

ORGANIZATIONAL HEALTH AND MINDFULNESS AS
PREDICTORS OF SCHOOL EFFECTIVENESS:
USING THE BALANCED SCORECARD

by

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A DISSERTATION

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ABSTRACT

This study tested the idea that schools using the Balanced Scorecard, a management monitoring program, would achieve higher school performance compared to schools not using the Balanced Scorecard. The theory argued that close attention to school operations would result in higher test scores for students, a better school climate, and a greater degree of mindfulness than would be the case in non-Balanced Scorecard schools.

The Study examined 61 schools from 6 independent school districts in the state of Georgia. Participants involved in the study completed either the Organizational Climate Index (OCI) (Hoy, 2001) or the M-Scale survey (Hoy, 2001). Some participants completed both surveys. OCI surveys were completed by 1,102 participants and M-Scale surveys were completed by 1,090 participants. Reliability coefficients for the teacher level analysis of the OCI and M-Scale were performed. To examine school effectiveness, two regression analyses were conducted: one for the 3-year average math score and one for the 3-year average ELA score. To examine school climate, four independent samples *t* tests were performed, one for each of the four OCI scales. Finally, to examine the M-scale scores an independent samples *t* test was performed.

Use of the Balanced Scorecard had mixed success. Language scores were higher, but there appeared to be no effect on math scores. While collegial leadership and professional teacher behavior were significant higher in the scorecard schools than in non-scorecard schools,

no significant relationship was found between use of the scorecard and either academic press or institutional vulnerability. Scorecard schools were more mindful than non-scorecard schools.

DEDICATION

This dissertation is dedicated to my wife, Melanie S. Williams, and my daughters, India Elizabeth and Alexis Dianne.

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CHAPTER I

INTRODUCTION

At first glance, monitoring for school improvement may seem an easy enough task. Under the No Child Left Behind Act, schools in the state of Georgia are assigned status as defined by whether or not they make Adequate Yearly Progress (AYP). Furthermore, schools failing to make AYP for consecutive years can fall into the Needs Improvement (NI) category, with varying levels depending on the number of years they fail to meet AYP. A brief glance at any school's AYP report offers a final score. However, this score constitutes only one small part of the overall picture. Not surprisingly, the climate of the school and performance of faculty can suffer when schools fail to meet the AYP mark. Principals may struggle to find ways to improve climate and encourage teachers to refocus on meeting the benchmark. Conversely, schools who meet AYP may develop a false sense of security, resulting in a tendency to relax and let down their collective guard. Schools need some method of measurement that allows them to avoid each situation. The problem with current school improvement plans is that they fail to accomplish this task. Instead, they are reviewed at the year's end and offer little more than a summative report. Many school improvement plans offer no strategy at all. Instead, they relate only what happened during the previous school year and provide no means for improvement during the course of the next school year.

Background of the Study

Although administrators and teachers can state with certainty whether or not their school is an AYP school, a complete picture often cannot be painted. Staff members cannot give hard facts based on actual data to describe their particular schools. Because teachers cannot or do not analyze current student test data, schools fall into one of two traps. Teachers either fail to understand the actual state of the school and recognize that they are merely NI and feel hopeless, or they gain a sense of false security because they are an AYP school and grow complacent. In either case the faculty operates without a strategic focus.

Need and Purpose

Because a pervasive outcome measure has the effect of constantly monitoring performance across such organizational characteristics as organizational climate and overall faculty mindfulness, the balanced scorecard approach is an effective strategy for school improvement. The concept of mindfulness is of theoretical interest here because the balanced scorecard may represent an application of the general notion of mindfulness. The constant scrutiny of the kind captured by mindfulness and represented by the balanced scorecard should have a relationship to organizational health. This assumption is based on the belief that a healthier organization is a more mindful organization. This leads to the assumption that the balanced scorecard is a manifestation of mindfulness and that overall organizational health and the balanced scorecard are compatible with each other. As Kaplan and Norton (1996a) emphasize, the balanced scorecard is not a static tool for measuring success. It is, rather, a tool that provides a continual progress monitoring device making it amenable to the concept of mindfulness. Schools that use the balanced scorecard should have higher levels of mindfulness,

healthier climates, and exhibit more effective outcomes than schools that do not use the balanced scorecard approach.

The purpose of this study was to determine if the use of the balanced scorecard can provide schools with the necessary tools to monitor progress more accurately and increase organizational climate, mindfulness, and overall effectiveness. This was accomplished by conducting a comparison of schools that utilize the balanced scorecard against schools that do not use the balanced scorecard. The structure of this tool will provide schools with the opportunity to refine their target for success and use leading and lagging indicators to monitor progress. It is believed that this will result in better organizational health and an increased level of mindfulness in the school environment. Furthermore, it is believed that schools using the balanced scorecard will be more effective academically than schools that do not.

Definition of Concepts

The balanced scorecard is a measurement and management system that allows organizations to clarify their vision and strategy. “The Balanced Scorecard assists organizations in overcoming two key issues: effective organizational performance measurement and implementing strategy” (Niven, 2002, p. 3). Strategy is centered on strategic goals, called S.M.A.R.T. goals, which are aligned to the organization’s mission. S.M.A.R.T. goals are described as goals that are specific, measurable, attainable, relevant, and time-oriented. Because the balanced scorecard uses leading and lagging indicators, it allows organizations to convert reports into actions that can help them better achieve organizational goals. While lag indicators represent results of actions previously taken, lead indicators are used to drive performance and help organizations translate strategy into action. Use of the balanced scorecard forces schools to

respond immediately to current problems by executing a continuous school improvement model. One such model is the 8-step process introduced by Davenport and Anderson (2002). The 8-step process gives a rapid intervention to problems identified by using the balance scorecard. This ability to identify and respond to problems is characteristic of organizations that are considered mindful.

Mindfulness is accurately defined as the continuing scrutiny present in some organizations today (Weick & Sutcliffe, 2001). While mindless organizations have a tendency to focus on success and run the risk of growing complacent, mindful organizations not only anticipate problems, they actively look for them. “Mindfulness is a paradox of sorts: it sees problems as opportunities and views successes as problematic; it is both optimistic and skeptical” (Hoy, 2003, p. 97). Problems are viewed as opportunities for growth in mindful organizations. Mindfulness is said to be high in highly reliable organizations (HROs) (Weick & Sutcliffe, 2001). HROs exhibit five distinct characteristics. They are a preoccupation with failure, a reluctance to simplify, sensitivity to operations, a deep commitment to resilience in the face of adversity, and deference to front line expertise in the event of crisis.

Broadly defined, organizational climate is “a relatively enduring quality of the school environment that is experienced by participants, affects their behavior, and is based on their collective perceptions of behaviors in schools (Hoy & Miskel, 2005, p. 185). It is important to draw a distinction between culture and climate. While culture more commonly refers to organizational norms and is manifest in patterns of behavior, climate is based on the perceptions of individuals. Climate is a subset of culture. The concept broadly defines life in school organizations and, in this study, is comprised of four subtests. These four subtests are collegial leadership, professional teacher behavior, achievement press, and institutional vulnerability.

Collegial Leadership is present when the principal is focused on meeting both the social needs of the faculty and achieving the goals of the school. Professional teacher behavior exists where collegiality and respect among teachers are high. Teachers also exhibit higher levels of commitment to students. A school that sets and achieves high academic standards has high achievement press. Teachers, parents, and students buy into these academic standards. Finally, low institutional vulnerability reflects the principal and teachers enjoying a higher level of immunity from external pressures.

Talcott Parsons states that all social systems or subsystems must meet four functional needs in order to continue (Gingrich, 2002). These functional needs can be remembered by the acronym AGIL. The four needs are adaptation, goal attainment, integration, and latency. It is recognized that the four are interrelated and interdependent. Likewise, school effectiveness cannot be defined by a single measure. Hoy and Miskel (2005) have expanded upon this work and placed the effectiveness definition into a broad conceptual framework. School climate, student attitude, and stockholder perceptions are all elements of effectiveness. Hoy and Ferguson (1985) point out that “research on effective schools is limited by the same weaknesses as the research on effective organizations--the absence of both a sound theoretical framework and a careful definition and measurement of the concept” (p. 117). For these reasons they advocate for the Parsonian model when measuring effectiveness in schools. For the purpose of this study school effectiveness was defined and measured using the AGIL method supplied by Parsons and expanded upon by Hoy and Ferguson.

Definition of Terms

The following additional definitions are provided as a means of insuring understanding and uniformity of the specified terms throughout the study. The definitions are consistent with the literature reviewed and are expressed as such. They are not exclusively the words of the researcher.

Balanced Scorecard is defined as a management system (not only a measurement system) that enables organizations to clarify their vision and strategy and translate them into action (Kaplan & Norton, 1996b).

Effectiveness is 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. 121). It is measured in this study as performance on the Math and ELA scores on the Georgia C.R.C.T. and graduation test, the degree of organizational mindfulness, and the degree of collegial leadership, professional teacher behavior, academic press, and institutional vulnerability.

Mindfulness is the extent to which teachers and administrators in a school carefully and regularly look for problems, prevent problems from becoming crises, are reluctant to oversimplify events, focus on teaching and learning, are resilient to problems, and defer to expertise (Hoy, 2001). It is measured in this study as the score on the M-Scale. (See Appendix C)

Organizational Climate describes a harmony present when the institutional, administrative, and teacher levels work in concert; and the school meets functional needs as it successfully copes with disruptive external forces and directs its energies toward its mission (Hoy, 2001). Dimensions of organizational climate include achievement press, collegial

leadership, institutional vulnerability, and professional teacher behavior. It is measured in this study as the score on the OCI. (See Appendix B)

Achievement Press describes a school that sets high but achievable academic standards and goals. Students persist, strive to achieve, and are respected by each other and teachers for their academic success. Parents, teachers, and the principal all exert pressure for high standards and school improvement (Hoy, Smith, & Sweetland, 2002, p. 42).

Collegial Leadership is defined as principal behavior directed toward both toward meeting the social needs of the faculty and achieving the goals of the school. The principal treats teachers as professional colleagues, is open, egalitarian, and friendly, but at the same time sets clear teacher expectations and standards of performance (Hoy et al., 2002, p. 42).

Institutional Vulnerability is defined as the extent to which the school is susceptible to a few vocal parents and citizen groups. High vulnerability suggests that both teachers and principals are unprotected and put on the defensive (Hoy et al., 2002, p. 42)

Professional Teacher Behavior is marked by respect for colleague competence, commitment to students, autonomous judgment, and mutual cooperation and support (Hoy et al., 2002, p. 42).

Scope and Limitations

There were a number of limitations inherent to this study. First, the design and regular use of a particular school's balanced scorecard could not be monitored by the researcher. The study obviously focused on some schools that use the balanced scorecard and others that do not. It is recognized that among the schools that use the balanced scorecard there is variation in how much of the balanced scorecard is implemented and a variation in regards to how it is monitored.

This study did not measure the degree of implementation as a predictor of school performance. Rather, it attempted to show that by virtue of committing to the balanced scorecard, a school would improve because it had made a formal decision to increase the scrutiny of its operations and would be more responsive to needed changes. This is a result of the balanced scorecards design. Regardless of what other tools non-scorecard schools use, it is believed the balanced scorecard is superior.

Second, due to the possible failure of respondents to answer surveys, results may not accurately reflect the opinions of all members of the population studied. Third, the study is in one southeastern state, so the findings may not be easily generalized. Fourth, because some schools may already have continuous monitoring systems that do not use the balanced scorecard in place, accuracy of the comparison may be compromised. There is an inherent limitation in doing cross-sectional survey research because no account is made of what changes might occur over time. Finally, survey research is limited by the reliability and validity of the measures.

Assumptions

There were several assumptions held by the researcher in regard to this study. First, it was assumed that all surveys collected were answered honestly and accurately. Second, it was assumed that all survey items were explained to and understood by all respondents. Third, it was expected that about one half of the schools participating in the study understood the development and implementation of the balanced scorecard approach and therefore assumed that one half did not.

Research Questions

RQ1: Are schools that use the balanced scorecard more effective than schools that do not use the balanced scorecard?

RQ2: What is the relationship of a balanced scorecard to school climate and its dimensions?

RQ3: What is the relationship of the balanced scorecard to mindfulness?

Hypotheses

In the following chapters a review of the literature will be presented. A theory describing the relationship of the balanced scorecard, organizational climate, mindfulness, and school effectiveness will be developed. To answer the research questions, the following hypotheses will test the theory.

H1: Schools implementing the balanced scorecard are more effective than schools not using the balanced scorecard.

H2: Schools implementing the balanced scorecard will have higher levels of organizational climate along all four dimensions of the OCI than schools not using the balanced scorecard.

H3: Schools implementing the balanced scorecard will have higher levels of mindfulness than schools not using the balanced scorecard.

Summary

School improvement is often limited in its impact due to the inflexible nature of the school improvement plan. The balanced scorecard approach to school improvement affords

schools the opportunity to design and implement plans that are as useful and continuously current as the instruments on a car's dashboard. Constant monitoring of the various indicators may create a more mindful attitude. Mindful schools make decisions based on a continuing scrutiny that invites, if not seeks, problems. They view these problems as opportunities to "welcome the bad day" (Hoy, 2003) and thus make adjustments to the status quo. This collective agility and resolve may improve teacher professionalism and collegial behavior and directly impact the climate of academic expectations. The focus of this study was to demonstrate the connection of these variables.

CHAPTER II

REVIEW OF LITERATURE

Introduction

This chapter will introduce the concepts of the balanced scorecard, mindfulness, organizational climate, and effectiveness. An argument will be presented to show that all three of these concepts capture different elements of school effectiveness. Finally, it will be argued that the use of the balanced scorecard leads to more effective schools because the internal operations of the school support monitoring and improving performance. Thus, schools that use the balanced scorecard will be more effective generally and with respect to mindfulness and climate specifically. The following review of literature will discuss the balanced scorecard, mindfulness, school organizational climate, school effectiveness, and the relevance of the four to each other. The theory that binds these concepts will be presented as will the hypotheses that test the theory.

Conceptual Framework

The concept of this study is that the balanced scorecard will have a positive correlation to school effectiveness, school climate, and mindfulness in the school. Each of the constructs mentioned above have been defined in chapter I and will be expanded upon in the review of literature section of this chapter. The study will attempt to show that all four work interdependently.

Kaplan and Norton (1996b) define the balanced scorecard as a management system that enables organizations to clarify their vision and strategy and translate them into action. They call

attention to the fact that the balanced scorecard is not a static tool for measuring success. Rather, the balanced scorecard is a tool that provides organizations a continual progress monitoring device. The conceptual framework suggests that because the balanced scorecard stresses putting strategy into action its use will improve schools effectiveness, climate, and mindfulness.

Effectiveness will be defined not only as an organization achieving goals but also demonstrating efficiency in the operations while achieving goals. This definition is based on the work of Hoy and Ferguson (1985), which is an expanded definition originally provided by Talcott Parsons. The multi-dimensional nature of this definition makes it amenable to the balanced scorecard approach because it provides a more complete measure of success.

The definition of climate will be consistent with that provided by Hoy and Miskel (2005). Climate is “the relatively enduring quality of the school environment that is experienced by participants, affects their behavior, and is based on their collective perception of behavior in school” (Hoy & Miskel, 2005, p. 185). The study will link climate generally to the AGIL paradigm elaborated on by Hoy and Ferguson (1985) and more specifically to integration and latency.

