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The Effects of School Climate Change  
on Student Success in a Fifth and Sixth  
Grade School

by

Kim M. Harris

A Dissertation submitted to the Education Faculty of Lindenwood University  
in partial fulfillment of the requirements for the  
degree of

Doctor of Education

School of Education

The Effects of School Climate Change  
on Student Success in a Fifth and Sixth  
Grade School

by

Kim M. Harris

This dissertation has been approved as partial fulfillment of the requirements for the

degree of

Doctor of Education

at Lindenwood University by the School of Education

  
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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Fenderwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

Full Legal Name: Kim M. Harris

Signature: 

Date: 4-8-11

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## **Abstract**

The significance of the study was to examine intentional strategies to improve school climate relative to student school success as measured by academic achievement, attendance, and student behavior. It was important to understand how student school success was affected by factors related to school climate improvement such as leadership and change processes, initiatives to improve student sense of safety and connectedness, and factors such as time, relationships, grade span, and alignment in academic focus. Understanding how school climate could promote student school success was significant in this study, as was an understanding of the differences between school culture and climate to clarify the interchangeable use of these terms. A review of literature presented culture as beliefs, norms, values, ceremonies, and rituals, while climate was presented as measurable effects related to programs, practices, and structures within the school setting.

The problem at the school of study was that student surveys indicated significant concerns with school safety and belonging, and the school had consistently failed to meet adequate academic progress. The success of the students at the mid-western suburban school of 730 students required that school leaders and staff understand the compelling nature of the school's data in order to motivate change, and to understand the process for change and the resources needed to improve school climate and student school success. Efforts to bring about school climate change in this study consisted of an intentional, integrated, and multi-faceted approach of leadership influence in improving age

appropriate school climate, improving adult and student relationships through climate improvement initiatives, and increased and aligned academic focus.

The results were that the intentional, multi-faceted, and integrated approach to school climate change at the school of study led to measurable improvement in indicators of school climate. The climate improvement accompanied statistically significant improvement in student school success after the first year and into the second year of the study, as measured by indicators of improved academic achievement, decreased discipline incidents, and improved attendance rates. Because of the limited scope of the study, further investigation of this intentional, multi-faceted, and integrated approach is recommended.

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## Chapter 1: Overview of the Study

### Background of the Study

Student school success and school climate have received considerable attention in educational literature, leading to an understanding that a “positive sustained school climate promotes students’ academic achievement” (Cohen, Pickeral, & McCloskey, 2009, p. 45). Understanding how school climate can promote student school success was especially significant in light of the declining status of United States’ student achievement in international rankings. According to Darling-Hammond (2010), the U.S. ranks 35<sup>th</sup> out of 40 on the tests administered through the Program in International Student Assessment. The costs of declining student achievement are high, including increased drop-out rates, increased costs of social services and costs related to increased crime and incarceration, and an inadequately prepared work force (Darling-Hammond, 2010). Unhealthy and failing schools experienced an environment where achievement was not valued, and those unhealthy schools lacked a strong school leader (MacNeil, Prater, & Bush, 2009).

**School climate.** Educational authors, DuFour and Eaker (1998), indicated that a failure to address school climate was a significant factor in the failure of school reform efforts (DuFour & Eaker, 1998). Addressing the characteristics of healthy school climates, Cohen, discussed “safety, relationships, teaching and learning, and the institutional environment” (Cohen et al., 2009, p. 46), and explained that the institutional environment included the aspect of student connectedness and belonging. The Association for Supervision and Curriculum Development’s Whole Child Initiative

defined student connectedness and belonging as students feeling “healthy, safe, engaged, supported and challenged” (Cohen et al., 2009, p. 46) at school. Comer (1992) encouraged school leaders to focus school reform efforts on the developmental needs of the children including their need to feel safe and to feel a sense of belonging. Brunner and Lewis (2009) also found that the need for students to feel safe and feel a sense of belonging at school was a significant aspect of school climate. These authors described school safety as a column of support for academic achievement, noting the devastating effects that the lack of school safety can have on student school success. Authors of the Safe School Initiative Final Report indicated, “many (student) attackers felt bullied, persecuted or injured by others prior to the attack” (Vossekuil, Fein, Reddy, Borum, & Modzeleski, 2002, p. 35) and that the response of adults within the school that empowered students to prevent bullying was critical to creating a safe school climate.

As noted, the lack of a strong school leader contributed to an unhealthy school climate (MacNeil, Prater, & Bush, 2009). Conversely, transformational school leaders measured the current reality of a school’s climate and the effectiveness of initiatives to bring about effective change (MacNeil et al., 2009). MacNeil et al. noted that the school principal served as the “change agent” (p. 76) and that the leader’s impact on student achievement was indirect through his or her influence on school climate. However, according to adjunct professor, Cohen (2007), of Columbia Teachers College, many principals did not use valid instruments when measuring school climate. The subjective nature of defining and measuring school climate necessitated the use of scientifically

developed instruments to validate the measurement of results, which frequently did not happen (Cohen et al., 2009).

**United States student school success.** Researchers measuring student school success have used discipline incidents, attendance, and other internal school indicators to measure success (Balfanz & Byrnes, 2006; Henry, 2007; Wilkins, 2008). However, this success, or lack thereof, was measured most often through academic achievement, as the No Child Left Behind Act (2002) required that schools use aggregate and disaggregate student achievement results as indicators of student school success. Since the No Child Left Behind Act was passed in 2002, more and more schools have failed. According to educational author Ravitch (2010), in 2007-2008 “30,000, or 35.6% of public schools” (p. 104) did not make annual yearly progress, representing a 20% increase in failing schools over the prior year. During the same period, 3,500 public schools were in various stages of restructuring, representing a “50 percent increase over the previous year” (p. 105). Ravitch attributed this increased failure rate to the punitive nature of the No Child Left Behind Act, noting that this movement had less to do with school reform than accountability and punishment.

Adding to the data on the dismal condition of children’s educational experiences in the U.S., Darling-Hammond (2010) noted that over the last 20 years, the achievement gap between white and minority students has increased and the “graduation rate has slipped below 70 percent” (p. 14). This author reported that even though U.S. white students scored on par with European nations, the low scores of U.S. African American and Hispanic students brought the national ranking to the bottom level. Related to this,



Granger (2008) reported that “dropout rates for Limited English Proficient students, students of color, and those living in poverty . . . have increased markedly in the wake of NCLB” (p. 208). Other data on the achievement gap in the nation’s schools shows a “30 to 50 percentage-point difference between White students and the largest minority group in the percentage of students scoring at the basic level on the eighth grade National Assessment of Educational Progress” (Balfanz & Byrnes, 2006, p. 144) in almost every state. While minority achievement has improved since the Balfanz and Byrnes report, significant gaps continue to exist between achievement levels for white students compared with their minority peers (National Assessment of Educational Progress, 2009).

**School improvement.** Researchers have shown that school leaders can facilitate a school climate that improves student school success (Boyer, 1983; Cohen et al., 2009; MacNeil et al., 2009). Specifically, Boyer noted, “In schools where achievement was high and where there was a clear sense of community, we found invariably that the principal made the difference” (p. 219). The differences in schools and the characteristics making up those schools make a difference in student achievement and “schools that are highly effective produce results that almost entirely overcome the effects of (student) background” (Marzano, 2003, p. 7). Related to this, Schmoker (1999) noted that targeted individual academic interventions for students were more important than student background in reading, writing, and math; and, he further noted that “schools improve when purpose and effort unite” (p. 111).

The use of time within the school day was another critical component relating to climate and to student school success. Multiple researchers have referred to how time

was used in the school day as “sacred” (Reeves, 2009, p. 129; Wood, 1993, p. 248), and Glickman (1993) referred to time as “the scarcest resource in school renewal” (p. 44). This was related to Marzano’s (2003) work on guaranteed and viable curriculum, which he identified as having “the most impact on student achievement” (p. 15). Guaranteed and viable curriculum indicated that there was adequate time within the school day and year to teach designated concepts, and that each student in the system had access to these designated concepts regardless of the teacher to whom he or she was assigned (Marzano, 2003). How available time was used affected achievement (Stigler & Hiebert, 1999). While interruptions to classroom instruction are virtually non-existent in Japanese classrooms in a comparative study, public address announcements and other interruptions occurred in “33 percent of the American lessons” (Stigler & Hiebert, 1999, p. 62).

The researchers referenced in this background section highlighted the grave and growing concern regarding the ability of the nation’s schools to meet the needs of its learners (Darling-Hammond, 2010; Granger, 2008; Ravitch, 2010). Successful school reform called for a comprehensive approach to climate reform focused on safety, belonging, and academic press, including careful consideration of the use of time. To bring about successful systemic school improvement, school staff must measure, address, and monitor student progress through the habitual use of data to meet the behavioral and academic needs of individual students (Boyer, 1983; Marzano, 2003; Schmoker, 1999). According to the research of this dissertation, intentional acts served to create a sense of school community and school success for students and staff, related to the school’s climate and culture.

**Statement of the Problem**

Missouri Middle School, a pseudonym for the school of study, suffered from an unhealthy school climate and from falling academic achievement. Approximately half of Missouri Middle School's students indicated on two separate climate surveys that they did not feel safe or have a sense of belonging. Further, the school was in its third year of improvement status, having failed to meet AYP goals for multiple years.

The success of the students at Missouri Middle School required that school leaders and staff understand the compelling nature of the school's data in order to motivate change, and to understand the change process and the resources needed to improve school climate and student school success. Valid and reliable measurements of climate and achievement were required to measure progress in order to ensure the realization of goals (Cohen et al., 2009).

**Purpose of the Study**

The purpose of this study was to determine outcomes of student school success resulting from initiatives for school climate change at Missouri Middle School, a fifth and sixth grade center that was the school of study. Data sources for measurement of student success and climate change included secondary sources related to achievement, attendance, and behavior, as well as research-based measures of student sense of safety and belonging.

**Research question.** The research question that guided the work of this dissertation was, "Will strategies to positively improve school climate result in improvement in student school success as measured by improved academic achievement,

reduced number of discipline incidents, and improved attendance rates?” School climate improvement strategies included daily morning assemblies, increased adult supervision, cross-age buddy classes, class meetings, increased focus on student teams and student leadership, protected instructional time, content teacher building leadership, and collaboration using data for improvement.

**Null hypothesis:** Strategies to improve school climate will not result in improvement in student school success as measured by student proficiency on the MAP (MAP) scores, number of discipline referrals, and attendance rates.

**Alternate hypothesis:** Strategies to improve school climate will result in improvement in student school success as measured by student proficiency on the MAP scores, number of discipline referrals, and attendance rates.

### **Definition of Terms**

**Caring School Community.** An approach “designed to develop students’ sense of community in school – their sense of belonging, contribution, and influence” (CHARACTERplus, 2007, p. 105).

**Climate.** Climate represents the measurable effects related to the practices, programs, and structures within a school (Haynes, Emmons, & Ben-Avie, 1997; Schoen & Teddlie, 2008).

**Culture.** Culture represents the beliefs, values norms, ceremonies and rituals shared by members of school (Bruhn, 2005; Krumm, 1996; Stolp, 1994).

**Formative assessments.** Assessments used to inform instruction (DuFour, 2010), allowing teachers to better meet individual students’ learning needs.

**FRL (FRL).** Students whose family incomes are sufficiently low, 130-185 % of the poverty rate, so that the cost of their school meals is partially or completely subsidized by the federal government (US Department of Agriculture, Food and Nutrition Service, 2010).

**Grade span.** The number of grades contained within a school or level; a more narrowly configured school has fewer numbers of grades and a more broadly configured school has a larger number of grades (Cook, MacCoun, Muschkin, & Vigdor, 2007).

**Looping.** A structure where a teacher remains with his or her students across two or more years and grade levels (Elliott & Capp, 2003).

**Missouri Assessment Program (MAP).** The state test administered to all Missouri students in grades three through eight (Missouri Department of Elementary and Secondary Education, 2010).

**Missouri Integrated Model (MIM).** The state funded model to explore and implement structures for systemic intervention to address behavior and learning needs of students school-wide (Missouri Integrated Model, 2010).

**Missouri School Improvement Program (MSIP).** The state guidelines used for curriculum and school operations to rate effectiveness of schools (Missouri Department of Elementary and Secondary Education, 2010).

**Positive Behavior Support (PBS).** A three-tiered system wide intervention approach to improve school climate including, “positively stated purpose (and) clear expectations backed by specific rules” (Cohen, Kincaid, & Childs, 2007, p. 203) to encourage adherence and discourage violations.

**Socio economic status (SES).** Socio economic status, referring in this dissertation to students whose family income is sufficiently low to qualify to receive FRL (FRL).

**School within a school.** An alternative school model that operates from within the traditional school setting, eliminating the need for students to matriculate back into the traditional setting when their individual goals have been met (Weir, 1996).

**Stakeholders.** Stakeholders are members of a school community that have a stake in the workings of the school including, but not limited to, staff, parents, students, and community members (Reeves, 2009).

### **Summary**

The conditions at Missouri Middle School mirrored the state of student school success in the nation's schools. The growing minority populations and percentage of FRL (FRL) students at this school, and the significant concerns regarding school climate and student achievement at Missouri Middle School made threat to student success at this school particularly significant. This study provided a starting point for a more specific review of research regarding the work at Missouri Middle School, especially in terms of school leadership, school level factors including relationships and the use of time, climate and student success measures, and school climate change initiatives.

## Chapter 2: Literature Review

This literature review was conducted to address student academic failure and significant climate concerns at the Missouri Middle School. In order to understand how to respond to the climate concerns related to students' lack of sense of safety and belonging at this school, it was initially important to understand the similarities and differences in the terms *culture* and *climate*, and their relationships to student school success, and to determine how to use these terms in this dissertation. The study of the terms included both etymological information and the use of these words in educational research literature in order to determine how to define these terms within the study.

To bring about effective and responsive change, educational research literature was examined relative to leadership factors and change processes, including timeline for change, effective practices, resistance to change, decision making and leadership models, emotional intelligence, and how school reform was related to school culture. Understanding the role of the school leader and the process of bringing about positive and systemic change in the areas of climate and student school success is foundational to the work of this study. Marzano, Waters, and McNulty (2005) and Kofman and Senge (1993) spoke to the interconnected and overarching nature of this important work.

Similarly, the literature review included school level elements such as time factors, grade span and looping, teacher factors (including teacher-student relationships and teacher-principal relationships), time devoted to non-core content, and those relationships to student school success. Grade span configuration was specifically relevant to this studied school, as the Missouri Middle School recently reorganized as a

fifth and sixth grade middle school, with students matriculating from five different neighborhood elementary schools to spend two years at Missouri Middle School. Also significant as an area of study was the impact of school transitions on at-risk students, which led to the study of alternative school models. The literature review also included a study of models for successful climate improvement.

### **Culture and Climate Differences**

The Webster's Third New International Dictionary (Gove, 1961) gave the primary definition of culture as, "the act of developing by education, discipline, or social experience: the training or refining of the moral or intellectual faculties" (422-423). The word culture originated from the Latin word *colere* meaning tend or cultivate.

A primary definition of climate in the same source (Gove, 1961) was, "the average course or the condition of the weather at a particular place over a period of many years" (422-423), originating from the Greek word *klima* meaning slope, zone. From a strictly etymological standpoint, these words are seemingly disconnected. The terms culture and climate, however, are used interchangeably in educational research.

Current studies were used to clarify the similarities and differences between the terms culture and climate. This provided a better understanding of the role that each played within the school, and helped determine how to measure various aspects of each.

**Culture.** In his work on culture-brain interactions, Bruhn (2005) described culture as learned and shaped, in an ongoing manner, by each event and circumstance experienced throughout an individual's life, and these events provided the construct for the shaping of beliefs, values, and norms. Bruhn further pointed out that culture affected



numerous individual domains including thinking, verbal and non-verbal communication, and emotions. Bruhn was not alone in his attempt to connect the mind with culture. Shore (1996), writing about the relationship between culture and mind, pointed out that historically anthropological studies omitted study of the mind when addressing culture. Shore referenced internally constructed aspects of human culture shaped by reactions to the environment, and those aspects that one inherits as a matter of birth as “inside-out . . . and outside-in” (p. 208). Under Bruhn’s premise, culture is both something inherited and something to which individuals contribute. In a separate study, Kachru (2008) further clarified these thought/action ideas about culture as what people “must know in order to act as they do, make the things they make, and interpret their experiences in the distinctive way they do” (p. 312).

Other researchers concurred with Bruhn’s earlier stated connection of culture with beliefs, values, and norms, similarly connecting culture with “values, opinions, and beliefs” (Krumm, 1996, p. 6) and “values, beliefs, and attitudes” (Stolp, 1994, p. 2). Krumm, however, offered an extension of this idea, dividing culture into domains of ethnicity, social/work, and religion, and pointed out that the dogma of these subsets of culture for any specific individual might not align; for example, the norms within an individual’s social interactions may not align with an individual’s espoused religious beliefs.

