of a general, school-wide confidence that students will be academically successful and that teachers can make a difference despite demographic constraints (Hoy, Tarter, & Woolfolk Hoy, 2006a) and serves as a theoretical guide for school leaders in designing effective schools and improving student achievement. More importantly, it is an area that school administrators can influence and control. School leaders may use their position of influence within the school to inspire teachers to believe in the strengths and capabilities of the school, and encourage teachers to believe they can and will help their students find success within the school.

Administrators can work on increasing positive organizational climate and academic optimism in their respective schools in the effort to increase achievement and effectiveness. Seligman's study (1998) posited that optimism is a collective property that can be learned and developed, and matters as much as talent and motivation in regards to achievement. He went on to say that all schools are capable of excellence, regardless of SES, if they can raise their level of academic optimism, which he stressed can be learned. Organizational climate measures the health and openness of schools, which enables administrators to find key areas of the

organization that need change or improvement. The conceptual framework for the OCI identifies one important feature at each of four levels to provide a snapshot of four of the most important facets of a school that the administrator can use to specifically address teacher's perceptions of the general work environment within the school: the institutional level (institutional vulnerability), the principal level (collegial leadership), the teacher level (professional teacher behavior), and the student level (achievement press) (Hoy & Miskel, 2013). Examples of change in climate include the extent to which the school is susceptible to disruptive forces, how open and friendly the principal is to teachers while treating them as professional colleagues, teacher's mutual respect for colleague competence while showing cooperation and support, and having a school that sets high but achievable academic standards and goals.

An implication from this study is that school administrators can use the organizational climate index, which measures organizational climate in a school, to identify potential problems that a school may need to overcome. School climate is a relatively stable property of the school environment that is experienced by participants and affects their behavior, and is based on their collective perceptions of behavior in schools (Hoy & Hannum, 1997; Hoy & Miskel, 1996; Taguiri, 1968). Administering the index would enable administrators to determine their own leadership style, as perceived by teachers. They would also gain insight into the professional interactions and behaviors of their teachers, and gauge how teachers view the schools' susceptibility to community influence.

If, after administering the organizational climate index, administrators find they are perceived by their teachers to be close-minded, then proper steps may be taken to improve negative teacher perceptions. Likewise, if the climate index showed teachers felt there was a lack of mutual respect in competence among colleagues, or in commitment towards students, an

administrator can implement proper methods to address teacher dissatisfaction. Avenues of professional development, service opportunities, focus on building school morale, or attending to the school's mission statement can be addressed by the school administrator to unite a faculty at odds or in the midst of dysfunction. If teachers perceive the school is susceptible to vocal parents and community members, the administrator can knowingly take steps to serve as a buffer between the community and the school. With inaction in the aforementioned areas, a school climate may suffer. However, by administering the organizational climate index and using results of this study and others like it, administrators can work to improve the climate of their schools and work towards improving student achievement and school effectiveness, as organizational climate has proved predictive of both.

Recommendations for Future Research

This is believed by the researcher to be the first study to examine the relationship between academic optimism and organizational climate as predictors of student achievement and school effectiveness while controlling for SES. This study should be extended for multiple reasons. First, it has the ability to contribute important theoretical and empirical findings for future researchers and educational practitioners in designing effective schools and improving student achievement. Also, this study should be extended further to verify these findings because this is the only known study that has compared these constructs. Second, the positive results from this study of elementary schools provide a basis for continued study on middle and secondary schools, with perhaps the difference being the unit of analysis. Third, the results pertaining to academic optimism were in line with previous research and extended that body of research by looking at the combined effect of academic optimism and organizational climate, and require further analysis. Fourth, the results involving organizational climate were promising and

should be explored. Fifth, a subsequent study may benefit from a larger sample size, while including previous achievement scores for a more well-rounded view of data results. The small sample size was likely a limiting factor in the current study, particularly when looking at the combined effect of the independent variables on achievement. Lastly, future studies, with a larger sample size, may wish to access individual student achievement data to utilize higher order analysis such as hierarchical linear modeling to determine the within school and between school effects of the independent variables on the outcome variables.

This study did find academic optimism to be a predictor of academic achievement when controlling for SES, which supported previous research studies (Bevel & Mitchell, 2012; Hoy & Miskel, 2008; Hoy, Tarter, & Woolfolk Hoy, 2006a, 2006b; Kirby & DiPaola, 2011; McGuigan & Hoy, 2006; Smith & Hoy, 2007; Wagner & DiPaola, 2011). However, results of this study found that when placed in a block entry linear regression analysis with organizational climate, academic optimism no longer served as a predictor for achievement, which does not support previous research. However, this finding was likely due to the small sample size. Particularly since, as multiple research studies have shown prior, there is an established connection between academic optimism and academic achievement (Hoy, Tarter, & Woolfolk Hoy 2006a, 2006b; Smith & Hoy, 2007). Therefore a suggestion for future research is to individually examine the subscales of academic optimism with the dimensions of organizational climate, as well as their relationship to academic achievement. This will show which properties correlate together and which provide significant contributions.