For the purpose of this study mindfulness will be defined using the definition provided by Weick and Sutcliffe (2001) and expanded upon by Hoy (2001). Mindfulness will be shown to be complementary to effectiveness and climate because all three are concerned with problem solving, collaboration, and anticipating the unexpected. It will be further established that mindfulness works to strengthen the organization at the individual level but also can have a positive impact on the overall quality of the organization. The study will reference Hoy et al. (2006) to show that organizational mindfulness leads to overall effectiveness because individual participants become more understanding of effective school organization.

The conceptual framework of this study is that the balanced scorecard, mindfulness, and a positive organizational climate all work jointly to make a school more effective. The intricate nature of measuring effectiveness is in part why the balanced scorecard can be useful. Because the balanced scorecard enables more immediate responsiveness, mindfulness and organizational climate will be positively impacted by its use.

The Balanced Scorecard

Many schools in America today borrow methods of operation and management tools from the business world. While some of these methods and tools may seem to be out of place or, at best, a poor fit, others have helped school systems and individual schools progress. One such example is the balanced scorecard. The balanced scorecard was first introduced in 1992 to help businesses better monitor performance (Kaplan & Norton, 1992). The balanced scorecard was designed to translate an organization's strategy into terms that could be understood and acted upon by everyone in the organization. Toward that end, the first balanced scorecard used the language of measurement to define the meaning of strategic concepts such as quality, customer satisfaction, and growth. This important tool gave birth to the development of a one-page strategy summary known as a strategy map. These two tools have worked their way into the field of education. Although not yet widely used, the popularity of the balanced scorecard is growing.

The balanced scorecard is built around an organization's mission. Main goal areas that support the mission are identified and strategic objectives are assigned to each. Each strategic objective corresponds to units of measure, trend data, and an annual measurable goal. The use of the balanced scorecard forces school systems and individual schools to act immediately upon data linked specifically to the goals established within the document itself.

The immediacy of the response elicits the use continuous school improvement model. Many school systems use, for example, the 8-step process of continuous improvement (Davenport & Anderson, 2002), which identifies problems using data similar to that presented by the balanced scorecard. Resolutions follow a standard problem-solving sequence in which solutions are proposed based on data and various remedies are implemented and monitored. The value of any problem-solving sequence is, however, in applying useful data drawn from a continuing source of information; hence, its connection to the balanced scorecard. Thus, it is not the 8-step process that is important; rather, it is the kind of sequential decision making that using the balanced scorecard virtually forces on the organization. As the data become available, the school cannot simply turn its collective head and ignore relevant information.

The business world has long recognized that in order to function effectively, an organization has to be aligned around its strategy. The challenge is to align management processes and systems to strategy (Kaplan & Norton, 2001b). In response to the need for strategic enterprise management, the Balanced Scorecard Concept was introduced in a 1992 *Harvard Business Review* article (Kaplan & Norton, 1992).

Core Principles of the Balanced Scorecard

The balanced scorecard framework was implemented by applying five core principles. The first is mobilizing change through executive leadership. As noted by its creators, “a successful Balanced Scorecard program should be a change project, not a ‘metrics’ project” (Kaplan & Norton, 2001a, p. 64). Initially the focus is on mobilization, or getting the process launched. At this stage, the capacity for organizational learning at the executive level (i.e., strategic learning) is “perhaps the most valuable aspect of the Balanced Scorecard” (Kaplan &

Norton, 1996, p. 24). The focus then shifts to governance, with emphasis on team-based approaches. By creating and clearly articulating desired outcomes and the drivers of those outcomes, “executives can channel the energies, the abilities, and the specific knowledge held by people throughout the organization towards achieving the [organization’s] long-term goals” (Kaplan & Norton, 1996, p. 56). Thus by integrating long-range strategic plans with short-term measurable objectives, the balanced scorecard evolves into a successful management system for implementing an organization’s strategic vision (Kaplan, 1994).

The second core principle of the balanced scorecard is translating strategy into operating terms. Baruah and Haley (2004) described the balanced scorecard as being much like an onion. It is not just a performance measurement system; it is a multi-layered tool, with each layer serving a different purpose and audience. At each level (or layer), strategy maps proved beneficial for their ability to communicate strategy to an entire organization (Kaplan & Norton, 2000). Such maps “specify cause-and-effect relationships which [make] them explicit and testable” (Kaplan & Norton, 2000, p. 176).

Aligning organizations with strategy is the third core principle of the balanced scorecard. An organization’s strategy theme was mapped by applying linked objectives, measures, and initiatives across four perspectives: financial, customer, [internal] process, and learning and growth. Each objective and measure was supported by one or more strategic initiatives. For example, the first column of such a map might show, for each perspective, how value-creating objectives were linked to the theme. A second column might show measures and targets needed to realize the theme’s objective. And a third column might list cross-unit or cross-functional projects aimed at realizing synergies for each perspective and the dollars budgeted for them.

Kaplan and Norton (2006) found the mapping of strategic themes to be particularly well-suited to the public sector where organizations were diverse but limited in their freedom to experiment with structural change. Focusing on strategy, such early adopters as Mobil Oil, Cigna Insurance, Brown and Root Energy Services (Rockwater Division), and Chemical Retail Bank (now Chase Bank) employed the scorecard with impressive results. As pointed out by MacStravic (1999), having specific data to back compelling claims made in advertising was a major benefit of using a balanced scorecard.

The fourth core principle of the balanced scorecard is making strategy everyone's job. Because the balanced scorecard is centered on the organization's mission, all employees are identified as essential. And because a well developed mission statement is the product of collaboration, it is expected that all employees have voice and buy in concerning the mission. Therefore, all members of an organization recognize the importance of self-monitoring of performance and processes.

Finally, the fifth core principle is making strategy a continual process. By design, the balanced scorecard is a powerful management system. It serves as the tool to communicate strategy, establish targets, and align people and teams. Perhaps most importantly, it provides a continual feedback loop that is linked directly to learning about the strategy. This is a critical and innovative aspect of the balanced scorecard. This continual learning process does not allow strategy to grow stagnate. "The balanced scorecard enables managers to monitor and adjust the implementation of their strategy and make fundamental changes in the strategy itself" (Kaplan & Norton, 1996b, p. 23).

The Balanced Scorecard in the Non-Profit Setting

Beginning in 1996, the balanced scorecard was applied to non-profit organizations as well. Shortly after the founding of the Social Enterprise program at Harvard Business School, Kaplan approached United Way of America, United Way of Southeastern New England, and several other organizations as prospective pilot sites for applying the balanced scorecard in society's "third sector."

Like its corporate counterpart, the non-profit balanced scorecard required total commitment on the part of the executive leadership team. Strategy rather than job description was placed at the center of the nonprofit system. And there was emphasis on "the value of communicating to all units and individuals, aligning them to the strategy, and encouraging them to find innovative ways to achieve strategic outcomes in their daily operations" (Kaplan, 2001, p. 368).

Kaplan (2002) made the valid argument that success in this sector should be measured by how well the organizations provided benefits to their constituents, not by financial performance based on donations, expenditures, and operating expense ratios. Since financial success was not the primary goal, nonprofits found it necessary to modify the balanced scorecard framework. The mission of the organization was elevated; that is, it was featured and measured at the highest level of the scorecard. After all, "[a] *nonprofit agency's mission represents accountability to society, the rationale for its existence and ongoing support*" (Kaplan, 2002, p. 4). In addition, nonprofits had to expand the definition of *customer*. Both the donor and recipient perspectives could be included in the nonprofit balanced scorecard.

Using this format, the balanced scorecard "enabled nonprofit organizations to bridge the gap between vague mission and strategy statements and day-to-day operational actions" (Kaplan,

2001, p. 369). It also provided much-needed information to donors and support organizations. The overall result has been a more efficient marketplace that rewards effectiveness. By extension, Inamdar and Kaplan (2002) examined the application of the balanced scorecard to nine innovative healthcare provider organizations. The results of their 2-year study also indicated “measurable performance improvement in competitive market positioning, financial results, and customer satisfaction” (Inamdar & Kaplan, 2002, p. 194). The value of the balanced scorecard as a tool for organizational improvement is clear.

School Applications of the Balanced Scorecard

Like so many tools from the business world, the balanced scorecard surfaced as a tool in schools not long after it was introduced to the non-profit sector. In 1999, the Fulton County, Georgia district hired former United Way Vice President Martha Greenway as the system’s Executive Director of Research, Planning, and Policy. Greenway’s primary goal was to create a balanced scorecard that “focused on strategy formulation and execution, not just reporting performance” (Kaplan & Lee, 2007, p. 1). The scorecard developed by Greenway and the Fulton County Board of Education included five perspectives from which they would measure progress. These perspectives were: student achievement, stakeholder involvement, operational processes, staff learning and growth, and financial performance. The board then set goals for each of the perspectives and established targets for each.

In March of 2004, Fulton County Schools became the first district in the nation to acquire district-wide SACS accreditation. It is significant to note the accreditation team pointed to the schools’ effective use of the balanced scorecard as one of the system’s strengths. The team observed the “the Balanced Scorecard has provided all district and school personnel along with

other stakeholders with a clear understanding and awareness of expectations” (Kaplan & Lee, 2007, p. 6).

Clarifying goals and articulating strategy allows teachers to focus more on the real challenge of school. Rather than waiting for end-of-the-year reports, a balanced scorecard in the school allows professional staff members the opportunity to check progress throughout the year. This helps bring focus to school improvement plans that are cumbersome and do little more than collect dust. The renewed focus has an overall positive impact on school effectiveness, overall organizational climate of a school, and mindfulness.

How the Balanced Scorecard Works

Using the Fulton County template as a general guide, a school system balanced scorecard can be divided into four perspectives or goal areas. They are student achievement, stakeholder satisfaction, effective administrative processes, and staff learning and growth. These elements work in concert to achieve the school systems mission. They are common threads found throughout effective schools research and provide a strong framework for developing scorecard measures.

“A scorecard should contain just enough data to give a complete picture of organizational performance toward achieving the overall strategy . . . and no more”(Orion Development Group, 2004). This means that each of the four perspectives, again referred to as goal areas, should contain a number of sub-measures. These sub-measures are labeled as strategic objectives. These strategic objectives are further divided into performance measures. A quality balanced scorecard may contain an overall total of 20-25 performance measures. Designers however should be mindful of falling into the trap of trying to measure everything. It is vital to limit the measures to

a more controllable number so that organizational direction and strategy are clearer. Having too many performance measures defeats the purpose of a balanced scorecard because it leaves employees uncertain as to what the top priorities are.

There is certainly no specific template to be utilized when designing a good balanced scorecard. Rather than adopting the tool, each organization should adapt their scorecard to fit what they are trying to capture. The following template provides general guidelines for building a balanced scorecard that is relatively easy to read and interpret.

The first column of a balanced scorecard typically contains the goal areas determined by the school system. These should be determined by the members of the Board of Education and system leadership team. The goal areas should be linked accurately to the system improvement plan. This should also link directly to the system strategy map and serve as the foundation of the balanced scorecard. “While the strategy map is about development of strategy, the balanced scorecard is about strategic execution” (Orion Development Group, 2004). The usual public school balanced scorecard would reflect student achievement as goal area number 1. All other goals would be listed as illustrated in Figure 1.

Goal Area 1
Student Achievement

Figure 1. BSC Column 1, Goal Area 1.

The second column typically contains the strategic objectives of the school system. These too should be determined by members of the Board of Education and system leadership team members. The strategic objectives must also be linked to the system improvement plan. Strategic objectives are more specific than goal areas. They act more as a means to obtaining the objectives. As illustrated in Figure 2, goal area number one, student achievement, is divided into two strategic objectives. They are students master the curriculum and students are nationally competitive.

Goal Area 1	Strategic Objective #1	
Student Achievement	Students Master the Curriculum	
	<table border="1"> <thead> <tr> <th data-bbox="285 999 557 1031">Strategic Objective #2</th> </tr> </thead> <tbody> <tr> <td data-bbox="285 1031 557 1194">Students are Nationally Competitive</td> </tr> </tbody> </table>	Strategic Objective #2
Strategic Objective #2		
Students are Nationally Competitive		

Figure 2. BSC Columns 1 & 2, Goal Area 1, & Strategic Objective.

Determining these strategic objectives can be a very challenging step in developing the balanced scorecard. It requires all stakeholders involved in the development phase have a high level of understanding of all the relevant objectives needed to achieve the system mission. Establishing the objectives provides the overall framework for the strategy.

The third column provides yet another level of specificity to the balanced scorecard. This step defines specific performance measures for each objective. For the objectives listed in the example, state and national test results provide convenient performance measures (see Figure 3).

Goal Area 1	Strategic Objective #1	Performance Measures
Student Achievement	Students Master the Curriculum	SO #1.A = CRCT (Reading)
		SO #1.B = CRCT (Math)
		SO #1.C = Writing Assessment
		SO #1.D = HSGT
	Strategic Objective #2	Performance Measures
	Students are Nationally Competitive	SO #2.A = I.T.B.S. (Reading)
		SO #2.B = I.T.B.S. Math
		SO #2.C = SAT
		SO #2.D = ACT

Figure 3. BSC Columns 1 through 3, Goal Area 1, Strategic Objectives, & Performance Measures.

Determining the unit of measure in the fourth column is a matter of simply plugging in the information as it relates to standardized tests. The units of measure are defined as they relate to the specific performance measures (see Figure 4). For example, SO #1.A is listed as a state Criterion Referenced Competency Test (CRCT). Student scores are reported as either “does not meet” grade level expectations, “meets” grade level expectations, or “exceeds” grade level expectations. This unit of measure is constant for SO #1.B and C as well. SO #D is reported as either “pass” or “fail.” Because students are offered multiple opportunities to pass the graduation tests, the scorecard example shows first-time passing rate as the agreed upon unit of measure.

Gathering trend data is the next step in balanced scorecard development. Typically balanced scorecards for schools and school systems show annual summative data. Because the data are linked to goals, continual focus on achieving the goals is provided. This affords teachers, administrator, indeed all stakeholders, the opportunity to be mindful of critical target areas. It also provides clarity in terms of priorities. This calls for school systems to seek formative data for the purpose of monitoring so they can be more responsive to feedback. This is a major benefit of the balanced scorecard as timely information is critical for continuous improvement. This

section of the balanced scorecard is color coded for quick reference. Areas marked in red indicate that the specific strategic objective showed a decrease from the previous year. Areas marked yellow reflect improvement over the previous year but failure to meet the target. An area marked green indicates that the target for the specific strategic objective was met. This allows all faculty members and stakeholders to quickly identify target areas and refine strategy. These would be listed as illustrated in Figure 5.

Goal Area 1	Strategic Objective #1	Performance Measures	Unit of Measure
Student Achievement	Students Master the Curriculum	SO #1.A = CRCT (Reading)	% Meets + Exceeds
		SO #1.B = CRCT (Math)	% Meets + Exceeds
		SO #1.C = Writing Assessment	% Meets + Exceeds
		SO #1.D = HSGT	% Passing 1st Time
	Strategic Objective #2	Performance Measures	Unit of Measure
	Students are Nationally Competitive	SO #2.A = I.T.B.S. (Reading)	% > Peers
		SO #2.B = I.T.B.S. Math)	% > Peers
		SO #2.C = SAT	Ave Score
		SO #2.D = ACT	Ave comp score

Figure 4. BSC Columns 1 through 4, Goal Area 1, Strategic Objectives, Performance Measures, and Unit of Measure.