Within the educational context, Stolp (1994), writing for the ERIC Clearinghouse on Education Management, defined school culture as “historically transmitted patterns of meaning that include the norms, values, beliefs, ceremonies, rituals, traditions, and

myths” (p. 2) shared by those within a community. Stolp found these patterns to have a powerful influence on the words and actions of community members within a school setting.

**Climate.** Turning to an understanding of school climate, educational researchers have described climate as related to interpersonal interactions and structures and their effect on child development. School climate was defined as “the quality and character of school life – reflecting the norms, goals, values, interpersonal relationships, teaching, learning, leadership practices, and organizational structures” (Haynes, Emmons, & Ben-Avie, 1997, p. 322). Keiser and Schulte (2009) defined school climate as “the quality and consistency of interpersonal interactions within the school community that influence children’s cognitive, social, and psychological development” (p. 46) and Gunzelmann (2005) defined school climate as “a reflection of the positive and negative feelings regarding school environments which may directly or indirectly affect a variety of learning outcomes” (p. 66).

For purposes of measurement and clarity of communications, this dissertation sought to establish the relationship and differences between the words culture and climate. Regarding the relationship between school culture and climate, the work of Keiser and Schulte offered some insight. They indicated that school climate is developed through the shared cultures of students and teachers, and extended this premise to include “the diverse cultures that [each] bring to school from home” (Keiser & Schulte, 2009, p. 45). Schoen & Teddlie (2008) described climate as measured more quantitatively and culture as having attributes that more easily measured qualitatively. In the Schoen and

Teddlie model, culture consisted of four domains: “I Professional Orientation” (activities/attitudes of faculty), “II Organizational Structure” (leadership style, communication, and process), “III Quality of Learning Environment” (intellectual engagement and rigor), and “IV Student-Centered Focus” (efforts and programs to support student achievement) (p. 140). This model eliminated the discussion of climate, encompassing climate within the four domains, with climate being the espoused beliefs of members of a learning community.

**Summary.** A review of the framing literature has presented conflicting and overlapping views of the terms culture and climate. Much of the research involved in this study used the terms interchangeably; consistent agreement on the meanings of these terms did not universally exist in the educational literature reviewed. However, based upon the agreement that did exist, this dissertation represented culture through beliefs, values, norms, ceremonies, and rituals, while it represented climate through measurable effects related to the programs, practices, and structures within a school setting.

### **School Leadership Factors and Change Processes**

Understanding organizational dynamics and the role of the school leader in the processes that brought about effective change were critical components of this research related to school climate change improvement and student school success.

Seeking to identify the connection between climate and school leadership, researchers Kelley, Thornton, & Daugherty (2005) found that principals played a lead role in influencing school climate as principals’ words and actions served to “foster or restrict teacher effectiveness” (p. 18) and that the shared words and actions of principals

and teachers had a strong relationship to student achievement. Bates (1992) in his research about school leadership and culture extended this thought on the role of school leaders and the impact of their influence on both school and community climate, putting forth the idea that schools must develop character for effective citizenship, as well as equip students with skills and knowledge for a productive society. Bates further suggested that practices within the school connected its stakeholders to a larger context through movements such as social action, with a related impact on citizenship and governmental structures. The following topics are reviewed in detail: timeline for change, effective practices, responding to resistance, leadership decisions and models, school reform and school culture, and emotional intelligence.

**Timeline for change.** While some researchers have noted the need for quick improvements to gain momentum for change efforts, other researchers have addressed the expectation of time needed to bring about significant and measurable improved achievement. Rivero (2009), described school turn around as a two-year plan. The first year, according to Rivero, focused on stabilizing the school environment and developing a specific improvement plan involving curriculum alignment, assessment development, and targeted professional development, and during the second year, turn-around schools fully implemented those plans bringing about measurable improvements in achievement. Writing about organizational change in schools, Zins and Illback (2007) also addressed the timeline for institutionalized change, noting that systemic change began to take place across a three-year period. Addressing the lack of large scale success in school reform, Zins and Illbak reported that this was due to momentum lost over the course of time and

that the intense sustained focus on intentional strategies for school improvement was difficult to maintain.

**Effective practices.** Herman, Dawson, Dee, Greene, Maynard, Redding, and Darwin et al. (2008), researchers for the National Center for Education Evaluation and Regional Assistance, provided helpful practices for principals hoping to turn around a failing school. According to this research, the principal must be a highly visible instructional leader who sends a clearly publicized message about the reform work. Key components of effective school reform, as noted by Herman et al. were a focus on achievement data, formative assessments, curriculum alignment, individualized professional development, and progress monitoring to create a sustained emphasis on instructional improvement. Goals geared toward “quick wins” (Herman et al., 2008, p. 9) were also noted in this research as the staff became fully committed to turning the school around. Effective reform principals, described by Herman et al., identified commitment levels, strengths, and weaknesses of the teaching staff, maximized teacher placements, released teachers who visibly worked against the reform efforts, and recruited highly qualified teachers and specialists.

Other researchers have found many of these same practices to be effective in turning around low-performing schools. Duke (2006), discussed student assessment and interventions, teacher collaboration, data informed decisions, shared school leadership, curriculum alignment, and focused professional development in his research on how low performing schools had effectively improved achievement. Authors of “Successful School Turnarounds” (Hassel, 2009) also noted the importance of quick improvements,

while Rivero (2009) noted the importance of a strong leadership team (shared leadership), high expectations climate, curriculum alignment, focused professional development, student intervention, and releasing teachers who did not support the school vision.

**Responding to resistance.** Several researchers referenced roadblocks, specifically teachers' resistance to change. Nderu-Boddington (2008), writing about the complexities of organizational dynamics, noted the importance of empathy on the part of a leader implementing organizational change. This research also pointed to the importance of training geared toward staff learning needs and flexible practices in order to provide the necessary support system to reduce staff frustrations. The work of Lindahl (2007) supported this concept, noting that an understanding of the cultural context of an organization helped leaders to secure an understanding of the source of, and the most effective response to, stakeholder frustrations during the change process. Nderu-Boddington (2008) suggested mitigating these obstacles by providing support and training for employees to increase their proficiency in adapting to the change. Lindahl (2007) described the threat posed by staff members who challenged reform as, "change (being) the problem of the smallest unit" (p. 321). Lindahl pointed to positive school culture as a venue to support organizational reform.

Expanding on the notion of roadblocks, Harvey (1991) referred to "gatekeepers" (p. 15). In order to establish his or her true position of leadership, Harvey noted the importance for the new school leader to challenge the gatekeepers (assistant principal, formal or informal teacher leaders, parents) as he or she made autonomous decisions

“emphasizing the purpose of the school to legitimize culture” (p. 15). According to Harvey it was important for the new principal to decide strategically when he or she would, “demonstrate the capacity to independently judge what perspectives and behaviors are appropriate in the school” (p. 16) related to increased student learning.

**Leadership decisions and models.** The myriad of proposed school reform approaches and models found in school turn-around literature revealed the complexity of the school leader’s job. In their research on instructionally effective schools, Murphy and Hallinger (1988) reported that some of the things that set an educational organization apart as excellent were the expectations of excellence across the board, on the part of the school leader, with problems viewed as challenges to conquer rather than obstacles to overcome. Stakeholders provided input within excellent organizations studied by these researchers, and leaders used that information to make decisions in the best interest of the organization. In order to move goals past the point of implementation to the point of institutionalization, goal driven leaders, described by Murphy and Hallinger, provided necessary resources and energy and allowed for autonomy in implementation.

Addressing a paradox, Lindahl (2007) described the principal as being the leader of the change effort, while also being a member of various sub-groups within the school. Spillane (2009) pointed to the impact of these informal relationships on the effectiveness of school leadership, referring to the importance of the “principal plus” (p. 70) aspect, commonly referred to as shared leadership or distributed leadership. Related to this, Lindahl (2007) also acknowledged the important role that the other individuals had in the principal’s ability to effectively lead the school. Support existed for increasing

the number of people involved in shared leadership; however, the principal must also possess a clear understanding of which decisions he or she viewed as shared, and which were those of the school leader alone (Zins & Illback, 1995). Decisions related to the vision of the school were those held within the principal's control, while decisions related to building collaborative culture, instruction, and interventions were those appropriate to share with other leaders in the school (Lindahl, 2007). Lashway (1997) reminded school leaders that while the principal's ability to garner the respect of the school staff was important, democracy was at times secondary to the need for a school leader to continue the momentum of the improvement practices through his or her decisions.

Different kinds of situations call for different kinds of leadership styles and decision making on the part of the principal. Lindahl (2007), discussed "single-loop changes, double-loop, and deutro-learning changes" (p. 322). Single loop changes worked with pre-established goals and set new strategies for attaining those goals. Double-loop changes established new goals and strategies. According to Lindahl, most school reform required the adoption of the deutro-learning model that called for new approaches, goals and organizational structures to bring about school improvement. However, school reform failures were the result of almost exclusive implementation of single-loop change, and Lindahl's work noted that the simplistic approaches often used by school leaders were inappropriate for the depth of change needed to institutionalize new approaches, goals, and strategies. Single loop changes, were those meeting the least resistance and having the smoothest implementation, while changes that are more



complex encounter greater resistance and require greater skill on the part of the school leader in implementation.

Further, “transactional, or control based” (Lindahl, 2007, p. 324), leadership was described as being appropriate for single-loop change while “transformational, or commitment-based” (p. 324) leadership was needed for more complex changes and these deeper level changes required much more time and effort on the part of the principal in strategically developing collective commitments to ensure success. Within transformational leadership, Lindahl pointed to the importance of helping others to find internal and external satisfaction resulting from their involvement in the change process, describing effective school leaders as those who shared leadership, both formally and informally, while securing the lead role in the establishment of the school vision and aligning organizational strategies to recognize that vision. Further, school leaders must have the ability to manage diverse kinds of change, and possess the judgment to know the necessary responses required by different circumstances (Lindahl, 2007).

DuFour (2002) addressed the role of the school principal in leading the work of curriculum alignment and instructional strategies improvement, describing the excellent school leader as the “learning principal” (p. 13) who focused not on teaching, but on learning outcomes. Rather than focusing on single instructional strategies, the synergy of factors (climate, clearly identified essential outcomes, instructional strategies, individual teacher differences, attendance, attitude, behaviors) were taken into account when the leader focused on learning outcomes (DuFour, 2002). The learning principal, according to DuFour, worked collaboratively with educators to set clear, specific goals to measure

and monitor progress toward meeting the learning objectives; this change of leadership focus found the principal serving in the role of learning leader, intent on outcomes, rather than in the recently acknowledged role of instructional leader. The reflective question that DuFour posed for the school leaders then became, “What steps can I take to give both students and teachers the adequate time and support they need to improve learning?” (p. 13).

The comprehensive approach advocated by DuFour was also evident in the earlier work of Kofman and Senge (1993). In their writings about communities of commitment, Kofman and Senge discouraged the practice of breaking a problem down and dealing separately with the pieces, explaining that this approach resulted in fragmented unsuccessful initiatives. A “Galilean” or “heliocentric” approach (Kofman & Senge, 1993, p. 6) was proposed where the whole was always kept in view as the different parts of the problem were addressed, resulting in learning organizations where people worked together, rather than working as disconnected specialists. This comprehensive approach, according to Kofman and Senge, helped leaders to avoid the outcome of disconnected solutions that ended up blocking progress. Kofman and Senge urged leaders to keep their visions at the forefront of their work and to avoid getting caught up in task management. This is not unlike the work of Marzano, Waters, and McNulty (2005) who described 21 areas of principal responsibility and their correlations to student achievement. While the effect of each strategy varied from .18 to .33 for each of the areas of responsibility, priority importance varied depending upon specific circumstances. However, “situational

awareness” (p. 43), which is a grasp of the whole, was noted by Marzano et al. as having the highest correlation to student achievement.

**School reform and school culture.** Marzano et al. (2005) noted that while principals had little direct impact on student achievement, it was through the principal’s influence on climate and culture that the leader brought about organizational change. Connected to this understanding of culture in organizational change processes, Nderu-Boddington (2008) explained this idea as “values being linked to needs and actions” (p. 2). The understanding of climate and culture was also central to the work of researchers Keefe and Amenta (2005), as they noted the need for the school leader to identify the “specifications of school climate and culture” (p. 542) as being essential to a school leader’s understanding of how to “change school culture in positive ways” (p. 542). According to Stolp’s (1994) research, the first step a transformational leader needed to take was to understand the existing culture of the school. Stolp explained school culture as encompassing the values, beliefs, and practices of the school’s students, staff, and parents, finding a relationship between positive school culture and both teachers and students who were better motivated, and another relationship to student achievement gains. This research showed that the principal’s actions sent messages to the learning community about what was important, and found that along with promotion of shared values and beliefs, and support of “traditions, ceremonies, rituals, and symbols” (Stolp, 1994, p. 4) that a “principal’s use of story-telling to illustrate shared values” (Stolp, 1994, p. 4) helped to build school culture.

In his work related to considerations and practices for effective new principals, Harvey (1991) proposed that the new principal must determine the components of the shared meanings and key values of a school, and then determine whether these shared meanings were a positive force to support student learning. Harvey referred to renovation of the school culture as energy intensive and value laden work that empowered new sets of stakeholders in its focus on learning as a top priority. Langston, McClain, Stewart, and Walseth (1998) suggested that culture shock was the reason that new principals failed in their school leadership efforts. School leaders needed to be able to “interpret each detail in the context of one underlying reality -- school culture” (Langston et al., 1998, p. 2) in order to be successful in their work within a new organization.

Other researchers also supported the need for the transformative leader to focus on climate and culture (Kelley, Thornton, & Daugherty, 2005). This work found a relationship between effective schools and “strong leadership, a climate of expectation, an orderly but not rigid atmosphere, and effective communication” (Kelley et al., p. 18); and significant relationships between school climate and culture and student achievement, and between the behaviors of the principal and school climate. Other researchers (Balfanz, & Byrnes, 2006; Papanastasiou, 2008) found positive school climate to also be related to high math and reading student achievement. Addressing the inverse relationship, Walker and Greene’s (2009) research on student motivation and achievement found a relationship between students’ feelings of alienation and their low grades in reading and math. This collective research presents compelling reasons for a

principal of a failing school to address issues of culture and climate that go beyond academic measures of school success.

Providing insight to guide principals in bringing about cultural change in their schools, Doug Reeves (2009) noted that principals must clearly share what will change and what will not change and principals must understand that their own intentional actions will be the impetus for cultural change. As the principal comes to a personal understanding of the staff, Reeves explained that he or she must clearly provide strategies, structures, and supportive training and resources, and the stakeholders must view the leader's efforts as visionary, not imposing. Reeves also described school cultural change as ongoing hard work, and the school leader must be dedicated to the mundane responsibilities, and become familiar with the most menial jobs and those who perform them.

School leaders must understand that although changes must become systemic, this is not the work of retooling an assembly line, as the school leader is working with people, not parts (Reeves, 2009). The effective leader, described by Reeves, will focus on the needs and mindsets of the educational staff to determine the best way to present compelling evidence for change and best practice response. According to Reeves, leaders must understand that each member of the teaching staff represents a key to effective change. Reeves referred to Fullan's (2008) work with "Firms of Endearment" (p. 3) regarding teachers as vital players in the change process, not as something to manipulate.

**Emotional intelligence.** Addressing another approach to supporting school improvement efforts, Beavers (2009) wrote about emotional intelligence as being a factor

over which a principal in a high poverty school had control. She described the positive effect that this sensitivity had in working with her school faculty. The focus on teamwork, service, creating a dream of the future, building collegiality, and recognizing the contributions of the staff have allowed Beavers to bring out the best in everyone. She referred to this as “leading with the heart” (p. 26).

Goehlman (2005) addressed the idea of emotional intelligence, indicating that it was more important than IQ, as he provided examples of individuals with high IQ who failed at job and societal success and inversely Goehlman noted that people with average IQs rise to positions of high responsibility and authority. Goehlman described emotional intelligence as especially significant for school leaders because effective feedback was essential to positive change within employee practices. Goehlman related this effective feedback or “artful critique” (p. 153) to emotional intelligence, and further described this kind of feedback as allowing people to believe that their failures were not related to “unchangeable deficits in themselves” (p. 153), but were related to practices that could be changed by the individual for a better outcome. According to Goehlman, the leader with a high level of emotional intelligence was able to provide this artistic critique and bring about positive organizational change as a result.

### **School Level Factors**

Because the Missouri Middle School, researched in this study, recently reorganized as a fifth and sixth grade middle school, research related to grade span configuration, use of time within the school day, and structure of the school day was critical to this work as each of these factors had an effect on the climate experienced by

students and teachers. This literature review examined teacher relationship with students and models of programming as school level factors. The following six topics were reviewed: time factors, grade span and looping, alternative models, teacher relationships, academic focus, and time for physical education and the arts.

