

School Climate and Student Outcomes

Thomas N. Collins & Kyleah A. Parson

School climate has been a subject of interest to educators and researchers for over a century. As early as 1908, Perry was the first to explore the impact of school climate on student learning (Cohen & Geier, 2010). Decades later, Dewey examined the social dimensions and internal environments of schools. During the 1960s, Halpin and Croft were the first to measure school climate as a means of determining school effectiveness (Cohen & Geier, 2010). Prior to Halpin and Croft, most school climate research was qualitative but over the past fifty years many researchers have employed quantitative methods to measure school climate. The foundations of school climate research can be traced to various theoretical disciplines such as social psychology, education psychology, organizational and management theory (Anderson, 1982). Beginning in the 1980s, school climate research expanded from a primary focus on school effectiveness to other measurable aspects of student outcomes including; socio-emotional development, student self-efficacy, and student behavior (Cohen, 2009). Since the turn of the 21st century, researchers, practitioners, community activists, and policy makers have linked the influence of school climate on student mental health and risky student behaviors (Cohen, 2009; Frey, Ruchkin, Martin, Schwab-Stone, 2009; Kasen, Cohen, Chen, Johnson & Crawford, 2009).

Early researchers were interested in the relationships between the school environment and student learning. Changes in the larger society as reflected in schools, for example the persistent and ever widening achievement gap between specific ethnic minority groups and students that are economically disadvantaged and incidences of mass school violence such as at Columbine High School and Virginia Tech, have prompted researchers to focus on specific responses to these pressing issues. Many researchers have found a possible solution in measuring school climate and recommending strategies for improvement.

Educational researchers have prescribed a plethora of means to improve instruction and student learning. School climate researchers have attempted to assess the nature of social dynamics and its effect on specific school characteristics that may positively or negatively influence student outcomes. Current assessments of school climate focus on various measures of student outcomes such as student achievement, school safety and violence prevention, and interpersonal student growth and development.

According to the research reviewed, it is clear that school climate positively impacts student outcomes such as student achievement, behavior and personal well being (Brand, Felner, Seitsinger, Burns & Bolton, 2008; Chen, 2007; Goddard, Sweetland & Hoy, 2000; Hoy et al., 2003; Johnson & Stevens, 2006; Ross, McDonald & Alberg, 2007; Stewart, 2007, Sweetland & Hoy, 2000; Tschannen-Moran et al., 2006). Depending on the dimensions of school climate measured, there are varying factors that contribute to the correlation between school climate and student outcomes. However, there is limited consensus on a specific definition of school climate and there are inconsistent methods of assessing school climate (Brand et al., 2008; Chen, 2007; Sweetland & Hoy, 2000; Tschannen-Moran et al., 2006). Despite these variations, the extant literature suggests that improved school climate positively impacts outcomes for students.

School Climate Constructs

Researchers have conceptualized school climate in several different ways and have utilized a variety of methodologies to define the construct of school climate as it relates to various student outcomes. It is difficult to generalize findings in the research to recommend change in practice because many scholars have developed various constructs of school climate that include but are not limited to factors such as: school organizational structure, facilities management, stakeholder perceptions of

the school, interpersonal relationships, the level of community support and engagement.

The National Council for School Climate (2007) suggests that school climate is comprised of four main components: safety, relationships, teaching and learning, and institutional environment. Safety included students and teachers physical and socio-emotional safety, internal and external stakeholders' perceptions regarding violence and their responses to incidence of violence. Relationships are defined as respect for diversity, school community collaboration, high levels of engagement for students, enthusiastic staff, and shared decision making. Teaching and learning is described as high-quality instruction, high expectations of student achievement, acceptance of varying learning styles, socio-emotional and ethical learning, systematic and ongoing professional development for teachers, and opportunities for leadership. The institutional environment is characterized by the quality of facilities, school size and organizational structure.