Goal Area 1	Strategic Objective #1	Performance Measures	Unit of Measure	Trend Data		
Student Achievement	Students Master the Curriculum			2007	2008	2009
		SO #1.A = CRCT (Reading)	% Meets + Exceeds	86%	91%	93%
		SO #1.B = CRCT (Math)	% Meets + Exceeds	68%	72%	74%
		SO #1.C = Writing Assessment	% Meets + Exceeds	94%	82%	89%
		SO #1.D = HSGT	% Passing 1st Time	94%	92%	94%
	Strategic Objective #2	Performance Measures	Unit of Measure	Trend Data		
	Students are Nationally Competitive			2007	2008	2009
		SO #2.A = I.T.B.S. (Reading)	% > Peers	59%	61%	58%
		SO #2.B = I.T.B.S. Math)	% > Peers	51%	48%	49%
		SO #2.C = SAT	Ave Score	1441	1439	1468
	SO #2.D = ACT	Ave comp score	18.4	19.3	19.5	

Figure 5. BSC Columns 1 through 5, Goal Area 1, Strategic Objective, Performance Measures, Unit of Measure, and Trend Data.

Gathering data and performance measure information can be very labor intensive during the development of the balanced scorecard. It is important to involve teacher leaders in this process to help them better understand the goal areas and the details involved in the balanced scorecard. Once the initial data are collected, updating on an annual basis is an easy enough task.

The final task is to fill in the last column. Specifically, these are the target goals set by the organization (see Figure 6).

Goal Area 1	Strategic Objective #1	Performance Measures	Unit of Measure	Trend Data			Target
Student Achievement	Students Master the Curriculum			2007	2008	2009	2010
		SO #1.A = CRCT (Reading)	% Meets + Exceeds	86%	91%	93%	96%
		SO #1.B = CRCT (Math)	% Meets + Exceeds	68%	72%	74%	75%
		SO #1.C = Writing Assessment	% Meets + Exceeds	94%	82%	89%	91%
		SO #1.D = HSGT	% Passing 1st Time	94%	92%	94%	95%
	Strategic Objective #2	Performance Measures	Unit of Measure	Trend Data			Target
	Students are Nationally Competitive			2007	2008	2009	2010
		SO #2.A = I.T.B.S. (Reading)	% > Peers	59%	61%	58%	70%
		SO #2.B = I.T.B.S. Math)	% > Peers	51%	48%	49%	70%
		SO #2.C = SAT	Ave Score	1441	1439	1468	1520
	SO #2.D = ACT	Ave comp score	18.4	19.3	19.5	21	

Figure 6. BSC Columns 1 through 6, Goal Area 1, Strategic Objective #1 & #2, Performance Measures, Unit of Measure, Trend Data, and Target.

S.M.A.R.T. Goals

Setting goals is a critical task when building a balanced scorecard. The goal development process should include input from stakeholders and be linked to the trend data provided. Most importantly, balanced scorecard goals must be S.M.A.R.T. goals. The Georgia Leadership Institute for School Improvement (G.L.I.S.I.) is an advocate for the balanced scorecard and the use of S.M.A.R.T. goals as a critical piece.

According to G.L.I.S.I., the acronym S.M.A.R.T. establishes a set of criteria that an organization's goals must have in order to be well-focused and achievable. That set of criteria is Specific, Measurable, Attainable, Relevant, and Time-Oriented (Georgia Leadership Institute for School Improvement, 2008).

The S in S.M.A.R.T. stands for Specific. A specific goal has a greater chance of being accomplished than a general goal. A goal that is specific not only states a single performance result, it also helps an organization focus strategy. Specific goals tell an organization what they

want to accomplish, why they want to achieve the goal, and who is involved in helping achieve the goal.

The M in S.M.A.R.T. stands for M measurable. Measurable goals allow organizations to assess progress. They include concrete criteria, provide targets, and are linked to baseline or trend data. All of these can be expressed in numerical value referred to as performance measures. These targets also provide the unit of measure to which each goal is linked. Questions to help determine if a goal is measurable include the following: How much? How many? and How will we know we have accomplished our goal?

The A in S.M.A.R.T. stands for A attainable. Attainable goals can be difficult to establish because they must do two things that can be viewed as paradoxical. First, effective S.M.A.R.T. goals must challenge an organization to improve. Setting goals that are well within reach serve to produce little fear of failure. This generates a complacency that is unhealthy and contradicts the concept of mindfulness linked to the balanced scorecard. Setting goals too high, however, can serve to set organizations up for failure. This is why attainable goals must be realistic relative to the resources available. Setting goals that generate a healthy amount of stress needed to create the preoccupation of failure present in mindful organizations without setting the bar hopelessly high requires careful collaboration.

The R in S.M.A.R.T. stands for R relevant. Relevant goals closely align with system plans and priorities. They aim at results that must be either improved upon or maintained if a system is to successfully complete its mission. Relevant goals also help systems maintain focus and ensure they are maximizing resources.

The T in S.M.A.R.T. stands for Time-oriented. Unless goals are bound by time and have deadlines, there is no sense of urgency in completing them. This, once again, can be detrimental

to the mindfulness of an organization. Providing deadlines with milestones or benchmarks not only heightens urgency but also begs for a continuous monitoring system.

Without S.M.A.R.T. goals a balanced scorecard does little for an organization. Goals that do not meet the S.M.A.R.T. criteria get lost either because they are too vague or too lofty. Either way, mindfulness suffers and frustration grows because members of the team do not realize their role in helping achieve the goal. The balanced scorecard makes organizations carefully set goals and find means to constantly monitor progress towards the goals. This constant monitoring can be expressed as the constant scrutiny present in mindful organizations.

Upon completion, the balanced scorecard provides one the ability to quickly identify the goals and strategic intent of the organization. And, if the goals written follow the S.M.A.R.T. criteria “a novice reading the goal should be able to explain exactly what the results are when the goal is achieved”(Georgia Leadership Institute for School Improvement, 2008, p. 8). Any stakeholder in a school, for example, can reference the goal area in relation to the strategic object and on down the line. Most important, all employees can view the target and be more mindful of how to progress towards completing the mission of the school. A complete balanced scorecard often includes a separate page for each goal area.

Constructing a balanced scorecard can be a time and labor intensive endeavor. It will certainly require time investment at the administrative level to build the mission and vision around which the goals are established. Administrators would also be wise to reserve time at the end to review measures and targets. The majority of the time will be devoted to the leadership team. This group has the responsibility for selecting the measures, precisely defining them, collecting the data, and so forth. Administrators should build the balanced scorecard slowly by

focusing at first on one goal area. This helps build leadership capacity within the organization and increases the likelihood of buy-in.

Section Summary

The preceding section gave an explanation of what the balanced scorecard is and how it works. The continuous scrutiny of the balanced scorecard and its effects on school achievement has not been empirically demonstrated. This is because of the varieties of implementation and the relative newness of the innovation. In spite of the varieties of implementation, the argument offered here is that schools that utilize the balanced scorecard will be better off than those that do not, by virtue of simply committing to the balanced scorecard. The explanation for their success is that adoption of the balanced scorecard fosters a continual examination of school operations and thus elicits cooperation from school people to find problems and solve them.

Effectiveness

Effectiveness is the dependent variable in this study. Effectiveness is defined not merely as achieving goals but also in the efficiency of the operations of the organization to achieve goals. Using a theoretical framework from Talcott Parsons (Hoy & Ferguson, 1985), the study will establish the multidimensionality of school effectiveness and its connection to the balanced scorecard, mindfulness, and climate.

A.G.I.L. Model of Effectiveness

Hoy and Ferguson (1985) conceived of school effectiveness along two broad dimensions: one that contains behaviors of adaptation and goal attainment, the other containing integration and latency. They linked school effectiveness directly to the Parsonian AGIL model.

Adaptation in the Parsonian model is referred to as an organizations ability to accommodate to the environment. In the context of the school setting, Hoy and Ferguson (1985) suggest “adaptation in the form of successful accommodation to internal and external forces” (p. 122). Where adaptation is high, teachers and administrators display a greater level of innovation and maximize all resources.

Goal attainment measures organizations’ productivity relative to their ability to set and accomplish goals. Organizations are wise to select a limited number of goals in order to better ensure success. The measure of goal attainment in the school setting most often relates directly to the academic achievement of all students.

Effectiveness under the Hoy and Ferguson (1985) model is further measured by the absence of conflict within the school in regard to the relationships among professional staff. The Parsonian model refers to this as integration, which is defined as the ability to maintain unity and solidarity within the system. Where integration is present teachers act as a cohesive unit. Teacher turnover and absentee rates would be low.

Latency deals with an organization’s ability to maintain motivational and value patterns. Hoy and Ferguson’s (1985) adaptation of latency refers to members of an organization being motivated and committed to the organization. The manifestation of latency would be seen in a school or system where staff learning and growth are high and job satisfaction is as well.

Measuring Effectiveness in Schools

As stated in the first chapter of this study, effectiveness will be defined relative to the Parsonian AGIL model adapted by Hoy and Ferguson (1985). Measuring organizational effectiveness can be a difficult task. Basic input-output philosophy would provide a very narrow definition at best. Measuring any business organization's effectiveness solely by financial measures provides only a retrospective view of what has already happened. Furthermore, it ignores any and all other aspects of the organization. Parson's AGIL paradigm states that if any system or organization is to survive it must (1) adapt to its environment, (2) attain its goals, (3) integrate its components, and (4) maintain a latent pattern. Adaptation refers to the dilemma of acquiring adequate resources. Goal attainment is the process of establishing and achieving goals. Integration refers to the issue of maintaining harmony and dexterity among the organization. And latency refers to the problem of creating, communicating, and maintaining the organization's unique culture and norms. For a system to be effective, it must perform all four functions of the AGIL paradigm in concert. This is consistent with the practice of the balanced scorecard approach and encourages organizations to utilize this tool. The balanced scorecard provides a visual framework for the Parsonian AGIL paradigm and the Hoy and Ferguson adaptation of the model. Furthermore, the balanced scorecard allows schools to keep a watchful eye on the multiple measures to success and be more responsive to current conditions.

An effective balanced scorecard has, as one component, a strategic objective relating to administrative processes that maximize the use of all resources. This falls in line with adaptation under the Parsonian model and innovation under the Hoy and Ferguson model. Measuring the level of adaptation can be achieved by examining various resource inventories, budgets, and staff qualification reports. Adaptation can be further scrutinized by comparing how effective one

system recruits and hires teachers in critical needs areas as compared to others. All of these units of measure are present on a well designed balanced scorecard.

Student achievement must also be a strategic objective in an effective balanced scorecard. This aligns with goal attainment in the Parsonian model and is congruent with the Hoy and Ferguson model as well. Student achievement can be measured in many ways. For the purpose of this study student achievement will be measured by analyzing student performance on Georgia criterion referenced competency tests and high school graduation tests. As defined by Parsons, goal attainment relates not only to accomplishing goals but also an organizations ability to set goals that are specific, measurable, attainable, realistic, and time bound. These goals, referred to as S.M.A.R.T. goals are critical to the formation of any effective balanced scorecard.

Harmony among the members of society is referred to as integration under the Parsonian model. A society that demands the cultural norms and values to be followed and respected by all members is said to be fully integrated. Under the Hoy and Ferguson model teachers will act and perform as a cohesive unit. They exhibit higher levels of solidarity and respect colleagues as professionals. High integration will manifest in lower teacher turnover and absenteeism among other things. The manifestation of integration can be reflected in both the OCI and M-Scale scores of the schools.

A society that creates, preserves, and communicates its values to others is said to exhibit latency under the Parsonian definition. Hoy and Ferguson (1985) state that this is reflected in teachers being more committed to staff growth. The balanced scorecard uses teacher satisfaction as one of the strategic objectives. This specifically correlates to the CL and PTB sub-dimensions of the OCI.

The illusive nature of defining school effectiveness also begs for the use of the balanced scorecard approach to school improvement. The very design of the balanced scorecard in fact addresses the complexity of measuring any organizations performance. Kaplan and Norton (1996) recognize that defining business success in financial measures is inadequate because there is no guiding force involved. Likewise, measuring school success on academic achievement alone fails to guide performance. Multiple measures of performance that include the system-theory model (Hoy & Ferguson) capture a more complete picture of effectiveness. They allow schools to measure “the internal aspects of the organization that promote harmony and efficiency (Sweetland & Hoy, 2000).

Effectiveness Measures in the Study at Hand

The study here proposed to test the balanced scorecard will use student performance, school climate, and mindfulness assessments. Student performance is an integral part of the scorecard and AGIL theory as well. School climate, discussed in the next section, assesses the teachers’ perception that the school operates well. Mindfulness, discussed further in this chapter, measures the teachers’ view that the school does carry out a continuous scrutiny of school operations. At the end of the research history section of this chapter, a rationale for linking student performance, climate, and mindfulness to use of the scorecard will be elaborated. At that time, hypotheses will be offered to test the explanation.

Section Summary

Although the achievement of goals is a common measure of success in organizations it does not provide a complete picture. Goal attainment must be measured relative to the efficiency

of operations and the collective harmony of the organization. The multidimensional elements of success require organizations to have a balanced approach to measuring success. Organizations must find methods to measure not only end results but also processes in place to help achieve the mission. The balanced approach to measuring success is a key component of the balanced scorecard. The balanced scorecard helps organizations, including schools, find effective ways to constantly monitor success and avoid failure by using lead data to make adjustments.

Organizational Climate

Organizational climate is the next important concept of this study. This section will first explore the concept of organizational climate in the general sense and then, more specifically, in the school setting. It will include a description and discussion of the Organizational Climate Index (OCI) and the individual sub-dimensions of the index.

Two of the more popular terms for describing the nature of organizations are climate and culture. While the two terms are often used interchangeably, they have specific differences. Organizational culture refers to the norms and values that exist within any organization. These may be established formally and/or informally and have great impact on the day-to-day interactions within the organization. The culture of an organization is often an abstract concept. Simply stated, it is the shared assumptions within the organization (Hoy & Miskel, 2005; Hoy & Tarter, 1997; Hoy, Tarter, & Kottkamp, 1991). Culture is created over time and is thus related to the organizational behaviors, attitudes, and customs that have been created throughout the organization's history (Pang, 2001). Unless one is a member of the organization, the elements of culture go largely unnoticed. This makes the study of organizational culture difficult in the quantifiable sense.

Organizational climate is related to the perceptions members hold at a given time. Hoy and Miskel (2005) define climate as, “the relatively enduring quality of the school environment that is experienced by participants, affects their behavior, and is based on their collective perception of behavior in school” (p. 185). Unlike culture, climate can be quantifiably measured through the use of surveys. In fact, climate surveys are often used within organizations when improvement initiatives are utilized. This is certainly true in the school setting.

The concept of organizational climate in the school first appeared in literature in 1963 with Halpin and Croft’s conception and measure of organizational climate as the Organizational Climate Description Questionnaire. Halpin’s interest in school climate stemmed from his notion that two leadership behaviors, initiation of structure and consideration, would predict successful administrative practice. This led him to refine the Leader Behavior Description Questionnaire (LBDQ) in 1952. Halpin engaged professionals in training based on the framework from the Leadership Behavior Description Questionnaire and found that administrators were often successful following LBDQ training. He became more interested, however, in those that failed and exploring the reasons for their failure. After examining the schools where LBDQ-trained principals had not been successful, Halpin concluded that the internal environment of the school, which he called “climate,” was responsible. Climate was, he observed, analogous to personality and just as a person can be open or closed in regards to personality, so, too, can a school be open or closed. Moreover, the faculty and principal were different dimensions of the construct. A faculty could be closed, while the principal could be open, and vice versa. Or, both could be closed or both open. Halpin, conceptualizing climate as personality, set about to map the concept and published the OCDQ in 1967. The measure enjoyed wide use through the 1980s.