**Time factors.** Silva (2007) provided a historical overview of the way that time used in schools has changed over the decades. During the mid-1800s school was in session for most of the year, however the need for children to help on farms in rural settings, laws regarding compulsory school attendance, child labor laws, and women entering the work force during World War II, resulted in the changed structure of the school day and school year over the decades. Silva described different ways that time was used in school as “allocated school time” (length of the school day), “allocated instructional time” (time designated for class instruction), “instructional time” (amount of time used within each class period for teaching and learning), and “academic learning time” (the amount of engaged learning time experienced by students in a classroom) (p. 2.). Silva found that adding time to the school day was unrelated to higher achievement unless that time involved student engagement in learning activities at which they could find success. She referenced a 1989 report by Kathleen Cotton involving 57 different studies that confirmed this finding. Investigating the benefits of the extended school year and extended school day, Silva concluded that the number of additional days that students were absent nullified the benefits of a longer school year, but confirmed academic benefits related to additional time built within a school day as long as those minutes involved student engagement.

**Grade span and looping.** Researchers found that grade span configuration and school transitions impacted student achievement (Alspaugh, 1998; Cook, 2007; Renchler, 2002; and Wren 2003). While economic and facilities related factors, such as changing enrollments, facilities capacity, and transportation needs have contributed to decisions regarding school reorganization and grade span configuration, these researchers have provided information related to the impact of reconfiguration decisions on student achievement and school success.

The establishment of “elemiddle” (p. 4) schools was investigated by Renchler (2002) finding academic achievement for students in K-6 and 7-8 schools to be higher than that experienced by students in the K-5 and 6-8 models. Further, Renchler found that with each transition to a new school, within a district’s grade span configuration, that students experienced achievement loss. Especially significant to the Missouri Middle School, which was a recently reorganized fifth and sixth grade middle school, this research also documented the difficulty of creating a sense of school community within a narrowly configured two-year school.

Research within the state of Missouri (Alspaugh, 1998) also found that students suffered achievement loss during transitions; specifically students attending 9-12 schools after attending K-8 schools experienced greater achievement retention than students who transitioned from elementary to middle school to high school. Alspaugh also found a relationship between the larger number of school transitions within a district and higher dropout rates. Another study of Midwestern schools conducted by Wren (2002) found that both grade span configurations and the number of school transitions were strong



predictors of student achievement. Wren found that as the number of grades served within a building broadened, or as grade span configuration increased, achievement also increased, and as the number of transitions increased academic achievement decreased. Wren and Alspaugh related narrower grade spans and larger numbers of transitions between schools to lower student achievement.

In a North Carolina study conducted by Cook, MacCoun, Muschkin, and Vigdor (2007), the grade of transition was a factor in school success. Cook et al. found significant achievement loss suffered by students transitioning to middle school in sixth grade, and increased behavior problems accompanied these achievement losses, further noting that the increased infraction rate stayed with these students through grade nine. These researchers concluded that students should remain within the elementary model through grade six in order to support both academic achievement and behavior success for students.

Related to the use of time within a school day and grade span configuration, is the concept of looping. Looping, as described by Elliott and Capp (2003), involved a teacher and his or her students staying together across two or more years of the students' education. The benefits of looping have received a great deal of attention (Elliott & Capp, 2003; Denault, 1999; Little & Dacus, 1999) in recent years. While teachers consistently cited the increased work required of a looping teacher, related to becoming familiar with multiple subject areas within multiple grade levels of curriculum, the benefit of being able to begin the second school year with a deep understanding of each student's academic and emotional needs justified the additional work required (Denault,

1999). Structures such as grade level mentors in the second year of looping decreased the stress experienced by teachers involved in the looping model (Little & Dacus, 1999). Teachers involved in looping consistently identified the increased sense of community, related to the climate of a school, as a benefit of looping (Denault, 1999; Elliott & Capp, 2003; Little & Dacus, 1999).

**Alternative models.** Alspaugh (1998) noted the possible negative impact of school-to-school transitions on the most at-risk students. To mediate the possible negative impact on the most at risk students who left their neighborhood elementary schools to attend the all-district fifth and sixth grade Missouri Middle School, the focus of this study turned to alternative school models. Students considered at risk of school failure for reasons including disruptive behavior, poor grades, suspension, and truancy provided the impetus for the creation of alternative schools (Kallio & Sanders, 1999; Quinn, Poirier, Faller, Gable, & Tonelson, 2006). Quinn et al. (2006) identified the benefits of alternative school programs as “improved attendance, grades, and graduation rates, and decreased behavior problems” (p. 26). Alternative programs, according to this research, were set up to do one of three things: “change the student, change the school, or change the educational system” (Quinn et al., 2006, p. 12), depending on the philosophy regarding the problem source of the at-risk condition. The third model described by these researchers involved changing the educational system, and has been associated with the most positive results, creating positive school climate through positive, non-authoritarian, supportive relationships between staff and students. Quinn et al. (2006) found that respect, flexibility in problem solving, and fair rules were hallmarks of successful

alternative environments. Henrich (2005) found a relationship between alternative school success and securing a good fit between the student and the alternative program and utilizing an approach that sought to influence behaviors rather than control students.

Alternative schools' successes were characterized by intentional planning in the areas of "organizational, instructional, and interpersonal" components (Weir, 1996, p. 1). Organizational components, described by Weir, had to do with low class size, flexibility in policies, participation of students in school decision making, and instructional components that included integrated and accelerated curriculum, improvement and interdisciplinary projects, and cooperative and individualized learning. Weir described parent participation, adults who chose to work within the alternative setting, and a climate focused on caring support and the development of shared community as the hallmarks of interpersonal components. Related to this, Kallio and Sanders (1999) found that effective alternative schools had strong leadership, career instruction and exposure, highly trained staff, and clearly established alternative school goals.

Researchers have addressed the question of the optimum location for alternative school programs. Off-site alternative school programs research cited falling achievement and repeated disruptive behaviors that often occurred when the student returned to the traditional school setting from off-site alternative schools (Henley, Fuston, Peters, and Wall, 2000; Kallio & Sanders, 1999). Addressing this concern, Henrich's research (2005) supported the integration of the alternative school into the traditional school, referring to this integrated model as a "school within a school" (p. 48) model that addressed the negative results that accompanied a student's return to the traditional setting from an off-

site alternative program. The school within a school setting capitalized upon the benefits of shared resources and social participation within the integrated school and this integrated model allowed students in both the traditional and alternative programs to experience the opportunity to create a shared sense of positive community that was adaptable to the needs of individual students and groups of students (Henrich, 2005). Henrich noted the strong sense of vision and clear communication that was required for successful implementation of an integrated model.

**Teacher relationships.** Researchers described critical attributes of effective teachers as their relationships with their students. The much-quoted line, “Locate a resilient kid and you will also find a caring adult—or several—who guided him” (Shapiro, Friedman, Meyer, & Loftus, 1996, p. 62) reinforces this sentiment. Also highlighting the importance of quality teacher relationships to support young adolescents, Poncelet’s (2004) study involved kindergarten through eighth grade students in the Cleveland Municipal School District. Poncelet found that caring adult relationships were “protective and compensatory” (p. 84) and that as students matriculated from elementary to middle school, the quality of these relationships diminished and teacher control increased.

Addressing the important role of the teacher in fostering a student sense of belonging at school, Archambault, Janosz, Morizot, and Pagani (2009) reported that students experienced increased “psychosocial disengagement” (p. 409) as they moved closer to the decision to drop out of school. The psychosocial disengagement happened over a period of years in response to student interactions within the school environment;

and these researchers found that actions and interactions of adults in the learning community could create positive learning climates for students resulting in a student-school connection. The research of LaRusso, Romer, and Selman (2008) found that “teacher behavior that values student needs and perspectives” (p. 394) can support a climate of respect. LaRusso et al. (2008) related this respectful climate to a decrease in risk-taking behaviors of students, and an increase in student sense of belonging.

Teachers’ relationships with their students supported student sense of belonging and heightened school success, and were essential in creating a positive school climate (Walker & Greene, 2009). According to Walker and Greene, teacher support reinforced students’ sense of belonging, leading to student “self-regulated learning strategies . . . and a willingness to seek help” (Walker & Greene, 2009, p. 469). Researchers with John Hopkins University reported on a relationship between student academic success in math and positive teacher-student relationship (Balfanz & Byrnes, 2006). Their findings identified “sustained and intensive teacher support . . . (and) student-teacher bonds” (Balfanz & Byrnes, 2006, p. 155) as relational factors identified in improving student math achievement. Papanastasiou (2008), a researcher at the University of Cyprus, found school climate, which he explained as “student beliefs about teacher attitudes toward them” (pp. 547-548) to be one of six relational factors that supported student reading achievement, further reinforcing the importance of positive teacher-student relationships on school climate and academic achievement.

In their article about creating networks for student support, Korinek, Walther-Thomas, McCloughlin, and Williams (1999) noted the need to explicitly teach and give

students feedback on pro-social skills, with the teaching and reinforcement of pro-social skills representing a proactive response to student behavior, as opposed to a reactive, disciplinary approach to student behavior. Further, the learning environments that experienced “academic and social progress” (Korinek et al., 1999, p. 2) were also the places where adults modeled and gave students feedback on effective pro-social skills including “attitudes . . . rights, responsibilities, and interactions that make communities work” (Korinek et al., 1999, p. 3). This proactive approach, described by Korinek et al., allowed teachers to build relationships with all students, and especially at-risk students, as they provided an abundance of positive feedback. This was especially significant in light of the research of Montague and Bergeron (1997) which indicated that at-risk students more frequently experienced negative teacher-student interactions. Korinek (1999) stated that the time spent on helping students “to take better care of themselves, each other and their classrooms . . . (is) probably the most enduring thing that (is) taught” (p. 6) in schools.

In order for teachers to effectively build relationships with students and support school-wide climate improvement, the relationship between the teacher and principal must be healthy. Within the school setting, Edgeron, Kritsonis, and Herrington (2006) found that as teacher interactions with their principals improved, teachers’ self-perceptions, sense of mission, and classroom instruction and management improved. These positive teacher-principal relationships, characterized by good communication, emotional and resource support, and creating shared vision, were foundational elements in building trust (Edgeron et al., 2006). Other researchers have referred to this common

sense of vision as “shared stance toward learning . . . link(ing) shared values and beliefs into a communal attitude” (Strahan, Carlone, Horn, Dallas, & Ware, 2003, p. 211).

Rhodes, Camic, Milburn, and Lowe (2009) implemented and studied the results of the “Teacher Empowerment Project” (p. 713) in three middle schools relative to comparison schools that did not participate in the project. According to Rhodes, et al., as teachers were empowered, over the course of the five year study, to identify climate problems at the participating schools, and as they worked together to develop and implement strategies to correct those problems, teacher perceptions of climate and principal support improved as did academic emphasis in the classroom. At the comparison schools during the same period, climate measures reflected a downward trend (Rhodes et al., 2009).

Supporting the work of the power of the teacher-principal relationship, Taylor and Tashakkori (1995) found that quality principal leadership, which diminished barriers to their teaching, enhanced teachers’ job satisfaction. In a study conducted at Florida State University, Stewart’s (2007) work supported a relationship between teachers’ “sense of school cohesion . . . and successful student outcomes” (p. 16) and that collegial relationships within the school, including those of the teacher-principal, supported the sense of school cohesion.

**Academic focus.** Highly effective schools had common elements within their school climate and practices that included “a commitment to high levels of learning for all students; a commitment to a collaborative culture; and a commitment to using results to foster continuous improvement” (DuFour, DuFour, Eaker, Karhanek, 2010, p. 21). Other characteristics of highly effective organizations included, “goals (that) are clear

and widely shared...a belief that success is critical...and interdependence among staff” (Blankstein, 2004, p. 18), “guaranteed and viable curriculum” (Marzano, 2003, p. 22), and “challenging goals and effective feedback” (Marzano, 2003, p. 35). Confirming these characteristics of highly effective schools, Schmoker (1999) described the use of effective teamwork or collaboration, setting measurable goals, and the use of student data to guide instruction as key elements to schools that had significantly improved student achievement.

Within the learning focus of a school, Mooney and Mausbach (2008) discussed the need for alignment. According to Mooney and Mausbach, the need for teachers to have time to work together to “plan common units and assessments” (p. 3) aligned with a clearly defined curriculum. This work must be aligned with specific curriculum goals, instructional strategies, and professional development. Current research indicated that due to the increasing breadth of curriculum schools would need to offer Grades Kindergarten through 22 to accommodate all of the curriculum expectations that are now in place (Marzano, 2003). Marzano also noted that, “US math textbooks address 175 percent as many topics as do German textbooks and 350 percent as many topics as do Japanese textbooks” (p. 26). One of the first steps in this alignment and academic focus process, as outlined by Marzano, was to identify essential understandings that could occur within the time allocated for instruction.

**Time for physical education and the arts.** Haynes (1997) explained climate as including the teaching, learning, leadership practices and organizational structures within a school. Haynes’ definition has been applied to give consideration to the school level



factors (organizational structure) of course content and the use of time within the school day relative to school climate, specifically within the areas of physical education and the arts. The increased accountability associated with the No Child Left Behind Act (U.S. Department of Education, 2002) has resulted in schools significantly changing their allocation of time within the school day. In research on shared practices from successful schools, Billig (2005) found a relationship between a high expectations culture accompanied by increased time for math and reading instruction, and successful schools; however, this increased time for reading and math comes at the expense of other areas of curriculum. Trost and van der Mars (2010) noted that school districts have reduced time allocated for other core subjects as well as for elective and physical education classes since 2002. Research supporting the relationship between the arts and physical activity on student achievement provided guidance to school leaders work to create positive school climate change (Ehrlich, 2008; Hunt, 2008; Trost & van der Mars, 2010).

The rise in the incidences of childhood obesity compels educational leaders to dedicate time within the school day for physical activity. According to Hunt (2008), childhood obesity in North Carolina is “four times” (p. 1) greater than it was twenty years ago. Ehrlich (2008) reported that, “one in three children and adolescents (in the US) is already overweight or obese” (p. 42). However, since 2002 when NCLB passed, “44 percent of school districts (cut) time in such areas as . . . physical education and recess” (Trost & van der Mars, 2010, p. 60).

These statistics are significant when considering the development of the whole child. Within the school setting, obesity and lack of physical activity has a negative

impact on academic achievement (Hunt, 2008). Conversely, researchers at Texas Tech University (Stevens, To, Stevenson, & Lochbaum, 2008) have identified a positive relationship between physical activity and reading and math achievement.

A comprehensive school health program in Mississippi studied by Ehrlich (2008) included a physical fitness focus in the physical education program that had a significant effect on school success factors for students in participating schools. Within nine years, the “dropout rates decreased from 31 percent to 11 percent, graduation rates increased to 95 percent and the district’s ranking rose from 59<sup>th</sup> to 14<sup>th</sup> in the state test” (Ehrlich, 2008, p. 43). Trost and van der Mars (2010) also reported on the positive relationship between physical activity and achievement in math and reading, and in on-task behaviors in follow-up lessons. Supporting this work Chomitz, Slining, McGowan, Mitchell, Dawson, & Hacker et al. (2009), who studied the relationship between physical fitness and academic achievement for children in the US northeast, also found a significant positive relationship between physical fitness and achievement even after controlling for factors such as SES and race. These researchers questioned the wisdom of reducing time dedicated to physical activity within the school day, noting that in twelve years, the number of students who participated in daily PE class fell from “41.6 percent to 28.4 percent” (Chomitz et al., 2009, p. 31). Castelli, Hillman, Buck, & Erwin (2007) found that “aerobic fitness ... (was positively) associated with achievement in reading and mathematics” (p. 250) for fifth grade students in the study, and suggested that this information may equip school administrators with relevant knowledge as they decided how to allocate time within the school day. Increasing the time dedicated to students’

physical education within the school day did “not impede their academic achievement” (Trost & van der Mars, 2010, p. 64). Within a high expectations school climate these researchers have supported serious consideration for preserving time for physical activity within the school day.