Educational researchers have developed a number of specific frameworks within which school climate can be assessed. Two widely recognized frameworks center around the concepts of openness and health of organizations (Hoy, Smith & Sweetland, 2002; Sweetland & Hoy, 2000; Tschannen-Moran, Parish & DiPaola, 2006). These two frameworks are consistently utilized across the literature (Sweetland & Hoy, 2000; Tschannen-Moran et al., 2006). An open organization is characterized by respect and authentic behavior, and exhibits a level of shared leadership. It is one in which collegial leadership, collaborative decision making and a degree of teacher empowerment are present (Tschannen-Moran et al., 2006). A healthy organization exudes positive interrelationships. It includes positive relationships between students, teachers and administrators (Tschannen-Moran et al., 2006).

Several instruments have been developed and refined in the last few decades in order to assess these specific aspects of school climate. The Organizational Climate Description Questionnaire (OCDQ), one of the first measures of the openness of school climate was developed by Halpin and

Croft (Tschannen-Moran et al., 2006). The OCDQ has since been adapted and formed the basis of other instruments designed to assess the climate of a school by way of determining the level of openness between its stakeholders (Hoy et al., 2002; Tschannen-Moran et al., 2006). Researchers have revised the instruments based on the level of the school and the specific dimensions of school climate being assessed (Hoy et al., 2002; Tschannen-Moran et al., 2006). The Organizational Health Inventory (OHI), developed by Hoy and Feldman (1987), created a framework for measuring a healthy school climate by assessing the managerial styles and institutional integrity of a school. The OCDQ and OHI have differing numbers of dimensions depending on the level of the school assessed.

A relatively new measure, the Organizational Climate Index (OCI), is a consolidated measure of the twelve total dimensions from the OCDQ and OHI (Tschannen-Moran et al., 2006). The OCI measures four dimensions of school climate; environmental press, collegial leadership, teacher professionalism and academic press (Hoy et al., 2002; Tschannen-Moran et al., 2006). This instrument allows researchers to define specific correlations between school climate and student achievement (Tschannen-Moran et al., 2006). The evolution of these instruments reflects the changing context in which school climate is assessed. Researchers have adapted or developed new instruments based on the dimensions of school climate of greatest interest for particular studies. Other researchers, in seeking a relationship between school climate and other indicators of student outcomes such as, student violence, misbehavior and mental health have also developed and modified school climate assessment instruments specific to these outcomes (Gottfredson, Gottfredson, Payne, & Gottfredson, 2005).

School climate constructs differ across the literature and researchers have established relationships between various components of climate and measures of student achievement. Likewise, researchers have employed a variety of methods of assessing school climate. In a number of studies, researchers have reported the perceptions of

school climate from students (Frey et al., 2009; Kasen et al., 2009), teachers (Hoy et al., 2003; Sweetland & Hoy, 2000; Tschannen-Moran et al., 2006), principals (Goddard et al., 2000) teachers and students (Brand et al., 2008), teachers and parents (Griffith, 2000). Others have attempted analyze multiple data sets such as student GPA, student attendance and incidences of school violence, as indicators of school climate (Chen, 2007; Stewart, 2007).

Regardless of the instrument used to assess school climate, research has demonstrated positive relationships between school climate and student achievement. What is necessary, however, is a consistent measure of school climate. Research has influenced policymakers to include school climate as an additional measurement of accreditation and accountability, in the blueprint of the reauthorization of the Elementary and Secondary Education Act. This policy shift will cause educational practitioners to implement research-based school climate measures to as a means of improving student outcomes, specifically student achievement.

School Climate and Public Policy

No Child Left Behind (NCLB) was the first federal legislative act that mandated comprehensive local and state reporting mechanisms. Local and state department of education agencies were held accountable for multiple aspects of student outcomes, primarily student achievement. Local and state agencies must met specific benchmarks for Adequate Yearly Progress (AYP). High stakes accountability measures prompted local and state educational agencies to implement multifaceted school-wide improvement strategies which included school climate as an influence of student outcomes (Cohen & McCabe, 2006).