As the measure was studied through 1970s and 1980s it was discovered that, when following the OCDQ, all secondary schools were closed rather than open. This is probably because the original group of schools that contributed to the measure was elementary schools. Additionally, the subtests for both principal and faculty climate were not stable in factor analysis and conceptually indistinct. New measures were developed in the 1990s (Hoy et al., 1991). The first of these were the revisions of the OCDQ-RE. The term “Organizational Climate” was kept to honor Halpin’s contributions to the field, but the emerging subtests were completely different and versions for elementary and secondary schools were developed with a middle school measure being developed somewhat later (Hoy & Sabo, 1998). The measure was starkly empirical, had acceptable reliability indices, and predicted in anticipated directions (Hoy et al., 1991).

The Organizational Health Inventory represents another track of the climate developed in a Parsonian theoretical framework (Hoy & Feldman, 1987). The measure distinguished levels of authority separating the board, conceived of as institutional integrity; the administrative level, conceived of as initiation of structure, consideration, principal influence, and resource support; and, finally, the technical level, where teachers manifested morale and academic emphasis. The Hoy and Feldman conception and measure was designed specifically for high schools. Subsequent measures were developed for elementary and middle schools (Hoy et al., 1991). Similar to the revised OCDQ, the OHI has been widely used in the analysis of school performance (Hoy & Sabo, 1998; Uline, Miller, & Tschannen-Moran, 1998). Although both measures continue to be used, the next step in the evolution of the measures was to find a way to combine them, thus, giving rise to the Organizational Climate Index (Hoy & Sabo, 1998).

While both the OCDQ and OHI are useful tools for assessing the climate and health of schools, they both are inclined to be redundant because they tap overlapping elements of climate. The Organizational Climate Index was developed as a combination of the two climate measures. A second-order factor analysis brought together the 14 subtests of the two measures into one four-element instrument. The dimensions that emerged were Collegial Leadership, Professional Teacher Behavior, Academic Press, and Institutional Vulnerability (Hoy & Sabo, 1998; Hoy et al., 2002).

The Development of Organizational Climate Measures

Organizational climate studies can be traced back to the 1950s. The construction of the Organizational Climate Description Questionnaire (OCDQ) by Haplin and Croft (1963) provided one of the first studies in the field. The OCDQ is a questionnaire that uses a 4-point Likert-type scale response consisting of *rarely occurs*, *sometimes occurs*, *often occurs*, and *very frequently occurs*. The OCDQ has become one of the most widely used measures of organizational climate. It allows the user to collect data to describe the perception members of the organization have concerning the climate of the work place.

Organizational Climate Description Questionnaire

The OCDQ was revised by Hoy (2001) and is now referred to as the OCDQ-RE (RE: revised elementary edition). The OCDQ-RE is designed to identify three dimensions of principal behavior and three dimensions of teacher behavior. The three behaviors for principals are defined as supportive, directive, and restrictive. A principal is said to exhibit supportive behavior when he/she values the suggestions of teachers, provides constructive feedback, and respects their

professional decision making (Hoy & Tarter, 1997). Directive principal behaviors are characterized by a higher degree of inflexible control the principal exerts over teachers and school operations (Hoy & Tarter, 1997). When a large number of extra duties and paperwork are present in a school, the primary job of teaching is hindered. This situation defines restrictive principal behaviors (Hoy & Tarter, 1997).

The three behaviors connected to teachers as defined by the OCDQ-RE are collegial, intimate, and disengaged (Hoy & Miskel, 2005). Collegial behaviors are defined by open interactions between teachers and mutual respect for peer professionalism (Hoy & Tarter, 1997). When collegial behaviors are present so too are school pride and satisfying working relationships. Intimate behaviors are manifest in strong group associations, where teachers are more relaxed with one another. Intimate behaviors result in teachers socializing together more often (Hoy & Tarter, 1997). Disengaged behaviors exist where teachers lack common goals and values. Disengaged behaviors are often negative as teachers are critical of colleagues and their school and most professional development initiatives are ineffective (Hoy & Tarter, 1997).

Organizational Health Inventory

The Organizational Health Inventory (OHI) is yet another inventory designed to calculate the overall health of an organization by focusing on three levels of authority in the school, the institutional, managerial, and technical levels (Hoy, 2001). The first subtest is Institutional Integrity (II), which is defined as the level to which a school can operate within its environment in a way that supports and maintains the educational integrity of all programs. Institutional Integrity guarantees that teachers have protection from community and parental demands that are viewed as unreasonable.

The second area is Collegial Leadership (CL). Characteristic of CL is a principal that is friendly, supportive, open, and strong in establishing equality among all staff. At the same time, the principal sets a tone for high performance by clearly establishing staff expectations.

The third area, Principal Influence (PI), is the ability of the principal to influence the actions of superiors. Principals that exhibit high PI are persuasive and are able to secure additional consideration from their superiors. They operate in a fashion relatively unrestricted by the central office.

The fourth area is Resource Support (RS), defined as the availability of classroom supplies and instructional materials made available to staff. If RS is high in a school, extra materials are frequently supplied when requested by staff.

The fifth area is Teacher Affiliation (TA). It is characterized by a sense of friendliness and strong affiliation with the school. Teachers feel good about each other, their job, and their students. They are committed to both their students and their colleagues and accomplish their jobs with enthusiasm. This is important because it has been documented that the attitude and efforts of the faculty as a whole has a positive effect on student achievement (Goddard, Hoy, & Hoy, 2000; Hoy & Sweetland, 2001; Sweetland & Hoy, 2000).

Finally, the sixth area, Academic Emphasis (AE), is described as the extent to which the school is guided by and more clearly focused on academic performance. Schools that exhibit high AE set academic goals that are high but achievable for all students. They provide a learning environment that is orderly and focused. High AE schools have teachers who believe in their students' ability to achieve academic standards. This belief is transmitted to the students and results in a student body that works hard and respects academic achievement.

Organizational Climate Index

Separate versions of the OCDQ-RE and OHI, depending on the grade level of the school, must be used when measuring the climate of schools. As a result, the Organizational Climate Index (OCI) was developed by Hoy et al. (2002). The OCI is a shorter organizational climate descriptive measure for schools that is a combination of the OHI and OCDQ-RE. The OCI is a 30-item descriptive questionnaire. Twenty-seven items are scored and the total is then divided into four dimensions. The four dimensions are Institutional Vulnerability, Collegial Leadership, Professional Teacher Behavior, and Achievement Press.

Institutional Vulnerability (IV) is defined as “the extent to which the school is susceptible to a few vocal parents and citizen groups. High vulnerability suggests that both teachers and principals are unprotected and put on the defensive” (Hoy et al., 2002, p. 42). Schools hope to have low scores in the area of IV, as it is important to operate without community and parental pressures that could be considered unreasonable. Five items on the OCI are designed to measure Institutional Vulnerability. They include “A few vocal parents can change school policy” and “Teachers feel pressure from the community.”

Collegial Leadership (CL) describes a principal who is open to options and listens to all sides of important topics. The principal treats faculty members as his/her equal and allows them to put suggestions into action. CL is further characterized by a principal who is friendly, approachable, and willing to make changes, yet he/she clarifies expectations and sets clear standards for performance. An increase in CL opens the door to more staff input and leads to consensus building thus creating a higher level of collective efficacy.

Seven items on the OCI are designed to measure CL. Items such as “The principal explores all sides of topics and admits that options exist,” “The principal is friendly and approachable,” and “The principal maintains definite standards of performance” are included.

Professional Teacher Behavior (PTB) is characterized by teachers helping and supporting each other. When PTB is high, faculty members work cooperatively, provide strong social support for one another, respect each other as competent professionals, and frequently exercise professional judgment. They also enthusiastically accomplish their jobs and even go beyond expectations to help students. Teacher collegiality and professionalism have long been recognized as important elements of effective schools. This element of organizational climate has been shown to positively impact student achievement as it “provides direction and maintains high standards of performance” (Hoy & Miskel, 2005, p. 191). Some items scored on the OCI to specifically measure PTB are “Teachers help and support each other,” “Teachers respect the professional competence of their colleagues,” and “Teachers provide strong social support for colleagues.”

Finally, Achievement Press (AP) addresses the attitude and standards of the parents and students of a school. This attitude is directly linked to the academic emphasis present in teachers as mentioned earlier. The teacher’s role in Achievement Press is necessary. Without a strong belief in student achievement from the teacher perspective a “can do” attitude from students and parents is less likely. Where AP is high, so are parent and student expectations for learning. Students respect others who get good grades and students try to improve on previous work. A climate where academic achievement is recognized as the norm is present when AP is high. Parents are involved in the school improvement process and exert pressure to maintain high standards for all students if AP is high. The OCI uses eight items to measure the level of AP in

schools, including “The school sets high standards for academic performance,” “Parents exert pressure to maintain high standards,” and “Students try hard to improve on previous work.”

Section Summary

This section describes the multidimensionality of school climate and the complex nature of measuring and manipulating it. Both the openness and health of school climates were discussed as were the specific sub dimensions of a school climate. The interaction between teachers, between teachers and administrators, and between the school and outside forces are all important. All of these relationships are important to school improvement and must be addressed effectively by school leaders. This section also suggests that strategy can be employed to change the climate of a school. The step by step clinical strategy connects with mindfulness because it is a continual process and it is congruent with the notion of the balanced scorecard because progress can be measured and strategy can be engaged.

Mindfulness

Mindfulness is the final element of this study. The concept of mindfulness was introduced by Langer, Blank, and Chanowitz (1978). It is linked to philosophy from the Far East where individuals exhibit high levels of focused attention, calmness, and stability. Mindfulness and its opposite, mindlessness, were further discussed by Langer and Moldoveanu (2000). Their focus was on the exploration of mindfulness as a condition where individuals have open minds, are more engaged in activities, are able to notice changing information, and have the ability to exercise flexibility in situations. Mindful behavior at the individual level happens very naturally and is a habit formed over time.

Langer's (1978) work on individual mindfulness has been expanded to the organizational setting. It was built upon by Weick and Sutcliffe (2001). They conceive of mindfulness in the organization as a collective quality held by all. Mindfulness is best described as a high level of constant self-scrutiny present in some organizations. It is more completely defined as follows:

the combination of ongoing scrutiny of existing expectations, continuous refinement and differentiation of expectations based on newer experiences, willingness and capacity to invent new expectations that make sense of unprecedented events, a more nuanced appreciation of context and ways to deal with it, and identification of new dimensions of context that improve foresight and current functioning. (Weick & Sutcliffe, 2001, p. 42).

This complex definition is an extension of Langer's observation that "[a]lthough people are certainly capable of acting mindfully, they frequently respond in routinized, mindless ways" (Langer, 1989, p. 137). The want to eliminate the routine is what makes the concept of mindfulness desirable.

Individual Mindfulness

According to Langer (2000), *mindlessness* comes about in two ways: repetition and a single exposure during which information is processed mindlessly. In the field of education, certain myths or mind-sets about learning may, in fact, detract from one's ability to learn. For example, if one advocates that the basics should be learned so well as to become second nature, then it will not occur to the advocate to change strategies when it would be to his or her advantage to do so. Only by attending to an object or target *mindfully* will performance improve.

The results of studies conducted by Langer and Brown (1992) indicate that mindfulness is not only more effective as an educational tool, but it also makes learning more enjoyable. The reason is easily explained: to respond statically rather than actively makes a response feel like more of an effort, and the effort involved may be evaluated as negative, making the respondent

more prone to error. On the other hand, “when one is actively drawing novel distinctions, the whole individual is involved” (Langer & Moldoveanu, 2000, p. 2). Consequently, mindfulness gives the participant an increased state of involvement, or a sense of being in the present, and results in a more positive response. In the final analysis, mindfulness as it relates to learning is “a flexible state of mind in which [participants] are actively engaged in the present, noticing new things and sensitive to context” (Langer, 2000, p. 220). The concept of mindfulness defined by Langer can be applied to organizations as well as individuals.

Characteristics of Mindfulness in Organizations

Expanding on Langer, Weick and Sutcliffe (2001) defined mindfulness in organizations using the following five characteristics: (1) a preoccupation with failure, (2) a reluctance to simplify interpretations, (3) sensitivity to operations, (4) commitment to resilience, and (5) deference to expertise. These five qualities exist in what they call highly reliable organizations (HROs). Organizations that exhibit high levels of mindfulness and are considered HROs are organizations that deal with the constant possibility of disaster. Aircraft carriers, nuclear power plants, or large power companies are such organizations because failure can be of a devastating magnitude.

Preoccupation with Failure

It is common practice in organizations to focus on success as a way to build momentum. This notion, that success breeds success, is exactly what Weick and Sutcliffe (2001) challenge by suggesting organizations instead focus on failure. They argue that success, too often, breeds laziness and complacency that is a consequence of arrogance.

A preoccupation with failure may at first seem to create a defeatist attitude. On the contrary, “such a preoccupation is functional because it leads to continuous scanning for problems” (Hoy, 2003, p. 97). Organizations that look only at successes see only half of the picture. They look at data that confirm what they expect to find and never examine data that fail to confirm the same expectations. This allows small underlying failures to go either unnoticed or ignored. They are then allowed to grow and become much harder to control. Because focusing on success often leads to complacency, leaders of mindful organizations focus instead on looking for the small mistakes and eliminating them. They also encourage members of the organization to report errors and mistakes and often reward it. This keeps employees from covering up mistakes and instead invites them to engage in mistake analysis. This state of constant scrutiny gives organizations a chance to catch problems early and prevent failures that could be more wide spread.

Reluctance to Simplify

The reluctance to simplify interpretations that Weick and Sutcliffe (2001) refer to is an effort to encourage a deeper level of understanding within the organization. And, just like a preoccupation with failure, it attacks another common belief held in many organizations, simplification. More than ever before, organizations today are taught to embrace the notion that less is more and that keeping it simple is the best method of operation. This philosophy limits organizations because they inadvertently eliminate information that could be beneficial. When organizations “simplify less, they see more” (Weick & Sutcliffe, 2001, p. 11).

Organizations that are reluctant to simplify avoid the problem of missing key information. HROs are better poised to act on all information available rather than dismissing or

overlooking it. Members of HROs are taught to challenge the status quo and be more skeptical of the way things are done. They are also more comprehensive in their thinking and have the ability to enjoy differences in opinions without creating animosity.

Schools, too, look for ways to simplify. This is done in the name of efficiency but it leads instead to behaviors that limit perspectives. In the school setting reluctance to simplify requires teachers and administrators to more look more deeply at school data and discover the subtleties that are present. It requires them seek input from all stakeholders in an effort to build diversity of opinions. This allows all stakeholders to see more and as a result reach synergistic thinking.

Sensitivity to Operations

It is important that executives have the ability to discuss what is happening throughout the organizations they lead. Being able to do this displays an understanding of how things are done and creates a culture within the organization that allows leaders to engage employees in meaningful dialogue about normal operations. This is an important part of what Weick and Sutcliffe (2001) refer to as sensitivity to operations. Sensitivity to operations can be described as knowing ones trade regardless of position and having the ability to notice when operations are even slightly askew. It is further characterized in HROs as being “attentive to the front line, where the real work gets done (Weick & Sutcliffe, 2001, p. 13).

Leaders in HROs recognize that, in times of crisis, front line decisions must be made without hesitation. This means the organizational structures that embrace a chain of command or flow of information from the top must be challenged. This is the essence of sensitivity to operations. Troops in the field, for example, have the clearest picture of what is happening on the battlefield at any given time. They cannot depend on central command to access the situation

and dictate the best course of action. The immediacy of response required means the front line must be empowered to act. Mindful organizations apply this method of operation not only to crisis situations but make it a part of the day-to-day operations as well.