References within this dissertation have noted the reduction of time provided for instruction in non-reading and math subjects since NCLB passed in 2002 (Trost & van der Mars, 2010). The relevance of other non-core subjects was explained, specifically the relationship between music and art instruction, relative to school climate and student school success. Eady & Wilson (2004) pointed to the similarities between reading and music noting that both subjects required decoding of symbols, use of notation or punctuation, and left-to-right arrangements. Eady and Wilson identified a positive relationship between music and student motivation in language arts, as well as a gain in achievement scores for students whose content area courses included music as a component of learning. Researchers at Ohio State University, found “a robust relationship between music participation and achievement” (Southgate & Roscigno, 2009, p. 18), and further found that music involvement served as a “mediator of educational outcomes” (Southgate & Roscigno, 2009, p. 18), helping to level the opportunities available to lower SES students compared to their more affluent classmates. Other research also supported this relationship noting that instrumental students who participated in the FRL program outperformed their higher SES peers on multiple measures of school success (Fitzpatrick, 2006). Ken Ingram, past president of the Illinois Music Educators Association, advocated having, “music for the sake of music” (Ingram,

2005, p. 14); multiple reasons were given for preserving music instruction in the school setting including music's relationship to student academic achievement as well as the relationship between music and art students and their level of performance of community service.

Student perspectives also underscored the value of the arts in the structure of the school day. Reviewing the content of almost 1,200 students' essays on the topic of "Ban the Elimination of Music in the Schools" researchers reported that students perceived multiple benefits resulting from their music program participation including learning about "concentration and hard work . . . confidence, responsibility, compassion, pride, patience, and respect" (Hodges & Luehrsen, 2010, p. 77). The students in this study also indicated that music helped them to deal with emotions and relieve stress, and helped them to find a "way to belong" (Hodges & Luehrsen, 2010, p. 77) at school.

Turning to the visual arts, Miller and Hopper (2010) have provided multiple reading strategies for the art teacher to use in the classroom, noting that visual arts are beneficial in supporting struggling reading students. Miller and Hopper (2010) further reported that an "arts based environment enhances creativity, independent thinking, cognitive development, and social skills" (p. 3). These skills are some of the critical thinking and interpersonal 21<sup>st</sup> century skills that our students will need to prepare them for success and full participation in their adult lives (Ballanca, 2010).

### **School Climate Change Initiatives**

Three initiatives for school climate change were reviewed in the literature to give guidance to the successful implementation of practices to positively change school

climate. They are as follows: Caring School Community, Positive Behavior Support, and hybrid initiatives.

**Caring school community.** Caring School Communities, an evidence based approach to support academic achievement and reduce anti-social school behaviors, has been recognized by the U.S. Department of Education What Works Clearinghouse, the U.S. Department of Justice, and the National Institute on Drug Abuse, among others, for the effectiveness of the program (Developmental Studies Center, 2004). Key elements of a Caring School Community were “respectful, supportive relationships among students, teachers, and parents; frequent opportunities for students to help and collaborate with others; frequent opportunities for student autonomy and participation in decision making; and emphasis on common purposes and ideals” (Developmental Studies Center, 2004, p. 7). According to the *Caring School Community Overview* published by the Developmental Studies Center (2004), the foundations of the Caring School Community enhance student belonging, and include class meetings, cross age buddies, home side activities, and school wide activities. In a study conducted by Character Plus in St. Louis, Missouri, the Caring School Community program reduced problematic school behaviors with a 31% decrease in office referrals in treatment schools compared with a 19% decrease in non-treatment schools, as classrooms became more orderly and students worked more cooperatively (Developmental Studies Center Research, 2004). This report described student autonomy, sense of belonging, and student competence as the core of Caring School Community (CHARACTERplus, 2010).

Results in California found increased improvement in math and reading proficiency scores on the state test as compared with control schools that did not participate in the Caring Schools Community project, with the percent proficient in the Caring Schools reported as 43% proficient in math and 29% proficient in language arts. The control schools that did not implement the program reported 34 and 26% proficient, in math and language arts, respectively (Developmental Studies Center Research, 2004).

Missouri schools that participated in Caring School Community, according to data provided by Developmental Studies Center Research, showed higher academic improvement in both reading and math compared with a control group of schools that did not implement the program. Missouri schools reported the highest achievement scores in their third year of implementation. The third year schools reported 57% of students proficient in math as compared with the control group that reported 35% proficient, and in language arts the third year schools reported 57% proficient compared with the control group that reported 38% proficient (Developmental Studies Center Research, 2004).

**Positive behavior support.** Positive Behavior Support (PBS) is another program structured to create positive school community with clear expectations, common language, and ongoing support for student success. Specifically, Cohen, Kincaid, and Childs (2007) reported that the foundation of a positive behavior support model, commonly referred to as PBS, used individual schools' discipline data to establish expectations regarding behaviors, and established common language and common, intentional responses to build support toward the realization of a school's goals. An additional component of PBS as reported by Skiba and Sprague (2008) included a clear

identification of minor and major infractions along with guidance as to the appropriate place to address those infractions, in the classroom or in the office. Staff members in the Skiba and Sprague (2008) school of study directly taught the positively stated expected behaviors and established ways to acknowledge and affirm these behaviors as they were practiced by students, such as letting students know that they should walk in the hall, rather than telling students not to run. The PBS three-tiered program implementation aligned with the trend in schools to adopt a three-tiered pyramidal system of interventions (Cohen, 2007). Polirstok and Gottlieb (2006) stressed the importance of whole staff training in order to realize the benefits of PBS. The benefits that resulted from this training were significant, including reduced office referrals, reduced behavior related special education referrals, a measurable more positive school climate experienced by both teachers and students, and increased academic achievement.

Scott (2007), writing about effective interventions, investigated the importance of providing students with a lead role in setting the expectations of the school in order to ensure “social validity” and “personal dignity” (p. 4), finding that for PBS to become systemic all stakeholders, including students should be involved in developing the program, leading to shared ownership during implementation. Adding to the expanded focus of PBS in future implementation, researchers (Carr & Horner, 2007) suggested exploring personal satisfaction, happiness, and hope, more directly related to improvements of quality of life factors for students and staff.

**Hybrid initiatives.** Rubenstein (2010), reiterated the positive impact of class meetings, referencing the value of morning meetings as a daily ritual to bring students

together in small groups, to set shared focus and strengthen relationships. The work that Rubenstein described was part of a “CARE for Kids” (p. 23) program, partially based on the principals of Caring School Community. The implementers of this program in the Jefferson County Public Schools noted the connection between school culture and student achievement as the program sought to build core social skills for students through direct instruction, and focused on the development of class norms with student input, reinforcing expectations, morning meetings, and common staff language. Office referrals fell dramatically in participating schools, test scores rose, and the in-school suspension room at one school became an intervention room (Rubenstein, 2010).

### **Measures of School Climate and Student School Success**

Multiple measures of school climate and student success were reviewed in the literature. These include safety, student connectedness and belonging, attendance, and achievement.

**Safety.** Smith (2002) defined safety, as a measurable aspect of climate within a school, as “free of danger” (p. 4). Bucher and Manning (2005) described safety as “the total school climate [that] allows students, teachers, administrators, staff, and visitors to interact in a positive, nonthreatening manner that reflects the educational mission of the school while fostering positive relationships and personal growth” (p. 56). This second definition included aspects of physical, emotional, and intellectual safety.

The relationship between school safety and student achievement was a significant matter of investigation at the Missouri Middle School because of the lack of sense of safety reported by the school’s students, both in the MSIP Advance Survey and in the



Caring School Community baseline survey. Numerous researchers have brought clarity to this relationship, including Gronna and Chin-Chance (1999) whose research revealed a relationship between an unsafe school climate and the hindrance of student academic school success. Gronna and Chin-Chance found a correlation between maintaining a quiet and orderly environment in math and reading classes with student academic achievement, as their data indicated that for “every one standard deviation increase in school safety” (p. 14) a .12 standard deviation change was experienced in math and reading achievement. These researchers pointed to the urgency of school administrators to respond to ensure safety and orderliness within their school environments.

As far back as Maslow (1968), social scientists, educators, and psychologists have studied the need for safety in order to move to higher levels of personal accomplishment. A child’s need for basic physiological needs and safety must be met, according to Maslow, before he or she is able to move on to higher levels of self-actualization; students’ needs for food, clothing, shelter and safety interfere with their ability to fully focus on learning. Smith (2002) found that middle school safety during unstructured times such as hallway passing, arrival, dismissal, and cafeteria were major sources of concern and that increased adult supervision was needed to monitor student actions during these times. Smith also laid out a three-step plan to move a school forward in the area of safety which included identification of present reality, deciding where the school wanted to head, and developing action steps to move forward.

Essentials of a safe, healthy school climate include general school level components as well as factors directly related to administrators, teachers, and students and their families.

Table 1

*Safe School Climate Essentials*

School Leader Factors	School Level Factors	Teacher Level Factors	Students and Their Families
Open door policy	Strong sense of optimism	Enjoy teaching	Feel a sense of belonging
Behavior issues addressed in timely and respectful manner	School mission is known by all and is practiced daily	Behavior issues addressed in timely and respectful manner	Like their school
Limit power of testing	Bullying is not tolerated	Don't give too much homework	Not overscheduled
Ask how can we help children	High expectations for all	Ask how can we help children	Are listened to with respect
	Value individuality of students		

*Note:* From Gunzelmann, 2005, p. 74.

Related to aspects of school safety, Ratner, Chiodo, Covington, Sokol, Ager, and Delaney-Black (2006) studied the relationship between violence exposure and the effects on a child's IQ and academic performance, with the conclusion that there was a positive correlation between students' feelings of safety and cognitive measures. Focusing

specifically on first grade students, these researchers found that students who were exposed to violence experienced lower academic achievement; even after other possible contributing factors (low SES, etc.) had been taken into account. While violence victimization was negatively related to measured factors such as IQ, GPA, and scores on standardized tests, protective factors such as feeling safe at school and the perception that teachers were nice to them were positively related to “14 of the 15 cognitive and achievement measures” (Ratner et al., 2006, p. 276) in this study.

**Student connectedness and belonging.** Because sense of belonging was also an issue of concern of the Missouri Middle School, the researched school of study, the literature review turned to student sense of belonging and connectedness in order to determine how those factors were related to student success. Numerous researchers (Loukas, Suzuki, & Horton, 2006; Ma, 2003; Nichols, 2008; and Walker & Greene, 2009) found a positive relationship between student school connectedness and sense of belonging, and to student success in school. While many of the factors affecting the academic success of students remain outside the ongoing control of educators, these researchers identified the ability to create a sense of belonging or connectedness as an area over which educators had significant influence.

Researchers at the University of Alberta found that a sense of belonging and connection developed as students felt respected, cared for, and supported (Larson, Suzuki, & Horton, 2006; Ma, 2003; Walker & Greene, 2009) and that students’ sense of connectedness came from their ability to set goals and master learning as opposed to the simple completion of tasks or assignments. Larson (2006) described the mastery

approach of the four spoke Circle of Courage Model, developed by Brokenleg and Van Bockern in 2003. This model provided abundant opportunities for students to be successful at their own academic level, as having had a profound effect on students' sense of belonging. Within the Circle of Courage model, students had opportunities to recreate their image within the school through school service, thereby developing positive relationships with adults in the building, and seen by all members of the school community as helpful and worthwhile.

Brookmeyer, Fanti, and Henrich (2006), investigated the relationship between home and school, with specific emphasis on the connectedness of students to school, along with other measures of school climate, to see how this might provide information to reduce the likelihood of violent adolescent behavior. What Brookmeyer et al. (2006) found, not surprisingly, was that when students felt connected at school, there was a likelihood that the school environment would be more focused and orderly and that less disruptive behavior would occur in the school. Further, in this study, attendance was supported by positive school climate, and dropout rates were related to schools that had negative climates. Brookmeyer et al. (2006) concluded that student connectedness and positive school climate served to protect children from engaging in violent behaviors and supported pro-school behaviors.

Numerous positive outcomes have a relationship to students' sense of belonging and connectedness within the school setting. Researchers found positive sense of belonging as an influential factor in academic persistence, specifically evidenced through student decisions made to remain in high school rather than drop out, and in making pro-

social behavior choices (Archambault, Janosz, Morizot, & Pagani, 2009; Ma, 2003; Walker & Greene, 2009). Related to this, Nichols (2008) found a relationship between positive sense of belonging and academic persistence as evidenced through regular school attendance. Nichols also found a relationship between students' tendencies to embrace classroom norms and expectations, and the level of support that they felt their teachers provided, while Loukas, Suzuki, and Horton (2006) found that a positive path existed between "sense of belonging and friction, cohesion, and overall satisfaction with classes" (p. 492). Ma's (2003) research confirmed these outcomes, reporting on the lower reported incidences of delinquent behaviors by students who felt a school sense of belonging. Conversely, Archambault et al. (2009) cited the relationship between a student's lack of a sense of connectedness with the school, and problematic school behaviors. Korinek, Walter-Thomas, McLaughlin, and Williams (1999) addressed the importance of direct instruction in the teaching and successful expectation of pro-social behaviors, pointing out the need for practice and feedback in the building of positive school communities where students and staff felt connected and supported.

**Attendance.** Wilkins (2008), conducted a study to determine the motivational factors that led to increased student attendance. Students in Wilkins' study indicated that they attended school more often because of the positive school climate, described as a place of trust and friendliness between students, and between staff and students. In addition to positive school climate, Wilkins noted a relationship between a calm, focused, and supportive academic environment and higher attendance for students most at risk of truancy. A relationship also existed between fair, non-punitive disciplinary approaches

and students' attendance at school. The fourth relational component reported by Wilkins, through her student surveys, was teacher relationships that allowed for friendly conversations. Balfanz and Byrnes (2006) reported on the impact of regular school attendance for students who were academically behind, finding a 20% difference in the probability of catching up for a student who had a 60% attendance rate versus a student who attended every day" (p. 152).

Studying the characteristics of students who skipped school, Henry (2007) found that students whose parent(s) were college graduates, students who had adult supervision during non-school hours, students who felt safe at school, and students for whom high school graduation and college attendance was a goal were less likely to be truant from school. Henry also found a relationship between drug use, academic difficulties, and truancy noting that "at least 2.8 million students would have skipped school at least once during a given month" (p. 33) for students in Grades 9-12, and she did not find significant differences in truancy rates for middle grade students.

With more sweeping results, Comer (1992) reported on his work with the two lowest performing schools in achievement, attendance, and behavior in the city of New Haven, Connecticut. By focusing on developmental needs of the children in the school, Comer's team was able to develop a structure to mitigate the "underdevelopment of children from families under economic and social stress" (Comer, 1992, p. 29). Governance and mental health teams in the Comer study assessed and responded to student needs in a team approach, and provided support to staff and parents in creating a school climate that supported rather than controlled the students. At the end of the study,

Comer reported that the two schools were among the top in the county in three measured areas including attendance, achievement, and behavior.

**Achievement.** A study conducted by McNeil, Prater, and Busch (2009) discovered a relationship between academically exemplary schools and healthy school climates as measured by an organizational health inventory. According to these researchers, statistical significance existed between schools that rated high in the two areas of goal focus and adaptation, and high academic achievement. Related to this, Billig (2005) found that data from successful schools indicated a shift in focus in the areas of curriculum and instruction as “teachers became more standards-oriented” (p. 12), time was allowed for instruction to effectively occur, and students were actively engaged in learning activities.

Student sense of belonging is vital to school climate as an increased sense of student belonging has a positive impact on academic achievement providing protective factors in relation to a student’s grades in school (Ma, 2003). Conversely, students’ feelings of alienation were related to their low grades in reading and math (Walker & Greene, 2009). Related to this, Balfanz and Vaughan (2006) pointed out that in order to close the achievement gap; students who were below grade level would need to gain multiple grade levels of learning within each given year in order to catch up. Within a classroom experience that provided a positive school climate, in addition to the high quality teaching element that was needed for learning to occur, Balfanz and Vaughan found that students attended school more regularly, invested more effort in class, and made better behavior choices, leading to higher academic achievement in math. The

need for positive climate programs to be in place, which set clear expectations for students and had consistently followed consequences for inappropriate behaviors, was reinforced by Balfanz and Byrnes along with the need to establish programs to affirm and recognize positive student choices.

In a study of factors distinguishing the most effective schools in terms of reading achievement, Papanastasiou (2008) studied multiple variables, including school climate, and their relationships to student reading achievement. Papanastasiou found that while the strongest predictor of a student's ability to read was the number of books that the student owned at home, school practice factors were also strongly associated with reading achievement, further finding a relationship between engaging lessons that required students to interact with their learning following a reading lesson and high student reading achievement. These interaction activities described by Papanastasiou included discussing with partners, writing about the reading, or creating a project or performance related to the reading.

School climate was also among the six variables that Papanastasiou (2008) found related to high reading achievement, with school climate related to students' perceptions of how teachers felt about and treated them. This research found supportive teacher behavior significantly related to student reading achievement. Sterbinsky, Ross, and Redfield (2006) also reported on a positive relationship between school climate, characterized by focused academic work including "direct instruction, sustained writing, ability grouping, higher level questioning, high usage of academic focus, and high student engagement" (p. 383) and high reading achievement.