Because of the wide array of constructs of school climate and related assessments thereof, it is difficult to compare levels of improvement of school climate among localities and states. This is reflected in the inconsistent state policies and practices regarding school climate. According to a national State Department of Education school climate policy scan by Cohen and McCabe (2006), policies and practices regarding school climate vary

from state to state. Cohen and McCabe found that, even though research-based climate assessment instruments are available via the United States Department of Education (USDOE), only one state utilizes a research-tested climate measure. Ten states used internally developed criterion-based climate instruments and 26 states used school climate instruments as part of their state-mandated reporting systems. There was also little agreement across states on a commonly accepted definition of school climate. Nineteen states incorporate school climate within the constructs of their state academic departments. The remaining states regard school climate as a separate entity, or at best include climate as a function within the student health, school safety and/or special education departments. However, the proposed reauthorization of the Elementary Secondary and Education Act (ESEA) has the potential to require states to include school climate as a formal measure within local and state accountability systems. According to the proposed reauthorization, competitive grants will be offered to states and local education agencies. State and school districts that receive the federal Safe and Drug Free school grants will be required to implement and report school climate needs assessments (USDOE, 2010).

School Climate and Student Achievement

Researchers have found varying relationships between components of school climate and student achievement (Brand, Felner, Seitsinger, Burns & Bolton, 2008; Chen, 2007; Goddard, Sweetland & Hoy, 2000; Hoy et al., 2003; Johnson & Stevens, 2006; Ross, McDonald & Alberg, 2007; Stewart, 2007, Sweetland & Hoy, 2000; Tschannen-Moran et al., 2006). The standardized accountability movement has allowed for researchers to utilize specific indicators of student achievement, specifically state-mandated standardized criterion-referenced assessments. Recently, researchers have examined the impacts of specific dimensions of school climate on specified measures of student achievement.

Reading, math and writing standardized test scores are used as measures of student achievement in several climate studies (Chen, 2008; Chen, 2007; Goddard et al., 2000; Hoy et al., 2003; Johnson &

Stevens, 2006; Ross et al., 2007; Stewart, 2007; Sweetland & Hoy, 2000; Tschannen-Moran et al., 2006). In a study of 82 middle schools in one state, Tschannen-Moran et al., (2006) found that teacher professionalism, academic press, and community engagement were positively related to student achievement on English and Math Standards of Learning scores. Researchers have found that Academic Press, or a strong emphasis on academics, as a leading factor of school climate (Sweetland & Hoy, 2000; Goddard et al., 2000).

Teacher Empowerment is another important aspect of school climate. Sweetland and Hoy (2000) measured the relationship between school climate and teacher empowerment and the corresponding relationship between teacher empowerment and student achievement. In schools in which there is collegial leadership, high level of teacher professionalism, and strong academic press, there is typically a high level of teacher empowerment which results in increased student achievement (Sweetland & Hoy, 2000). Goddard et al. (2000) found that the level of academic emphasis as reported by teachers was a predictor of school level student achievement within one urban elementary school district. Hoy et al., (2003) specifically defined dimensions of school climate as a measurement of the level of trust in schools. In a study of 97 high schools in one state, academic press was found to be the only component of school climate that promotes teacher trust in students and parents (Hoy et al., 2003).

Studies have shown a strong positive correlation between the level of community involvement and student achievement (Johnson & Stevens, 2006; Tschannen-Moran et al., 2006). Students may perform at higher rates on state standardized tests if teachers perceive high levels of support from external stakeholders (Johnson & Stevens, 2006; Tschannen-Moran et al., 2006). Studies have yielded conflicting results when considering the impact of external factors such as Socio-Economic Status (SES). Tschannen-Moran et al. (2006) found schools with positive school climate generally had higher student achievement scores, regardless of SES. In a study of 59 elementary schools, Johnson and Stevens, (2006)

determined that SES was a moderating factor in determining the relationship between climate and student achievement. Although community variables such as low SES can sometimes be a stronger predictor of student achievement than school climate, school climate also directly influences student achievement (Johnson & Stevens, 2006). Regardless of the varying dimensions of school climate outlined in the research, overall, studies have typically found positive relationships between perceived school climate and student achievement (Chen, 2007; Goddard et al., 2000; Hoy et al., 2003; Johnson & Stevens, 2006; Ross et al., 2007; Stewart, 2007; Sweetland & Hoy, 2000; Tschannen-Moran et al., 2006).