Sensitivity to operations is imperative in the school setting. School leaders must be experts in the areas of teaching and learning. This allows them to provide immediate feedback to teachers and listen to them articulate their concerns. This ongoing conversation about operations increases scrutiny and should also empower teachers to take action without a check-with-me protocol from the hierarchy. This should create a higher awareness about what needs to be done and reduce lag time between data collection and responsive action. Additionally, interpersonal relationships with teachers tend to be more positive if school leaders are more sensitive to what teaching and learning are all about. This helps “create a climate where people feel safe to question assumptions and to report problems or failures candidly” (Weick & Sutcliffe, 2001, p. 66). Sensitivity to operations leads seamlessly to deference of expertise, another feature of mindfulness.

Commitment to Resilience

The first three characteristics of mindfulness provide guidance in regard to what organizations can do to develop and maintain mindfulness. This is important because it helps them seize the unexpected minor problems that arise and prevents them from growing into major issues. These three characteristics embody the constant scrutiny described in mindful organization. This does not produce a formula that guarantees problems will never develop into bigger issues nor does it suggest emergencies will never occur. Indeed crisis situations will arise and, when they do, HROs display the ability to contain the crisis and bounce back more quickly.

The ability to do this is referred to as commitment to resilience. “Resilience is a combination of keeping errors small and of improving workarounds that keep the system functioning” (Weick & Sutcliffe, 2001, p. 14). This is a major component of HROs and characteristic of mindful organizations.

Despite the fact that the continuing scrutiny described in mindful organizations helps prevent crisis, mistakes will happen and surprises will occur. This is true in the business setting as well as the school setting. One major difference is that businesses that fail to bounce back run the risk of going out of business. This is not true in the school setting. In fact, seldom are schools closed because of poor performance. This poses a challenge for school leaders as they try to develop mindfulness, because the reality of failure in the business world does not extend to the school. In the event of these surprise events, school leaders must still make use of the concept of resilience. Administrators must display strength and flexibility in coping with whatever emerges and encourage teachers to do the same. Schools, like businesses, must be able to anticipate problems and be resilient in adversity. “Mindful organizations do not let failure paralyze; instead they detect, contain, and rebound from mistakes” (Hoy, 2003, p. 98).

Deference to Expertise

The top-down approach to decision making is very common in organizations today. Additionally, the flow of information tends to move from this same top-down pattern. This can prove to be problematic for organizations as mistakes from “higher levels tend to pick up and combine with errors at lower levels, thereby making the resulting problem bigger, harder to comprehend, and more prone to escalation” (Weick & Sutcliffe, 2001, p. 16). HROs recognize this practice as an impediment to progress and instead embrace the practice of deference to

expertise. HROs recognize that the players on the front line are better equipped to make decisions for two reasons. First, they are indeed experts trained to perform the job at hand and second, their decisions are made based on knowledge specific to current circumstances. Building on the analogy offered earlier, troops in the field are trained professionals that have an acute view of the battlefield as it exists in real time. It only makes sense that commanders would defer to their expertise and recognize they are the most capable decision makers.

Deference to expertise can happen only if organizations are able to let go of rigid administrative protocols, job titles or ranks, and experience. This requires leaders to strike the perfect balance between organizational structures that enable creativity without embracing a laissez faire approach to leadership. The manifestation of deference to expertise is seen when leaders consult with employees regularly and actively listen to them for advice and judgment. This attentive, active listening promotes self-confidence that allows employees to exercise judgment and solve problems instantly rather than waiting for directives.

HROs in the School Setting

Rossi and Stringfield (1997) identify HROs in the school setting as having the following characteristics:

1. The central goals of HROs are clear and widely shared.
2. All staff in an HRO believe that success is critical and that failure to achieve core tasks would be absolutely disastrous.
3. HROs stress intensive recruitment and ongoing training.
4. HROs build interdependence among staff. This is typically “rooted in the strong sense of community” (Rossi & Stringfield, 1997, p. 7).

5. HROs extend formal, logical decision analysis, evolved into standard operating procedures as far as extant knowledge allows. The idea is to “standardize proven best practices in some areas so as to focus human attention on performing nonstandard tasks as well”(Rossi & Stringfield, 1997, p. 7).
6. HROs prize vigilance against lapses and flexibility toward rules. Teams work to identify student problems early and seek solutions to those problems.
7. HROs are invariably by their supervising organizations.

Because the goals of HROs are clearly understood, progress can more readily be attained. Blankstein (2004) states that maintaining clarity and constancy of purpose is important because it helps school accomplish two major goals. The first is that it helps reduce stress among staff because they clearly understand the primary function of the school. And, because the target is clear, “leaders provide direction that is clear, strong, and unambivalent” (Blankstein, 2004, p. 25).

Mindfulness in Action: The Plan, Do, Check, Act Cycle

The eight step process advocated by Davenport and Anderson (2002) requires a close examination of data as a means of executing strategy. They utilized an adaptation of a Plan, Do, Check, and Act instructional cycle (PDCA), coupled with an eight-step process to address achievement gap issues. The PDAC cycle was based on Deming’s 14 points total quality control system. It begins with planning a change or test aimed at improvement. This involves the collection of data and the establishment of a specific time frame for implementation. The *Plan* phase follows a collaborative approach that involves all stakeholders. Based on data from a previous period of time, stakeholders formulate a plan that is characterized by concrete goals and

bound by time. The *Do* phase entails execution of the plan, which may be done on a small scale. This is followed by the *Check* phase. Here, stakeholders recognize that any action brings results. These results, whether good or bad, require an analysis of the current data. These leading indicators then dictate what needs to happen in the *Act* part of the cycle. The question then is whether the organization should apply the change, abandon it, or run through the cycle again under different conditions. The PDCA cycle then begins again with the *Plan* phase. This continuous improvement approach is popular and useful in schools today.

Davenport and Anderson (2002) expanded upon the PDCA cycle and developed what they called the Eight-Step Process to school improvement. The first two steps in the process involve planning. Initially, there is test score disaggregation, which requires all professional staff members to examine the most current student test data, to identify student strengths and weaknesses, and to create instructional groups. The second step is the development of a timeline for execution of the plan. In this step, teachers are charged with developing an instructional timeline that focuses the greatest emphasis on the areas where the greatest number of students were shown to need the most help (Davenport & Anderson, 2002). The third step of the eight-step process corresponds with the *Do* phase of the PDCA cycle. It is called the instructional focus step, and involves implementation of the timeline and delivery of instruction. Davenport and Anderson advocate the use of frequent benchmark assessments as the fourth step. The assessment step corresponds with the *Check* phase of the PDCA cycle. Assessment is done to identify students that exhibit mastery or non-mastery of skills tested. Additionally, the assessment step allows teachers to self-monitor in the event that certain items were not effectively taught. Steps five and six correspond to the *Act* phase of the cycle. Depending on what current data of leading indicators say, students enter into either tutorials to address

weaknesses or enrichment activities to further advance skills. Whatever the case, this action is a result of what the check phase dictated. Step seven in the process is a re-check. The formal review process, scheduled throughout the instructional year, allows students to reinforce learning from prior units. Monitoring is the eighth and final step and it also corresponds with the Check phase of the PDCA cycle.

The Eight-Step Process easily allows for the creation of a balanced scorecard. Because it begins with a close look at student data, the establishment of goals, and is bound by time, the process affords users the opportunity to reduce an improvement plan to a workable scorecard. The monitoring step of the cycle is the logical place for the school administration to constantly review leading indicators. This leads to an improvement plan that does not allow for stagnation.

This implies that there is indeed a connection between the concept of mindfulness, the balanced scorecard, and the continuous improvement process. The constant state of re-evaluation present creates an agility that helps school stakeholders develop mindfulness. Mindfulness is another important and measurable element of overall school culture. As defined by Langer (1993), mindfulness is “a state of mind that results from drawing novel distinctions, examining information from new perspectives, and being sensitive to context” (p. 44).

Mindfulness and Teaming

In the context of the school setting, Hoy et al. (2006) describe mindfulness as a school’s ability to not only anticipate trouble but, in fact, to expect it. This collective quality makes a school more resilient when trouble arises and, therefore, better able to survive difficult circumstances. This concept is characteristic of both the balanced scorecard and the continuous school improvement model described earlier. The balanced scorecard framework includes,

among others, the core principles of translating strategy into operation and making strategy a continual process. It also makes strategy everyone's responsibility and leads to the formation of more effective teams.

Team building plays an important role in the process of building and utilizing a balanced scorecard and is an integral part of any mindful organization as well. Although teaming in mindfulness is informal it is a team-like concept. Mindfulness does, after all, require joint efforts in ways similar to team efforts. Edmondson, Bohmer, and Pisano (2001) opined that the most successful teams were able to adapt quickly to new ways of working. In their study of 16 cardiac surgery teams, they suggested ways in which team leaders might create an environment conducive to team learning. To set the right tone, team leaders should be accessible or available, not aloof, ask for input, and serve as a "fallibility model" by admitting their mistakes to the team.

Asking for input is a form of the constant scrutiny present in mindful organizations and by admitting mistakes, team leaders demonstrate the importance of looking for problems within the organization. This, too, is characteristic of mindful organizations.

In an educational perspective, Hoy et al. (2006) discovered that mindfulness is continuous and ongoing if faculty trust is high. The two seem to go hand-in-hand because mindful teachers look for solutions to problems rather than a place to put blame. Conceptually, mindfulness in schools is a collective quality. It can occur only when principals and faculty members work closely together in a trusting and caring environment. Mindfulness affords schools the ability to not only anticipate trouble but, in fact, to expect it. This makes a school more resilient if trouble arises and, therefore, better able to survive.

Clearly, mindfulness is a concept that could be valuable in any school. Unfortunately, Langer and Moldoveanu (2000) found that "[e]ducation is an area that often seems to abound in

mindlessness” (p. 3). As noted by Dattner and Dunn (2003), “[m]indlessness involves automatic, habitual thought” (p. 2). It is characterized by the treatment of information as context-free and true, regardless of circumstances. The end result is the application of previous solutions to current problems. Mindlessness is prevalent when people are distracted, overloaded, and/or multitasking. Conditions brought on by mindlessness include boredom and malaise.

Section Summary

The opportunity to study mindfulness in the school setting could prove to be beneficial. By exploring this construct, individual faculty members can contribute a more watchful eye concerning the state of the school and the mindfulness of individuals can affect the collective efforts. This can generate an organizational mindfulness that leads to a climate of openness necessary for schools to improve. By being watchful for mistakes, reluctant to simplify, and acutely focused on teaching and learning, teachers will be better prepared for the emergent problems they will inevitably face. They will be more resilient in times of crisis and more willing to recognize and defer to the expert most likely to impact change.

Mindful schools will also look for structures that are more flexible. Structures such as the Plan, Do, Check, Act cycle and the Eight-Step Process do not dictate next steps. Instead they provide guidance yet still provide the opportunity for teachers to exercise judgment. This serves to better empower teachers as professionals and also helps promote a more open climate. This review of literature promotes that study in the area of mindfulness can be beneficial to the world of education.

Theoretical Framework

Based on the review of literature presented, use of the balanced scorecard should have a positive correlation to effectiveness, school climate, and mindfulness in the school. Each construct has been defined for the purpose of the study. All will work in concert to provide the theoretical framework for the study.

Effectiveness has been defined as achieving goals and demonstrating efficiency in the operations of the organization to achieve goals. This framework is based on the work of Hoy and Ferguson (1985) which, in turn, is based on the definition originally provided by Talcott Parsons. A particular advantage to this definition is the multi-dimensional nature of measuring success. It provides a more complete measure of success and is consistent with the balanced scorecard method.

For the purpose of this study, the definition of climate provided by Hoy and Miskel (2005) will be a theoretical construct. Climate is “the relatively enduring quality of the school environment that is experienced by participants, affects their behavior, and is based on their collective perception of behavior in school” (Hoy & Miskel, 2005, p. 185). Climate is closely linked to integration and latency as defined using the AGIL paradigm elaborated on by Hoy and Ferguson (1985).

Research shows mindfulness to be complementary to effectiveness and climate. The definition of mindfulness used as a construct in this study is provided by Weick and Sutcliffe (2001) and expanded upon by Hoy (2001). Mindfulness, effectiveness, and climate are all concerned with problem solving, collaboration, and anticipating the unexpected. Mindfulness not only works to strengthen the quality of the organization at the individual level but also positively impacts the collective efficacy of the organization. Hoy et al. (2006) provided data that shows

the more mindful an organization is the more understanding individual participants are in regard to effective school organizations. Mindfulness therefore can likely improve effectiveness.

The balanced scorecard has been defined by Kaplan and Norton (1996) as a management system that enables organizations to clarify their vision and strategy and translate them into action. As a point of emphasis they state the balanced scorecard is not a static tool for measuring success but a tool that provides organizations a continual progress monitoring device. Because the balanced scorecard puts strategy into action it is theorized that it will improve schools' effectiveness consistent with the definition provided by Hoy and Ferguson (1985).

Because the balanced scorecard clarifies mission and lets all stakeholders know their role in meeting the mission, its use should directly affect the overall climate of a school. The theory tested is that all sub-dimensions of the OCI (Hoy, 2001) will be improved by using the balanced scorecard. Kaplan and Norton (2000) suggest this is possible because the balanced scorecard "gives employees a clear line of sight into how their jobs are linked to the overall objectives of the organization" (p. 168). This is consistent with the clinical strategy for changing school climate as described by Hoy and Miskel (2005).

Finally, the relationship to mindfulness was tested. Because the balanced scorecard keeps targets clearly defined and because it uses real time data to guide decisions, it clearly links to the constant scrutiny present in organizations that are mindful. Theoretically, the balanced scorecard and mindfulness are linked.

The balanced scorecard, mindfulness, and a positive organizational climate all work together to make a school more effective. Measuring effectiveness can be very complex. This is in part why the balanced scorecard can be useful. Because performance on the state mandated tests is normally considered goal attainment it is supported by the Parsonian paradigm. There is,

therefore, a strong organizational argument to use the state tests as a measure of effectiveness. Mindfulness and organizational climate can be positively impacted when the balanced scorecard is used because they each enable the responsiveness necessary for the scorecard to work. A reciprocal relationship exists between the scorecard and mindfulness and climate. This study is based on the theory that the balanced scorecard, organizational climate, mindfulness, and effectiveness are all codependent.

To test the theory, schools that use the balanced scorecard were compared to schools that do not use the balanced scorecard. The relationship of a balanced scorecard to school climate and its dimensions was measured. The relationship of the balanced scorecard to mindfulness was also measured. Finally, the study tested the theory in regard to the balanced scorecard and school effectiveness.

Rationale for the Study

This study will potentially provide a strong framework for monitoring school improvement. Because the balanced scorecard uses leading and lagging indicators toward progress, the study will help schools better understand the continuous school improvement process. The study helps administrators and teachers better understand the analysis of test data for the purpose of building a strategic student schedule. It also helps administrators and teachers utilize data for driving instruction throughout the academic year. Administrators will be able to use the scorecard as a summative tool for the evaluation of the academic year and as a strategic learning tool that creates ongoing formative monitoring. The study also helps teachers and administrators better understand school climate and its impact on school performance. Finally,

teachers and administrators better understand the concept of mindfulness and its impact on school performance.

Hypotheses

This study tested three hypotheses. The first hypothesis is “Schools implementing the balanced scorecard are more effective than schools not using the balanced scorecard.” The second hypothesis is “Schools implementing the balanced scorecard will have higher levels of organizational climate along all four dimensions of the OCI than schools not using the balanced scorecard.” And the third and final hypothesis is “Schools implementing the balanced scorecard will have higher levels of mindfulness than schools not using the balanced scorecard.”