## Summary

The review of the framing literature began with an attempt to separate definitively the meaning of school culture from that of school climate (Haynes et al., 1997; Keiser & Schulte, 2009; Krumm, 1996; Stolp, 1994; Van Houtte, 2005). Although definitive meanings were not consistent across the research studied, some agreement existed to give guidance to the use of the terms culture and climate. For the purposes of this study on Missouri Middle School, climate is referred to as routine practices and measurable aspects of school life reflected by positive and negative feelings about safety and belonging, as well as other measurable aspects including discipline, attendance, and achievement while culture addresses values, beliefs, norms, ceremonies, and traditions.

Having established the use of the terms climate and culture within this research, the study turned to the role of the school principal in shaping school climate and culture (Bates, 1992; Harvey, 1991; Kelley et al., 2005). The relationship was significant as the words and actions of the school leader served as a role model for others (Harvey, 1991) and as effective principals focused on creating positive school culture through modeling of behaviors and story-telling (Md Nor & Roslan, 2009). A strong relationship existed between the words and actions of principals and teachers in the school and student achievement (Harvey, 1991), and principals' words and actions increased or inhibited teacher effectiveness (Kelley et al., 2005).

School leaders need to spend time understanding the realities of the existing school culture in order to avoid failure resulting from culture shock (Keefe and Amenta, 2005; Langston, 1998; & Nderu-Boddington, 2008). Additionally, expectations of

excellence, stakeholder input in problem solving, and goal driven leadership are described as characteristics of effective school leadership (Murphy and Hallinger, 1988). Effective leaders see the big picture, rather than focusing on fragmented parts of a system and understood that all aspects of leadership responsibilities are inter-related (Kofman & Senge, 1993; Marzano et al., 2005). Often overlooked by school reform leaders was that different types of leadership are required depending on the depth of change needed (Lindahl, 2007). Tempering unrealistic hopes, Zins and Illback (1995) pointed out the reality that institutionalization of organizational change often took several years. The magnitude of change required to address the significant climate and achievement concerns at the Missouri Middle School required taking into account the overarching work of this research on organizational dynamics and system change.

Numerous school level factors, including the use of time, affect both school climate and student school success. Related to time factors, additional time added within the school day that involves student engagement activities results in student achievement gains, however, this relationship does not exist for a lengthened school year (Silva, 2007).

Grade span configuration, the number of grades included within a school building or school level, was another school level factor related to time (Alspaugh, 1998; Cook, MacCoun, Muschkin, & Vigdor, 2007; Renchler, 2002; Wren, 2003). These researchers found that both grade span configuration and the number of school transitions were predictors of students' achievement; achievement decreases with the fewer years a student remains in a given school and students who entered middle school in sixth grade

suffers achievement loss and an increase in behavior problems. Because the Missouri Middle School was the first school of transition for students completing fourth grade at their neighborhood elementary schools, the results of this research are significant. The difficulty of creating a sense of school community in a narrowly configured school was noted (Renchler, 2002) which was directly related to the challenge of creating a sense of community for the Missouri Middle School children and families within the two years that they would spend at the school. Related to use of time within the school day, this literature review provided evidence for the preservation of physical education classes, music, and art classes, noting their relationship to student success outcomes (Billig, 2005; Chomitz, 2009; Eady & Wilson, 2004; Ehrlich, 2008; Haynes, 1997; Hodges & Luehrsen, 2010; Miller & Hopper, 2010; Stevens, et al., 2008; Trost & van der Mars, 2010).

Alternative school models represented another school level factor connected to the use of time. Climate, characterized by positive, non-authoritarian, supportive relationships, along with flexibility and a regard of rules as being fair, is characteristic of successful alternative schools (Weir, 1996) and the alternative structure related to the greatest student success is the school within a school model (Henrich, 2005). Researchers Kallio and Sanders (1999) and Henrich (2005) found that strong visionary leadership, clear communication, highly trained staff, and clearly established goals are essential features of effective alternative school programs. This research was relevant to easing school transitions for the most-at risk students as they transitioned to the Missouri Middle School.

Another school level factor, teacher relationships, has received significant attention relevant to the effects on other factors within the school. Researchers found that teacher relationships with students consistently related to higher student sense of belonging and student achievement, and that adults needed to model, teach, and give feedback on effective pro-social skills for students to experience optimum success (Archambault et al., 2009; Balfanz & Byrnes, 2006; Korinek et al., 1999; LaRusso et al., 2008; Poncelet, 2004; Walker & Greene, 2009). Connected to this, teachers needed to feel supported by their principals through positive interactions, emotional and resource support, and shared vision, in order to increase their effectiveness with classroom instruction and student support. Positive teacher relationships were related to positive school climate (Edgeron et al., 2006; Rhodes et al., 2009; Stewart, 2007; Taylor & Tashakkori, 1995). Positive teacher to student and teacher to principal relationships must exist at Missouri Middle School in order to effectively address the school climate and student achievement concerns.

Academic focus was another school level factor related to climate and student school success. Positive and professional learning climates with significant gains in student achievement occurred within schools that identified essential understandings, aligned curriculum, teaching, and professional development, and provided time for teachers to collaborate within the school day to develop common assessments and determine ways to improve student learning (Blankstein, 2004; DuFour et al., 2010; Marzano, 2003; Mooney & Mausbach, 2008; Schmoker, 1999). As academic

achievement was a significant concern for students at the Missouri Middle School, this research is very relevant to the work at this school.

Measures of school climate included safety and belonging. Safety within the school setting was described as a positive place where all members experienced physical, intellectual, and emotional safety and felt free from threats (Buecher & Manning, 2005; Smith, 2002). Maslow (1968) established the need for safety to be in place before learning could effectively occur. Researchers found a relationship between unsafe school climates and the hindrance of student success, and positive student cognitive achievement related to student sense of school safety, specifically interactions with kind teachers (Gronna & Chin-Chance, 1991). A relationship existed between reading and math academic achievement and school safety (Balfanz & Byrnes, 2006; Papanastasio, 2008).

Students expressed a sense of connectedness and belonging related to their being respected, cared for, and supported (Ma, 2003), and students' connectedness to their schools facilitated orderly environments, improved attendance, promoted pro-social behaviors, and lowered drop-out rates (Brookmeyer et al., 2006; Ma, 2003; Nichols, 2008). A sense of belonging was a protective factor in relation to students' grades (Ma, 2003) while a sense of alienation was a deterrent to math achievement and was a deterrent to pro-social behaviors (Archambault et al., 2009; Walker & Greene, 2009). Practice and feedback in appropriate behaviors created an environment where students felt connected (Korinek et al., 1999). The connection between student safety, students' sense of belonging, and student school success, clearly supported by these researchers, was relevant to the achievement and climate concerns at Missouri Middle School.

Attendance and achievement were identified as measures of student school success. Positive school climate and positive teacher relationships were motivational factors for student attendance, as was a calm, focused, supportive environment (Henry, 2007; Wilkins, 2008), and social support services for students whose families were experiencing financial and social stress were effective in increasing student attendance and achievement rates (Comer, 1992). Researchers found that highly focused schools with positive school climates were also higher achieving schools (Balfanz & Byrnes, 2006; Billig, 2005; McNeil et al., 2009). Related to this, an increased sense of student belonging positively impacted achievement, while students' sense of alienation resulted in lower reading and math grades (Ma, 2003; Walker & Greene, 2009). This research provided guidance for the Missouri Middle School in improving attendance and achievement and in removing obstacles to student school success.

This review of literature included an examination of the Caring Schools Community model (Developmental Studies Center, 2004) and Positive Behavior Support model (Cohen et al., 2007; Polirstok & Gottlieb, 2006; Skiba & Sprague, 2008) as evidence based structures to establish positive school climate and culture. Results in these programs are the greatest over continuous years of implementation. (CHARACTERplus, 2010; Cohen et al., 2007). Positive climate and achievement outcomes have also resulted from hybrid climate reform (Rubenstein, 2010). These studies made clear the importance for school leaders' intentional responses to school climate concerns and the related impact of those responses on positive achievement gains, which was relevant to the work at Missouri Middle School.

This review of literature created an understanding that building a positive school climate leading to student school success was much more important than implementing a character education program. Research on improving academic achievement found that closing the achievement gap occurred more effectively within schools that included climate reform along with instructional practice reform and teacher support. The work of comprehensive school reform, focused on improving school climate and creating student school success, requires a multi-faceted approach.

To summarize a review of the framing literature, effective climate reform creates a safe and orderly climate where students feel a sense of belonging, and should at the same time, intentionally build academic focus through alignment, collaboration, and the use of data to support individual student growth. The school leader should possess an understanding of the complex nature of school reform and the inter-relationship of the parts of the whole to create positive, sustainable systemic change as the leader instills a shared belief that “success is critical” (Blankstein, 2004, p. 18) and “failure is not an option” (p. 1).

### Chapter 3: Methodology

Failing academic achievement reflected in students' inability to meet AYP (AYP) in communication arts and failure to meet disaggregate progress in math created compelling reasons for change at Missouri Middle School. Table 2 reflects the aggregate and disaggregate decline of 2008 scores in comparison to 2007 scores.

Table 2

*AYP Results*

Missouri Assessment Program (MAP) Missouri Middle School Achievement Data			
Whole School and Disaggregate Data	Percent Proficient or Advanced 2007	Percent Proficient or Advanced 2008	Percent Proficient Target 2008
Communication Arts	54.6	47.6	51.0
FRL	28.6	28.1	51.0
Black	28.8	21.3	51.0
Math	51.9	46.9	45.0
FRL	19.2	13.3	45.0
Black	24.2	29.8	45.0

*Note:* From Missouri Department of Elementary & Secondary Education (MODESE), 2010.

The results of the Missouri School Improvement Advance Survey added to the base of data that provided the impetus for this research at Missouri Middle School. The Missouri School Improvement Advance Survey provided feedback from stakeholders including students, parents, and teachers in the 2008 school year. Survey results



highlighted several areas of concern indicating that over 70% of teachers and 60% of students perceived students at this school as unfriendly. School safety was also a noted area of concern, with 43% of sixth grade and 35% of fifth grade students indicating that they did not feel safe at school. Similarly, almost 60% of sixth grade students and 45% of fifth grade students indicated that they did not like going to this school. Further 60% of sixth grade students indicated that their classes were often interrupted (MODESE, 2010). This combined data spotlighted climate concerns that revolved around student safety, sense of belonging, and academic focus at Missouri Middle School.

### **Research Question**

The research question that guided the work of this dissertation was, “Will strategies to positively improve school climate result in improvement in student school success as measured by improved academic achievement, reduced number of discipline incidents, and improved attendance rates?” School climate improvement strategies included daily morning assemblies, increased adult supervision, cross-age buddy classes, class meetings, increased focus on student teams and student leadership, protected instructional time, curriculum based teacher leaders, and collaboration using data for improvement.

Null hypothesis: Strategies to improve school climate will not result in improvement in student school success as measured by student proficiency scores on the MAP test, number of discipline referrals, and attendance rates.

Alternate Hypothesis: Strategies to improve school climate will result in improvement in student school success as measured by student proficiency scores on the MAP test, number of discipline referrals, and attendance rates.

### **Research Setting**

The Missouri Middle School was a fifth and sixth grade middle school in the western suburbs of St. Louis, Missouri with a student population that ranged from 700-750 students. Approximately 39% of the students in the school were participating in the FRL program in 2008 as reported by the Missouri Department of Elementary and Secondary Education (MODESE, 2010), although contracted food service counts rose as high as 47% from month to month. The 2008 school year represented the second year of the school's status as in need of improvement resulting from a failure to meet AYP goals, the target proficiency accountability goals, for more than two years.

### **History of Research Setting**

During the 2007 school year, the district implemented a major reorganization that reconfigured the elementary level as kindergarten through fourth grade. While the district, for decades, had two separate sixth through eighth grade middle schools on opposite sides of the community, with the reorganization all of the district's fifth and sixth grade students began to attend the Missouri Middle School after completing their K-4 elementary education at their neighborhood elementary schools. Following Missouri Middle School, the students attended the seventh and eighth grade middle school on the other side of the community before separating again into the community's two high schools. The Missouri Middle School represented the first school of transition following

students' completion of their fourth grade year and they would spend two years at Missouri Middle School before their next transition.

With the elimination of fifth grade at the elementary level and the split of the middle school experience between two different levels, (fifth and sixth grades, and seventh and eighth grades in two separate buildings), the district experienced a major change in placement of teaching staff. The Missouri Middle School experienced a 70% change in staff in 2008 with certifications ranging from elementary to middle school certification, to lifetime subject specific certifications. The demographic make-up of students at the school had changed significantly slightly prior to and during the course of this study (see Table 3).

Table 3

*Missouri Middle School Disaggregate Enrollment Changes*

	2004	2008	% Change +/-
African American	6.3%	12.5%	+98.4%
Hispanic	2.9%	4.3%	+48.3%
Free and Reduced	22.1%	39.3%	+77.8%

*Note:* From MODESE, 2010.

### **Conceptual Framework**

The review of literature and school related data made clear that the climate change required at Missouri Middle School must address issues of safety and belonging (Balfanz & Byrnes, 2006; Korinek et al., 1999; LaRusso, Romer, & Selman, 2008; Ma, 2003; Walker & Greene, 2009) as well as academic press (Blankstein, 2004; DuFour et

al., 2010; Marzano, 2003; Mooney & Mausbach, 2008). The relationships between students' feelings of safety and belonging with student attendance (Balfanz & Byrnes, 2006; Henry, 2007; Wilkins, 2008), behavior (Archambault et al., 2009; Ma, 2003; Nichols, 2008; Walker & Greene, 2009), and achievement (Balfanz & Byrnes, 2006; Ma, 2003; Papanastasiou, 2008; Walker & Greene, 2009) are discussed in Chapter Two.

**Safety and belonging.** Missouri Middle School's participation in the Caring School Communities initiative, beginning in the 2010 school year, partly addressed the need to improve student sense of safety and belonging identified through the MSIP Advance Survey. Core components of this model included cross-age buddy classes, class meetings, school-wide activities, and home-school activities. Cross-age buddy classes, that allowed collaborative activities between older and younger students, were established between Missouri Middle School's fifth and sixth grade classrooms and the kindergarten through fourth grade classes at the neighboring elementary school that shared the same campus. Because the number of classrooms at the Missouri Middle School exceeded the number of classrooms at the elementary school, participation was optional. However, approximately two-thirds of Missouri Middle School teachers chose to participate in the cross-age buddy component in both years of the study. Additionally, teachers began to walk students to and from their specialty classes, PE classes, and lunch, increasing adult supervision in these most unstructured portions of the school day. Further, posters hung in the cafeteria designating areas for each team to eat together at lunch, added to the sense of belonging to a smaller group within a larger school.

Professional development to model facilitation of class meetings occurred throughout the course of the 2010 and 2011 school years through early release day professional development meetings and through faculty meetings. Principals, outside facilitators, and staff members contributed to the professional development that began with a focus on class meetings centered on building classroom and school community.

School-wide activities that included whole school assemblies and school-wide character education activities developed by Missouri Middle School's character education committee took place on early release days. Monthly community outreach initiatives and school spirit weeks were also elements of the school-wide activities component of the Caring School Community initiative.

Home-school activities began through the work of the family and parent involvement committee. These activities included a Pastries for Parents morning event that was attended by over 350 people in 2010, resulting in a decision to have separate fifth and sixth grade events in the coming year. In the second year, over 500 people participated in this event. Additionally, a family fun night held in the winter allowed students to teach their families the dances that they had learned in physical education class, and they participated in hula-hoop contests and giant tricycle races.

Evaluations conducted by the Developmental Research Center over 20 years of study found "significant positive effects of these combined approaches on the students' achievement motivation; positive social tendencies . . . resistance to problem behaviors . . . and over time, (student) grades and test scores" (Developmental Studies Center, 2004, p. 16). The Caring School Community implementation included a two-day summer

workshop in 2009 with a review of baseline data from the prior year. Whole-staff volunteer workdays with volunteer teachers attending a breakfast meeting to learn the character theme of the year followed this initial training. After the breakfast meeting, teachers painted the off-white hallways and gathering areas of the building with color, character words, and character quotes to create a physical space supporting the developmental needs of students and the character focus of the school.

**Academic focus.** Morning assemblies addressed a dual-need to minimize classroom interruptions and to develop student sense of belonging at school. A committee of teachers worked in the summer with the principal and counselor creating the framework for morning assemblies. Each morning of the week represented a separate theme, including Magnificent Mondays, Terrific Tuesdays, Missouri Middle School Way Wednesdays, Thoughtful Thursdays, and Fantastic Fridays (school spirit days). Music played at the beginning of each assembly to accompany the theme of the day. On Monday mornings, students recited the Pledge of Allegiance and the principal or students read the week's announcements. Tuesday mornings recognized students and teachers for their accomplishments and contributions to the school, with certain weeks designated to recognize students who earned the AAA (attitude, attendance, or achievement) Awards or the Principal Awards (for outstanding school leadership) at each grade level. On Wednesday, the entire school participated in choral response of the school pledge. Thursday mornings focused on a meaningful quote for the day, tied to the school's five character words. Fridays focused on building school and team spirit through cheers, and school members wore school t-shirts. After students left the gym or cafeteria (duplicate

assemblies were held in both areas to accommodate the many students who participated in the breakfast program), announcements interrupting classes were not made outside of emergencies.

