A Study of School Climate and Its Relationship to the Accountability-Focused Work of Principals

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This dissertation titled

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Abstract

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A Study of School Climate and Its Relationship to the Accountability-Focused Work of Principals

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A study has been conducted in order to pursue an enhanced understanding of the accountability-focused work of high school principals in a large Ohio school district. This study examines the use by the principals of climate data for the purpose of school improvement planning. This study also identifies the data sets used by principals when creating annual School Improvement Plans (SIPs), especially when engaging in the Data-Driven Decision Making (DDDM) process. Interviews were conducted with seven principals in the district, which annually provides its principals with formal climate data. These data have been collected by the district and the teachers’ association (union) from parents, students, and teachers. Principals, in this particular district, are required to create annual SIPs, but are not mandated to use any particular forms of data when creating such plans. This investigation sought to understand if the principals used the formally collected school climate data when creating SIPs and engaging in the DDDM process. Furthermore, the study sought to understand the manner in which and the extent to which the principals use climate data when creating their SIPs. The qualitative data from the interviews have been analyzed by the researcher through an emergent coding system. The study revealed that while the principals indicated that they value school climate data, they typically did not focus on the available formal school climate data when creating
their SIPs and engaging in the DDDM process. Instead, the principals focused on using
data sets related to state and federal school improvement mandates measured by
Adequate Yearly Progress (AYP) standards. Furthermore, the principals in this study
described having little or no training on the use of school climate data as part of the
DDDM process for school improvement. This study suggests that principals may need to
focus on understanding and improving school climate, in order to make plans for
continuous improvement as it relates to mandated data sets.
To my family and friends. Thank you for your endless support.
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Chapter 1: Overview of the Study

Introduction

Most principals, with the growth of accountability mandates at the state and federal levels and the passage of the No Child Left Behind (NCLB) legislation, have been experiencing increased responsibility for overseeing school improvement and improvement planning (Lyons & Algozzine, 2006; O’Day, 2002). School improvement, which is typically operationalized using state and federal mandates, such as Adequate Yearly Progress (AYP), assesses schools in regards to annual increases in student achievement (Starr, 2011). In the state of Ohio, student growth is reported annually by the Ohio Department of Education (ODE) on state-issued report cards for each school district, as well as individual schools. In order to enhance the likelihood that the state and federal growth targets are met, some principals engage in planned change with an intent of increasing student achievement (Beach & Lindahl, 2007). To enhance the likelihood that proposed changes succeed, principals may elect or be required to create School Improvement Plans (SIPs) (O’Day, 2002). The way in which principals produce SIPs often varies, as there are no federal or other specific mandates regarding the manner in which SIPs, in the state of Ohio, should be created.

As a way to strategically plan for their schools, some principals choose to engage in the Data-Driven Decision Making (DDDM) process when completing SIPs. The DDDM process entails that data sets be used for creating plans of actions and making decisions (Lange, Range, & Welsh, 2012). Principals who engage in the DDDM process for school improvement planning may often focus on mandated data, which are used by
state and federal agencies to assess schools. However, research indicates that using only mandated data sets may hinder school improvement planning, especially when utilizing the DDDM process (Bernhardt, 2004; Hopson & Lawson, 2011; Lindahl, 2011). Non-mandated data sets may also need to be included in the DDDM process in order to provide additional perspectives. These perspectives can enhance the process of making decisions regarding ways to address school deficiencies (Bernhardt, 2002).

One such non-mandated data set, which may be used to create more comprehensive SIPs, includes school climate data. School climate may be a significant factor for principals to consider when planning for school improvement, as school climate can influence students’ performances, including achievement levels as measured by state and federal standards (Kelley, Thornton, & Daugherty, 2005; Lindahl, 2011; Stevens & Sanchez, 1999). Additionally, climate data may be needed during the DDDM and improvement planning processes to reveal information which may aid in understanding: (a) the principals’ influences on their school organizations, (b) the ability of schools to undergo particular changes, (c) the needs of schools which should be addressed, (d) other data sets which may exist, and (e) the context in which proposed change initiatives should be implemented. Essentially, school climate data can provide principals with information as to the reasons and the ways in which change will result in progress (Bernhardt, 2004; Bulach & Malone, 1994; Knapp, Copland, & Swinnerton, 2007; Lindahl, 2011).

With consideration of the previously described factors, this study investigated the possible use of school climate data for the purpose of continuous improvement by high
school principals. The study was also prompted due to a lack of information regarding the use by school principals of formal climate data when developing SIPs, especially when they are provided with such data sets. Reasons as to the use or non-use of school climate data as part of DDDM and the manner in which these data can be used during the DDDM process appeared to have remained unclear. Another purpose of this study was to uncover the possible views of principals regarding the usefulness of school climate data when engaging in the creation of SIPs. This study was conducted in order to understand better the experiences of high school principals in relation to the use of school climate data when engaging in the DDDM process when creating annual SIPs in a particular district in the state of Ohio. The study revealed that the principals tended to focus on mandated data sets when planning for school improvement. While the principals expressed that they valued school climate data, this value did not translate into the principals actively using school climate data when creating SIPs. However, such an approach may not be a best practice for school improvement planning, as issues related to school climate may need to be addressed first before other aspects of an organization can be improved, especially the aspects of a school which are reported in mandated data sets.

**Background to the Problem**

School change remains a complex task with which most principals engage out of necessity and a desire to improve their schools. The following subsections provide background information to understand best the climate in which school principals operate when engaging in such tasks, as well as rationales regarding the reasons that they may become leaders for change. The first subsection describes the necessity of schools to
engage in change initiatives when working towards continuous improvement. The second subsection explores reasons that many school principals have found themselves in the role of a change agent in their schools. The third subsection explains the importance of change leadership as it relates to school improvement, especially for school principals. The fourth subsection addresses the significance of principals engaging in strategic planning as a means to increase the likelihood that their schools will successfully undertake and plan change. The fifth subsection discusses DDDM, a process in which principals may engage in when creating SIPs. The final subsection addresses the possible use of school climate data by principals, as part of the process for implementing change for continuous improvement.

**Kaizen-change as improvement.** Kaizen is a Japanese term which represents “the participation of the workforce in improvement to enhance the organization” (Brunet & New, 2003, p. 1427). This term has been utilized in Western cultures to describe the technique used by management of successful Japanese manufacturers to improve their organization through change. Kaizen is a Japanese character which combines “change” and “good”, or change for the better (Burnet & New, 2003; Kato & Smalley, 2011). Therefore, kaizen is continuous improvement through change, “which is used to signify both the embedded nature and also its place in a never-ending journey towards quality and efficiency” (Bhuiyan & Baghel, 2005; Brunet & New, 2003, p. 1427). The term kaizen can also be used in a larger sense to describe the process of engaging in organizational change for the purpose of improvement. More narrowly defined, kaizen means “to consist of pervasive and continual activities outside the contributor’s explicit
contractual roles, to identify and achieve outcomes he believes contribute to organizational goals” (Brunet & New, 2003, p. 1428; Cheser, 1998).

Western scholars and businesses have studied kaizen as a model for improving organizations in the United States. While the Japanese typically associate the term with manufacturing, kaizen has increasingly been applied in the United States to other types of organizations which seek to imbed continuous improvement in their organizational systems, structures, and culture (Bhuiyan & Baghel, 2005). Kaizen also has implications for the leadership of organizations, as leaders embrace change, not merely for the sake of change itself, but change to improve the organization. Using the definition of kaizen crafted by Brunet and New (2003), leaders can pursue improvement through change to meet in an effective and efficient manner, the goals of an organization. This idea of kaizen, or continuous improvement through change, has also come to dominate the political and professional landscape in American education (Beach & Lindahl, 2007; Fritzberg, 2004; Hollingworth, Dude, & Shepherd, 2010; Luo, 2008; McDermott, 2003; McDonnell, 2005). Contemporary educational policies at the federal and state levels have required schools to create change that will result in improvements such as those which can be measured by graduation rates, school attendance rates, and state standardized tests (Fritzberg, 2004). This push for increased accountability has been motivated by “increased stakeholder expectations to continually increase quality and results to improve both effectiveness and efficiency” in public schools (Ewy, 2009, p. 7). Thus, many American schools and their respective school leaders are now engaged in a kaizen-like
change process for the obtainment of continuous improvement (Lyons & Algozzine, 2006; O’Day, 2002).

In conjunction with effective leadership, change can be used as an instrument through which organizations can engage in continuous improvement (Choi, 1995). With the expectation of increased accountability for performance and the intent of achieving improvements, schools often develop plans for change (O’Day, 2002). Principals are sometimes assigned the task of creating School Improvement Plans (SIPs) and can be “pivotal players in educational change and reform” (Isernhagen, 2012; Starr, 2011, p. 646). When developing such plans, principals may tend to focus on increases in educational outcomes which are measured and reported to the public, such as those directly related to student achievement data (Hopson & Lawson, 2011; Lange et al., 2012). Another way in which principals may elect to approach change in their schools is by addressing their school’s climate. Because the climate of a school can affect student learning outcomes such as those measured by state standardized testing (Kelley et al., 2005; Lindahl, 2011; Stevens & Sanchez, 1999), school climate data may be used to provide insights on how best to plan for school improvements (Hopson & Lawson, 2011). Additionally, school climate data can present school leaders with information as to the reasons and the ways in which change will result in progress (Bernhardt, 2004; Bulach & Malone, 1994; Knapp et.al, 2007; Lindahl, 2011). Thus principals, when engaging in change initiatives for improvement, may need to consider school climate and its related data in order to make more exact decisions and plans, which would result in measurable improvements, rather than just making changes for the sake of change itself. School
climate data, especially when utilized in concurrence with mandated data sets, may help principals to create change that results in measurable gains and continuous improvements (Hopson & Lawson, 2011).

School administrators throughout the country must contend with increasing accountability for school improvement, as federal and state mandates measure and report such data to the public, and the outcomes of such measures have significant effects on school organizations (Ellis, 2007; Johnston, Dikkers, & Luedeke, 2009; Kane & Staiger, 2002; O’Day, 2002; Petersen & Young, 2004; Strike, 2007). This trend can be witnessed in the experiences of principals, specifically in the state of Ohio. As an educator and student of this aspect of scholarship, who resides in the state in which the district being studied is located, I have personally observed such pressures of accountability on school principals. To attempt to ensure school improvement in such high-stakes environments, Ohio school administrators often devise, whether by choice or when mandated, to improve their schools through planned change (Fernandez, 2011). The principals, with whom I have personally worked, have taken a multitude of approaches to secure such ends. As a participant of school leadership teams which included principals, I have also engaged in the responsibility for creating such plans. During my experiences, I have observed that decisions regarding changes for improvement are largely based upon data which are limited to students’ scores on state mandated testing, school attendance rates, and graduation rates. While these data sets can reveal some aspects of learning and teaching which need attention for improvement, these data often fail to fully explain the results. School climate data sets, from my experience and as noted in the literature
are frequently omitted from the planning stages of change initiatives, even though school climates often contribute to such outcomes. Based upon my experiences and the literature-base regarding accountability systems, a school district within Ohio has been examined for this particular study. The district collects and compiles school climate data from families, students, and teachers for each of its school buildings. Principals in this particular district are provided with these school climate data but are not mandated to utilize such data in any particular way, including when developing plans for school improvements.