Chapter Summary

The concepts and definitions of the balanced scorecard, mindfulness, and organizational climate have been presented in this chapter. School effectiveness has also been discussed and defined and all four have been linked together as interdependent elements of the study. An argument was presented to show that the balanced scorecard, mindfulness, and organizational climate all capture different elements of school effectiveness. It was further presented that the use of the balanced scorecard leads to more effective schools. This is because use of the balanced scorecard creates internal operations in the school that supports monitoring and improving performance. The case has been made that schools that use the balanced scorecard will be more effective than schools that do not. Additionally, the case has been presented to suggest schools that use the balanced scorecard will have higher levels of mindfulness and healthier climates than schools that do not. Hypotheses have been presented to test a theory.

CHAPTER III

METHODOLOGY

Introduction

The description of the research methodology and the procedures used for the study will be presented in this chapter. Survey instruments, data sources, and the methods of data analysis will be discussed. Permission from the Institutional Review Board for Human Subjects was sought prior to collecting any data used in the study.

Design

The design of the study was to assess the impact that the balanced scorecard approach has on the organizational health of a school and the collective mindfulness of the faculty. The study was intended to test the predicted relationships of the balanced scorecard, mindfulness, climate, and effectiveness in a select group of schools in Georgia.

To test climate and mindfulness, two groups of schools were surveyed. The balanced scorecard was utilized by roughly half of the schools in the study and was the independent variable. The dependent variables used were climate, as measured by the OCI, and mindfulness, as measured by the M-Scale. The climate and mindfulness of both the balanced scorecard group and the non-balanced scorecard group were measured.

To test for school effectiveness, two groups of schools were studied and again half used the balanced scorecard while half did not. The sample included equal numbers of elementary,

middle, and high schools. The balanced scorecard was used as the independent variable, socioeconomic status as the control, and achievement was used as a dependent variable.

Participants and Sampling Procedures

This study includes select schools in the Metro Regional Educational Service Agency, West Georgia Regional Educational Service Agency, and Northwest Georgia Regional Educational Service Agency. The target population was teachers from elementary, middle, and high schools. OCI surveys were collected from 1,102 teachers. M-Scale surveys were collected from 1,089 teachers. The sample size yielded an adequate data set to ensure reliability. Within the three RESA districts, school characteristics are very similar in terms of size, demographics, and socioeconomic makeup. A total of 82 schools were surveyed for the study. Sixty-two schools provided adequate responses to provide OCI scores. Thirty-seven of those schools did not use the balanced scorecard and 25 did use the balanced scorecard. The survey sample produced 51 individual school M-Scale scores. Among the 51 schools, 25 did not use the balanced scorecard and 26 did.

Sixty schools from the subject group were randomly selected to test effectiveness. Thirty of those schools used the balanced scorecard and thirty did not. Equal numbers of high schools, middle schools, and elementary schools were randomly selected for each group. Test data for each school were collected from the Georgia Department of Education website.

Study Instruments

Participants involved in the study completed the Organizational Climate Index (OCI) (Hoy, 2001) and the M-Scale survey (Hoy, 2001). The OCI is an organizational climate

descriptive measure for schools. It is designed to measure the harmony present when the institutional, administrative, and teacher levels work in concert. The instrument has four dimensions which include a combination of items from the Organizational Health Inventory (OHI) and the Organizational Climate Description Questionnaire (OCDQ), also developed by Hoy. The four dimensions are Collegial Leadership (CL), Professional Teacher Behavior (PTB), Achievement Press (AP), and Institutional Vulnerability (IV). OCI scores were compiled by having participants answer 30 questions on a 4-point Likert-type scale. Sample items include “the learning environment is orderly and serious” and “the principal is friendly and approachable.” The response choices are assigned points. One point is assigned for *Rarely Occurs*, 2 points for *Sometimes Occurs*, 3 for *Often Occurs*, and 4 for *Very Frequently Occurs*. Each dimension of the OCI was measured by a subtest and reliability scores for the scales were relatively high. A factor analysis of the instrument supports the construct validity of the concept of school climate (Hoy et al., 2002).

The M-Scale score is based on a 14-item, 6-point Likert-type scale. It is designed to measure the extent to which teachers and administrators in a school carefully and regularly look for problems, prevent problems from becoming crises, are reluctant to oversimplify events, focus on teaching and learning, are resilient to problems, and defer to expertise. Sample items include “the principal welcomes challenges from teachers” and “in this school teachers welcome feedback about ways to improve.” The response choices for the M-Scale are based on a 6-point scale beginning with 1 point for *Strongly Disagree* and 6 points for *Strongly Agree*. The reliability of the scale is consistently high and the construct validity has been supported in three factor analyses (Hoy et al., 2006).

Data Collection

The researcher hand-delivered surveys to each building level principal in the subject group. The researcher requested that principals administer the survey at a regularly scheduled faculty meeting. Participating principals received e-mail reminders encouraging completion of the surveys. Complete copies of the inventories are given in full in the Appendix.

To introduce the study, the student researcher met with groups of principals to explain the study. Principals were given the opportunity to read the informed consent and ask any questions concerning the study. Principals were told that they could choose not to participate as individuals and/or schools. No coercion or undue influence was placed on principals.

Teachers received information regarding the study through the informed consent during a regularly scheduled faculty meeting at their particular school. All teachers in the contacted schools were asked to participate in the study. There is no inclusion or exclusion criterion, otherwise. Participation was completely voluntary and no incentives were offered or extended. All teachers were given a copy of both the OCI and M-Scale to complete.

Data Analysis

Establishing an Organizational Climate Index (OCI) score for each school involved a three-step process. The first step was to score each item for each respondent with the appropriate number 1, 2, 3, or 4. One point was awarded for each response of *Rarely Occurs* (RO), 2 points for each response of *Sometimes Occurs* (SO), 3 points for each response of *Often Occurs* (O), and 4 points for each response of *Very Frequently Occurs* (VFO). Items 4, 14, and 30 were not scored due to the fact they are filler items. Step two required calculating an average school score for each item. This is completed by adding all teacher scores for each school on each survey item

and then dividing each sum by the number of teachers in the school. The score is rounded to the nearest hundredth. This process produced 27 average school item scores. The third and final step is to sum the average school item scores for each of the four areas of the instrument. Specific items that correlate with each area of the instrument are elaborated by Hoy (2001). These four scores were used to establish the health profile of each of the participating schools.

Establishing the Mindfulness score for each school is a similar process. All items on the M-Scale are answered with either *Strongly Agree* (SA) or *Strongly Disagree* (SD). Each response receives 1 point or 6 points, depending on the response. The total number of points is divided by 14, the total number of items, to find the average score. This represents the level of mindfulness for a particular school and was used to establish a mindfulness (M) rating for each school. The researcher utilized computer scan sheets to tabulate both the OCI score and M score for each school.

To answer the first research question and test the first hypothesis, two regression analyses were conducted. One regression analysis for the 3-year average math score and the other regression analysis for the 3-year average ELA score. In each test, the percentage of students receiving a free or reduced price lunch (SES) was used as a control, and whether or not the school used a balanced scorecard was the independent variable.

To address the second research question and test the second hypothesis, four independent samples *t* tests were performed, one for each of the four OCI scales.

Finally, to answer the third research question and test the third hypothesis, an independent samples *t* test was used to determine the relationship of the balanced scorecard to mindfulness.

CHAPTER IV

RESULTS

Introduction

This chapter describes the results of gathering and analyzing data. Statistics describing the sample, respondents, and measures will be presented. Reliability coefficients of all measures are given. Finally, the results of hypotheses testing are given.

The purpose of this study was to determine if the use of the balanced scorecard can provide schools with the necessary tools to monitor progress more accurately and increase organizational climate, mindfulness, and overall effectiveness. Schools using the balanced scorecard were compared to schools not using the balanced scorecard in terms of organizational climate, mindfulness, and overall effectiveness measures. The central hypothesis of the study was partially supported. Schools that use the balanced scorecard performed better than schools that did not, in some instances.

Initially, descriptive statistics were computed for all study variables. This was followed by analyses of reliabilities for both the OCI and M-scale. Next, the three hypotheses that correspond to the three research questions are addressed. The chapter ends with a summary of key findings.

Descriptive Statistics

Sixty schools from the subject group were selected to test academic effectiveness.

Sixteen high schools, 16 middle schools, and 28 elementary schools were selected for each group. Among each group, the number of schools that use the balanced scorecard was the same as the number that did not. Thirty of the schools in the effectiveness study use the balanced scorecard and 30 do not. Table 1 shows the descriptive statistics for math and ELA scores as a function of the use of the balanced scorecard. Test data for each school were collected from the Georgia Department of Education website.

Table 1

Descriptive Statistics for Math and ELA Scores as a Function of the Use of the Balanced Scorecard

	Did Not Use the Balanced Scorecard (<i>n</i> = 30)		Did Use the Balanced Scorecard (<i>n</i> = 30)		Total Sample (<i>N</i> = 60)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
2006 Math	75.81	11.13	77.63	12.60	76.72	11.82
2007 Math	75.15	9.89	79.60	10.46	77.37	10.34
2008 Math	70.05	7.42	77.24	7.71	73.65	8.34
Average Math	73.67	7.96	78.16	9.51	75.91	8.98
2006 ELA	82.28	7.58	86.41	4.96	84.34	6.68
2007 ELA	83.60	7.35	89.38	4.48	86.49	6.70
2008 ELA	87.20	4.03	90.60	3.28	88.90	4.03
Average ELA	84.36	5.84	88.80	3.84	86.58	5.39

To test the influence the balanced scorecard has on climate, a total of 82 schools were surveyed. Sixty-two schools provided adequate OCI responses. The OCI data set includes 35 elementary schools, 20 middle schools, and 7 high schools. Twenty-seven of the OCI schools use the balanced scorecard and 35 do not. OCI surveys were collected from 1,101 teachers. Table 2 shows the descriptive statistics for OCI scales as a function of the use of the balanced scorecard. The mean scores for the schools that used the balanced scorecard and the schools that did not use the balanced scorecard on the four OCI dimensions are shown as part of the descriptive statistics in Table 2.

Table 2

Descriptive Statistics for OCI Scales as a Function of the Use of the Balanced Scorecard

	Did Use the Balanced Scorecard (<i>n</i> = 27)		Did Not Use the Balanced Scorecard (<i>n</i> = 35)		Total Sample (<i>N</i> = 62)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Collegial Leadership	20.47	1.87	22.61	1.91	21.50	2.16
Professional Teacher Behavior	21.09	1.60	22.49	1.77	21.76	1.81
Achievement Press	20.86	1.92	21.51	1.72	21.17	1.84
Institutional Vulnerability	11.56	1.26	11.37	1.31	11.47	1.28

The sample includes M-Scale responses from 51 schools. Table 3 shows the descriptive statistics for the M-Scale as a function of the use of the balanced scorecard. The mean for schools that used the balanced scorecard ($M = 63.20$, $SD = 5.05$) was significantly higher than the mean for schools that did not use the balanced scorecard ($M = 44.56$, $SD = 9.04$). The M-

Scale data set includes 28 elementary schools, 17 middle schools, and 6 high schools. Twenty-six of the schools in the set use the balanced scorecard and 25 do not. M-Scale surveys were collected from 1,089 respondents.

Table 3

Descriptive Statistics for Mindfulness Scale as a Function of the Use of the Balanced Scorecard

	Did Not Use the Balanced Scorecard (<i>n</i> = 25)		Did Use the Balanced Scorecard (<i>n</i> = 26)		Total Sample (<i>N</i> = 51)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Mindfulness	44.56	9.04	63.20	5.05	54.06	11.86

Analysis of Reliability

Reliability coefficients for the teacher-level analysis of the OCI and Mindfulness Scale are shown in Table 4. The reliability coefficients (Cronbach's α internal consistency) for the four variables from the OCI were all above .70: Collegial Leadership (.88), Professional Teacher Behavior (.85), Achievement Press (.81), and Institutional Vulnerability (.73). For the Mindfulness Scale, the reliability coefficient was .94. Therefore, for all five of the composite measures used in this study, the reliability coefficients were above the conventional cutoff of .70 for adequate reliability.

Table 4

Reliability Coefficients for Composite Measures

	<i>n</i>	Number of Items.	Cronbach's α
School Climate			
Collegial Leadership	1100	7	.88
Professional Teacher Behavior	1099	7	.85
Achievement Press	1097	8	.81
Institutional Vulnerability	1100	5	.73
Mindfulness	1087	14	.94

Hypothesis 1 Testing

The first research hypothesis of this study was as follows: Are schools that use the balanced scorecard more effective than schools that do not use the balanced scorecard? Both math and ELA student achievement were examined. Table 1 shows the math and ELA scores for each year and the average of the 3 years as a function of whether or not the school used the balanced scorecard.

There were no significant differences in math scores between schools that used the balanced scorecard and schools that did not. There were, however, significant differences in ELA scores between schools that used the balanced scorecard and schools that did not. For each of the 3 years and for the average of the 3 years, schools that used the balanced scorecard appear to have outperformed schools that did not use the balanced scorecard in terms of math scores, with the largest difference in 2008 and the smallest difference in 2006. For ELA scores the same trend was observed with respect to higher scores for schools that did use the balanced scorecard than

for schools that did not. The largest difference for ELA scores between the two groups of schools was for 2007. Overall, ELA scores were higher than math scores for both groups in all years and for the average across years.

To address the first research question, two multiple linear regression analyses were conducted, one for the 3-year average math score and one for the 3-year average ELA score. In each regression analysis, SES (i.e., the percentage of students receiving a free or reduced price lunch) was used as a control variable, and whether or not the school used a balanced scorecard was the independent variable (dummy coded as non-BSC = 0 and BSC = 1). The results of the regression analysis for math scores are shown in Table 5. Overall, the R^2 for this model was .081 (adjusted $R^2 = .049$), meaning that SES and the use of the balanced scorecard explained 8.1% of the variance in math scores. However, this model was not statistically significant, $F(2, 57) = 2.52, p = .089$. Individually, neither SES ($\beta = -.13, p = .298$) nor the use of the balanced scorecard ($\beta = .24, p = .061$) were statistically significant. Therefore, for the analysis of math scores it can be concluded that schools that use the balanced scorecard were not any more effective than schools that do not use the balanced scorecard when controlling for SES.

Table 5

Results of Regression Analysis on Three-Year Average Math Scores

Variable	<i>B</i>	<i>SE_B</i>	β	<i>t</i>	<i>p</i>
Constant	77.15	3.68		20.98	.000
SES	-.07	.07	-.13	-1.05	.298
Use of Balanced Scorecard	4.33	2.27	.24	1.91	.061

Note. $R^2 = .081$, Adjusted $R^2 = .049$, $F(2, 57) = 2.52, p = .089$.

The results of the analysis for ELA scores are shown in Table 6. The effect of the control variable SES on ELA scores was not statistically significant, $F(1, 57) = 1.87, p = .177$. However, the effect of the use of a balanced scorecard did have a statistically significant effect on ELA scores, $F(1, 57) = 11.57, p = .001$. Referring to the means in Table 1, the statistically significant effect of the use of the balanced scorecard was the result of better ELA performance in schools that used the balanced scorecard ($M = 88.80, SD = 3.84$) than in schools that did not use the balanced scorecard ($M = 84.36, SD = 5.84$).