School Climate and Student Behavior

Studies that attempt to link school climate and student behavior have yielded mixed results. In fact, studies have utilized a wide variety of measures of school characteristics and have likewise, attempted to link this assortment of constructs to numerous indicators of student behavior (Gottfredson, Gottfredson, Payne, & Gottfredson, 2005). Nevertheless, there appears to be a general relationship between positive school climate and reductions in indicators of student misbehavior (Chen, 2008; Chen, 2007; Brand et al., 2003; Frey et. al, 2009; Griffith, 2004; Kasen et al., 2009).

Schools characterized as conflictual or disruptive resulted in an increase in personality disorders, negative perceptions of school climate and lower student achievement scores (Chen, 2008; Chen, 2007; Brand et al., 2003; Frey et. al, 2009; Kasen et al., 2009). Chen (2007) found that school disorder directly negatively impacts elementary level student achievement, specifically incidences of major and minor criminal behavior. Chen (2008) concluded similar findings on the middle school level. The positive impact of school climate can mediate the negative influences of student poverty on student outcomes (Chen, 2008; Tschannen-Moran et al., 2006). Studies have shown that perceptions of positive school climate have long-term impacts on student mental health and well-being (Kasen et al., 2009; Suldo, Shaffer & Riley,

2008). Kasen et al. (2009) discovered that positive school climate has short and long-term effects on decreasing adolescent personality disorders. Suldo et al. (2008) found that parental involvement and student-teacher relationships, as components of school climate, were most directly related to student reports of higher levels of life satisfaction. Students who reported negative perceptions of school climate also demonstrated higher levels of negative attachment to school, violent behavior, aggressive beliefs and low academic motivation (Frey et al., 2009). Students that perceive positive school climate and teacher support had negative correlations to violent behavior and positive correlations to academic motivation (Frey et al., 2009). Some studies have sought to establish relationships among perceptions of school climate, safety and student achievement, though this research base is limited.

Implications for Practice and Further Study

According to the literature reviewed, there are moderate to strong positive correlations between school climate and various student outcomes (Brand et al., 2008; Chen, 2008; Chen, 2007; Frey et al., 2009; Goddard et al., 2000; Gottfredson et al., 2005; Hoy et al., 2003; Kasen et al., 2009; Johnson & Stevens, 2006; Ross et al., 2007; Stewart, 2007, Suldo et al., 2008; Sweetland & Hoy, 2003; Tschannen-Moran et al., 2006). Current state and federal policymakers are considering instituting accountability measures to encourage states and localities to address the improvement of school climate. Studies of the relationship of school climate and student outcomes have been in existence for the last two decades. There are few documented cases in which schools or school districts have specifically utilized research that suggest specific avenues to improve school climate, thus improving student outcomes (Cohen & McCabe, 2006). Even in the instances where research meets practice, such as in Knowledge Is Power Program (KIPP) schools (Ross et al., 2007), there have been few attempts to replicate the strategies used to increase school climate. Replication of studies that have found strong relationships between school climate and various student outcomes should be conducted. Connections

between nonachievement-related student outcomes such as student behavior and well-being, and mental health should be explored further.

The inconsistent use of school climate assessments and improvement strategies suggest that policymakers should prescribe specific school climate measures, including consistent definitions of school climate and research-based instruments to assess school climate as a means to improve student outcomes. Shared meaning of school climate dimensions and consistent usage of selected research based instruments would allow federal and state education agencies and practitioners in the field to accurately assess school climate. This would allow states and localities to develop and prescribe specific strategies for improving school climate.