The School Accountability Movement and Implications for School Leadership

American schools have historically focused their efforts and resources on federal and state mandated accountability and improvements (Ewy, 2009; McDermott, 2003; McDonnell, 2005). These two factors are primarily measured with the results from mandated state-wide content tests and other related data (Starr, 2011). Individual school and district data are published in the form of state reports cards, with the purpose of informing the public on student achievement and progress. At the federal level, the focus is on Adequate Yearly Progress (AYP), a requirement that pertains to measurable growth for disaggregated student subgroups, such as groupings based on ethnicity and race, socioeconomic status, students with disabilities, and limited English proficiency, along with improvements in overall student test scores, attendance, and graduation rates (Fritzberg, 2004; Porter, Linn, & Trimble, 2005). AYP is used as a measurement of change within districts and schools on a year-to-year basis. Schools are expected to meet AYP standards, with the eventual end goal being total student proficiency of academic
content, as well as improvements in areas such as student attendance, student graduation rates, and a reduction in achievement gaps between student demographic subgroups (Peterson & Young, 2004; Porter et al., 2005). The contents of the district and school report cards are determined and issued by the Ohio Department of Education. The report cards not only report achievement data such as test scores, attendance, and graduation rates, but also assign designations as to which districts and schools are improving or declining in their student performances. The focus on student improvement has been heightened as the levels of school funding have been tied to learning outcomes, in addition to designations of district and school effectiveness (Ellis, 2007).

As a result of federal and state mandates and public pressures for increased student performance, many school leaders, specifically principals, have found themselves in situations in which they must attempt to provide leadership for change in order that student achievement outcomes increase in their schools (Starr, 2011). Individual Ohio principals are held accountable for their particular school’s achievement data (Ohio Department of Education, School Improvement/District Involvement Questions and Answers, 2004). As a result, some school principals have increased their time and attention towards the responsibility of school improvement. For that matter, principals have amplified their focus towards the endeavor of school improvement which can include data analysis, DDDM, planned change, and strategic planning (Petersen & Young, 2004). The outcomes desired by principals include increased student achievement, especially in areas assessed by federal and state governments (Beach & Lindahl, 2007). In the district which was investigated for this study, school principals are
provided with multiple data sets from which to draw information regarding ways to improve their schools. Principals in this particular district have access to mandated data from state report cards from previous years which provide them with information relating to school demographics and student achievement as measured by state mandated testing, attendance rates, and graduation rates. This information is also disaggregated according to federal student subgroups. Additionally, principals in the district are provided with annual school climate data.

Progress toward desired increases in student achievement, out of necessity, involves change. For these reasons, some school principals have found it important to provide leadership for change that will increase student achievement, while continuing to address their managerial duties (Peterson & Young, 2004). The roles of principals as managers and instructional leaders have expanded into the arena of change agents. In addition to their daily activities, school principals may have the added expectation of creating change in their school organizations which will increase student achievement to fulfill the requirements inherent in the NCLB legislation and are measured federally by AYP (Petersen & Young, 2004). This environment of increased accountability has imposed a need upon school leaders to make decisions about strategic planning for change to improve student achievement in their school buildings.

**Change leadership and school improvement.** School improvement and school leadership go hand-in-hand. School leaders are becoming increasingly responsible for bridging external controls, such as mandates from federal and state government, with internal controls, such as decisions made within schools and districts, into organizational
changes and improvements (O’Day, 2002; Petersen & Young, 2004). Under the NCLB legislation, all schools are required to show student progress which is reported annually in AYP data (Petersen & Young, 2004; Porter et al., 2005; Shirvani, 2009). Additionally, “if a school fails AYP for two consecutive years, then it needs to develop an improvement plan” (Porter et al., 2005; Shirvani, 2009, p. 53). Whether by choice or in response to federal mandates for creating a SIP, many schools engage in planned change as it remains a critical component of school improvement (Beach & Lindahl, 2007).

Some school districts in Ohio have elected to require their principals to create an annual SIP regardless of the school’s AYP designation during the previous year (Fernandez, 2011). In Ohio, schools which fail to meet AYP proficiency standards, are required to engage in the state’s Comprehensive Continuous Improvement Process (CCIP). The CCIP is part of the Ohio Improvement Process (OIP) which fulfills the federal requirement for schools to create a SIP when failing to achieve AYP goals (Ohio Department of Education, School Improvement/District Involvement Questions and Answers, 2004). Federally designated Title 1 schools, within the state, are also mandated to create SIPS in order to receive federal funding (Isernhagen, 2012; Porter et al., 2005). Schools in Ohio may also elect to partake in the state’s CCIP in order to qualify for federal money through the U.S. Department of Education’s School Improvement Grants (SIG), which seek to improve under-performing schools. Even when a SIP is not mandated by the federal or state governments and is instead elective, school principals usually engage in planned changed for continuous improvement at some level.
In the district which was examined for this study, principals in every school are required to develop an annual SIP. Each school is mandated by the district to produce such plans to ensure compliance with the state’s OIP, in some cases to qualify for federal SIGs, to fulfill requirements of Title 1 schools, and to document efforts towards school improvement. The purpose of creating SIPS is typically to address aspects of schools which are failing to meet AYP standards and to construct strategies to improve upon such deficiencies. Each principal, in this particular district, must oversee the creation of a strategic plan, in the form of a SIP, which is focused upon addressing the deficiencies with the goal of obtaining an increase in underperforming AYP measurements such as student test results, school attendance, and graduation rates. The SIP may also serve as a formal document regarding changes which will be undertaken to improve the school’s performance.

**Strategic Planning.** In order for effective change to occur, some educational leaders adopt the outlooks and attitudes of transformational, rather than transactional leadership in their organizations (Bass & Avolio, 1993; Paton & McCalman, 2008; Pepper, 2010). Transformational leaders seek change, specifically planned changed, when possible. In order to induce planned change, principals may choose to engage in strategic planning. The process associated with school improvement planning or strategic planning, allows school organizations to better understand the current state of their organizations and then to plan, create, facilitate, manage, and evaluate an action plan of change with the end goal of measurable improvement. In the state of Ohio, there is no singularly mandated form of strategic planning in which schools must engage. The state
provides a general rubric for creating effective SIPs, but does not mandate any particular form or process. However, according to the U.S. Department of Education’s National Center for Educational Statistics (2000), “86.6 percent of public schools in Ohio used a formal SIP” (Fernandez, 2011, p. 340). Schools in Ohio typically use their SIPs as a form of strategic planning for change (Bell & Chan, 2005; Fernandez, 2011).

A primary step in strategic planning calls upon leaders to evaluate the current state of their organization and to determine which particular deficiencies may need to be addressed (Davies, 2003; Fitzpatrick, Saunders, & Worthen, 2004; McClelland, 1995; Waters, Marzano, & McNulty, 2004; Witkin & Altschuld, 1995). Principals may identify the schools’ “strengths, weaknesses, obstacles, and threats” to plan for exacted and meaningful change (Ewy, 2009, p. 53). By assessing these factors, leaders can pursue an understanding of the present state of their organizations in order to make effective decisions regarding change in the future. The areas of need, which are identified, can help to shape the focus of the SIP and may aid in indicating which areas within the organization should be changed for improvement. This “pre-assessment phase” is critical in setting the stage for principals’ decisions for planned change, as it seeks to answer the preliminary question of what needs to be improved upon (Stevahn & King, 2010, p. 13).

In order to correctly identify the particular aspects within the organization which need to be enhanced through change, principals should typically make decisions about the data that will be utilized in order to conceptualize their organizations and make determinations regarding the focus of the change (Lange et al., 2012). Because there is no uniform SIP creation process for the state of Ohio, individual principals may make
choices as to which data they should consider when developing such plans. However, principals in Ohio may be more likely to use data sets containing information which must be reported to the state and federal governments to ensure compliance with mandated accountability measures. These data sets would likely include AYP information such as state mandated student assessments, graduation rates, and attendance rates.

**Data-Driven Decision Making (DDDM) for principals.** One way to create SIPs which can result in continuous improvement is to employ the use of the DDDM process. In the current federal school-based accountability system, as directed under NCLB policies, data are an important part for accountability, especially for school principals (Knapp et al., 2007). By using data, principals can make relatively precise decisions regarding planned change to improve their school organizations (Bernhardt, 2004; Lange et al., 2012; Leithwood & Steinbach, 1995). The use of data can be critical in order to evaluate accurately and recognize aspects of the school organization in need of development, especially during the needs assessment phase of strategic planning (Fitzpatrick, Sanders, & Worthen, 2004; Knapp et al., 2007). Transformation of the identified areas of need may ultimately result in improvements to student achievement as measured by federal and state mandates and accountability requirements (Simpson, 2011).

In order to better understand the current state of the school organization and to determine its needs, principals may consider multiple data sets, sources of data, and perspectives to glean a more comprehensive perceptive from which they will base their plans for change (Bernhardt, 2004; Knapp et al., 2007; O’Day, 2002). The choice of data
sets to include or exclude in the needs assessment phase will ultimately affect the way principals conceptualize their schools and may affect which strategies they choose to improve their schools (Knapp et al., 2007; O’Day, 2002; Senge, Scharmer, Jaworski, & Flowers, 2004). Conclusions about the strengths, weaknesses, obstacles, and threats to a particular school may differ depending on the types and sources of data used and the perceived needs identified may change depending on the data which are considered (Ewy, 2009; Knapp et al., 2007; McClelland, 1995; O’Day, 2002; Witkin & Altschuld, 1995). Thus, careful consideration should be given as the input (data which are used) will affect the output (the strategic plan for change) (McClelland, 1995; O’Day, 2002).

Principals may have access to a variety of data in order to obtain a well-grounded understanding of their schools (Knapp et al., 2007; Lange et al., 2012). While student test data are most readily available to principals as they are collected and published by the state and federal governments, these particular data sets may not necessarily be enough to help principals conceptualize a holistic and complete picture of their schools (Anderson, Leithwood, & Strauss, 2010; Bernhardt, 2004; Shirvani, 2009). The DDDM process typically includes more than test scores and other mandated data published in Ohio state report cards (Bernhardt, 2004; Hopson & Lawson, 2011; Knapp et al., 2007; Lange et al., 2012). The inclusion of multiple data sets can enrich the strategic planning process by creating a context in which the related data are analyzed and understood, therefore resulting in comprehensive plans for change and particularly increased student achievement (Bernhardt, 2004; Hopson & Lawson, 2011). In order to accomplish these ends, principals may decide the types of data to use and the manner in which to use them.
when creating a strategic plan for change of their organization (O’Day 2002). In cases when multiple data sets are included, principals may be more likely to plan changes which result in meaningful continuous improvement, not just changes with a limited perspective.

In order to engage in planned change which is strategic, significant, and effective, principals may need to better understand the current status of their schools (Senge et al., 2004; Witkin & Altschuld, 1995). To fully understand the present state of the schools and to understand the areas which are in need of improvement, principals may need to examine multiple aspects of their learning organizations, including: demographics (attendance, drop-out rates, enrollment, ethnicity, gender, and language proficiency), perceptions (those of families, staff, and students), school processes (classroom management, class size, instructional strategies, policies, procedures, scheduling, and school programs), socioeconomic status, student learning (achievement data and trends), and teacher experiences and credentials (Bernhardt, 2004; Knapp et al., 2007; Lange et al., 2012). While these variables may be examined independently, the intersection of these data sets provides principals with a more inclusive picture of the current status of their schools (Bernhardt, 2004). Variables, such as those which may affect student learning, are therefore not independent of one another and instead interact and overlap as schools are complex organizations (O’Day, 2002; Starr, 2011). However, principals in Ohio are not currently mandated by the federal or state government to examine any particular group of data sets, especially when creating SIPs. Instead, individual principals make decisions regarding the data sets to include or exclude when engaging in
the strategic planning process. Principals may be more likely to focus on data which are collected and reported to the public such as student test results (Lange et al., 2012), rather than to focus on data sets that include variables outside of those which are measured and reported by the federal and state governments (Bernhardt, 2004). In doing so, valuable insights regarding the state of the schools may be overlooked and excluded. This may lead to the creation of SIPs which fail to identify areas which are critical in change efforts, thus stifling real improvements.