The results of the regression analysis for ELA scores are shown in Table 6. The regression model as a whole was statistically significant, $F(2, 57) = 7.06, p = .002$. The R^2 of .198 (Adjusted $R^2 = .170$) indicated that SES and the use of a balanced scorecard explained 19.8% of the variance in ELA scores. While SES was not statistically significant ($\beta = -.16, p = .177$), the use of the balanced scorecard did have a statistically significant effect ($\beta = .40, p = .001$). The positive regression coefficient indicates that schools that used the balanced scorecard (coded as 1) had higher ELA scores than schools that did not use the balanced scorecard (coded as 0). This can also be seen in the means presented in Table 2, where schools that used the balanced scorecard had a higher mean ($M = 88.80, SD = 3.84$) than schools that did not ($M = 84.36, SD = 5.84$).

Table 6

Results of Regression Analysis on Three-Year Average ELA Scores

Variable	<i>B</i>	<i>SE_B</i>	β	<i>t</i>	<i>p</i>
Constant	86.90	2.06		42.17	.000
SES	-.05	.04	-.16	-1.37	.177
Use of Balanced Scorecard	4.32	1.27	.40	3.40	.001

Hypothesis 2 Testing

The second hypothesis of this study was as follows: Schools implementing the balanced scorecard will have higher levels of organizational climate along all four dimensions of the OCI than schools not using the balanced scorecard. It appears that the schools that did use the balanced scorecard had slightly higher scores on the Collegial Leadership and Professional Teacher Behavior scales, and to a lesser extent on the Achievement Press scale, while there was virtually no difference on the Institutional Vulnerability scale.

To address the second research question, four independent samples t tests were performed, one for each of the four OCI scales. Table 7 shows the results of these tests. The test performed on the Collegial Leadership scale was statistically significant, $t(50) = -4.07, p < .001$. This indicated that schools that used the balanced scorecard scored higher on the Collegial Leadership scale ($M = 22.61, SD = 1.91$) than schools that did not use the balanced scorecard ($M = 20.47, SD = 1.87$).

The test performed on the Professional Teacher Behavior scale was also statistically significant, $t(50) = -2.99, p = .004$. This indicated that schools that used the balanced scorecard scored higher on this scale ($M = 22.49, SD = 1.77$) than schools that did not ($M = 21.09, SD = 1.60$).

For the Achievement Press scale, the independent samples t test was not statistically significant, $t(50) = -1.29, p = .202$. Similarly, the test performed on the Institutional Vulnerability scale was not statistically significant, $t(50) = .50, p = .608$. Therefore, for the Achievement Press and Institutional Vulnerability scales, there was no difference between schools that used the balanced scorecard and schools that did not.

Table 7

Results of Independent Samples t Tests Comparing Schools that Used the Balanced Scorecard to Schools that Did Not on the OCI Scales

OCI Scale	<i>t</i>	<i>df</i>	<i>p</i>
Collegial Leadership	-4.07	50	<.001
Professional Teacher Behavior	-2.99	50	.004
Achievement Press	-1.29	50	.202
Institutional Vulnerability	.52	50	.608

Hypothesis 3 Testing

The third and final hypothesis of this study was as follows: Schools implementing the balanced scorecard will have higher levels of mindfulness than schools not using the balanced scorecard. The results of the independent samples *t* test shown in Table 8 indicated that this difference was statistically significant, $t(49) = -9.15, p < .001$.

Table 8

Results of Independent Samples t Test Comparing Schools that Used the Balanced Scorecard to Schools that Did Not on the Mindfulness Scale

	<i>t</i>	<i>Df</i>	<i>p</i>
Mindfulness	-9.15	49	<.001

Summary of Findings

The use of the balanced scorecard had mixed success in regard to predicting achievement. In the sample set, schools that used the balanced scorecard had higher ELA achievement than

schools that did not use the balanced scorecard, but there was no difference for math achievement.

The schools that used the balanced scorecard had better Collegial Leadership scores and better Professional Teacher Behavior Scores than schools that did not use the balanced scorecard, but that there was no difference on the Achievement Press or Institutional Vulnerability scale.

Schools that used the balanced scorecard had much higher mindfulness scores than schools that did not use the balanced scorecard. Therefore, the answer to the third research question is that schools that used the balanced scorecard had higher levels of mindfulness than schools that did not use the balanced scorecard.

CHAPTER V

DISCUSSION

Chapter V presents an overview of the relationship of the balanced scorecard to school effectiveness, organizational climate, and mindfulness. Limitations, implications, and recommendations for further investigation are also given. The chapter ends with concluding thoughts.

Implications

Academic Achievement

The results of this study indicated that schools that used the balanced scorecard had mixed success in predicting academic performance. Two multiple linear regression analyses were conducted in order to test the theory. In both tests, socioeconomic status was used as a control variable and the balanced scorecard was the independent variable. The results of the regression analysis for math scores, as presented in Table 5, concluded that schools that use the balanced scorecard were not any more effective than schools that do not use the balanced scorecard when controlling for SES. The results of the regression analysis for ELA scores, however, produced a positive regression coefficient thus concluding that schools that use the balanced scorecard are more effective in the area of ELA (see Table 6).

The effect of socioeconomic condition on student achievement is well documented and the researcher does not challenge the impact SES has on student outcomes. Nonetheless, the

sample for this study indicated an insignificant relationship between SES and achievement. This was true for both math scores and ELA scores. Sample size is one probable cause for this instance. There is always a relationship between margin of error and sample size. As sample size decreases, the margin of error in the statistical analysis increases. The lack of SES impact on test scores in this study speaks more to the characteristic of the sample. The schools within the sample are geographically close to one another resulting in a relatively homogeneous sample. This restriction likely did not provide enough variation in SES to produce a correlation. This is a useful finding in the study because the sample provides the opportunity to measure more precisely the impact other variables, such as the balanced scorecard, may have on achievement.

The researcher maintains the assertion that the balanced scorecard is an appropriate tool for measuring student achievement. Because the state test data used for construction of the balanced scorecard are congruent with school AYP reports, schools simply must use them as annual targets. This could, however, be problematic in terms of the balanced scorecard because achievement is then measured by a single event. While measuring achievement is an appropriate use of the balanced scorecard, the use of summative tests may send an unintended message. The intended use of the balanced scorecard is to avoid putting emphasis on year-end reports. Instead, an effective balanced scorecard should more effectively capture data from leading indicators to better effect achievement. Leading indicators, such as benchmark test results and classroom level grade distribution reports would better serve administrators. The concern here is not that the balanced scorecard has no impact on achievement, but that a better balanced scorecard would include lead data.

Advances in technology and an increased awareness of results have caused schools to be more cognizant of data than ever before. Data are collected in many forms and from many

sources. This has resulted in many schools' shifting their thinking from the processes they are engaged in and focusing solely on the results they produce. This is the central problem introduced in this study. The Maryland Assessment Group addressed this problem at its annual conference in 2004. They suggest that schools often use data solely for accountability purposes. When this happens, data are arranged in a hierarchy where the external state assessments are the guiding force, and tools such as system benchmark tests, common course assessments, and day-to-day student work is forgotten. Instead, the hierarchy of data for instructional decision making would be completely opposite. Classroom assessment of student work would lead the charge, and state tests would lag behind. The use of lead data as a tool to impact instruction also requires a higher level of instructional leadership from the school principal. This type of leadership is a key component of the PDCA cycle.

The "check" phase of the PDCA cycle requires the building level principal to monitor both the implementation and effectiveness of the plan. The primary job here is twofold. First, the principal must make certain that the goals established by the balanced scorecard do not fall from the mind's eye of the faculty. This can be achieved by constantly referencing the goals and asking teachers to provide evidence of learning that points to progress towards achieving the goals. Second, the principal must frequently visit classrooms and make certain that teachers are utilizing best practices and adjusting instruction as needed. Principals must "assume the chief responsibility for monitoring program success" (Davenport & Anderson, 2002, p. 101). While these efforts should certainly be supported by the efforts of assistant principals and lead teachers, it is the principal who must set the tone for school improvement. This requires the principal to regularly spend quality time monitoring the progress of learning in classrooms. It also requires

principals to be better informed in regard to assessment techniques. They must be able to aid teachers in the struggle that still exists concerning the difference between testing and assessment.

No Child Left Behind legislation has created an atmosphere where standardized test results have become the primary focus. Teaching, learning, and formative ongoing assessment *for* learning have been compromised. Instead, teachers all too often focus on testing *of* learning. The difference is assessment *for* learning is compatible with the plan, do, check, act cycle. It allows teachers to assess where a student is, where he needs to go, and what needs to be done to make progress. Testing *of* learning, on the other hand, is strictly summative and does very little to inform the decision-making process. Continuous monitoring of teaching and learning is the type of instructional leadership needed from principals to help lead data translate to strategy. Finding ways to measure the level of instructional leadership provided by the principal, though challenging, is a necessary addition to a more effective balanced scorecard. The researcher suggests adding effective school level administrative processes as a strategic objective. This would fit in the goal area identified as organizational effectiveness and both the number of classroom visits and number of teacher conferences could be used as units of measure.

Part of the theoretical framework for this study is the belief that the constant state of re-evaluation present in mindful organizations creates an agility that helps them be responsive to potential problems. This is significant because the very design of the balanced scorecard helps frame and emphasize potential problems by establishing goals and dictating strategy. If this is true, the obvious question to be answered here is how can schools that use the balanced scorecard exhibit higher levels of mindfulness yet be only minimally more effective, academically, than those that do not? If indeed mindful organizations “are attentive to the front line, where the real work gets done” (Weick & Sutcliffe, 2001, p. 13), how does this not translate

to student achievement as the results of this study suggest? The answer to the question can perhaps be found in another area of the definition of mindfulness,; deference to expertise.

Deference to expertise is described by Weick and Sutcliffe (2001) as a migration of the decision-making process. Simply put, when systems are operating normally the decision-making process is a top down approach. However, as conditions change from normal to a faster pace or even emergency, the decision makers on the front line need to be allowed the freedom to act with immediacy. Without this freedom, small problems can quickly develop into catastrophic events. Conceptually, this idea is powerful. It seems to suggest that teachers in mindful schools are allowed greater freedom in regard to what should be happening instructionally. The high degree of professional autonomy granted to teachers, however, does not guarantee success. Professional autonomy is often juxtaposed with abdication of administrative oversight. The high level of teacher autonomy present in schools begs for a closer examination of the loose coupling perspective discussed by Weick (1976).

Schools have long been recognized as loosely structured organizations (Bidwell, 1965). Teachers are charged with providing instruction to students with a wide range of academic abilities and interests and are thus allowed great professional freedom in regard to how they meet the individual needs of students. The majority of teaching taking place in schools goes unobserved by either administrators or lead teachers, and classroom teachers, consequently, enjoy high levels of authority over students. This is desirable in the sense that teachers should enjoy the ability to make instructional decisions quickly so emergent problems can be addressed and teaching can continue without interruption. Teachers are, after all, considered to be content experts and professionals in the arena of pedagogy. Despite the fact that teachers, as individuals or departments, have specific curriculum goals, in the very broad sense, all teachers in any

particular school work to advance students and help their school achieve its goal. Because all teachers in a school are working to achieve the same goal, a certain level of standard operating procedures must be in place. There must be balance in the sense that teacher autonomy should be married to mutual accountability. This is the essence of loose coupling.

Weick (1976) expands upon the loose coupling studies of Glassman (1973) and March and Olsen (1975). These studies focus on organizations where there is often a disconnection between the behaviors of individuals, or groups of individuals, and the outcomes produced by the organization at large. Loose coupling is best described when “coupled events are responsive, *but* that each event also preserves its own identity and some evidence of its physical or logical separateness” (Weick, 1976, p. 3). This is obviously present in educational organizations where a great deal of work is departmentalized. Hoy and Miskel (2005) link structural looseness in schools to the work of Bidwell (1965). Teachers think of their work as independent of principals and principals usually view what they do as independent of the county office. The epitome of departmentalization occurs within the central office where departments rarely interact as they simultaneously work to achieve the same goal. Loose coupling can be effective because it allows the parties involved to preserve their autonomy while concurrently holding themselves and others accountable to the goals of the organization. This should create an atmosphere that strengthens the desire to promote the common good and allows individuals the freedom to act immediately without checking with the higher ups. This is clearly congruent with the concept of mindfulness and should result in a manifestation of mindful behavior in schools.

A common unintended consequence of loose coupling in schools, however, is poor monitoring of the teaching process. This takes us back to the earlier notion that professional autonomy can very easily turn into administrative neglect. This happens because there is often a

noticeable gap between what Weick (1976) calls certification and inspection. The term certification is used to answer the question “who does the work,” while inspection seeks to find out “how well the work is done.” Administrators have a tendency to focus on management issues (who does the work) and often no organizational structure is in place to monitor the impact of instruction (how well the work is done). This is common in loosely coupled organizations because members tend to trust one another to get the job done. This creates a problem in schools because “the work is intrinsically uninspected and unevaluated or if it is evaluated it is done so infrequently and in a perfunctory manner (Weick, 1976, p. 11). This is perhaps true because administrators fail to make distinctions between normal times and the high-tempo, emergency times described by Weick (2001). It is important to note that HROs embrace mindfulness but the deference to expertise described is to take place only in the event of an emergency. The mode of operations in normal times requires a closer level of supervision from the top. In the practical sense it may be true that teachers operate better when fewer precise rules are in place and administrators would be wise to avoid absolute rules. However, the concept of mindfulness and specifically, deference to expertise, should not translate to organizational looseness that is void of administrative oversight. It is important to remember that while some organizations are loosely coupled because they infrequently interact (Snook, 2000), they can at the same time be tightly coupled because their actions lead to the attainment of a common goal (Beekun & Glick, 2001).

The results of this study reveal that teachers in schools that use the balanced scorecard have higher levels of mindfulness than teachers where the balanced scorecard is not used. While teachers in schools that use the balanced scorecard may have a preoccupation with failure and may even support the notion of deference to expertise, the researcher believes the concept of

sensitivity to operations gets lost in loosely coupled organizations. This is certainly not purposeful but rather illustrates the complexity of mindfulness and the difficulty of shifting culture in schools. Defining mindfulness for a faculty and changing behaviors from the standpoint of management can be done with relative ease. Creating a culture of mindfulness, however, can be a more lengthy process that can challenge the leadership skills of principals. This is true because the very nature of mindfulness requires a shift in thinking that results in a shift in beliefs. If teachers, indeed, are more committed to resilience they expect more of themselves and others. Weick (2001) describes this as a change in culture where “a new set of expectations and a new urgency” (p. 119) drive the organization. High mutual expectations extend to all team members without exception. Teachers will more easily accept the expectation of a preoccupation with failure because current NCLB legislation has made failure more real than ever before. Deference to expertise is accepted because teachers like the idea of being in control of their domain. Sensitivity to operations, on the other hand, includes a never ending vetting process where teachers carefully test the instructional prowess of administrators. Therefore, a shift in sensitivity to operations can only happen if principals guide the learning communities in schools and actively engage teachers in an ongoing conversation about what good teaching and learning looks like. Administrators need to do a better job of monitoring the teaching process. For this to happen, school leaders must be

unremitting in their scan for problems and never so removed from the day-to-day operations that they have difficulty understanding what is happening and why. Thus it is especially important for school leaders to stay close to teaching and learning in the classroom. (Hoy, 2003, p. 98)

While schools that use the balanced scorecard may exhibit more mindful behavior, the culture of mindfulness is a slow-changing process that requires administrative attention.