An extension of this study could occur by adding a measure for previous achievement. A better test of the achievement hypotheses may result with more variables controlled. The

extended study could provide a finer view of the relationships of optimism and climate as predictors of achievement and effectiveness.

To determine within school and between school effects of academic optimism and organizational climate on achievement and effectiveness, a future study may benefit from performing a hierarchical linear model. Researchers could find individual student scores for the SAT and evaluate achievement and effectiveness at the individual student level. The extended study could yield much different results, especially if previous achievement scores were available.

Academic optimism could also be examined as a mediating variable between organizational climate and effectiveness, as well as a mediating variable between climate and achievement. In this study climate was significantly linked to achievement and effectiveness. Since there are properties of optimism and climate that have some theoretical overlap, such as academic emphasis and achievement press, a study exploring the mediating effects of the two constructs could yield interesting results.

Finally, this study involved elementary schools containing the 4^{th} grade. More research needs to be conducted to see if similar results would be found in the middle and secondary settings. Middle and secondary settings begin to differ from elementary school settings in that they become more departmentalized and curriculum focused. Administrators in these schools tend to have less overall expertise in each field of study, which enables teacher autonomy to take hold. A possible altering of results could occur in organizational climate, as professional teacher behavior and collegial leadership may have less of a relationship with academic optimism in the secondary setting.

Limitations

There were a few limitations with this study that prevent generalizing these results beyond this sample. First, the study relied on participants' accuracy and honesty in completing and returning a survey. A second limitation was sample size. Notwithstanding 1,353 teachers were surveyed, when results were aggregated to the school level, N = 67, which was not as large a sample size as this researcher would have hoped for. Third, there exists a potential loss of information due to using aggregated data. However, aggregation of data is a necessary circumstance when working with a large sample and having the school as the unit of analysis. A fourth limitation was that the sample this study dealt with was a convenience sample of sixty-seven public elementary schools in Northern Alabama that contained the 4th grade. Schools consented to participated, and efforts were made to select a reasonably representative cross-section of elementary schools and teachers. However, generalization of results to any other sample or state should be done with caution as the sample for this study was not random.

Conclusion

This research developed a better understanding of the relationships among academic optimism and organizational climate. Perceptions of teachers were examined to determine the predictive nature of optimism and climate on student achievement and school effectiveness. Results confirmed Hypothesis 1, that academic optimism and organizational climate are positively and significantly correlated with each other, and also with student achievement. Hypothesis 2 was also confirmed, as academic optimism and organizational climate are positively and significantly correlated with each other as well as school effectiveness. Hypothesis 3 was only partially supported. Whereas academic optimism did independently predict academic achievement, it did not aid in prediction of student achievement while in a

multiple regression model with organizational climate while controlling for SES, as previous research suggested it would. However, organizational climate did independently and collectively predict academic achievement, as predicted. Hypothesis 4 was confirmed, as academic optimism and organizational climate both independently and collectively predicted school effectiveness while controlling for SES. In fact, once optimism and climate were added as predictors, the effects of SES were negligible.

The evidence provided by this study offers insight to administrators who are looking to initiate change or improvement in their schools. Designs for school effectiveness do exist if administrators are willing to take proper care in evaluating the climate and culture of their schools to help determine areas needing attention. Once problem areas are identified through administration of proper research instruments, school leaders can determine the presence of academic optimism and organizational climate within their schools. After determining the presence of academic optimism and organizational climate, administrators can utilize them as a tool for elevating the achievement and effectiveness of their schools.