Although the school district's professional learning communities initiative began prior to the reorganization, the large percentage of teachers new to Missouri Middle School created an imbalance in the amount of training that the teachers had received and in their individual experience using the data focused and collaborative model. A need existed to create a level of consistency in understanding and practice.

Missouri Middle School had used a variety of methods to identify teacher leaders ranging from continuity of the teachers who had randomly volunteered in prior years, to changing each of these stipend positions on a yearly basis, to identifying content area leaders to move the work of each curriculum area forward. During 2010, a recently created job description for team leaders provided the basis for interviews of those who were interested in serving as content area team leaders. The responsibilities focused on facilitating collaboration, creating common assessments, and using data to inform instruction and respond to individual student needs. Each subject area group created SMART (specific, measurable, attainable, results-oriented, and time-bound) goals at the beginning of the year, along with action plans to accomplish these goals. Missouri Middle School's school improvement plan aligned to the work of these content area groups. Team leaders facilitated the creation of agendas to guide the work of weekly meetings focused on the development of common assessments and pacing, common scoring practices, and using data to identify student needs and best practice in the school.

The building leadership team, representing content area leaders, intervention facilitators, special education leader, special subjects leader, and character education facilitator, met monthly to plan early release day professional development and collaboration activities, and to consider, and approve or deny requests for professional development workshop funding. These decisions aligned with the school's improvement goals.

**Behavior and discipline.** Various measures addressed behavior concerns at the Missouri Middle School beginning with issuance of agreed upon consequences for infractions in 2010, including adherence to the school's Code of Conduct. Further, during the 2010 school year, the staff came to consensus on the school's vision that Missouri Middle School would become a school with high achieving students of outstanding character. The agreement was that in order for this to happen, the adults in the school must model the expected behaviors. During the 2011 school year, the school's principals, along with the discipline committee, identified minor infractions addressed by the classroom teacher, including refocus opportunities and parent phone calls. Major infractions, agreed upon by the staff, became office referrals for disciplinary consequences. Additionally, during this year a respect rubric guided staff members' conversations when speaking with students about disrespectful behaviors.

### **Instrumentation**

**MAP.** The achievement results from the MAP grade level assessments provided a secondary source indicator of student school success at Missouri Middle School. Analysis included results from communication arts and math, as these two areas



represented the accountability areas for the school related to students' AYP. After two years of not meeting AYP goals, the state designated schools that are in need of improvement. At the beginning of this study, Missouri Middle School was in year three of improvement status. The inter-rater reliability of results provided by CT McGraw Hill, publisher of the assessments, indicated a range of .61 - .80 which was in the 'good' area, although two test items, one at each of the fifth and seventh grade levels were only moderately rated, while the overall reliability of test items was .90 or above (CTB/McGraw-Hill, 2009). The reported convergent validity of the grade level assessments indicated that, "only 12 items total were flagged for poor model/data fit across all 14 grade/content areas of MAPs" (CTB/McGraw-Hill, 2009, p. 141). The correlation coefficients for grades five and six were .75 between communication arts and math, reflecting a moderate to high level of correlation (CTB/McGraw-Hill, 2009, p. 144).

**Caring school community survey.** The student, staff, and parent surveys created through the Developmental Studies Center and analyzed through the Cooperating School District's CHARACTERplus program staff provided a secondary source of data related to school climate. These results highlighted concerns in the areas of student safety and belonging. The construct of the Caring Schools program and the related evaluation instruments developed by the Developmental Studies Center represented research over a 20 year period in diverse educational settings. Regarding the reliability and validity of the instrument, the "mean internal consistency reliability of the implementation index over the four years . . . was .74", while the "discriminate function analysis comparing

implementation scores . . . indicated that the measure had adequate validity (Solomon, Battistich, Watson, Schaps, & Lewis, 2000).

**(MIM) staff survey.** The Missouri Middle School applied for, and received, a scale-up school grant in the fall of 2010. The staff survey results provided a secondary source of data related to the academic focus and professional culture of the school. The MIM (scale-up school grant), funded through a personnel development grant received by the state of Missouri in 2007 from the U.S. Office of Special Education Programs focused on increasing academic achievement and student school success through tiered levels of support, based on eleven essential school components of professional school community (Missouri Integrated Model, 2010).

**(MSIP) survey.** Conducted on the fifth year of a five year cycle of Missouri school improvement oversight, the State Department of Education conducts individual school surveys of parents, students, and staff in the areas of educational quality, school safety, and school experiences. Data is made publicly available through the department's website.

### **Demographics**

Missouri Middle School's student population consisted of approximately 700-750 fifth and sixth grade students who matriculated to this two-year middle school following completion of their fourth grade year at neighborhood elementary schools. The school district reported Missouri Middle School's demographic information to the state, and MODESE published the information publicly on their website. See Table 4.

Table 4

*Student Demographic Information*

Missouri Middle School Student Demographic Information Reported as Percentage of School Population			
	2007	2008	2009
White	87.2	82.0	79.2
Black	9.6	12.5	14.6
Hispanic	2.2	4.3	4.8
FRL	19.5	39.2	39.3*

*Note:* From MODESE, 2010.

Reports generated by the contracted food service provider reported the free and reduced (FRL) rate as high as 47%\* at various points in 2009 and 2010. The Missouri Middle School community's estimated 2006 population according to the U.S. Census Bureau State and County Quick Facts was 63,009, representing 4% growth over the year 2000 population. The 2009 Missouri Kids Count Data Book Online reported that number of children in the community with limited English proficiency rose from 381 in 2004 to 539 in 2008, representing a 42% increase in four years. Speaking to the lack of resources at home and the need for support within the school day, the 2007-2008 MSIP indicated that almost a quarter of the Missouri Middle School families did not have computers in their homes (MODESE, 2010).

**Sampling**

According to educational authors, Frankel and Wallen (2006), sampling is “the process of selecting a number of individuals (a sample) from a population, preferably in such a way that the individuals are representative of the larger group from which they were selected” (p. G-7). Frankel further reported that a random sample selects data “in such a way that every member of the population has an equal chance of being selected” (p. G-7). In order to minimize the possibilities of bias in the sampling of data, the web-based Research Randomizer produced a sample of 45 students’ MAP achievement results for Missouri Middle School in each of the studied years.

**Data Collection**

Data for this study was secondary in nature. Aggregate and disaggregate achievement results from the MAP were collected for the years 2008, 2009, and 2010. Results of the Caring School Community Survey were provided to the Missouri Middle School as part of the implementation of this character/climate model. This study reports on the 2009 results that represented the conditions prior to implementation and 2010 results that represented student, teacher, and parent survey data following the first year of implementation. Results from the 2008 MSIP for Missouri Middle School provided a baseline of data for comparison to the Caring School Community survey results. Reports generated from the school’s data management system provided discipline data. Attendance data was collected through MODESE’s AYP report for Missouri Middle School. The MIM web-based staff survey, administered in September, 2010 as the first

step in the exploratory phase of a grant awarded to Missouri Middle School as a district scale-up school, provided data on the professional climate of the school.

### **Data Analysis**

Quantitative data analysis was used to determine whether to reject the null hypothesis, “Strategies to improve school climate will not result in improvement in student school success as measured by MAP proficiency scores, number of discipline incidents, and attendance rates,” or to support the alternate hypothesis, “Strategies to improve school climate will result in improvement in student school success as measured by MAP proficiency scores, number of discipline incidents, and attendance rates.” In order to determine the effects of school climate change on student school success, the first step in data analysis was to determine if positive school climate change had actually occurred. Data analysis measured the percentage of change in school climate as reported in responses to the Caring School Community survey. The results of the MSIP surveys and the MIM staff survey descriptive statistics also provided insight into school climate change. After establishing the existence of school climate change through measurement of improved responses to climate surveys, the relationship of the improved school climate was studied relative to changes in student school success as measured by MAP proficiency scores, number of discipline incidents, and attendance rates. *Z* tests for difference in means were calculated to determine the level of change in student MAP scores from 2009 and from 2010. *Z* tests for difference in proportions were used to determine the level of change in student behavior as reflected in the discipline referral rate as reported through the district’s student data management system. *Z* tests for

difference in proportions were also used to determine the rate of change for the months of September and October of school year 2009, 2010, and 2011. Incidents as a proportion of student population provided statistical comparison of school years 2009, 2010, and 2011 using a  $z$  test for difference in proportion. Changes in the attendance rates from 2008 to 2009 and from 2009 to 2010, as reported through the MODESE, determined the rate of change in student attendance rates.

**(MSIP) survey.** The Missouri School Improvement Survey results for the Missouri Middle School reported through the Department of Elementary and Secondary Education included parent, student, and teacher responses to statements, indicating if the survey participant strongly agreed, agreed, was neutral, disagreed, or strongly disagreed with the expressed statements. Statements that included the highest percentage of neutral, disagree, and strongly disagree responses were used to identify elements of school climate concern. These survey results provided the baseline data to determine areas of climate concern.

**Caring school community survey.** Following identification of the major areas of climate concern identified through analysis of the MSIP survey responses, the Missouri Middle School stakeholders participated in a Caring School Community baseline survey that was included prior to the first year of implementation of this model. Data analysis of the Caring School Community survey performed off-site through CHARACTERplus was provided to the school as grade level, student, teacher, and parent results were reported in the form of descriptive statistics, including the number of survey participants, the minimum, maximum, mean, and standard deviation. The reports also

included interval graphs of results for each stakeholder group surveyed. Review and analysis of this data provided measurement of percentage increase of mean scores from the 2009 to the 2010 school year following the initial phase of implementation, with particular emphasis on student sense of safety and school belonging. The implementation survey results provided through the Caring School Community report also included descriptive statistics reporting mean scores for 2009 and 2010 in measures of learning community, leadership support, school climate, staff collaboration, ten essentials of character education, and classroom practices and student pro-social behavior. Data analysis determined percentage of positive or negative change in each of these areas. Caring School Community survey results provided measures of improvement in school climate.

**Additional measures of school climate.** Results from the MIM staff survey measured the professional climate of the school. This last piece of data gave an additional measure of professional climate to inform the work of school improvement at Missouri Middle School. These results were reported descriptively.

**MAP.** Student MAP achievement results were compared for the school year 2008 to 2009, and for the school year 2009 compared to 2010. The web-based Research Randomizer, which provided automated randomization of data, produced 45 random students' results from the total school population results as the basis of comparison for each school year. The normal distribution and sample size of 45 allowed use of the z test for difference in means. The Excel data analysis feature was used to calculate the z score. The z score for difference in means is used "when researchers wish to compare

two sample means, using experimental and control groups” (Bluman, 2010, p. 468). The z score allowed the researcher to determine whether to reject the null hypothesis related to improvement in student school success. Aggregate and disaggregate scores were also analyzed to determine percentage change from year to year. MAP results reflected measures of student academic school success. Z scores for difference in proportions were also calculated to determine the statistical significance of the percent change in proficiency levels during the years of study.

**Attendance and discipline data.** Attendance data measured the percentage of improvement or decline from year to year for the school years 2008, 2009, and 2010. Analysis of discipline data included an aggregate measure of increase or decrease in discipline incidences with consequences tracked through the assistant principal’s office. Z scores for difference in proportion guided analysis of discipline data for school year 2008 compared to 2009, school year 2009 compared to 2010, and school year 2010 compared to 2011 year to date. Attendance and discipline data reflected measures of student school success.

### **Limitations**

The sample demographics of this study present limitations in consideration of the conclusions that follow the study. Other limitations that affected the generalization of the results of this study included instrumentation limitations as well as the threats of mortality, history, and bias. Finally, the impact of fidelity of implementation was reviewed relative the generalization of the study’s results.



**Sample demographics.** The sample for this study included random sampling of the MAP test results of the fifth and sixth grade students at the Missouri Middle School and the aggregated student achievement data. Because this study was limited to approximately 730 students within a fifth and sixth grade school, generalization of the results of this study to a larger population or to a school population with different demographics may not be applicable, thus the external validity of this study is limited.

**Instrumentation.** The instruments used to provide data included (a) the Caring School Community student, parent, and teacher surveys; (b) the MSIP survey; (c) the MIM needs assessment results and staff surveys; and (d) the MAP annual yearly progress results. Surveys are limited in their reliability and validity, most often due to bias and interpretation of results on the part of the researcher and the survey respondents (Fraenkel & Wallen, 2006). The Caring School, the MSIP, and MIM surveys were prepared within research settings, outside the influence of this researcher, and used across the span of multiple years and in a wide variety of other schools to assess school climate conditions. These conditions lend credence to their validity and reliability. Validity is defined as “the appropriateness, meaningfulness, correctness, and usefulness of the inferences a researcher makes”, while reliability is defined as “the consistency of scores or answers from one administration of an instrument to another” (Frankel & Wallen, 2006, p. 150). Measurement of responses to evaluate school climate concerns was outside the control of this researcher. The secondary nature of the survey results used in this study support the reliability of information and minimize bias.

The MAP utilized norm referenced and criterion referenced questions. The criterion-referenced portions of the MAP annual yearly progress includes achievement data specifically related to the state's grade level expectations within content areas, so results may not be generalized outside the state of Missouri. The Terra Nova portion of the state test is a norm-referenced test, making the data from this portion of the test more useful in generalized situations. Forty-five students' MAP scores were randomly selected for each of the school years represented and a  $z$  test for difference in means compared data from year 1 to year 2 and from year 2 to year 3 to check for possible statistically significant improvement in average scores. The overall proportion of students achieving proficient or above on the MAP will be calculated for each school year represented and a  $z$  test for difference in proportions will be applied to compare data from year 1 to year 2 to check for possible increase in the proportion of students achieving the desired results.

A high degree of subjectivity affects much school level data, such as student academic data and discipline data, due to subjective meanings of grades and the possible inconsistent response to behavior problems among various administrators and from situation to situation. Standards based assessments lend an element of reliability to grades as does discipline reported within the structure of Positive Behavior Support schools. However, the Missouri Middle School at the time of this research was not utilizing standards based assessments or positive behavior support strategies school-wide.

**Mortality and history threat.** The transience of the student population at the Missouri Middle School created a mortality threat (Fraenkel & Wallen, 2006) in each case where a student dropped enrollment or where new students arrived after the

beginning of each school year. Additionally, because this school only spanned two grades, each year 50 % of the population of students matriculated to the seventh and eighth grade school. Staff turnover created another history threat (Franekel & Wallen, 2006) as teachers retired or left and as new teachers took their places. During one of the years during the study, the district offered an early retirement incentive, adding to the normal rate of turnover. Administrative turnover also created a history threat as the lead principal in the baseline year of the study retired, and a different principal was in place during the first and following years of the study.

**Bias.** Because the author of this dissertation worked in the studied district, the possibility of bias existed. To mitigate the possible impact of this bias, all data were of a secondary nature, gathered and compiled by second parties, or by other staff at the school as a normal course of their job responsibilities.

**Implementation threat.** Integrity of implementation represented a limitation to the study, as a lack of comfort with changes led to variable practices on the part of teachers in implementation. Some of the components of the initiatives to improve climate were optional in the beginning while others were non-negotiable. Resistance to change subsided through the course of the year and existed in varying degrees in the second year of implementation.

### **Summary**

This research study represented a multi-faceted or holistic approach to address significant concerns identified in the areas of academic achievement and school climate at Missouri Middle School. Initial changes were in place in the 2010 school year

resulting from visits to elementary schools to determine developmental needs of students who left fourth grade to enter Missouri Middle School. Conversations with elementary principal counselors and principals also informed new structures put into place including the morning assemblies and the Caring School Community model. The Missouri Middle School applied for a MIM grant in the summer of 2010 to provide funds to support evidenced based systems to assess, provide intervention, and monitor progress toward student academic and behavior goals, and received the grant in the fall of 2010. Content area teachers led their teams in the work of creating SMART goals, common assessments to ensure consistent expectations regarding core curriculum, and the investment of professional development funds aligned to this work.

The conceptual framework of this study considered, as stated in the conclusion of the literature review, that effective climate reform creating a safe and orderly climate where students felt a sense of belonging, must accompany climate reform that intentionally builds academic focus through alignment, collaboration, and the use of data to support individual student growth. This researcher, as the school leader, must possess an understanding of the complex nature of school reform and the inter-relationship of the parts of the whole to create positive, sustainable systemic change as the leader instills a shared belief that “success is critical” (Blankstein, 2004, p. 18) and “failure is not an option” (p. 1).