Another unintended consequence of loose coupling in schools could be the lack of administrative oversight in the area of curriculum. The shift to a standards-based curriculum has not helped alleviate the problem of curriculum confusion. Despite the efforts of state officials to provide a prioritized curriculum for every subject, “the classroom teacher ultimately decides how much time to allocate to subjects, what topic to cover, and in what order they should be taught” (Manzo, 2003, p. 8). This often leads to a discrepancy between what is supposed to be taught and what is actually taught. This is discussed in detail by Marzano (2003). His work referenced three types of curricula identified by the Second International Mathematics Study conducted in the late 1970s and early 1980s. The study shows a disconnect between the content specified by the state, the content taught by the teacher, and the content actually learned by the students. Sausner (2005) asserts that a visit to “five different fourth-grade classrooms [will produce] five radically different qualities of work” (p. 32). The point being reinforced here is that teacher autonomy, which is present in loosely coupled schools, can inadvertently lead to a reduction of collective focus. As was mentioned earlier, teachers are considered the content experts and most principals defer to this expertise naturally. This leads to infrequent or superficial contact between teachers and principals during common planning time in most schools and translates into curriculum neglect in many cases. Just as principals must be leaders in observing classrooms, they must be present and engaged during teacher planning time. This requires a level of instructional leadership from the principal that is again a cultural shift in the school setting. Creating, maintaining, and growing the professional learning communities in schools needs to be appropriately targeted and measured on a balanced scorecard.

Although the balanced scorecard is built around S.M.A.R.T. goals that should translate into strategy, establishing goals does not always equal success. While annual test scores should

be the manifestation of day-to-day instruction, they have the propensity to provide a summative report. Framing the targets for achievement, as the balanced scorecard does, should provide a more intense classroom focus. The amount of administrative attention given to any monitoring system, including the balanced scorecard, is difficult to measure. This is true because building administrators often enjoy a high degree of professional autonomy. Finding ways to monitor the level of instructional leadership provided by the school administrators as a result of data framed by the balanced scorecard is a challenge. Nonetheless, a better balanced scorecard would include this lead data.

Mindfulness, Collegial Leadership, and Professional Teacher Behavior

This study shows that mindfulness, collegial leadership, and professional teacher behavior are all stronger when schools use the balanced scorecard. Collegial leadership (CL) and professional teacher behavior (PTB), sub-dimensions of the OCI, are both compatible with the concept of mindfulness. All four sub-dimensions of the OCI were compared using four independent samples *t* tests. The results of the tests can be found in Table 7. The results of the independent samples *t* test for mindfulness are shown in Table 8.

The elements of effective teaming, central to mindfulness and brought about through an effective balanced scorecard, have been discussed by Edmondson et al. (2001). Teaming can logically be linked to Collegial Leadership and Professional Teacher Behavior, which are both sub-dimensions of the OCI. Where CL is high we see a stronger team. This is true because the principal treats teachers as professional colleagues and demonstrates a leadership style that is more democratic and open. Because the balanced scorecard has firm goals that have been developed collaboratively, expectations and standards of performance are clear. The levels of

collegial respect and autonomous judgment present when PTB is high are also central to more effective and mindful teams.

The researcher wishes to reiterate elements from the earlier discussion on loose coupling. While the results of the study indicate higher levels of mindfulness, collegial leadership, and professional teacher behavior are present when schools use the balanced scorecard, work in the area of growing these qualities needs to be continued. It is encouraging to find these qualities are linked to a strategic planning tool and that they can apparently be developed. While mindfulness is recognized as a management tool and CL and PTB are elements of climate, having any or all of these qualities permeate the culture of a school takes a deeper level of leadership from school administrators.

Achievement Press and Institutional Vulnerability

The lack of difference in Achievement Press (AP) and Institutional Vulnerability (IV) between balanced scorecard schools and non-balanced scorecard schools requires inspection. The results of the independent samples *t* tests for AP and IV are located in Table 7. As was discussed earlier, changing the climate of a school is of primary concern to school administrators. The process of change is difficult and slow. “Long-term systemic effort is more likely to produce change than short-term fads” (Hoy & Miskel, 2005, p. 194). The introduction of the balanced scorecard to schools in Georgia was met with several coincidences. The implementation of NCLB and the stress of adequate yearly progress are among the most significant within this collision of events. While they have served to make measurable objectives more real in the school setting, they have caused a flood of new terminology. Veteran administrators have had to adjust old mindsets and develop new styles, while new administrators

have had to quickly grow into their positions with little mentoring. In the midst of the federal NCLB mandate, the state of Georgia introduced significant change as well. A recent and tremendous change in the state curricula has resulted in significant dips in standardized test scores in many areas. This certainly could impact some dimensions of the OCI. The many changes in the field of education could cause the balanced scorecard to be viewed by teachers as one more passing fad and therefore have little impact on achievement press.

The events described above have negatively impacted the morale of teachers. They have also placed a more intense public spotlight on schools and their performance. The heaviness this adds to teachers has increased public concern and pressure.

Limitations of the Study

This study is subject to certain limitations. First, the researcher has no means by which to compare the development, design, and implementation of any particular school's balanced scorecard. And, a critical limitation is the absence of measuring the level of monitoring employed by administrators. Since it was first introduced to the school setting, the design and regular use of the balanced scorecard has been widespread yet inconsistent from school to school.

The second limitation rests in the sample of the study. The sample is not only limited to the State of Georgia, it is further limited to only six school systems within the state. The restricted range of the sample creates an inability to easily generalize the findings.

The third limitation is that many schools already have continuous monitoring systems other than the balanced scorecard in place. Therefore, accuracy of the comparison may be

compromised. The study was cross sectional, which means there is an inherent limitation because no account is made of what changes might occur over time.

A very obvious limitation of the study is revealed in the discussion centered on loose coupling. The researcher has no means by which to measure the level of coupling for the schools in the study. This creates a complex limitation because of the multidimensional nature of this perspective. The varying degree of coupling in schools creates varying levels of instructional leadership and alters perceptions of both climate and culture. Measuring the impact that coupling has on schools is a challenge. Sharp (2009) conducted a study of public sector agencies and attempted to measure the appropriateness of coupling in criminal justice agencies in Florida. This work is described as exploratory and provides a “much needed foundation for future research on the concept of coupling” (Sharp, 2009, p. 50). Without empirical research linking coupling to climate, mindfulness, and the balanced scorecard, the results of this study cannot be easily generalized.

Recommendations

Clearly, there is the need to do more research in the area of the balanced scorecard in the school setting. The researcher found very limited research results are available on the topic. While a variety of continuous monitoring tools and techniques are currently employed in schools, the use and impact of the balanced scorecard in the school setting remains largely unexplored. However, the benefits the balanced scorecard has brought to the business world and various non-profit groups warrants further exploration in the school setting. This study seems to support that claim to a limited degree. Additional studies could help substantiate or refute the

hypotheses tested. The researcher offers suggestions for those wishing to further investigate the balanced scorecard.

If the current study is replicated, efforts should be made to not only increase the sample size but to ensure a more diverse sample as well. Because the schools selected for this study were restricted to one geographic area in one southeastern state, the results produced by the sample cannot be generalized.

Future studies should extend beyond the State of Georgia. The many changes in the math curriculum coupled with NCLB legislation and the pressures of AYP have made math achievement difficult in the state. Implementation of new standards bring questions of test alignment to the forefront. Replicating the study where such changes have not taken place could yield different results.

It is also the recommendation of the researcher that further studies more closely scrutinize the development of individual balanced scorecards. Too often, tools employed by schools that originate in the business sector are not well thought out prior to implementation. This could likely be the case for the balanced scorecard. Since its introduction to schools in Georgia, use of the balanced scorecard has rapidly increased. Further research should investigate how these scorecards were developed, how long they have been utilized, and how they are monitored throughout any given academic year.

This apparent lack of connectivity between the elements of this study leaves both the researcher and reader in search of further questions. It is therefore the recommendation of the researcher that future studies using the balanced scorecard, achievement, climate, and mindfulness seek to examine the inter-correlation of the variables. This study was limited in that it looked at achievement, climate, and mindfulness each independently in relation to the balanced

scorecard. Producing a study that links all four variables together could produce more intriguing results and better answer the hypotheses presented.

A final recommendation is the development of a coupling scale for schools to measure the impact loose and/or tight coupling may have on outcomes. This could be done in conjunction with a study comparing the balanced scorecard to other monitoring systems. Continued research linking leadership and, specifically, coupling to climate, mindfulness, and the balanced scorecard could provide very useful information.

Conclusions

Clearly, monitoring for school improvement is not an easy task. The No Child Left Behind Act and Adequate Yearly Progress both weigh heavily on teachers and administrators as the prospect of falling into the Needs Improvement category becomes more real. School leaders need tools that discourage only a quick glance at any school's AYP report as a measure of success. Tools such as the balanced scorecard need to be explored as the need for constant monitoring is ever-present.

All stakeholders need to have the ability to give firm facts based on authentic data, including lead data, to access the current condition of their particular schools. The existence of a persistent measuring device should create constant monitoring in schools. In addition to student achievement, performance across all elements of the school needs to be monitored. This includes organizational climate and faculty mindfulness. The balanced scorecard approach needs to be further explored as an effective strategy for school improvement.

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APPENDIX A
SAMPLE BALANCED SCORECARD

Goal Area 1	Strategic Objective #1	Performance Measures	Unit of Measure	Trend Data			Target
Student Achievement	Students Master the Curriculum			2007	2008	2009	2010
		SO #1.A = CRCT (Reading)	% Meets + Exceeds	86%	91%	93%	96%
		SO #1.B = CRCT (Math)	% Meets + Exceeds	68%	72%	74%	75%
		SO #1.C = Writing Assessment	% Meets + Exceeds	94%	82%	89%	91%
		SO #1.D = HSGT	% Passing 1st Time	94%	92%	94%	95%
	Strategic Objective #2	Performance Measures	Unit of Measure	Trend Data			Target
	Students are Nationally Competitive			2007	2008	2009	2010
		SO #2.A = I.T.B.S. (Reading)	% > Peers	59%	61%	58%	70%
		SO #2.B = I.T.B.S. Math)	% > Peers	51%	48%	49%	70%
		SO #2.C = SAT	Ave Score	1441	1439	1468	1520
SO #2.D = ACT		Ave comp score	18.4	19.3	19.5	21	
Goal Area 2	Strategic Objective #1	Performance Measures	Unit of Measure	Trend Data			Target
Effective Administrative Processes	Sound Fiscal Management			2007	2008	2009	2010
		Variance to Budget	Approved vs. Actual	1.4%	2%	2.2%	2%
		Purchase Order Flow	% ≤ 10 days	93%	94%	92%	95%
	Strategic Objective #2	Performance Measures	Unit of Measure	Trend Data			Target
	Effective Operations			2007	2008	2009	2010
		On time Bus Delivery	% on time	94%	96%	96%	95%
		Maintenance Request	% ≤ 5 days	96%	93%	95%	95%
	Strategic Objective #2	Performance Measures	Unit of Measure	Trend Data			Target
	Technology Support			2007	2008	2009	2010
		Industry Certified Staff	% Certified	98%	98%	99%	100%
Response to Work Orders		% ≤ 4 hours	96%	97%	96%	95%	
Goal Area 3	Strategic Objective #1	Performance Measures	Unit of Measure	Trend Data			Target
Stakeholder Satisfaction	School Climates are Healthy and Effective	Organizational Climate Index (OCI)	CL	19	21	22	> 20
			PTB	23	22	24	> 20
			AP	18	21	20	> 20
			IV	16	14	17	< 15
		Strategic Objective #2	Performance Measures	Unit of Measure	2007	2008	2009
	Parents and Students are Satisfied						
		Student Surveys	% Satisfied	94%	92%	96%	95%
		Parent Surveys	% Satisfied	93%	92%	94%	95%
Goal Area 3	Strategic Objective #1	Performance Measures	Unit of Measure	Trend Data			Target
Staff Learning & Growth	Faculty Demonstrates Mindfulness	M-Scale		2007	2008	2009	2010
			M=Score	4.2	4.2	4.4	> 4.5
Did Not Meet Annual Goal			Improved but Did Not Meet		Met Annual Goal		

APPENDIX B

OCI

OCI

DIRECTIONS: THE FOLLOWING ARE STATEMENTS ABOUT YOUR SCHOOL. PLEASE INDICATE THE EXTENT TO WHICH EACH STATEMENT CHARACTERIZES YOUR SCHOOL BY CIRCLING THE APPROPRIATE RESPONSE.

RO =Rarely Occurs **SO** =Sometimes Occurs **O** =Often Occurs **VFO** =Very Frequent Occurs

1. The principal explores all sides of topics and admits that other opinions exist RO SO O VFO
2. A few vocal parents can change school policy RO SO O VFO
3. The principal treats all faculty members as his or her equal..... RO SO O VFO
4. The learning environment is orderly and serious RO SO O VFO
5. The principal is friendly and approachable..... RO SO O VFO
6. Select citizens groups are influential with the board RO SO O VFO
7. The school sets high standards for academic performance..... RO SO O VFO
8. Teachers help and support each other RO SO O VFO
9. The principal responds to pressure from parents..... RO SO O VFO
10. The principal lets faculty know what is expected of them..... RO SO O VFO
11. Students respect others who get good grades..... RO SO O VFO
12. Teachers feel pressure from the community..... RO SO O VFO
13. The principal maintains definite standards of performance..... RO SO O VFO
14. Teachers in this school believe that their students have the ability to achieve academically..... RO SO O VFO
15. Students seek extra work so they can get good grades RO SO O VFO
16. Parents exert pressure to maintain high standards RO SO O VFO
17. Students try hard to improve on previous work..... RO SO O VFO
18. Teachers accomplish their jobs with enthusiasm..... RO SO O VFO
19. Academic achievement is recognized and acknowledged by the school..... RO SO O VFO
20. The principal puts suggestions made by the faculty into operation..... RO SO O VFO
21. Teachers respect the professional competence of their colleagues RO SO O VFO

- 22. Parents press for school improvement RO SO O VFO
- 23. The interactions between faculty members are cooperative..... RO SO O VFO
- 24. Students in this school can achieve the goals that have been set for them..... RO SO O VFO
- 25. Teachers in this school exercise professional judgment..... RO SO O VFO
- 26. The school is vulnerable to outside pressures RO SO O VFO
- 27. The principal is willing to make changes..... RO SO O VFO
- 28. Teachers “go the extra mile” with their students RO SO O VFO
- 29. Teachers provide strong social support for colleagues..... RO SO O VFO
- 30. Teachers are committed to their students..... RO SO O VFO

APPENDIX C

M-SCALE

M Scale

DIRECTIONS

The following statements are about your school. Please indicate the extent to which you agree with each of the following statements along a scale from STRONGLY DISAGREE (1) to STRONGLY AGREE (6).

1. My principal often jumps to conclusions 1 2 3 4 5 6
2. When a crisis occurs the principal deals with it so we can get back to teaching 1 2 3 4 5 6
3. In this school teachers welcome feedback about ways to improve 1 2 3 4 5 6
4. Teachers do not trust the principal enough to admit their mistakes 1 2 3 4 5 6
5. The principal of this school does not value the opinions of the teachers 1 2 3 4 5 6
6. My principal is an expert on teaching and learning 1 2 3 4 5 6
7. Teachers in this school jump to conclusions 1 2 3 4 5 6
8. People in this school respect power more than knowledge 1 2 3 4 5 6
9. Teachers in my building learn from their mistakes and change so they do not happen again 1 2 3 4 5 6
10. My principal negotiates faculty differences without destroying the diversity of opinions 1 2 3 4 5 6
11. Too many teachers in my building give up when things go bad 1 2 3 4 5 6
12. The principal welcomes challenges from teachers 1 2 3 4 5 6
13. When things go badly teachers bounce back quickly 1 2 3 4 5 6
14. Most teachers in this building are reluctant to change 1 2 3 4 5 6