In the district which was studied, principals are not required to use any particular data sets when creating their SIPs. As previously mentioned, principals in this particular district have access to a variety of data including mandated data sets collected by the state of Ohio, which include student standardized test scores, attendance rates, graduation rates, and student demographics. Also available to principals are data sets collected by the district and teachers’ association (union), which include discipline information, internally generated student data on district created tests, and school climate data. The formal climate data which are provided include annual survey results collected from families, students, and teachers from each school within the district.

**The impact of school climate on student achievement and learning outcomes.**

At first glance a principal may choose to focus on student achievement data in relation to high-stakes assessments, as current accountability standards “place great emphasis on testing as a primary mechanism to measure student success” (Lange et al., p. 2). For example, “Building and district leaders use student test data to make decisions about effective services and practices, develop School Improvement Plans, and if necessary
take corrective action when schools miss the mark,” (Peterson & Young, 2004, p. 350).

However, by limiting the concentration to student data related to mandated testing, other variables which influence student achievement may be overlooked (Bernhardt, 2004; Lange et al., 2012). If the goal of the school organization is to increase student achievement and thus create school improvement, it has been suggested that multiple data sets be collected and analyzed during the DDDM process to make meaningful plans which will create change that results in improvement (Bernhardt, 2004; Lange et al., 2012; Shirvani, 2009).

Another variable which directly influences student performance includes school climate (Anderson, 1982; Hopson & Lawson, 2011; Hoy, Hannum, & Tshannen-Moran, 1998). To understand school climate as it exists in their schools, the literature has suggested that principals grasp underlying issues, which are not typically evident in the student achievement data which principals have typically given their primary focus (Hoy et al., 1990). While not appearing to be a regular focal point of principals, school climate can influence student performance and outcomes on measurable standards such as those assessed by state tests (Bulach, Malone, & Castleman, 1995; Goddard, Hoy, & Hoy, 2000; Heck, 2000; Hopson & Lawson, 2011; Kelley et al., 2005; Lindahl, 2011; Stevens & Sanchez, 1999). In other words, to increase the likelihood that the school improvement process will be successful, principals may choose to include the identification and examination of school climate data (Hopson & Lawson, 2011). Climate data can also allow principals to expand their views of the organization as a living system and understand the “larger context within which student achievement
occurs” (Lange et al., 2012, p. 6; Senge, 1990). Too often, mandated assessments and other related data remove the “human” element from the school organization. The inclusion of school climate data can help create a more complete picture of the total organization, which can help principals to make more exacted and meaningful decisions regarding possible changes for improvement (Hopson & Lawson, 2011; Lange et al., 2012; Lindahl, 2011).

School climate data may allow principals to understand the “sociopsychological feature of organizational life” and may “illuminate the processes within students’ environment that impede or support healthy development and student success” (Hopson & Lawson, 2011, p. 107). By understanding the ecological aspects of the school organization, principals may better understand the various dimensions of the organization and more importantly the manner in which these dimensions interact with one another (Hopson & Lawson, 2011). Thus, by including school climate data during the DDDM process for school improvement planning, a more comprehensive plan may be created and proposed changes to climate may become driving forces for school improvement (Hopson & Lawson, 2011).

While the collection, reporting, and analysis of school climate data are not mandated by the federal government and state of Ohio, these types of data can offer critical insight into the state and health of schools (Bernhardt, 2004; Shirvani, 2009). Additionally, school climate data can be used to enhance an understanding of other data sets such as student learning data (Bernhardt, 2004; Lange et al., 2012). In other words, understanding school climate can aid a principals’ understanding of a school’s health
which can have an influence on student achievement (Hoy & Feldman, 1999; Hoy et al., 1990). An understanding of school climate can also reveal possible aspects of the school that should be changed in order to pursue improvements. School climate data can be used to help explain underlying issues, motivations, perceptions, and factors which ultimately contribute or detract from student achievement and school improvement (Bulach & Malone, 1994; Lindahl, 2011). These particular data can provide insight regarding the internal workings of the organizations, not necessarily evident or obvious in other types of data (Freiberg, 1998).

The data, which are used when creating SIPs, may also reveal what is valued by school leadership and possibly the larger school organization. What is of value may include school climate factors that can consist of the underlying perceptions by critical stakeholders which may impact a school’s success (Stevens & Sanchez, 1999). Additionally, choices of the data to examine and analyze in the creation of planned change may also reflect the capabilities of school principals. As organizational leaders, the principals are served to be able to appreciate and understand the multitude of variables which affect the entire school organization and influence the school’s climate (Hoy & Feldman, 1999). The capability of school principals to understand the relationships and interactions between multiple aspects of the organization can aid them in creating plans for successful change (Lange et al., 2012). In the case of school climate data, they may first have to be valued as a significant and influential factor on student achievement before school principals will likely commit to collecting and/or reviewing such data as part of the DDDM process for strategic planning and school improvement.
If principals do not value school climate, as an influencing factor of student achievement outcomes, then this particular form of data may not be seen as a contributing variable to improvement and could be excluded in the DDDM improvement process, especially when the use of such data are not mandated. However, research has shown that climate can have a significant impact upon the success of organizations, especially school organizations (Freiberg & Stein, 1999; Hopson & Lawson, 2011; Hoy et al., 1990; Hoy, Tarter, & Hoy, 2006; Kelley et al., 2005; Lindahl, 2011).

In the state of Ohio, the collection, reporting, and use of climate data is not mandated. While the state of Ohio encourages the use of school climate data in the needs assessment stage of a SIP, which is part of the creation of the CCIP, the collection or analysis of such data is not required (Ohio Department of Education, 2009, p. 3). In the particular school district that was examined for this study, school climate data are collected but their use by school principals for any particular purpose is not mandated. The school district, along with the teacher’s association (union), distributes annual climate surveys to families, students, and teachers in every school in the district. These data are then compiled into reports for each school building. Such information is then made available to school principals. However, the use of such data is not required. The use of the school climate data by a principal with the creation of the SIP and other continuous improvement initiatives is voluntary.

The school district, which was studied, requires that all principals create an annual SIP using a template provided by the district. However, the manner in which individual principals identify areas of needed improvement for their particular schools, are not
mandated. For example, principals are encouraged to use data to identify areas of needed improvement, although the use of any particular data sets, are not expected. Besides the identification of school needs and the setting of goals for improvement, the SIP template for the district requires that the principals describe their schools’ climate. However, principals may create the description in any manner that they choose, as there are no district, state, or federal mandates regarding the manner or sources that the principals must use to gather information in order to make such conclusions about their school’s climate.

Some districts do not formally collect school climate data, nor do they provide the services and resources to pursue such objectives. By using the district which was chosen for the study, the researcher was able to control for the availability of school climate data provided for principals, due to the district and teacher’s association (union) efforts to collect and report such data. Additionally, some school districts do not require that each school creates an annual SIP. The use of this particular district enabled the researcher to control for the variable regarding whether principals have created SIPS, as they are mandated annually by this district. Furthermore, school improvement and improvement planning can include a multitude of activities and can be engaged in formally and informally. By only including data from this school district, the researcher was able to control for the variable of principals describing the use of school climate data for informal school improvement planning, which can be vague and difficult to assess. Additionally, the use of a formalized SIP allows for a better understanding, specifically
of strategic planning, as other forms of school improvement planning may not be considered as being strategic activities.

**Purpose of the Study**

**Statement of the problem.** Multiple ways exist in which principals may devise comprehensive plans of change for improvement in their school organizations. While many schools “are guided by a general framework/format for planning, substantial variations have been found in the quality of SIPs” (Fernandez, 2011, p. 346). Variations may also be observed in strategic processes, approaches, motivations, and attitudes regarding change for improvement (Davies, 2006). Principals, who head school improvement initiatives (such as those charged with creating SIPs), may determine the areas in which their school organizations need improvement and the manner in which the schools will create planned change in order to obtain desired outcomes, such as increased student performance as measured by federal and state standards. To determine their specific organizational needs, principals may use a variety of data to make these determinations, especially during the DDDM process. By making data-driven decisions in assessing the current state of their organization, principals can attempt to draw conclusions regarding the manner in which to best move their schools forward.

School improvement is typically measured using “archival” data (Witkin & Altschuld, 1995, p. 48). Archival data includes existing information which is collected and recorded using the state of Ohio’s school report card system and federal AYP reporting. These quantitative data sets include student test scores, attendance rates, graduation rates, and student demographics. Data sets from previous years are compared
to those of the current year and conclusions are made regarding increases or decreases in school performance. While these data can reveal such trends, it remains unclear if accurate decisions by principals regarding school improvement can be made using such limited measurements.

The type of contextual data, which are being examined by school principals when creating plans for change and continuous improvement, remain unclear. Contextual data, which include school climate data, could be used by principals to examine the environmental and organizational conditions which affect the school’s capacity for improved student learning (Hallinger & Heck, 2011). By using climate data as part of the needs assessment process, principals may be able to craft improvement plans that address the root causes for student achievement (Hopson & Lawson, 2011). Current measurements of school effectiveness, as stipulated by federal standards inherent in the NCLB legislation, fail to address these contextual factors in their matrixes of assessing quality schools. However, research shows that contextual factors, such as those measured to ascertain school climate, can be used to construct plans that will have significant effects on school and student achievement and on organizational successes (Bulach et al., 1995; Goddard et al., 2000; Heck, 2000; Hopson & Lawson, 2011; Kelley et al., 2005 Lindahl, 2011; Stevens & Sanchez, 1999). By including school climate data, an understanding of schools, with greater depth and breadth of meaning, can be obtained. By gaining a more comprehensive understanding of the school, more effective plans for school improvement could in turn be made.
Another problem in relying solely on data sets based upon federal and state mandates is the lack of complete and authentic evaluations of schools. By only using limited data sets such as high-stakes test results, graduation rates, and attendance rates, other aspects of successful schools and quality education may be overlooked (Anderson et al., 2010; Duffy et al., 2008; Fritzberg, 2004; Strike, 2007). For example, standardized achievement data, such as those which are garnered from the Ohio Graduation Test (OGT), may not represent the totality of student learning. The quality of the learning, the dimensions of a school’s organization, and the contributions of the local community may not be measured by using such narrowly defined variables. By relying on limited quantitative data, the total health and success of a school organization may not be accurately or totally assessed (Knapp et al., 2007). Using limited sources of data, such as federally and state mandated data sets, can create restrictions and biases for a principal (Anderson et al., 2010). Reliance upon such focused data sources may detract from a principal’s ability to assess a school’s organization and capacity to generate successful plans for improvement. Other forms of data, such as school climate data, may aid in overcoming the barriers associated with mandated data sets.

**Research question.** School principals, as previously mentioned, should accurately identify the needs within their schools in order to create meaningful strategic plans, with the intent of effectively changing and improving the learning process and related dimensions of the organization (Altschuld & Eastmond, 2010). An important component, which could be considered when creating these plans, is school climate. Research indicates that school climate affects school quality, which in turn drives or
detracts from student achievement within a school organization (Bulach & Malone, 1994; Bulach et al., 1995; Freiberg, 1998; Heck, 2000; Hopson & Lawson, 2011; Hoy et al., 1990; Lindahl, 2011). The purpose of this study was to answer the following research question and sub-questions:

Question: What are the perceptions of the high school principals in the Ohio district of this study regarding to the formal use of climate data, particularly as they pertain to school improvement planning?