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APPENDICES

Appendix A

OCDQ-RE

Directions: The following are statements about your school, Please indicate the extent to which each statement characterizes your school.	Rarely Occurs	Sometimes Occurs	Often Occurs	Very Frequently Occurs
1. The teachers accomplish their work with vim, vigor, and pleasure.	1	2	3	4
2. Teachers' closest friends are other faculty members at this school.	1	2	3	4
3. Faculty meetings are useless.	1	2	3	4
4. The principal goes out of his/her way to help teachers	1	2	3	4
5. The principal rules with an iron fist.	1	2	3	4
6. Teachers leave school immediately after school is over.	1	2	3	4
7. Teachers invite faculty members to visit them at home.	1	2	3	4
8. There is a minority group of teachers who always oppose the majority.	1	2	3	4
9. The principal uses constructive criticism.	1	2	3	4
10. The principal checks the sign-in sheet every morning.	1	2	3	4
11. Routine duties interfere with the job of teaching.	1	2	3	4
12. Most of the teachers here accept the faults of their colleagues.	1	2	3	4
13. Teachers know the family background of other faculty members.	1	2	3	4
14. Teachers exert group pressure on non-conforming faculty members.	1	2	3	4
15. The principal explains his/her reasons for criticism to teachers.	1	2	3	4
16. The principal listens to and accepts teachers' suggestions.	1	2	3	4
17. The principal schedules the work for the teachers.	1	2	3	4
18. Teachers have too many committee requirements.	1	2	3	4
19. Teachers help and support each other.	1	2	3	4
20. Teachers have fun socializing together during school time.	1	2	3	4
21. Teachers ramble when they talk at faculty meetings.	1	2	3	4
22. The principal looks out for the personal welfare of teachers.	1	2	3	4
23. The principal treats teachers as equals.	1	2	3	4
24. The principal corrects teachers' mistakes.	1	2	3	4
25. Administrative paperwork is burdensome at this school.	1	2	3	4
26. Teachers are proud of their school.	1	2	3	4
27. Teachers have parties for each other.	1	2	3	4
28. The principal compliments teachers.	1	2	3	4
29. The principal is easy to understand.	1	2	3	4
30. The principal closely checks classroom (teacher) activities.	1	2	3	4
31. Clerical support reduces teachers' paperwork.	1	2	3	4
32. New teachers are readily accepted by colleagues.	1	2	3	4
33. Teachers socialize with each other on a regular basis.	1	2	3	4
34. The principal supervises teachers closely.	1	2	3	4
35. The principal checks lesson plans.	1	2	3	4
36. Teachers are burdened with busy work.	1	2	3	4
37. Teachers socialize together in small, select groups.	1	2	3	4
38. Teachers provide strong social support for colleagues.	1	2	3	4
39. The principal is autocratic.	1	2	3	4
40. Teachers respect the professional competence of their colleagues.	1	2	3	4
41. The principal monitors everything teachers do.	1	2	3	4
42. The principal goes out of his/her way to show appreciation to teachers.	1	2	3	4

Appendix B

OHI-E

Directions: The following are statements about your school, Please indicate the extent to which each statement characterizes your school from **rarely occurs** to **very frequently occurs.**	Rarely Occurs	Sometimes Occurs	Often Occurs	Very Frequently Occurs
1. The principal explores all sides of topics and admits that other opinions exist.	①	②	③	④
2. The principal gets what he or she asks for from superiors.	①	②	③	④
3. The principal discusses classroom issues with teachers.	①	②	③	④
4. The principal accepts questions without appearing to snub or quash the teacher.	①	②	③	④
5. Extra materials are available if requested.	①	②	③	④
6. Students neglect to complete homework.	①	②	③	④
7. Students are cooperative during classroom instruction.	①	②	③	④
8. The school is vulnerable to outside pressures.	①	②	③	④
9. The principal is able to influence the actions of his or her superiors.	①	②	③	④
10. The principal treats all faculty members as his or her equal.	①	②	③	④
11. The principal goes out of his or her way to show appreciation to teachers.	①	②	③	④
12. Teachers are provided with adequate materials for their classrooms.	①	②	③	④
13. Teachers in this school like each other.	①	②	③	④
14. Community demands are accepted even when they are not consistent with the educational program.	①	②	③	④
15. The principal lets faculty know what is expected of them.	①	②	③	④
16. Teachers receive necessary classroom supplies.	①	②	③	④
17. The principal conducts meaningful evaluations.	①	②	③	④
18. Students respect others who get good grades.	①	②	③	④
19. Teachers feel pressure from the community.	①	②	③	④
20. The principal's recommendations are given serious consideration by his or her superiors.	①	②	③	④
21. The principal maintains definite standards of performance.	①	②	③	④
22. Supplementary materials are available for classroom use.	①	②	③	④
23. Teachers exhibit friendliness to each other.	①	②	③	④
24. Students seek extra work so they can get good grades.	①	②	③	④
25. Select citizen groups are influential with the board.	①	②	③	④
26. The principal looks out for the personal welfare of faculty members.	①	②	③	④
27. Teachers express pride in their school.	①	②	③	④
28. Teachers identify with the school.	①	②	③	④
29. The school is open to the whims of the public.	①	②	③	④
30. A few vocal parents can change school policy.	①	②	③	④
31. Students try hard to improve on previous work.	①	②	③	④
32. Teachers accomplish their jobs with enthusiasm.	①	②	③	④
33. The learning environment is orderly and serious.	①	②	③	④
34. The principal is friendly and approachable.	①	②	③	④
35. There is a feeling of trust and confidence among the staff.	①	②	③	④
36. Teachers show commitment to their students.	①	②	③	④
37. Teachers are indifferent to each other.	①	②	③	④