## Chapter 4: Analysis of Data

This chapter opens with an analysis of data measuring the success of the climate reform initiatives, with particular focus on student sense of belonging and safety, as identified in the results of baseline survey data compared to survey results after year one of implementation of the Caring School Community model. Survey results related to the academic focus and professional learning climate of the school were also analyzed, with particular attention given to items related to staff focus on student success. Once the success of those school climate change initiatives was determined, the data analysis turned to the measurement of improvement in identified areas of student school success. Data analysis included academic achievement, behavior and discipline, and attendance in order to determine whether to reject the null hypothesis, “Strategies to positively improve school climate will not result in improvement in student school success as measured by proficiency on the MAP test, number of discipline incidents, and attendance rates.”

### Measuring the Success of Climate Change Initiatives

Multiple measures were used to measure the success of climate change initiatives at Missouri Middle School. These include measures of student sense of safety and belonging, and measures of the professional learning climate of the school.

**Safety and belonging.** Analysis of data focused on the change in percent of positive responses to survey items related to student sense of safety, student sense of belonging, and student sense of school as community for fifth graders. The transitional support for these students, as they left their small elementary schools for this larger fifth and sixth grade center was foundational to creating a feeling a connection to the school

within a safe environment. Data from the Missouri School Improvement Advance Survey (Table 5) provided baseline information identifying areas of significant school concern, which were students' sense of belonging and safety, and staff professional learning environment.

Table 5

*MSIP Survey Results – Fall 2008*

Baseline Data for Missouri Middle School			
Percent Responses <u>Neutral, Disagree, or Strongly Disagree</u>			
	Fifth Grade Students	Sixth Grade Students	Teachers
Students at my school are friendly	60.8	70.2	70.2
I feel safe at school	34.5	42.6	---
I like going to this school	44.6	58.8	---

*Note:* From MODESE, 2010.

The MSIP Survey results provided the impetus for the implementation of the Caring School Community model at the Missouri Middle School. The Caring School Community 2009 pre-implementation results, focusing on students' sense of safety and sense of belonging, were compared with the 2010 results following the first year of implementation. See Table 6.

Table 6

*Caring School Community Survey Results for Missouri Middle School*

Change +/- in Percentage of Positive Responses				
z test for Difference in Means				
Fifth Grade Students				
2009 (n=328) 2010 (n=250)				
School Climate Category	2008-2009 Mean Results/ Std. Deviation	2009-2010 Mean Results/ Std. Deviation	Change in Positive Responses Percent Change +/-	Comparison of Means z Stat
Students' Feelings of Belonging	44.42/ 22.83	55.24/ 20.77	+24.36	8.52
Students' Sense of School as Community	44.57/ 22.81	55.68/ 21.51	+24.93	8.61
Students' Sense of School Safety	44.28/ 19.20	53.32/ 18.11	+20.42	8.29

*Note:* From Caring School Community, 2009 & 2010; alpha .05; Confidence Level 95%; Critical Value 1.96

Eighty-eight fewer fifth grade students participated in the survey in the second year of administration, representing a limitation in the reliability of the results. Sixth grade students' responses represented a slight decrease in these measures (7 points, 7 points, and .3 respectively). Some of the sixth grade students, as well as some of the teachers, were resistant to the idea of increased adult supervision in students' movements throughout the school day. Students' sense of safety also included consideration of sense

of safety coming to and from school that included time spent on contracted school busses. The survey results of school year 2010, the first year of implementation, showed statistically significant improvement in school climate as measured by the increase in positive survey responses.

Interval data, reflecting high and low ranking scores and the range for each response statement for the fifth grade class, measured perception of climate for students matriculating to Missouri Middle School. Response intervals, reported in Table 7, showed improvement from the year prior to implementation to year one of implementation.



Table 7

*Caring School Community Student Survey Intervals*

	Interval Comparison	
	2008-2009	2009-2010
Students' Feelings of Belonging	42-47	52-57
Students' Sense of School Community	42-47	53-58
Students' Sense of Autonomy	45-50	50-56
Students' Feelings of Competence	57-63	57-64
Students' Sense of School Safety	42-46	52-56
Parent Involvement at School	48-54	47-52
Parent Involvement at Home	56-62	62-68

*Note:* From Caring School Community, 2009 & 2010

Interval data provided through the Caring School Community report indicated improvement in interval scores in all but two areas in the second year of the study, students' feelings of competence and parent involvement at school, although both of these areas had equal scores or scores one point below the prior year.

**Professional learning climate.** Professional learning climate needs were identified in the MSIP Advance Survey. Areas of specific academic concern came from

86.6% of sixth grade students responding neutrally or with agreement or strong agreement to the statement indicating that classes often were interrupted. These students also responded neutrally or negatively to statements about classes staying focused on learning (68.4%) and teachers' openness to students' sharing ideas in class (46.5%). Further, sixth grade students were asked to respond to their experiences with different learning strategies in their classroom experiences. These responses from the MSIP survey administered in the 2008 school year, prior to the implementation of strategies to reform school climate, gave guidance to instructional improvement professional development at Missouri Middle School as did information regarding student reported staff practices noted in Table 8.

Table 8

*MSIP Student Survey Results*

Regarding Staff Practices at Missouri Middle School		
Student Reported Percentage of Teachers Not Using Strategies		
Fall, 2008		
	Rarely	Not at All
Require students to take notes	20.2	4.0
Place students in small groups	22.2	5.6
Students use pictures/graphs/charts/ maps to represent learning	33.2	8.3
Asked to summarize new material	30.2	11.3
Asked to revise/correct errors	16.1	3.3
Asked to identify similarities and differences	22.0	8.1
Asked to relate known to new	23.4	10.4
Present learned material to others	23.9	14.8
Graded assignments returned before test	13.4	5.7

*Note:* From MODESE, 2010.

Related to this, the staff survey results identified a need for professional development in the teaching of effective note taking skills and flexible grouping, as 59.1% of teachers indicated that they occasionally, rarely or never taught effective note taking skills and 40.8% of teachers indicated that they occasionally, rarely, or never used flexible grouping. Other areas of instructional concern are noted in Table 9.

Table 9

*MSIP Staff Survey Results*

Instructional Practices			
Percentage of Teachers Indicating Use or Non-Use of Strategies			
Fall, 2008			
	Occasionally Used	Rarely Used	Never Used
Students identify learning goals at beginning of unit	34.6	19.2	13.5
Students keep track of learning goals	38.9	11.1	13.0
Students assess learning goals summatively	34.6	19.2	11.5

*Note:* From MODESE, 2010.

Results from the Caring School Community implementation survey descriptive statistics from the spring of 2010 and from the MIM staff survey from the fall of 2010 provided data regarding the professional learning climate of the Missouri Middle School prior to and following the first year of implementation of strategies to reform school climate. The Caring School Community data was analyzed to determine percent change in positive responses from 2009 compared to 2010 (see Tables 10 and 11).

Table 10

*Implementation Survey Descriptive Statistics*

Caring School Community Survey Results			
	2009 School Year Mean Responses	2010 School Year Mean Responses	Change in Positive Responses Percent Change +/-
School as Learning Community	41.96	54.39	+29.62
School Leadership	41.86	49.09	+17.27
School Climate	49.80	56.52	+13.49
Staff Collaboration	62.75	69.39	+10.58
Ten Essentials of Character Education	40.34	52.58	+30.34
Classroom Practice and Student Pro- Social Behavior	34.31	45.61	+32.94

*Note:* From Caring School Community Survey, 2009 and 2010.

All areas of the implementation survey showed increases in the percent of positive responses from school year 2009 to 2010. The greatest gains were reported in the areas of School as Learning Community, Ten Essentials of Character Education, and Classroom Practice and Student Pro-Social Behaviors.

The results of the MIM School Staff Survey provided another measure of the professional climate of the school in relation to the eleven identified essential features of the model. Staff members were able to select from a range of responses with 5 designated as the strongest positive response and 1 designated as the weakest response.

The school's strengths and areas for present and future growth were identified through this survey.

Table 11

*MIM Staff Survey Results, October 2010*

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Top and Lowest Five Mean Scores 5-1 (5 is Strongest) Average Rating Responses to Likert-Scaled Questions	
I collaborate with my colleagues on a regular basis.	4.1
I feel that my administrators are committed to implementing tiered levels of academic and behavior supports.	4.1
When I am concerned about a student's behavior success, I collaborate with a team to identify interventions.	3.9
I consider my students' background when I plan lessons.	3.9
I participate in professional development where I learn ways to improve my instructional strategies.	3.8
I participate in professional development where I learn how to monitor students' progress and use progress monitoring data.	3.0
My students move between tiers of support as their academic needs change.	2.9
I am involved in action planning tiered supports with the other staff and administrators at my school.	2.8
My students move between tiers of support as their behaviors change.	2.7
I have the time necessary to analyze student data and problem solve with my colleagues.	2.3

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*Note:* From MIM Staff Survey, 2010.

### **Measuring Improvement in Student School Success**

Having reviewed data reflecting the school climate including measures of safety, belonging, and academic focus, the work of this chapter turned to an analysis of data related to measures of student school success including student achievement, attendance, and behavior/discipline.

**Student achievement.** Aggregate student achievement results in the areas of communication arts and math for the three years of the study allowed the researcher to determine rates of improvement or decline across time. Disaggregate student results were analyzed to determine achievement improvement or decline related to the whole school improvement.

MAP student achievement results were compared for the three years of the study, beginning with the 2008 school year and ending in 2010. The normal distribution and sample size of 45 randomly chosen student results for each of the years allowed use of the z test for difference in means. The Excel data analysis feature was used to calculate the z score. The z score allowed the researcher to determine whether or not to reject the null hypothesis regarding the effect of school climate change on student school success. Disaggregate and aggregate percent change, positive or negative, was measured for student results in each year of the study. The null hypothesis was, “Strategies to improve school climate will not result in a difference in student school success, defined by the measure of proficiency on the communication arts portion of the MAP.”

Table 12

*MAP - AYP*

Percent of Students Proficient or Advanced					
	2008 Results	2009 Results	Percent Change +/- Over Prior Year	2010 Results	Percent Change +/- Over Prior Year
Communication Arts	47.6	42.4	-10.9	53.4	+25.9
Black	21.3	23.7	+11.3	34.8	+46.8
Free and Reduced Lunch	28.4	30.6	+7.8	39.0	+27.5
Hispanic	25.9	14.7	-43.2	26.5	+80.3
IEP	14.2	16.4	+15.5	24.8	+51.2
LEP	10.0	5.9	-41.0	22.9	+288.1
Math	46.9	47.4	+1.07	54.8	+15.6
Black	13.3	24.7	+85.7	38.4	+55.5
Free and Reduced Lunch	29.8	32.2	+8.1	39.7	+23.3
Hispanic	29.6	8.8	-70.3	26.5	+201.1
IEP	17.0	16.4	-3.5	21.1	+28.7
LEP	10	5.9	-41.0	28.6	+384.8

*Note:* From MODSE, 2010.



The increasing percentage of students scoring proficient or above on the MAP test (see Table 12) from school years 2009 to 2010 provided observable evidence indicating that data may support the alternate hypothesis, “Strategies to improve school climate will result in a difference in student school success, measured by proficiency on the math and communication portions of the MAP test.” To decide whether or not to reject the null, the  $z$  test for difference in proportions and the  $z$  test for difference in means were applied.

Table 13

*Students Scoring at Proficient and Advanced on the MAP Test*

	z test for Difference in Proportion Comparing 2008, 2009, and 2010					
	2008 Percent Proficient or Advanced n=674	2009 Percent Proficient or Advanced n=705	z Stat for 08-09	2010 Percent Proficient or Advanced n=736	z Stat for 09-10	z Stat for 08-10
Communication Arts	47.6	42.4	-2.41	53.4	5.00	2.59
Math	46.9	47.4	2.30	54.8	5.64	3.59

*Note:* From MODESE, 2010; alpha .05; Confidence Level 95%; Critical Value 1.96.

The  $z$  test for difference in proportion (see Table 13) showed a statistically significant improvement in student scores on the MAP test for the first year of implementation, 2010, compared to both the baseline school year of 2009 and to the prior school year, 2008. Communication arts  $z$  stat values were 5.00 comparing school year 2008 to 2010 and 2.59 for 2009-2010, and math  $z$  stat values were 5.64 comparing school year 2008 to 2010 and 3.59 for 2009 compared to 2010. The null hypothesis was rejected

in all categories as the  $z$  stat values fell within the critical region. There was evidence to support the alternate hypothesis, “Strategies to improve school climate will result in a difference in student school success, defined by the measure of proficiency on the communication arts portion of the MAP,” for both communication arts and math.

Descriptive statistics for the years 2008, 2009, and 2010 provided the necessary data to calculate  $z$  test for difference in means when comparing student achievement results for the years 2008 to 2009, and the years 2009 to 2010. The confidence level was 95% and alpha level was .05. A two-tailed test was appropriate to this statistical analysis. The web-based Research Randomizer produced 45 random students’ results from the population results as the sample basis of comparison for each school year (see Tables 14 and 15). The null hypothesis was, “Strategies to improve school climate will not result in a difference in student school success, defined by the measure of proficiency on the communication arts portion of the MAP.”

Table 14

*MAP Scores – Communication Arts*

Descriptive Statistics and z test for Difference in Means						
Comparing 2008 to 2009, and 2009 to 2010 (n=45)						
	2008	2009	z Stat Value	2009	2010	z Stat Value
Mean	667.02	657.44		657.44	673.60	
Standard Deviation	27.15	47.92		47.92	33.97	
z score			-1.09			1.85
Median	670	672		672	676	
Mode	696	672		672	695	
Variance	736.98	2301.3		2301.3	1154.1	
Range	124	216		216	156	

*Note:* From MODESE, 2010;  $\alpha = .05$ ; 95% Confidence Level; Critical Value 1.96.

Because the  $z$  stat value (-1.09) comparing school year 2008 to 2009 Communication Arts scores fell outside the critical region, the null hypothesis, “Strategies to improve school climate will not result in a difference in student school success, defined by the measure of proficiency on the communication arts portion of the MAP,” was not rejected. Proficiency levels fell during this time. For the years 2009 to 2010, the  $z$  stat value (1.85) fell outside the critical region and the null hypothesis was not

rejected. Although the proficiency levels in school year 2010 increased, the increase in mean was not statistically significant.

Table 15

*MAP Scores - Math*

Descriptive Statistics and $z$ test for Comparison of Difference in Means $\alpha = .05$						
Comparing 2008 to 2009, and 2009 to 2010 (n=45)						
	2008	2009	$z$ Stat Value	2009	2010	$z$ Stat Value
Mean	662.6	672.04		672.04	683.93	
Standard Deviation	40.85	39.95		39.95	43.40	
$z$ score			1.11			1.35
Median	660	668		668	687	
Mode	621	693		693	679	
Variance	1668.4	1365		1365	1883.7	
Range	204	162		162	234	

*Note:* From MODESE, 2010;  $\alpha = .05$ ; 95% Confidence Level; Critical Value 1.96.

Because the  $z$  stat value (1.11) comparing school year 2008 to 2009 for Math fell outside the critical region, the null hypothesis, “Strategies to improve school climate will not result in a difference in student school success, defined by the measure of proficiency on the communication arts portion of the MAP,” was not rejected. For the school year

2009 compared to 2010, the null hypothesis was not rejected as the  $z$  stat value (1.35) fell outside the critical region. Although there was improvement in average student achievement, the  $z$  stat values did not show the improvement to be statistically significant.

**Behavior and discipline.** Discipline incidents for the years 2009 and 2010 provided the basis for analysis of changes in this measure of student school success. Comparative discipline data for 2008 was not available for analysis. A  $z$  test for difference in proportions analyzed the change in average discipline incidents per day as a percent of student population, comparing the school year 2009 to 2010 and year-to-date results for 2011. A separate  $z$  test for difference in proportion was used to analyze September and October discipline data for the school years 2009, 2010, and 2011. The null hypothesis was, “Strategies to improve school climate will not result in a difference in student school success, defined by the proportion of discipline incidents.”

Table 16

*Average Daily Discipline Incidents per Student\**

School Years 2009, 2010, and School Year 2011 Year-to-Date								
z test for Difference in Proportion (Daily Incident Comparison)*								
School Year	School Year		z Stat Value		School Year	z Stat Value		z Stat Value
2009	2010		09-10		2011	10-11		09-11
Incidents/ Students	% of Total	Incidents/ Students	% of Total		y-t-d Incidents/ Students	% of Total		
13.84/ 723	.019	14.56/ 736	.020	-1.67	4.85/ 720	.006	2.80	2.60

*Note:* alpha = .05; Confidence Level 95%; Critical value = +/- 1.96. \*Average daily rate calculated by the (number of incidents divided by the number of students); the quotient was then divided by the number of school attendance days attained in each period to get the average daily proportion of incidents per student per day. This calculation equalized the result of the year-to-date number for school year 2011, allowing an annualized comparison.