Sub-questions:

1. Do the principals use climate data, when they are available, for the purposes of creating and implementing change and school improvement, specifically when creating SIPs?

2. If the answer to question # 1 is yes, in what manner and to what extent are the school climate data used?

3. If the answer to question #1 is no, what are the reasons that principals offer for not using available climate data when creating SIPs?

4. What values do principals express that they associate with the use of the climate data, especially as it relates to school improvement planning?

5. What are principals’ experiences with school climate data in general?

Potential significance of the study. Since inclusion of school climate data is optional when creating SIPs in the district under study, the researcher investigated if the principals were electing to include these data regardless of the lack of federal, state, and district mandates. Particular attention was given to an investigation of the manner in
which principals, who elected to incorporate school climate data when creating plans for school improvements initiatives, accomplished such tasks. An attempt was made by the researcher to collect information regarding the reasons that the principals, who failed to use school climate data, chose to do so, particularly as the reasons for the exclusion of these data appeared to be plentiful. The researcher also investigated the perceptions of the principals in relation to the overall usefulness of school climate data to increase outcomes such as those measured by federal and state standards which are used to determine official measurements of school effectiveness.

The data collected in this study was for the purpose of ascertaining the degree to which school climate data are used by principals, if they view school climate as a factor that can be used to improve student achievement, and the perspectives of the leaders about the degree of importance of school climate data, especially as related to school improvement planning. The data collected in this study may also add to the bodies of literature pertaining to school climate, school leadership, organizational change for continuous improvements, DDDM, and strategic planning by school principals. Likewise, the conclusions from this study may inform principal preparation programs in colleges and universities, with the identification of the contents that should be included in courses of study and training for future educational leaders. School districts may also use the data from this study to plan and possibly offer professional development regarding the collection and use of school climate data by current principals. Additionally, data collected in this study may contribute to an awareness of the perspectives of principals regarding school climate, school change, and their impact on student academic growth.
The results may contribute to an understanding among academicians and practitioners of the limitations associated with the use of mandated student achievement data without the benefit of school climate data. Finally, the results may also contribute to an enhanced perspective among principals regarding the degree to which they engage in transformational and transactional leadership and leadership for organizational change.

**Research design and rationale.** A qualitative research methodology was used for this study. The use of a phenomenological qualitative design often requires data collection through the use of in-depth interviews in order to gain an understanding of the participants’ experiences from their perspectives (Creswell, 2007; Roberts, 2010; Saldana, 2013). The researcher therefore focused on the phenomenology regarding the principals’ experiences and perspectives associated with the formal use of school climate data for the stated purpose of creating SIPs. A qualitative research methodology allowed for the exploration of the perspectives and understandings of individuals through their experiences (Creswell, 2009; Roberts, 2010). Semi-structured interviews, with open-ended questions, were conducted in order to investigate and better understand the outcomes of the research question and sub-questions. This particular methodology was selected as it allows for the obtainment of in-depth descriptions of principals’ perceptions on school climate data, as well as their actions, activities, and behaviors related to their personal use of school climate data when preparing SIPs. The use of interviews was appropriate for this study, as the participants were able to describe their personal experiences regarding school climate data for school improvement. Because there are no state or federal mandates prescribing the use of or manner in which school climate data
should be utilized when creating SIPs, responses from the participants provided insights into the possible ways these particular data may be employed by principals. Additionally, the use of the qualitative methodology helped to gain a greater view of the organizational processes associated with the use of school climate data for school improvement planning (Roberts, 2010).

While the existence of the climate surveys, which are administered by the district and teachers’ association (union), made this study possible, the results of the surveys were not considered as being relevant to the study. In addition to failing to be relevant to the study, the results of the surveys have been influenced by the transfer of the principals among schools within the district, making it difficult to look for valid relationships. Furthermore, this study was used to investigate the manner that climate data are used, not the results of the family, student, and teacher climate surveys.

**Scope of the Study**

One limitation of this study is the subjectivity of the precise definition of climate in relation to school organizations. Arguments have been made that “there is no standard definition of organizational climate; in fact, climate is conceptually complex and vague” (Hoy et al., 1990, p. 260). Organizational climate can be viewed as reflecting the participants’ perceptions within an organization (Hoy et al., 1990). The district and teachers’ association (union) instruments, which have been used to generate the formal climate data discussed in this study, primarily measure aspects of climate in relation to perspectives of families, students, and teachers, but did not encompass all possibilities of what climate data can include.
Another limiting factor of this study was the literature and theoretical framework surrounding organizational climate, as climate may be interchangeable with conversations about organizational culture. Some literature has revealed that “there is no general agreement concerning the difference between culture and climate” (Hoy et al., 1990, pp. 260-261). However, while there may not be a “large conceptual leap” between the two terms, some differences exist (Hoy et al., 1990, pp. 260-261). Burke and Litwin (1992) asserted that:

Climate is much more in the foreground of organizational members’ perceptions, whereas culture is more background and defined by beliefs and values. The level of analysis for culture is the organization. Organizational climate is, of course, affected by organizational culture, and people’s perceptions define both, but at different levels. (pp. 526-527)

Therefore, some of the factors which measure climate also measure culture and vice versa. However, climate tends to be more current while culture remains more imbedded in the organization (Burke & Litwin, 1992). Thus, the literature remains elusive in exacting a point in which climate becomes culture. Studying climate may by default also reveal information concerning culture within the organization. Alternatively, literature on the topic has suggested that organizational culture changes are difficult to manage, as much of an organization’s culture may not be totally transparent (Burke & Litwin, 1992). Instead, organizational climate is able to be influenced through change and transformational leadership. Changes in climate may then, if accepted, become imbedded into the organization’s culture. However, the imbedded culture does affect the daily
climate as seen in the perceptions of the organization’s members. In this case, climate and culture in organizations are different phenomena, but they continually influence one another and in many ways are intertwined (Hoy, Tarter, & Kottkamp, 1991).

One way to distinguish between climate and culture pertains to the way schools are viewed. For example, school organizational climate can be examined from a responsive, emotional perspective and school culture can be examined from a historical, deeply rooted perspective (Hoy et al., 1991). However, it has been noted that single validated survey instruments can provide data on both school climate and culture (Freiberg & Stein, 1999). The theoretical framework surrounding organizational climate and culture provides guidance but not definitive answers in distinguishing which (climate or culture) is the source for stakeholder’s perceptions about a particular organization. Due to the intertwined nature of climate and culture, some aspects of culture may be included in discussions concerning climate.

A final limitation of this study was the authenticity of the responses given by the participants. Even though the researcher has made assurances to participants regarding the confidentiality of their responses, some participants may not have fully expressed their perspectives or experiences in regards to the interview questions. One reason that the participants may have been guarded in their responses is the nature of their roles as principals and building leaders. Because of the public nature of their positions, some principals may have been hesitant to completely reveal their true perspectives on topics such as the usefulness of school climate data which are provided to them by the district in which they are currently employed.
A delimitation established for this study included restricting discussions of formal school climate data in the interviews to include only the data which have been collected through the district and teachers’ association (union) surveys. While these surveys address a multitude of variables associated with measures of school climate and would likely to be considered comprehensive instruments for measuring school climate, the survey instruments do not include all possible measures and aspects of what could be investigated regarding school climate. Therefore, the purposeful inclusion of formal, rather than informal, school climate in this study was made. However, discussions about formal uses of school climate data represented a jumping off point in the interviews. Many of the principals expressed that they do not use formal data since they rely on informal climate data. In such cases, the principals were asked to describe the informal climate data which they use, especially in relation to creating SIPs.

Another delimitation of the study was the relatively small sample size. A single district was selected for this study, and in that district 12 principals met the requirements for participation. Of the 12 principals selected, only 7 agreed to participate. This particular district was selected because all of the principals are given access to systematically collected school climate data and all principals are required to create annual SIPs. The participation and use by other districts in Ohio of school climate data remains unclear to the investigator of this study. For example, some of the unknown factors pertain to the collection and measurement of school climate data and the dissemination and use by school principals of the data for school improvement planning. Furthermore, the creation of SIPs varies between districts and schools in Ohio. This
variation is due to the lack of federal, state, and sometimes district mandates for the creation of SIPs.

For the purpose of this study, delimitations existed regarding which principals would be included for possible participation. The principals from elementary, middle school, combined middle/high schools, and non-traditional high schools were not included. Even though the district provided all principals with some form of school climate data, the climate data which are collected from these particular buildings are generated from slightly different survey instruments than the ones used by the traditional high schools. Furthermore, the way in which AYP is calculated differs for elementary, middle, combined middle/high schools, and non-traditional high schools.

This study delimited data collection to principals working in traditional high schools, which serve grades 9 through 12. Non-traditional high schools include schools which are vocational, arts-focused, or alternative schools. This particular district does not gather student climate data for all grades in its elementary schools. The surveys which are given to some elementary and middle school students differ as compared to the surveys given to high school students. Additionally, high schools which are considered “non-traditional” are given different student climate surveys, as compared to those given in traditional high schools in this particular district. Because of the differences in school climate surveys, the study focused on principals of traditional high schools, as these particular principals have access to data which come from identical climate surveys. Additionally, schools that combined middle and high school data for AYP reporting purposes were not used since this particular district combines their school climate data
results from both the middle and high schools in grades 7 through 12 buildings. The high schools and their respective principals, which were asked to participate in this study, have identical mandates which are used to calculate AYP, gain access to data from identical climate survey instruments, and must all create annual SIPs. These delimitations, which have restricted the sample size of principals that was used, may affect the transferability of the results of this study to other school districts.

**Definition of Terms**

**Adequate Yearly Progress (AYP).** School and district effectiveness nationwide are measured by the federal government using the Adequate Yearly Progress (AYP) matrix. AYP refers to the requirement of measurable growth for all students and student subgroups (Fritzberg, 2004; Porter et al., 2005). School effectiveness, as assessed by AYP, examines each of the following three categories: (a) student test scores on mandated state assessments of content standards, (b) attendance rates, and (c) graduation rates. Data from each of the three categories is examined as an “all student group” and as student subgroups. Disaggregated subgroups for AYP measurements include “racial and ethnic minorities, English-language learners, and poor and disabled students” (Fritzberg, 2004, p. 12; McGuinn, 2005; Porter et al., 2005). Proficiency levels, state academic content standards, as well as the percentage of students needed to constitute a subgroup are determined by state governments, and thus differ from state to state (Fritzberg, 2004 McDermott, 2003; McDonnell, 2005; McGuinn, 2005; Porter et al., 2005). However, all states must require every school and school district to make “student test results publically available and disaggregated” for student subgroups (McGuinn, 2005, p. 42).
In Ohio, AYP in high schools is measured using results from the Ohio Graduation Test (OGT), attendance rates, and graduation rates, and is reported publically in the form of school and district report cards by the Ohio Department of Education (ODE).

**Continuous improvement.** Continuous improvement is a means through which organizational change occurs (Choi, 1995). For the purpose of this study, continuous improvement referred to the philosophy attributed to Edward Deming which defines continuous improvement as “improvement initiatives that increase successes and reduces failures” (Bhuiyan & Baghel, 2005, p. 761). Continuous improvement also can be defined as meaning “doing better than the organization previously did” (Choi, 1995, p. 613). The determination used by most schools to understand if continuous improvement is occurring is by examining gains according to federal AYP measurements.