Appendix C

OCI

Directions: The following are statements about your school, Please indicate the extent to which each statement characterizes your school from **rarely occurs** to **very frequently occurs.**	Rarely Occurs	Sometimes Occurs	Often Occurs	Very Frequently Occurs
1. The principal explores all sides of topics and admits that other opinions exist.	①	②	③	④
2. A few vocal parents can change school policy.	①	②	③	④
3. The principal treats all faculty members as his or her equal.	①	②	③	④
4. The learning environment is orderly and serious.	①	②	③	④
5. The principal is friendly and approachable.	①	②	③	④
6. Select citizens groups are influential with the board.	①	②	③	④
7. The school sets high standards for academic performance.	①	②	③	④
8. Teachers help and support each other.	①	②	③	④
9. The principal responds to pressure from parents.	①	②	③	④
10. The principal lets faculty know what is expected of them.	①	②	③	④
11. Students respect others who get good grades.	①	②	③	④
12. Teachers feel pressure from the community.	①	②	③	④
13. The principal maintains definite standards of performance.	①	②	③	④
14. Teachers in this school believe that their students have the ability to achieve academically.	①	②	③	④
15. Students seek extra work so they can get good grades.	①	②	③	④
16. Parents exert pressure to maintain high standards.	①	②	③	④
17. Students try hard to improve on previous work.	①	②	③	④
18. Teachers accomplish their jobs with enthusiasm.	①	②	③	④
19. Academic achievement is recognized and acknowledged by the school.	①	②	③	④
20. The principal puts suggestions made by the faculty into operation.	①	②	③	④
21. Teachers respect the professional competence of their colleagues.	①	②	③	④
22. Parents press for school improvement.	①	②	③	④
23. The interactions between faculty members are cooperative.	①	②	③	④
24. Students in this school can achieve the goals that have been set for them.	①	②	③	④
25. Teachers in this school exercise professional judgment.	①	②	③	④
26. The school is vulnerable to outside pressures.	①	②	③	④
27. The principal is willing to make changes.	①	②	③	④
28. Teachers "go the extra mile" with their students.	①	②	③	④
29. Teachers provide strong social support for colleagues.	①	②	③	④
30. Teachers are committed to their students.	①	②	③	④

Appendix D

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 E

CE-Scale

Form L

Directions: Please indicate your level of agreement with each of the following 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 the 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 student learning.	①	②	③	④	⑤	⑥
5. If a child doesn't learn something the first time teachers will try another way.	①	②	③	④	⑤	⑥
6. Teachers in this school are skilled in various methods of teaching.	①	②	③	④	⑤	⑥
7. Teachers here are well-prepared to teach the subjects they are assigned to teach.	①	②	③	④	⑤	⑥
8. Teachers here fail to reach some students because of poor teaching methods.	①	②	③	④	⑤	⑥
9. Teachers in this school have what it takes to get the children to learn.	①	②	③	④	⑤	⑥
10. The lack of instructional materials and supplies makes teaching very difficult.	①	②	③	④	⑤	⑥
11. Teachers in this school do not have the skills to deal with student disciplinary problems.	①	②	③	④	⑤	⑥
12. Teachers in this school think there are some students that no one can reach.	①	②	③	④	⑤	⑥
13. The quality of school facilities here really facilitates the teaching and learning process.	①	②	③	④	⑤	⑥
14. The students here come in with so many advantages they are bound to learn.	①	②	③	④	⑤	⑥
15. These students come to school ready to learn.	①	②	③	④	⑤	⑥
16. Drugs and alcohol abuse in the community make learning difficult for students here.	①	②	③	④	⑤	⑥
17. The opportunities in this community help ensure that these students will learn.	①	②	③	④	⑤	⑥
18. Students here just aren't motivated to learn.	①	②	③	④	⑤	⑥
19. Learning is more difficult at this school because students are worried about their safety.	①	②	③	④	⑤	⑥
20. Teachers here need more training to know how to deal with these students.	①	②	③	④	⑤	⑥
21. Teachers in this school truly believe every child can learn.	①	②	③	④	⑤	⑥