References

- Anderson, C. (1982). The search for school climate: A review of the research. *Review of Educational Research*, 52(3), 368-420. doi:10.3102/00346543052003368
- Brand, S., Felner, R. D., Seitsinger, A., Burns, A., & Bolton, N. (2008). A large scale study of the assessment of the social environment of middle and secondary schools: The validity and utility of teachers' ratings of school climate, cultural pluralism, and safety problems for understanding school effects and school improvement. *Journal of School Psychology*, 46(5), 507-535.
- Chen, G. (2007). School disorder and student achievement: A study of New York city elementary schools. *Journal of School Violence*, 6(1), 27-43.
- Chen, G., & Weikart, L. A. (2008). Student background, school climate, school disorder, and student achievement: An empirical study of New York city's middle schools. *Journal of School Violence*, 7(4), 3-20.
- Cohen, J., & Geier, V. K. (2010). *School Climate Research Summary: January 2010*, 1(1)
- Cohen, J., Pickeral, T., & McCloskey, M. (2009). Assessing school climate. *Education Digest: Essential Readings Condensed for Quick Review*, 74(8), 45-48.

- Frey, A., Ruchkin, V., Martin, A., Schwab-Stone, & Mary. (2009). Adolescents in transition: School and family characteristics in the development of violent behaviors entering high school. *Child Psychiatry and Human Development*, 40(1), 1-13.
- Goddard, R. D., Sweetland, S. R., & Hoy, W. K. (2000). Academic emphasis of urban elementary schools and student achievement in reading and mathematics: A multilevel analysis. *Educational Administration Quarterly*, 36(5), 683-702.
- Gottfredson, G. D., Gottfredson, D. C., Payne, A. A., & Gottfredson, N. C. (2005). School climate predictors of school disorder: Results from a national study of delinquency prevention in schools. *Journal of Research in Crime and Delinquency*, 42(4), 412-444.
- Griffith, J. (2000). School climate as group evaluation and group consensus: Student and parent perceptions of the elementary school environment. *The Elementary School Journal*, 101(1), 35-61. doi:10.1086/499658
- Hoy, W. K., & Hannum, J. W. (1997). Middle school climate: An empirical assessment of organizational health and student achievement. *Educational Administration Quarterly*, 33(3), 290.
- Hoy, W. K., Smith, P. A., & Sweetland, S. R. (2003). The development of the organizational climate index for high schools: Its measure and relationship to faculty trust. *High School Journal*, 86(2), 38-49.
- Johnson, B., & Stevens, J. J. (2006). Student achievement and elementary teachers' perceptions of school climate. *Learning Environments Research*, 9(2), 111-122. doi:10.1007/s10984-006-9007-7
- Kasen, S., Cohen, P., Chen, H., Johnson, J. G., & Crawford, T. N. (2009). School climate and continuity of adolescent personality disorder symptoms. *Journal of Child Psychology and Psychiatry*, 50(12), 1504-1512.
- Knowledge is Power Program. (2010). Retrieved from <http://www.kipp.org/about-kipp/five-pillars>
- Ross, S., McDonald, A., & Alberg, M. (2007). Achievement and climate outcomes for the knowledge is power program in an inner-city middle school. *Journal of Education for Students Placed At Risk*, 12 (2), 137-165.
- Stewart, E. B. (2008). Individual and school structural effects on African-American high school students' academic achievement. *High School Journal*, 91(2), 16-34.
- Stewart, E. B. (2008). School structural characteristics, student effort, peer associations, and parental involvement: The influence of school- and individual-level factors on academic achievement. *Education and Urban Society*, 40(2), 179-204.
- Suldo, S. M., Shaffer, E. J., & Riley, K. N. (2008). A social-cognitive-behavioral model of academic predictors of adolescents' life satisfaction. *School Psychology Quarterly*, 23(1), 56-69. doi:10.1037/1045-3830.23.1.56
- Sweetland, S. R., & Hoy, W. K. (2000). School characteristics and educational outcomes: Toward an organizational model of student achievement in middle schools. *Educational Administration Quarterly*, 36(5), 703.
- Tschannen-Moran, M., Parish, J., & DiPaola, M. (2006). School climate: The interplay between interpersonal relationships and student achievement. *Journal of School Leadership*, 16, 386-415.
- U.S. Department of Education, Office of Planning, Evaluation and Policy Development. (2010). *ESEA Blueprint for Reform*, Washington, D.C.