**Data and Data-Driven Decision Making (DDDM).** For the purpose of this study, data will refer to information which is systematically collected. The climate data in this particular study focused on the outcomes of the administration of the survey instruments which were used in the district in Ohio that was studied. Data-Driven Decision Making (DDDM) refers to the “process involving the collection, analysis, and use of data to guide decisions” (Lange et al., 2012, p. 3) as part of strategic planning. The study included inquiry into the manner that the data are used to designate decisions, specifically those related to school improvement planning (Anderson et al., 2010).

**Mandated data.** For the purpose of this study, the term mandated data referred to data which must legally be reported by schools to the state of Ohio and the federal government. This data includes AYP outcomes which consists of student demographic
information, student test scores from the OGT, attendance rates, and graduation rates. These data must be reported by schools and districts to comply with the NCLB federal legislation.

**School climate.** In general, school climate is a broad term that refers to members’ perceptions of the organization (Burke & Litwin, 1992; Hoy & Miskel, 1987; Hoy et al., 1990). However, according to the National School Climate Council (NSCC) (2013), school climate includes the “quality and character of school life” (NSCC, 2013, “How do we define School Climate?,” para. 1). School climate is also “based on patterns of students’, parents’ and school personnel’s experiences of school life and reflected norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures” (NSCC, 2013, “How do we define School Climate?,” para. 1). School climate refers to “perceptions which are in the foreground of organizational members” (Burke & Litwin, 1992, p. 526). While multiple definitions of school climate exist, this study focused on the outcomes of an organized and systematic collection of perception data of critical stakeholders associated with the school district under study. The researcher noted in this study cases in which discussions of informal climate data emerged from the interviews.

**School improvement.** School improvement has been narrowly defined for this study as making measurable gains as established by state and federal mandated student outcome measures. At the state level, mandated student outcomes include content standards in which teachers are responsible for engaging students. These standards are coupled with performance standards and assessments, which are used to identify student
achievement (Fritzberg, 2004; McDonnell, 2005). School improvement is measured using AYP at the federal level (Porter et al., 2005). For the purpose of this study, the term school improvement was used in reference to gains made in the ranking and school designation system as established by the ODE and reported on the state of Ohio report card system, which align with federal AYP standards (Ohio Department of Education, 2013). Additionally, this study sought to understand school improvement as a process rather than just a natural progression or isolated occurrence (Beach & Lindahl, 2007; Hallinger & Heck, 2011). Instead, school improvement was examined as the imbedded process of achieving measurable gains, not simply the finality of gains themselves.

School Improvement Plan (SIP). Defining the term School Improvement Plan remains a challenge as “There is no one definition or model for a SIP” (Dunaway et al., 2012; Fernandez, 2011, p. 339). However, the term can generally be used to refer to the process in which decisions regarding school improvement are made and documented. The SIP has often been called a “public document of accountability” (Dunaway, Kim, & Szad, 2012, p. 160). SIPs are a type of formalized planning at the school level (Fernandez, 2011). Even with a lack of an exact definition, “SIPs are mandated by the federal government for schools officially designated as in need of improvement (No Child Left Behind [NCLB] Act of 2001, Pub. L. No. 107-110)” (Fernandez, 2011, p. 339). However, all SIPs, which have been mandated to fulfill NCLB requirements, must follow some general guidelines. According to federal NCLB SIP guidelines, plans must “directly address the problems that caused the school to be identified as a school in need of improvement (SINI); incorporate improvement strategies based on scientific research;
establish measurable objectives for progress and improvement; identify who is responsible for implementing of strategies; include strategies to promote professional development and parental involvement” (Fernandez, 2011, pp. 340-341).

Not all SIPs are created to fulfill federal NCLB requirements. In some cases, districts and schools can elect to generate SIPs, as a form of strategic planning for school improvement. SIPs vary between states, districts, and schools. States generally provide “guides and templates to assist schools in preparing SIPs” (Dunaway et al., 2012; Fernandez, 2011, p. 340). The state of Ohio provides general guidelines but does not require a particular process which schools are required to use when developing SIPs. In the district under study, principals are given a SIP template from the district which they must use. For the purpose of this study, SIP as it relates to the schools under study, refers to the specific template created by the district, which the school principals use to plan change for improvement. All principals in this study were mandated by the school district to create annual SIPs.

**Strategic planning.** The term strategic planning for this study was used to describe the process associated with deliberate and planned change. Strategic planning in this context can include school improvement planning, typically manifested in formalized SIPs (Bell, 2002). This study was not used to determine if the SIP process itself is effective in increasing student performance. Among other things, the literature regarding the success of the process appears to be divided (Fernandez, 2011; Mintrop & MacLellan, 2002). Additionally, the study examined the principals’ use of strategic planning and the DDDM process to create formalized SIPs.
Student achievement. Student achievement, for the purpose of this study, was defined by the state of Ohio in regards to standards of proficiency, as reported in the state issued report cards and school designation formula. While student achievement can be measured in multiple ways and can reflect individual values and purposes, student achievement was defined using standards set by state and federal mandated data and assessments.

Teachers’ association. For the purpose of this study, the terms teachers’ association, teachers’ union, and union will be used interchangeably to describe the same group. In the district under study, certified teachers typically belong to a collective bargaining unit. This association provides teachers with an annual school climate survey which has been discussed throughout this report of the study. Members of the particular district under study, including administration, district officials, and teachers, often refer to the teachers’ association as the “teachers’ union” or “the union”. The term “union” was used in interview questions and appears frequently in responses given by participants of the study. The decision to use the term “union” rather than “association” was made to ensure that participants were aware of the particular survey under question, as the term “union” is commonly used to describe the teachers’ climate survey distributed by the teachers’ association in this particular district. The definition of the term has purposefully been described generically in order to protect the name of the district and particularly to protect the identity of the participating principals.

Walkthrough. For the purpose of this study the term, walkthrough, refers to the informal observations in which principals visually inspect the school to understand a
number of variables, including school climate (Kachur, Stout, & Edwards, 2010). These observations are considered to be informal inspections of any area principals choose to focus.

Organization of the Dissertation

This dissertation was organized into five chapters, references, and appendices. Chapter 1, this chapter, provides an overview of the study. The overview includes a general background to the problem, the purpose of the study, the scope of the study, and definitions of terms used in the study. The second chapter includes the reporting and an analysis of the relevant literature and a construction of theoretical frameworks relating to the research question and sub-questions. Chapter 3 delineates the research design and methodology which has been used for this study. A discussion of the results of the study and an analysis of the findings are reported in Chapter 4. Finally, Chapter 5 offers a conclusion, implications, and recommendations for further research. The study concludes with the inclusion of references and appendices.
Chapter 2: Review of the Literature

Introduction

Schools in the United States, especially since the passage of the No Child Left
Behind Act (NCLB) in 2001, have increasingly focused their efforts and resources on
federal and state mandated accountability and improvement (Luo, 2008; McDermott,
2003; McDonnell, 2005). These two factors are primarily measured with the results from
state mandated tests and other related data (Fritzberg, 2004). The outcomes of such tests
are published at the federal and state levels for the reported purpose of informing the
public of student achievement (O’Day, 2002). In essence, “School accountability systems
typically include three elements: testing students, public reporting of performance, and
rewards or sanctions based on some measure of school performance or improvement”
(Kane & Staiger, 2002, p. 92). The “new accountability” system, which currently
influences American schools, emphasizes “student outcomes as the measure for adult and
system performance” (O’Day, 2002, p. 294). At the federal level, the focus is on
Adequate Yearly Progress (AYP), a requirement that pertains to measurable academic
growth for all students and student subgroups, along with improvements in student
attendance and graduation rates (Fritzberg, 2004; Porter et al., 2005). In the state of Ohio,
district and school report cards are issued by the Ohio Department of Education (ODE).
These report cards inform the public of student achievement levels and rate the
performance of Ohio districts and individual schools. This focus on student progress has
been further heightened, as it has been tied to district funding from federal and state
governments (Ellis, 2007; Johnston et al., 2009; Strike, 2007).
As a result of these federal and state actions, school principals have increased their attention on school improvement, which has involved strategic planning for change, data-analysis, and Data-Driven Decision Making (DDDM). The outcome desired by principals is enhanced student achievement (Beach & Lindahl, 2007; Hollingworth et al., 2010). Progress toward the desired improvement, out of necessity, involves change. For these reasons, school principals have found it necessary to provide leadership for change, which will increase student achievement, while continuing to address their managerial duties (Lyons & Algozzine, 2006; Peterson & Young, 2004). Multiple data sets and information need to be collected and analyzed in order to develop a meaningful plan that can be used to create positive change and overall improvement (Bernhardt, 2004; Knapp et al., 2007; O’Day, 2002). In order to accomplish these ends, principals have found it necessary to understand the current status of their school organizations (Altschuld & Kumar, 2010; Senge et al., 2004).

An important aspect of any organization is its climate (Hoy et al., 1998). For principals to understand school climate, as it exists in the organizational structure of their schools, they need to attempt to grasp underlying issues, which are not typically evident in student achievement data, on which principals have been primarily giving their attention (Hoy et al., 1990; Strike, 2007). Climate can be viewed as the shared perceptions of behavior within the school (Hoy & Miskel, 1987). However, according to the National School Climate Council (NSCC) (2013), school climate includes the, “quality and character of school life” (National School Climate Council [NSCC], 2013, “How do we define School Climate?,” para. 1). School climate is also “based on patterns...
of students', parents' and school personnel's experience of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures” (NSCC, 2013, “How do we define School Climate?,” para. 1).

While not appearing to be a primary focus of principals, factors associated with school climate can influence student performance behaviors and outcomes on measurable standards such as those assessed on state tests (Anderson, 1982; Bulach et al., 1995; Goddard et al., 2000; Heck, 2000; Kelley et al., 2005; Lindahl, 2011; Stevens & Sanchez, 1999). In other words, understanding climate can assist principals with a grasp of school and student achievement. Understanding school climate may also facilitate the efforts of principals to make more effective decisions for planned change to improve their school organizations.

School principals, as previously mentioned, must accurately identify the needs of stakeholders in order to create meaningful plans, with the intent of effectively changing and improving their schools (Altschuld & Eastmond, 2010). An important component, which should be considered when creating these plans, is school climate. School climate data collection and reporting are not mandated by the state of Ohio or by the federal government. Because school climate data are not mandated, such data do not appear to be currently a primary focus for principals. However, school climate data may be an essential component in creating meaningful plans for change in a school organization. Incorporating school climate data into the DDDM process can enhance the needs assessment phase of strategic planning and can aid in planning for change which will improve student achievement as measured by federal and state assessments. School
climate data, in conjunction with the analysis of other data sets, can help to create a richer picture of a school’s organization and can act as a guide for school leaders when making decisions about change and continuous improvements, especially when creating School Improvement Plans (SIPs) (Bernhardt, 2004; Knapp et al., 2007; Lange et al., 2012).

In response to the current educational trends described above, this study has been conducted to investigate the ways in which school climate data are utilized by principals in a school district in Ohio, to enact school improvement initiatives, especially when creating their school’s SIP. This dissertation’s investigation explored literature and theoretical frameworks in relation to the following research question and sub-questions:

Question: What are the perceptions of the high school principals in the Ohio district under study as to the formal use of climate data, particularly as they pertain to school improvement planning?

Sub-questions:

1. Do the principals use climate data, when they are available, for the purposes of creating and implementing change and school improvement, specifically when creating SIPs?