The z stat value (-1.67) comparing school years 2009 to 2010 (see Table 16) did not fall within the critical region, so the null hypothesis, “Strategies to improve school climate will not result in a difference in student school success, defined by the proportion of discipline incidents,” was not rejected as discipline incidents rose during that period. Comparing the school year 2009 to year-to-date 2011, and the school year 2010 to year-to-date 2011, the z stat values (2.80 and 2.60) fell within the critical region, resulting in the rejection of the null hypothesis. There was evidence to support the alternate hypothesis, “Strategies to improve school climate will result in a difference in student

school success, defined by the proportion of discipline incidents.” Average daily incidents favorably and statistically improved as reflected in this comparison.

Analysis of September and October discipline data for school years 2009, 2010, 2011 provided a preliminary view of discipline and behavior changes following the first full year of initiatives to improve school climate. An analysis of the number of incidents as a percentage of student population and a  $z$  test for proportions was calculated for September and for October for each of the years.

Table 17

*September Discipline Incidents*

Discipline Incidents as a Proportion of Students								
September 2009, 2010, and 2011								
$z$ test for Difference in Proportion								
	2009		2010			2011		
	Incidents/ Students	% of Total	Incidents/ Students	% of Total	$z$ Stat Value	Incidents/ Students	% of Total	$z$ Stat Value
Total Incidents	232/723	32	183/736	25	1.75	82/720	11	2.80

*Note:*  $\alpha = .05$ ; Critical value =  $\pm 1.96$ ; Confidence Level 95%

For the comparison of September data for school 2009 to 2010, the null hypothesis was not rejected as the  $z$  stat value (1.75) fell outside the critical region. September data for the school year 2010 compared to school year-to-date 2011, caused the null hypothesis to be rejected as the  $z$  stat value (2.80) fell within the critical region. Evidence existed to support the alternate hypothesis, “Strategies to improve school climate will result in a difference in student school success, defined by the proportion of

discipline incidents,” as the proportion of discipline incidents statistically and favorably improved during this period.

Table 18

*October Discipline Incidents*

Discipline Incidents as a Proportion of Students								
October 2009, 2010, and 2011								
z test for Difference in Proportion								
	2009		2010			2011		z
	Incidents/ Students	% of Total	Incidents/ Students	% of Total	z Stat Value	Incidents/ Students	% of Total	Stat Value
Total Incidents	354/723	49	281/736	38	4.86	148/720	21	8.85

*Note:*  $\alpha = .05$ ; Confidence Level 95%; Critical value =  $\pm 1.96$ .

The z stat values (4.86 and 8.85) for difference in proportion for October data fell within the critical region on all comparisons. Evidence existed in each comparison to reject the null and to support the alternate hypothesis, “Strategies to improve school climate will result in a difference in student school success, defined by the proportion of discipline incidents,” as the proportion of discipline incidents statistically and favorably improved during these periods.

**Attendance.** The null hypothesis related to attendance was, “Strategies to improve school climate will not result in a difference in student school success, measured by attendance rates.” Attendance data was reported through the MODESE for Missouri Middle School for the years 2008, 2009, and 2010.



Table 19

*Attendance Rate Comparison – Average Daily Attendance*

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School Year 2008	94.0%
School Year 2009	94.8%
School Year 2010	99.8%

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*Note:* From MODESE, 2010.

The Missouri Middle School attendance secretary tracked attendance to input data to the district’s system for submission to the state. There was an improvement in the rate of attendance from year to year and there is observable evidence to support the alternate hypothesis, “Strategies to improve school climate will result in a difference in student school success, as measured by attendance rates.”

**Summary**

The data presented in this chapter provided evidence to suggest a positive change in school climate following school climate change initiatives. Achievement, discipline, and attendance data provided mixed results regarding evidence to support the alternate hypothesis, “Strategies to improve school climate will result in an improvement in student school success, as measured by student achievement, student discipline data, and by attendance rates. Further discussion regarding this data is found in chapter five.

## **Chapter 5: Discussion, Implications, and Recommendations**

The purpose of this study was to determine outcomes of student school success resulting from initiatives for school climate change at Missouri Middle School, a fifth and sixth grade center that was the school of study. Data sources for measurement of student school success and climate change included secondary sources related to achievement, attendance, and behavior, as well as research-based measures of student sense of safety and belonging.

The research question that guided the work of this dissertation was, “Will strategies to positively improve school climate result in improvement in student school success as measured by improved academic achievement, reduced number of discipline incidents, and improved attendance rates?” School climate improvement strategies included daily morning assemblies, increased adult supervision, cross-age buddy classes, class meetings, increased focus on student teams and student leadership, protected instructional time, content teacher building leadership, and collaboration using data for improvement.

### **Review of Methodology**

In order to determine the effects of school climate change on student school success, the first step in data analysis was to determine if positive school climate change had actually occurred. After establishing the existence of school climate change, the effects of the improved school climate were studied relative to changes in student school success as measured by MAP proficiency scores, number of discipline incidents, and attendance rates. Year to year changes in percentage of students scoring proficient and

advanced,  $z$  tests for difference in means, and  $z$  tests for difference in proportions were used to determine the level of change in student achievement.  $Z$  tests for difference in proportion were used to determine the level of change in student behavior. Changes in the attendance rates from 2008, 2009, and 2010, as reported through the MODESE, determined the rate of change in student attendance rates.

### **School Climate Data Analysis**

A  $z$  test for difference in means showed that the strategies to improve school climate at Missouri Middle School were successful and statistically significant. At the beginning of the study over 55% of students expressed concern with school safety and belonging. By the end of the first year of implementation, fewer than 45% of students expressed concerns with sense of belonging and community and fewer than 47% of students expressed concerns with sense of safety during the school day and when travelling to and from school.

The staff survey administered through Caring School Community implementation also showed improvement in the professional climate of the school with positive response averages ranging from 34.31% to 62.75% in 2009 compared with positive response averages ranging from 45.61% to 69.39% in 2010 following the first year of implementation. The most notable improvements were in the areas of School as a Learning Community (29.62% increase), Ten Essentials of Character Education (30.34% increase), and Classroom Practice and Student Pro-Social Behavior (32.94% increase). The 2010 MIM staff survey also showed strengths in the professional climate of the

school, specifically in the areas of teacher collaboration, professional development, and leadership commitment to tiered levels of student support.

### **Implications Regarding School Climate Improvement**

Implications of this study for school leaders' efforts to improve school climate suggest that the Missouri Middle School's approach is one to be examined. Climate change initiatives at Missouri Middle School have resulted in a measurable and improved change in the climate at the school. The increased positive student responses to the Caring School Community survey on statements related to student sense of safety, and community and belonging, and in staff responses to survey statements regarding collaboration, classroom practice, school leadership, and school as a learning community reflected this success. While there was still considerable room for improvement in these areas, intentional actions on the part of the school leaders and staff to address concerns had resulted in measurable improvement in the school climate at Missouri Middle School.

### **Student School Success Data Analysis**

Student school success was measured through indicators in student achievement, discipline incidents, and attendance rates. Statistical analysis of MAP achievement results using a  $z$  test for difference in means required the researcher to accept the null hypothesis, "Strategies to improve school climate will not result in improvement in student school success as measured by improved academic achievement." The  $z$  stat values of 1.85 and 1.35 for communication arts and math were not statistically significant at a 95% confidence level, as the critical value was 1.96. A  $z$  test for difference in

proportions comparing MAP scores from 2008 to 2010, however, showed statistically significant improvement in student academic achievement when comparing the years prior to the climate change initiatives to year one of implementation. There was evidence to reject the null and to support the alternate hypothesis, “Strategies to improve school climate will result in improvement in student school success as measured by improved academic achievement.” Further, the school was granted a delayed status regarding improvement sanctions under No Child Left Behind due to the improved scores on the state assessment and the narrowing achievement gap.

A comparative analysis of discipline incidents for the school years 2009 to 2010 showed a proportionate increase in the number of discipline incidents, requiring the researcher to accept the null hypothesis, “Strategies to improve school climate will not result in improvement in student school success as measured by discipline incidents.” However, the 2011 school-year-to-date data highlighted a reduction in the proportionate discipline incidents. When a proportionate daily rate of incidents was calculated the  $z$  stat values for difference in proportion at a 95% confidence level provided statistically significant evidence showing a decline in the proportion of discipline incidents for the beginning of school year 2011. In addition, using a  $z$  test for the difference in proportion, the months of September and October for school year 2011 showed a statistically significant improvement in the number of discipline incidents compared to September and October of school year 2009, the baseline year, and September and October of school year 2010, the first year of implementation. These statistics provided evidence to

support the alternate hypothesis, “Strategies to improve school climate will result in improvement in student school success as measured by reduced discipline incidents.”

Attendance data provided the third measure of student school success.

Consecutive years of improved attendance rates of 94.0%, 94.8%, and 99.8% for the school years 2008, 2009, and 2010, provided observable evidence to support the alternate hypothesis, “Strategies to improve school climate will result in improvement in student school success as measured by attendance rates.”

### **Implications Regarding Student School Success**

Implications of this study for school leaders’ efforts to improve student school success suggest that the Missouri Middle School’s approach is one to be examined. Data from this dissertation suggest that the school climate improvement initiatives led to improvement in student school success at Missouri Middle School. The MAP test scores resulted in Missouri Middle School meeting 14 of 14 AYP measures in the first year of climate improvement implementation. This compared favorably to the school meeting only three of 12 AYP measures in the baseline year of the study. These scores also showed a narrowing of the achievement gap between White students compared with minority, LEP, FRL, and special education students. Discipline incidents for the first year of implementation increased, possibly because of clear and consistently enforced expectations. However, the 2011 school year-to-date comparison showed a statistical improvement in behaviors as reflected in reduced discipline incidents. The school-within-a-school model, implemented in school year 2011 to support Missouri Middle School’s most at-risk students as they transitioned from fourth to fifth and from fifth to

sixth grades, was a possible contributor to these improved behavior statistics. This data supported the continuance of climate change improvement efforts to increase academic focus, emotional support through community building and character education, and the continuance of the school-within-a-school model.

The emergent positive outcomes of the climate change initiatives on student school success, such as significantly improved measures of proficiency on the MAP test, the narrowing of the achievement gap, improving student behaviors, and improved attendance rates suggested that the initiatives should be continued and built upon. It is recommended that the climate change initiatives to increase academic focus and emotional support of students through community building and character education continue, as the data suggests a supportive relationship between climate change improvement and student school success. The elements of embedded education and school-wide activities should be expanded, along with the implementation of home-side activities to ensure fidelity of implementation of the Caring School Community model. Honing of current efforts, and careful monitoring of progress is recommended to support sustainability of improvement.

The Missouri Middle School was reorganized as a fifth and sixth grade intermediate school in 2011, the second year of implementation, in light of best practice and grade span research within this dissertation. Time was increased for reading, writing, and math, and students spent their time with one of two team teachers for all but two periods of the day when they went to everyday physical education, and days of music alternating with a semester of computer classes and a semester of art. The results of the

new intermediate model must be monitored to ensure its effectiveness in meeting the needs of the students.

The MIM grant, awarded to the Missouri Middle School in the fall of 2010, will ensure needed funding to build upon existing structures for intervention and enrichment to create school-wide, systemic approaches to student support. The integrated model approach enhances professional collaboration within a school as resources are identified and structures are put into place to intentionally and systemically gather data to assess, respond to students' academic and behavior needs, and monitor progress toward goals. The MIM grant process will use results from the staff survey and additional information gathered as part of a self-study to identify areas of support for the action plan for the school year 2012, the first year of grant implementation. Grant funds will be utilized to explore the possible implementation of the Positive Behavior Support model at the Missouri Middle School.

The researcher recommends continuation of school reform efforts with an integrated focus on character education and building school community alongside an increased academic focus using student data to guide teachers' collaborative work. Careful monitoring of progress will support the likelihood of sustainable school improvements. The Missouri Middle School, now operating as an intermediate school, will implement a standards based report card in 2012 as part of a district initiative. Teachers worked in 2010-2011 to identify priority standards, and created priority standard assessment rubrics and related common assessments to support the standards based report card. This focused academic work, along with the Caring School



Community Model implementation will support a sustained holistic and integrated approach to school reform at Missouri Middle School. The grant funds secured through the recently awarded MIM grant will allow this research to continue at the studied school after completion of this study.

Monitoring of discipline incidents must continue, along with the study of models to consistently set and support behavior expectations within the Missouri Middle School. These measures to improve behaviors are expected to also positively affect the sense of student belonging and safety at school. Because safety on the way to and from school was assessed in the climate survey, a recent school board decision to create a district owned transportation system might increase the school's ability to support positive behaviors on the school bus, related to students feeling safe at school.

### **Recommendations for Further Study**

This study was limited to approximately 730 students at a mid-western fifth and sixth grade school. This limitation prohibited the generalization of results to a larger population. Because this school only spanned two grade levels, 50% of the population of students turned over each year creating a history threat over the course of any study. Administrative turnover also created a history threat within this research as the lead principal in the baseline year of the study retired, and a different principal was in place during the first year of implementation and during the following years of the study. These limitations all provided direction for future study.

Further research regarding integrated school climate improvement approaches should be conducted at less narrowly configured schools over a longer period of time,

and in diverse settings. This would allow researchers to better assess the effects of school climate change initiatives on student school success for individual students and for larger and more diverse groups of students. Studies on schools working with primary age students, measuring results over time as they move into upper elementary grades are recommended. This research should be conducted in diverse settings, including suburban, urban and rural schools, to allow the results to be generalized to larger populations of students.

The MIM has shown promising initial results, with increased achievement and reduced discipline incidents at the participating pilot schools. It is hoped that implementation of the MIM grant in the 2011-2012 school year will allow the Missouri Middle School to experience a course of continual school improvement through systemic supports for student school success which also supports the alignment research discussed in the literature review of this dissertation. The study of integrated models in other states would help to generalize results of a comprehensive study.

## **Discussion**

Effective school reform, which is at the heart of increasing student school success, is a much talked about and written about topic. Most of the authors cited in the literature review of this dissertation were current, while others dated back to the middle-1990s. Business management researchers, such as Kofman and Senge (1993), set the stage for the implementation of system change principles in the business setting, while Lashaway (1997), Lindahl (2007), Marzano (2003), and Reeves (2009) passed the baton in the relay of these ideas to the educational setting. Systemic change does not result from a focus on

one element within an organization or school system and seeking to improve that single item, but rather by studying the system as a whole to determine how to integrate improvement strategies across the organization. Within a school setting, a focus only on character education might represent such a single-faceted approach. Integrating a focus on character education, community building, and increased academic focus built on data and collaboration, represents a multi-faceted approach. This holistic and integrated approach was initially supported by organizational change research, and was more recently supported by educational leadership research.

The research on holistic and integrated approaches to school climate change and support of student school success conducted within this study showed promising results over a short period of time. The challenge existed in creating sustained improvement over time. Zins and Illback (1995) and Rivero (2009) both addressed the timeline of systemic change as becoming institutionalized over two to three years. Zins and Illback also attributed the failure of school reform efforts to a lack of sustained momentum on the part of the school leader. This researcher notes the exhausting nature of the work of school improvement, and also notes the need for sustained effort, compelling school staff to rally to build future life opportunities for students as they work together to create an academically and emotionally supportive and inspiring school. The opportunity for the school leader to fall into the trap of task management would result in a fragmented and ineffective approach to school reform. This study makes clear that the work of school reform is complex, and the inter-related parts to the whole must be kept in view, as

momentum is sustained. In the words of Blankstein (2004), “success is critical” (p. 18) and “failure is not an option” (p. 1).

### **Conclusion**

The significance of the study was to examine the effect of intentional strategies to improve school climate on student school success (academic achievement, attendance, and student behavior). The intentional, multi-faceted, and integrated approach to climate improvement implemented in this study included an intensified academic focus, supportive relationships for students and adults, and practices to increase the sense of order and community within the studied school. Results of the study conclusively determined that within this school, during the time of the study, strategies to improve school climate had a statistically significant and positive effect on student school success.

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### Vitae

Kim Harris earned her Bachelor of Arts degree in Business Administration from Lindenwood University in 1985 while pursuing a career in business management. She completed coursework toward teacher certification at the University of Missouri – St. Louis in 1995. Ms. Harris earned her Master’s degree in Educational Administration in 2007 from Lindenwood University and her anticipated graduation date from Lindenwood University’s Doctoral Program in Educational Administration is May, 2011.

Following a business career, Ms. Harris served as a classroom teacher in both the elementary and middle school settings over a span of thirteen years. She has worked as a central office administrator, in the capacity of Coordinator of Student Services, and is currently serving in her second year as school Principal in a mid-western suburban school.