Appendix F

CE-Scale

Short Form

Directions: Please indicate your level of agreement with each of the following 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 the 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 student learning.	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 here 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

Appendix G

Omnibus T-Scale

Directions: Please indicate your level of agreement with each of the following 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 trust the principal.	①	②	③	④	⑤	⑥
2. Teachers in this school trust each other.	①	②	③	④	⑤	⑥
3. Teachers in this school trust their students.	①	②	③	④	⑤	⑥
4. The teachers in this school are suspicious of most of the principal's actions.	①	②	③	④	⑤	⑥
5. Teachers in this school typically look out for each other.	①	②	③	④	⑤	⑥
6. Teachers in this school trust the parents.	①	②	③	④	⑤	⑥
7. The teachers in this school have faith in the integrity of the principal.	①	②	③	④	⑤	⑥
8. Teachers in this school are suspicious of each other.	①	②	③	④	⑤	⑥
9. The principal in this school typically acts in the best interests of teachers.	①	②	③	④	⑤	⑥
10. Students in this school care about each other.	①	②	③	④	⑤	⑥
11. The principal of this school does not show concern for the teachers.	①	②	③	④	⑤	⑥
12. Even in difficult situations, teachers in this school can depend on each other.	①	②	③	④	⑤	⑥
13. Teachers in this school do their jobs well.	①	②	③	④	⑤	⑥
14. Parents in this school are reliable in their commitments.	①	②	③	④	⑤	⑥
15. Teachers in this school can rely on the principal.	①	②	③	④	⑤	⑥
16. Teachers in this school have faith in the integrity of their colleagues.	①	②	③	④	⑤	⑥
17. Students in this school can be counted on to do their work.	①	②	③	④	⑤	⑥
18. The principal in this school is competent in doing his or her job.	①	②	③	④	⑤	⑥
19. The teachers in this school are open with each other.	①	②	③	④	⑤	⑥
20. Teachers can count on parental support.	①	②	③	④	⑤	⑥
21. When teachers in this school tell you something, you can believe it.	①	②	③	④	⑤	⑥
22. Teachers here believe students are competent learners.	①	②	③	④	⑤	⑥
23. The principal doesn't tell teachers what is really going on.	①	②	③	④	⑤	⑥
24. Teachers think that most of the parents do a good job.	①	②	③	④	⑤	⑥
25. Teachers can believe what parents tell them.	①	②	③	④	⑤	⑥
26. Students here are secretive.	①	②	③	④	⑤	⑥

Appendix H

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Directions: Teachers produce a variety of product such as lesson plans, new curricula, student learning as well as numerous services including teaching, advising, counseling, and parent conferences. Think of these products and services as you respond to each item and indicate the degree to which you agree with the following statements about your school.	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1. The *quality* of products and services produced in this school is outstanding	①	②	③	④	⑤	⑥
2. The *quantity* of products and services in this school is high.	①	②	③	④	⑤	⑥
3. The teachers in my school do a good job *coping* with emergencies and disruptions.	①	②	③	④	⑤	⑥
4. Most everyone in the school *accepts* and *adjusts* to changes.	①	②	③	④	⑤	⑥
5. When changes are made in the school, teachers accept and adjust *quickly*.	①	②	③	④	⑤	⑥
6. Teachers in this school are well *informed* about innovations that could affect them.	①	②	③	④	⑤	⑥
7. Teachers in this school *anticipate* problems and prevent them.	①	②	③	④	⑤	⑥
8. Teachers in this school use available resources *efficiently*.	①	②	③	④	⑤	⑥

Appendix I

IRB Approval

Office for Research

Institutional Review Board for the Protection of Human Subjects

THE UNIVERSITY OF ALABAMA RESEARCH

June 2, 2014

Nicole D. Vaux
ELPTS
College of Education
The University of Alabama
Box 870302

Re: IRB # EX-14-CM-076 "Organizational Climate and Academic Optimism as Predictors of Achievement and Effectiveness: A Structural Explanation"

Dear Ms. Vaux:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your protocol has been given exempt approval according to 45 CFR part 46.101(b)(4) as outlined below:

(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

Your application will expire on June 1, 2015. If your research will continue beyond this date, complete the relevant portions of Continuing Review and Closure From. If you wish to modify the application, complete the Modification of an Approved Protocol Form. When the study closes, complete the appropriate portions of FORM: Continuing Review and Closure.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number.

Good luck with your research.

Sincerely,

[redacted]

Director & Research Compliance Officer
Office for Research Compliance
The University of Alabama

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