2. If the answer to question #1 is yes, in what manner and to what extent are the school climate data used?

3. If the answer to question #1 is no, what are the reasons that principals offer for not using available school climate data when creating SIPs?

4. What values do principals express that they associate with the use of school climate data, especially as it relates to school improvement planning?
The remainder of this chapter will include a brief overview and history of school improvement and accountability initiatives in American schools. Additionally, a summary of accountability mandates and their implications at the federal, state, and local levels will be discussed. Next, a theoretical framework for the study will be created through a review of relevant literature. These topics will be discussed to provide a clearer understanding of the current atmosphere in which principals are operating. This review of relevant literature will include a critical analysis of topics including accountability and leadership, the impact of principals and leadership on the school organization, organizational change, change management and leadership, strategic planning for improvement, school improvement as strategic planning, DDDM, and school climate. Lastly, a summary will be provided highlighting key points from the review of the literature, especially as they relate to the research question and sub-questions.

**School Accountability Initiatives and Intergovernmental Relationships**

The next section of this chapter discusses school accountability at the federal, state, and local levels. The connections and relationships between the three levels of government, in relation to school accountability are also discussed.

**Federal accountability.** Schools in the United States have historically been assessed, ranked, and funded based on their efficiency and numbers (Eacott, 2010). School accountability reports provide access to the work of publically funded American schools. Famed educational pioneer Horace Mann began producing comprehensive annual reports evaluating and comparing schools in Massachusetts as early as 1840 (Fitzpatrick et al., 2004). Following Horace Mann’s lead, in 1845 and 1846, the Boston
School Committee used printed tests on several subjects to compare student achievement in different schools (Fitzpatrick et al., 2004). These two early attempts were considered some of the first in the history of the nation to objectively measure student achievement and assess the quality and effectiveness of schools through a standards-based system (Fitzpatrick et al., 2004).

In 1870, K-12 education data in the United States were first collected by the Office of Education as compulsory secondary education began to spread nationwide (Synder, 1993). The early 1900s ushered in the writings of Fredrick W. Taylor who promoted scientific management. Taylor’s theories of efficiently managing and standardizing organizations were applied to public school systems during the first and second decades of the twentieth century (Callahan, 1962). In order to measure productivity and efficiency, schools along with the government, would need to increase data collection. The collection of educational data continued to expand into the 1930s and mid-twentieth century as public pressure for school accountability grew (Synder, 1993). The data collected, in the late twentieth century, would increasingly be used to provide evidence of whether schools were succeeding and being properly managed and if public moneys were being appropriately spent.

During the 1920s, America experienced an increase in norm-referenced testing, which measured individual student’s achievement, as compared to the larger population (Fitzpatrick et al., 2004). For example, “By the mid-1930s, more than half of the United States had some form of state-wide testing and standardized, norm-reference testing including achievement tests” (Fitzpatrick et al., 2004, p. 32). While these tests gave
insight to individual student learning, the results did not report student achievement in
group populations such as a school’s or district’s performance. One notable exception to
the use of norm-referenced testing can be seen in the Eight-Year Study by Smith and
Tyler (1942). Even while school evaluation was in its infancy, Smith and Tyler
conducted a study using “sophisticated methodology” with “linkage of outcome measures
to desired learning outcomes” (Fitzpatrick et al., 2004, p. 33). The study by Smith and
Tyler is considered to be one of the earliest attempts to use criterion-referenced testing
rather than norm-reference testing when assessing American public schools. Rather than
comparing individual student’s assessment scores to the achievements of the larger
population, as is the case with norm-referenced testing, criterion-referenced testing
compares what each individual understands in reference to pre-determined (standardized)
curriculum. Today’s school evaluations at the state and federal levels use criterion-
referenced testing, as schools are accountable for teaching a standards-based curriculum.

In more recent decades, school accountability has moved into the political
forefront. In 1965, the Elementary and Secondary Education Act (ESEA) was passed
under President Johnson’s administration as part of the “War on Poverty” (Fitzpatrick et
al., 2004; Grady, 2012). President Johnson sought to reduce socioeconomic inequalities
by increasing federal funding for schools which served low income students. The main
two goals of ESEA were to promote equal educational opportunities for all students and
to increase school accountability (Elementary and Secondary Education Act, 1965). This
legislation marked a significant shift in the role of school accountability and oversight
from state and local governments to the federal government. The ESEA would set a
precedent for the role of federal oversight of school accountability in the decades to come and would be renewed under the NCLB Act of 2001, which was an iteration to the original ESEA legislation.

In the decade following the 1983 report titled *A Nation at Risk* (National Commission of Excellence in Education, 1983), the federal government under the leadership of President Regan, pressured state and local governments to oversee and act to improve educational standards throughout the country (McDonnell, 2005; McGuinn, 2005). Besides promoting improvements in education, *A Nation at Risk* encouraged the movement towards assessing schools by student achievement outcomes, especially on a uniform national level (Guthrie & Springer, 2004). Changes in school accountability mandates at the federal level continued into the 1990s with the passage of the Improving America’s School Act (IASA) in 1994, Individuals with Disabilities Education Act (IDEA) in 1997, and the Perkins Vocational-Technical Education Act in 1998 (McDermott, 2003). With the passage of the IASA, education became standardized with the goal being “high standards for all students” (McDonnell, 1995, p. 30). Furthermore, “schools were accountable for students’ academic progress and achievement” (McDonnell, 1995, p. 30). This series of federal acts began the shift, not only to standardization of curriculum, but also towards legal requirements for states to assess the performance of students (McDermott, 2003). Federal educational legislation in the 1990s further stressed mandated pressures for school accountability on an individual school basis. Included in the IASA was the Hawkins-Stafford Bill which introduced the language of “Adequate Yearly Progress (AYP)” (Fritzberg, 2004, p. 10). This notion of
AYP would come to influence heavily the mandates inherent in the NCLB Act of 2001, especially at the state level and would add another layer of accountability to the federal mandates emerging after the original ESEA legislation of 1965 (Grady, 2012). By using AYP, schools would not only have to meet federal and state standards for quality education, but would also have to provide data demonstrating continual progress from one year to the next. The NCLB legislation would not simply suggest that schools increase achievement, but instead schools would explicitly be held accountable for ensuring progress and improvements were occurring in schools.

In 2001, the NCLB Act was passed as a “reauthorization of the Elementary and Secondary Act of 1965, and required schools to gather, analyze, and use school data to ensure adequate yearly progress and continuous improvement” (Bernhardt, 2004, p. 125). The NCLB Act went further than the original ESEA as it required rather than encouraged states to enforce accountability measures (McGuinn, 2005; Petersen & Young, 2004). The legislation also centralized the school accountability movement under the guidance of the federal government. Each state was required to “implement a single accountability system, aligned with federal requirements, ensuring all students made adequate yearly progress” (Petersen & Young, 2004, p. 348). Heightening the importance of the new accountability system, federal mandates of accountability were not just goals and expectations but results of student achievement assessments would lead to rewards and sanctions for schools across the country, including impacts on school districts’ funding (Ellis, 2007; Petersen & Young, 2004). Under the NCLB legislation, intergovernmental relations between federal, state, and local governments would become increasingly
important. Local and state governments were now responsible for implementing and complying with federal education standards.

**State-level accountability in Ohio.** With the passage of the NCLB Act in 2001, each state was mandated to develop a cohesive accountability system with a focus on AYP measures and gains which ensured proficiency and progress for all students. To oversee the implementation of this federal mandate, the U.S. Department of Education issued *Consolidated State Application Accountability Workbooks*. Each state was required to complete this workbook to outline its plan of compliance with the mandates inherent in NCLB legislation. As part of this task, all states were required to create a uniform system of measuring student achievement, data gathering, analysis, and reporting in order to ensure adequate yearly progress and continuous school improvement (Bernhardt, 2004). This literature review will now closely examine Ohio’s accountability system, as this is the state in which the study took place.

In 2003, the state of Ohio completed a workbook in conjunction with the ODE (United States Department of Education, 2003). The *Accountability Workbook* for Ohio contained the framework for Local Report Cards (LRCs). These report cards were issued annually by the ODE for each school and district within the state. The LRCs would uniformly be used throughout Ohio as a single source for school accountability data. The workbook also outlined Ohio’s testing matrixes, which would be used to assess student achievement throughout the state. The LRCs would also use a district and school rating system based on particular indicators which measured student performance levels. In the 2003-2004 fiscal year, the 125\textsuperscript{th} General Assembly in Ohio passed HB3 which eliminated
older accountability revised codes and adopted the new revised codes (Ohio Revised Code 3302 “Performance Standards”) which would ensure compliance with NCLB requirements. The new accountability system would include state standardized testing and multiple measures of school performance. A ranking system for test scores, as well as school achievement designations, was also included.

According to the Ohio Department of Education’s Guide to Understanding Ohio’s Accountability System (2010-2011), state issued report cards for individual Ohio districts and high schools examine the following data sets: proficiency of tenth and eleventh grade students’ achievement in the content areas of reading, mathematics, writing, science, and social studies as measured by the Ohio Graduation Test (OGT); student attendance; and graduation rates. ODE issued report cards also report achievement in what is called the “Performance Index”. The “Performance Index” disaggregates students’ OGT scores at designated levels (untested, limited, basic, proficient, accelerated, and advanced) and is a weighted system rewarding higher scores. For example, student scores at the advanced level on the OGT are multiplied by 1.2 and student scores at the limited level have scores multiplied by .3. Thus schools are rewarded for students’ performance levels as opposed to being rewarded for just meeting proficiency levels set by the state.

A series of “State Performance Indicators” are also assessed on the LRCs for Ohio’s districts and schools. At the district level, the state recognizes 26 indicators, while individual high school buildings have fewer indicators. According to the Guide to Understanding Ohio’s Accountability System (2010-2011), “schools can earn credit for performance indicators by meeting or exceeding the goal of 75 percent proficiency on the
10th Grade OGT in each content area, meeting or exceeding the goal of 85 percent proficiency on the OGT in each content area for cumulative 11th Grade, meeting or exceeding the 90 percent state requirement for graduation rate, and meeting or exceeding the 93 percent state requirement for the attendance rate” (p. 2). For each school’s report card, the number of indicators evaluated, as well as the number of indicators met, is listed. The data which are collected and reported on the LRC are given as both aggregated and disaggregated data sets. These data sets may then be used by principals when making data-driven decisions regarding school improvement initiatives for future school years. For example, principals may choose to make plans for school improvement in areas measured by the Performance Indicators which have been deemed as not meeting proficiency standards in order to make measurable gains in the coming year to meet AYP.

In order to comply with NCLB federal mandates, the state of Ohio also measures AYP. LRCs in Ohio report AYP as either “Met” or “Not Met”. According to the ODE’s Guide to Understanding Ohio’s Accountability System (2010-2011), “Every school and district must meet AYP goals that are established for reading and mathematics proficiency and test participation, attendance rates, and graduation rates,” (p. 4). To determine AYP calculations for a district or individual high school, OGT scores in the areas of reading and mathematics, as well as test participation are disaggregated into student groups. Subgroups are used when the minimum subgroup size requirements have been met. In the state of Ohio, the minimum number of students needed for a student subgroup is at least 30 (aggregated across all tested grades) for that particular group.
These student subgroups include: “American Indian/Alaska Native, Hispanic, White/Non-Hispanic, Limited English Proficient, Black/Non-Hispanic, Asian/Pacific Islander, Multi-Racial, Economically Disadvantaged, and Students with Disabilities” (Ohio Department of Education, 2010-2011, p. 5). When determining AYP graduation and attendance rates, only the “All Student” group is used. The “All Student” group includes every student, and does not account for any subgroups, rather it views all students as one collective group.

In addition to reporting student performance data, the LRCs also report an overall “School Designation” for each district and each school in Ohio. These designations include: “excellent with distinction, excellent, effective, continuous improvement, academic watch, and academic emergency” (Ohio Department of Education, 2010-2011, p. 6). These designations are determined based on a combination of the number of indicators met, the performance index score, and the AYP status. When determining overall designations for non-traditional high schools, “Value-Added” measurements are also included (Ohio Department of Education, 2010-2011, p. 3). Non-traditional schools include schools in which middle and/or elementary school data are reported on a single report card. However, all Ohio high schools (traditional and non-traditional) are given overall designations on state report cards which reflect a combination of both state and federal accountability measures. These overall designations allow for a uniform evaluation and comparison of school districts and individual schools throughout Ohio.

Beginning in August of 2013, the ratings and scoring matrixes for state issued report cards changed to a graded report card using an A through F scale. Additionally,
Ohio expanded the measures on its state issued report cards beginning in 2013. The focus of the new evaluation system, however, will continue to be based on AYP measures. All measures including attendance, academic achievement levels for students, graduation rates, gap closing for federally designated student subgroups, and final designations used the A through F scale beginning with the 2013-2014 state issued report cards. However, there will continue to be access to archived report cards, prior to the change in reporting beginning in the 2013-2014 school year. Additionally, the OGT test used to assess high school students are being phased out and new standardized high-stakes testing called Partnership for Assessment of Readiness for College and Careers (PARCC) are being phased in to evaluate student achievement levels. The PARCC tests are based on national common core standards.

**Local-level accountability in Ohio.** Because of the increased focus on accountability and school performance at the federal and state levels, local-level educational leaders have become increasingly accountable and involved in ensuring mandates are met (Petersen & Young, 2004). School district superintendents and building-level principals have increased responsibilities to oversee and lead improvement initiatives in their schools in order to address the mandates. The mandates and responsibilities of local-level administrators are typically in response to direction from the ODE. For example, to comply with NCLB mandates, the ODE must identify any schools which have failed to make AYP for two or more consecutive years (Ohio Department of Education, School Improvement/District Involvement Questions and Answers, 2004). These schools, according to the regulations of the ODE, are then placed
into school improvement (SI) status and building leaders are required to submit annual SIPs to their respective district for approval. Additionally, stakes are particularly high for building principals as schools who fail to make AYP for four consecutive years are eligible for administrative changes including “significantly decreasing management at the school level” (Ohio Department of Education, School Improvement/District Involvement Questions and Answers, 2004, p. 2). This can include changes to the administration and teaching staff, as well as transferring building control to state agencies.

In order to comply at the local-level with state and federal mandates, all schools at some level, make plans for change and continuous improvement. Whether creating change to comply with federal and state mandates or engaging in improvement planning by choice, school principals employ planning for change to ensure increased student achievement. In Ohio, Local Educational Authorities (LEA) which include districts and schools, that are part of the state’s school improvement process, are required to create an annual SIP as part of the state of Ohio’s Comprehensive Continuous Improvement Plan (CCIP) process. According to the U.S. Department of Education’s National Center for Educational Statistics (2000), 86.6 percent of public schools in Ohio used a formal SIP (Fernandez, 2011, p. 340). Districts and schools in Ohio who receive Title I federal funding are also required to create annual SIPs regardless of their academic designations by the state. Under NCLB legislation, the federal government has required any school that is deemed in need of improvement to also create SIPs (Fernandez, 2011). Some districts require an annual SIP to be created by principals as a form of improvement planning, regardless of the school’s performance.
Principals tend to take lead roles in organizing, facilitating, approving, and enacting SIPs for their individual school organizations. Federal mandates have thus ultimately translated into expanded responsibilities, public accountability, and political pressure on building-level principals (Petersen & Young, 2004). This expansion of responsibility and accountability is demonstrated in the actions of principals who create individual SIPs, especially to comply with state and federal mandates.

**Criticisms to school improvement initiatives.** While school improvement accountability mandates do not appear to be ending in the near future, considerable criticism has arisen in response to such changes. Some critics argue that accountability mandates are politically motivated rather than reflecting a true educational crisis in the United States (Guthrie & Springer, 2004). These critics suggest that accountability initiatives are used as avenues to expand federal authority over education which has traditionally been controlled at the state and local levels (Guthrie & Springer, 2004; McGuinn, 2005). Another criticism to school improvement mandates includes the argument that increased accountability does not necessarily translate into real increases in student performance (Duffy et al., 2008; Ellis, 2007; Shirvani, 2009). While AYP is a federal mandate, it is measured differently in each state due to “differing standards, assessments, uses of assessment results, and implementation strategies” (McDermott, 2003 p. 154; McDonnell, 2005). Critics have also cited the variations in funding for schools as schools are unequally funded and yet are held accountable to the same federal standards (McDermott, 2003; Shirvani, 2009). Because of these variations in funding, it
can become difficult to fairly compare schools to one another, especially when comparing schools from different states.

An additional criticism of current NCLB mandates includes the argument against “high-stakes testing” and the “significant ramifications of them” (Duffy et al., 2008, p. 54). Failure on high-stakes testing can have a considerable negative impact for multiple stakeholders and does not necessarily drive real or significant increases in student achievement. Critics have argued that high-stakes tests narrowly define student achievement. Many of the tests used to measure student achievement only assess a fraction of student knowledge. Mandated tests may fail to account for other definitions of student success and instead use a “one size fits all” definition of quality education (Anderson et al., 2010; Duffy et al., 2008; Fritzberg, 2004; Strike, 2007). The data, which are used to determine student and school success, are only a snap shot, and for this reason do not always give a complete picture of the entire school organization (Bernhardt, 2004).

Standardized tests themselves have also been scrutinized. For example, high-stakes tests and standards for content vary from state to state. These tests can also reflect more about factors outside of the school than they do those within the school (Kane & Staiger, 2002). Influences such as family background, socioeconomic status, and environmental issues all can influence student achievement and cannot be controlled within the bounds of the school. Skeptics also argue that school test publishers themselves can be to blame (Kane & Staiger, 2002). While many of the errors made by the publishers are identified and resolved, some are not, an outcome that can have a
considerable undesirable influence on the districts and schools that are being measured based upon test scores. Additionally, standardized tests may be biased and regional, as racial, economic, and social factors may not be considered when they are created.

An additional criticism to the current accountability systems has been the reliance upon selected data and the implications that this reliance may have for ethical decision-making by school leaders. Strike (2007) described possible unethical actions such as “gaming” (p. 145). The author described “motivational displacement” in which school leaders are only motivated by reaching particular numerical standards and do not consider the real achievements which must take place to reach them. “Gaming”, according to Strike, may lead to a number of unethical behaviors by educational leaders including:

- Fraud, teaching only to the test at the risk of forgoing learning for inquiry and reflection, focusing resources on students who are “on the bubble” and ignoring student who are sure to pass or fail, taking resources from non-tested areas and only diverting them to tested areas, encouraging students to drop-out or misclassifying them so that underperforming student do not take the test. (p. 145)

With the temptation and pressure for principals to act unethically, removing such requirements could lead to more ethical leadership in which decisions are made in the best interest of students, rather than ensuring fulfillment of government requirements.

Strike (2007), while offering numerous criticisms to current school accountability systems concluded:

But education is a monopoly. Educators do not need to compete for their students and their paychecks. Hence, they lack incentives for productivity. What
accountability to the government for meeting test-measured benchmarks does is provide these incentives. It does this via a set of rewards and sanctions that are contingent on test performance. These incentives include threats of lost resources and students. There is the significant threat of a kind of public shaming. Test-based accountability is most likely to succeed if educators employ its results sensibly. (p. 133)

Regardless of the legitimacy of some of the criticism of the manner in which schools are being assessed, they must legally continue to show improvement, as prescribed by current federal mandates. In order to achieve progress and continual improvement, schools must assess their current status and create plans for change in order to comply with state and federal mandates. This task remains complex yet is a critical function of school administration. The following theoretical framework discusses the major aspects which can contribute to school improvement planning for change.

Theoretical Framework

**Accountability and leadership: The impact of school principals on school organizations.** School principals are experiencing pressures to raise student achievement in response to the demands of federal and state accountability standards and measures (Petersen & Young, 2004; Starr, 2011). These pressures have created added complexity to the principals’ roles as school leaders, as several types of accountability exist (Shapiro & Stefkovich, 2005). These types of accountability can include “political, legal, bureaucratic, professional, market, parent, student, fiscal, and personal forms of accountability…accountability in all its forms, is seen by many to be a significant factor
in school improvement” (Shapiro & Stefkovich, 2005, p. 121). Due to the complexities of accountability, the principalship is a multifaceted task, especially as it relates to school improvement.

Principals have responded to accountability mandates by expanding their responsibilities and the scope of their roles in school organizations (Lyons & Algozzine, 2006). Rather than “being accountable for money and other resources, they (principals) are also accountable for student outcomes and achievement” (Lyons & Algozzine, 2006, p. 2). In many cases school principals have become the “chief educational accountability officer” for the school organization (Lyons & Algozzine, 2006, p. 2). For example, “Authors of contemporary literature on the principalship assign responsibility of long-range and strategic planning to the principal” (Howley, Howley, & Larson, 1999, p. 166). This additional level of accountability is applicable to principals in the district under study, as they are responsible for creating yearly SIPS.

Principals have undertaken the additional task of becoming change agents to ensure that federal AYP standards are met and exceeded in their schools (Johnstone et al., 2009; Pepper, 2010). The ways in which principals engage in the role of change agents may vary. Depending on the leadership approach of principals, the actions taken to achieve such ends can vary as well as the level of effectiveness which is achieved. For example, “transformational and transactional approaches to leadership have been identified as important factors for success in today’s high-stakes testing environment” (Pepper, 2010, p. 46).
Some literature, however, has purported that principal leadership styles are influenced by other factors. For example, Crowther (2002) has argued that principals do not operate alone in what Hallinger and Heck (1996) describe as the “black hole”. That is to say, principals are part of the larger organization and are not isolated in their actions. With the emergence of teacher leadership and parallel leadership, school reform has expanded to include multiple stakeholders (Crowther, 2002). While debate continues as to the degree that principals can and will specifically affect school change initiatives, many schools continue to operate in vertical, top-down power structures and hierarchies in which the principals remain a critical player in school reform and change for continuous improvement. Additionally, “The presumed press of accountability systems towards rationalizing school operations by means of external control may result in top-down managerialism” (Mintrop & MacLellan, 2002, p. 277).

**Principals’ influences on student achievement.** Thus, principals have a critical role in leading and managing their schools, especially in relation to change for improvement. While other factors such as curriculum, student motivation, and teacher performance may affect student achievement, principals remain the primary focus of accountability at the school level (Crowther, 2002). In fact, strong quantitative research exists that supports the notion that leadership matters and there remains a “significant, positive correlation between effective school leadership and student achievement” (Hallinger and Heck, 1996; Kelley et al., 2005; Lee, Louis, & Anderson, 2012; Petersen & Young, 2004; Sweeney, 1982; Waters et al., 2004, p. 49). For example, researchers Waters, Marzano, and McNulty (2004) reviewed data collected from 70 studies which
had been led by the Mid-continent Research for Education and Learning (McREL) which used quantitative data such as “those provided by state-adopted norm-reference tests” and “perceptions of leadership as the independent variable” (p. 49). These 70 studies “created a sample size of 2,894 schools, 14,000 teachers, and 1.1 million students” (p. 49). After reviewing the studies, Waters et al., (2004) concluded a strong correlation existed between effective schools and effective school leadership, with school principals playing a considerable role in shaping schools’ possible successes or failures. For example, using the McREL research data, Waters et al., (2004) found “that improving principals’ leadership abilities by one standard deviation, from the 50th to the 84th percentile, would lead to an increase in average student achievement from the 50th to the 60th percentile—a substantial improvement” (p.49). Principals’ leadership approaches and change facilitator styles in creating advancement for school organizations may then also influence student achievement and organizational successes or failures (Hall & George, 1999). The ways in which principals engage in such activities may untimely affect student achievement as their influence in the school organization drives such outcomes.

**Principals’ influences on school climate.** Just as school climate can influence student achievement, school principals also play a role in shaping the climate which can increase student learning outcomes (Hall & George, 1999; Kelley et al., 2005). Early studies by Schneider (1980) and Schneider and Bowen (1985) found links between management practices and climate (as cited in Burke & Litwin, 1992). Researchers (Bulach et al., 1995; Freiberg, 1998; Goddard et al., 2000; Heck, 2000; Kelley et al., 2005) have linked positive school climates to improved student achievement. Hoy
(2010) defined school climate as “the personality of the school, defined by the leadership of the principal…” (p. 25). Thus, the principal’s leadership may influence a school’s climate which in turn may affect student learning outcomes.

**Principals’ influences on strategic planning and change.** Literature pertaining to the principalship has revealed principals play critical roles as leaders charged with overseeing and planning change. For example, “Under classical management theory, planning has been interpreted as an executive function, reserved primarily for those upper-level managers with the most complete view of the organization” (Howley et al., 1999, p. 165). In the case of the school organization, the upper-level manager includes school principals. Principals, as executive leaders in the school organization, have considerable control over planning which will guide their school organizations from the present into future successes or failures. This guidance includes the task and responsibility of making decisions regarding change for the entire school. In the case of the high school principals included in this study, the principals have been assigned the task of planning for improvement by district officials. Principals, in this particular case, have oversight as executive leaders to make decisions regarding the direction and actions their schools will take to move the organization forward towards improvement.

Strategic planning in school organizations “means achieving the best possible student outcomes now and into the foreseeable future” (Quong & Walker, 2010, p. 22). Methodically led schools must not only have well-planned approaches and practices, but must also have strategic leadership (Quong & Walker, 2010). The strategic leader, in such a setting, may uniformly be the principal who leads in setting the vision and mission
for the school, but is also the manager empowered to make necessary changes associated with strategic planning for school improvement (Davies & Davies, 2005). School-based management initiatives have also placed increased responsibilities on principals to engage in planning for improvement in their respective school organizations (Howley et al., 1999).

School administrators must be able to recognize the changes that are needed for improvement (Waters et al., 2004). Otherwise, the failure to address the changes can have negative influences on student achievement (Waters et al., 2004). As stated by Waters, Marzono, and McNulty (2004), “Many theorists have made the case that not all changes are of the same magnitude” (p. 50). Principals must decide which changes are the most important to make and the order in which the changes should occur. These decisions regarding change will impact the degree in which intended changes are successful and will likely increase student achievement. Central to these decisions are principals whom often take lead roles in planning for change and creating an agenda as to which changes will become the primary focus for school organizations. Only with successful implementation do plans obtain real change which results in improvement.

While the need for some changes is more obvious and is in direct response to mandated data, other changes remain less obvious and take a deeper understanding of the learning organization. Less obvious changes can include transformations to school climates based on school climate data. As part of strategic planning for school improvement, principals may influence which data sets are considered when making decisions about the direction of the school. In this sense, principals may be less likely to
champion reform, which includes strategic changes in school climate, if they do not see its significance in the strategic process. Because of increased accountability measures which narrowly define and assess student achievement, principals may only take steps which are clearly justified by the end itself, not the means (Bell & Chan, 2005). In this case, the end (achievement as measured by federal and state mandates) may come to be more important than the means (changes in organizational climate). Regardless, if school climate data are included or excluded in strategic planning for continuous improvement, the principal continues to have a significant responsibility in the planning process.

The intersection of the impacts of the principal on leadership, student achievement, school climate, strategic planning for change and school improvement. When viewing schools as organizations, they are “complex, interrelated systems, where leadership has intended and unintended outcomes” (Quong & Walker, 2010, p. 22). Therefore, as leaders, principals may play a unique and critical role in the overall success or failure in school organizations. Through their various leadership and management approaches and practices, principals guide schools in strategic planning and change initiatives with the end goal of increased student achievement to meet federal and state government mandates. The way in which principals approach this task within individual school organizations can vary depending on selected leadership approaches. Additionally, school principals may choose whether to include school climate data when strategically planning for school improvements. Principals may also decide whether or not to address school climate as part of school change initiatives. Research suggests school climate impacts eventual student learning and achievement outcomes (Anderson,
Principals may also gain insight into their position and capacity as school leaders and change agents through school climate data. School climate data can give principals awareness as to the degree in which the organization may successfully engage in various forms of change. Since principals influence the climate of the school organization (Hall & George, 1999; Kelley et al., 2005), understanding this impact may help with them with the identification of decisions in ways that they can best engage in the change process themselves. Because of their impact on student achievement, school climate, and strategic planning for change, the principal remains a central figure in school improvement successes and failures.

The relationships between student achievement, school leadership, and school climate tend to be reciprocal. Each of these three factors may influence the other and remains central to the final goal of increased student achievement. School principals, through their understanding of and interactions with organizations, help shape their schools’ climate and culture (Bass & Avolio, 1993; Kelley et al., 2005). School climate in-turn can affect student outcomes including student achievement measurements such as those inherent in the NCLB legislation (Kelly et al., 2005). Student achievement may also influence a school’s climate and can contribute to current and future student success. Additionally, “the culture of the organization can also affect the development of its leadership” (Bass & Avolio, 1993, p. 112). Because of this intertwined relationship, effective principals should engage in understanding, changing, and strengthening the
climate and culture of a school organization to ensure continuous school improvement and increased student achievement. With the interconnectedness of school leadership (principals), school climate, and student achievement, all areas should be addressed and nurtured to assure the success of the other.

**Organizational change.** The dimensions of organizational change remain a key framework for understanding the capacity of school organizations to improve continuously in the current era of school accountability. For any type of organization, change, organizational shifts, and restructuring remain inevitable (Paton & McCalman, 2008). As described by Stevahn and King (2010), “The literature across numerous disciplines provides a wealth of information on factors and conditions associated with successful (or failed) initiatives for change, reform, restructuring, organizational development, and so on” (pp. 14-15). What can be concluded from the literature is that organizational change is complex (Armenakis & Harris, 2009), regardless of the type of organization, and change requires effective leadership in order to be successful. Additionally, simply because changes occur, “they do not necessarily lead to improvement” (O’Day, 2002, p. 299). Therefore, careful consideration should be given to ensure that changes lead to measurable gains for school organizations.

Organizational change can be caused by external and internal forces, or by a combination of the two. In the case of school accountability and improvement, driving factors for change include both external and internal forces (O’Day, 2002; Petersen & Young, 2004). External forces may include government requirements, at both the federal and state levels, such as NCLB mandates and state required assessments and teaching
School improvement as change. School improvement is an “approach to educational change that enhances student outcomes as well as strengthening the school’s capacity for managing change” (Hopkins, Ainscow, & West, 1994, pp. 14-15). In the NCLB era, “School accountability by definition targets the school unit for monitoring, intervention, and change” (O’Day, 2002, p. 295). For these reasons, change theories and models may aptly be applied when developing and implementing a framework for continuous improvement (Hallinger & Heck, 2011). Such a framework may contain information regarding the ways in which organizations function and the manner in which
they “might deliberately be changed” (Burke & Litwin, 1992, p. 523). Deliberate change can include the concept of planned change which “occurs when the organization recognizes a need to improve its competitive position” (McClelland, 1995, p. 223).

Also included in the framework of deliberate or planned change is a form of strategic planning for change itself, which tends to be systematic in nature. Strategy may be defined as “the framework of choices that determines the nature and direction of the organization” (Davies & Davies, 2005, p. 247). In school organizations, strategy may involve making decisions as to which changes must be made to move the organization forward in the most effective manner. Driving forces for such decisions can include the alignment of changes with the specific assessments of student performance in the current accountability systems (O’Day, 2002). More specifically, school principals may elect to strategize what changes are necessary to better “adapt” and align their schools with federal and state mandates and goals (O’Day, 2002, p. 299). Furthermore, “through effective strategic leadership, an organization can be mobilized so that it can adapt its behaviors and exploit different growth opportunities” (Dunae & Hitt, 2005, p. 64).

Organizational change is a kind of chaos (Burke & Litwin, 1992). This is caused by the number of variables which are continually changing at different times and are influenced by both external and internal forces (Burke & Litwin, 1992). As earlier mentioned, some of these variables are controllable while others are outside the bounds of the organization. This concept is particularly true and applicable in the school organization which must contend with internal variables, as well as changes in the external environment. This change dilemma, which is apparent in schools, is also
inherent in most complex organizations which contain complex networks of
organizational systems and structures (O’Day, 2002). Because organizational change is
often non-linear, strategic planning in schools is used to organize change into a more
rational and linear task which can become more manageable (Burke & Litwin, 1992).
This linear and rational approach can be used when schools create SIPs. Therefore,
strategic planning is change planning, especially in relation to the school organization
and the creation of SIPs.

Measuring effective school change. In the contemporary school organization,
successful school change may narrowly be measured using benchmarks and standards set
by the federal and state governments. These measures include performance levels on
mandated high-stakes testing, graduation rates, and attendance rates. The AYP
measurements at the federal level specifically evaluate school performance and change
from year to year with designated subgroups of students and their assessment
performances (Fritzberg, 2004; Porter et al., 2005). While measures of successful change
can have different internal implications depending on the school or school district, the
final external judgments tend to remain uniform with standards of proficiency being set
by federal and state governments. Due to the limiting nature of these mandates, the way
in which successful and effective schools and school change are measured has been
consolidated and rather narrowly defined. The success of school change efforts may
typically be measured by the degree to which a school increases student achievement,
particularly as it is measured by federal and state definitions of effective school
performance, such as those inherent in AYP measurements.
Debate continues regarding possible matrixes in which successful school change is measured, thus expanding the notion of what effective schools are and what quality education for students contains. Another possible measure of achievement could include improved school climate. However, an assumption could be made that positive school climate would be embedded in current assessment measures being used by schools to pursue NCLB standards (Creemers & Reezigt, 1999). Regardless, differences exist as to whether “even the most difficult-to-define goals or outcomes can be measured, and more importantly, must be measured if education is to have any credibility at all with its stakeholders” (Ewy, 2009, p. 66). In fact, principals engage, as part of strategic leadership, in the debate whether “we value what we can measure” rather than “we measure what we value” (Davies & Davies, 2010, p. 19). Because school performance standards remain narrowly defined and the implications for such determinations are significant, school principals may be more apt to value what they can measure rather than to measure what they value. Because of this trend, school change may actually be better described as adaptation because “even when learning and change occur, they do not necessarily lead to improvement” (O’Day, 2002, p. 299).

**Change management and leadership.** Key to understanding theories pertaining to organizational change is the concept of change management and leadership. The very nature of school accountability calls upon school leaders, such as principals, to enact change in order to meet external mandates put on their school organizations. In the case of change for school improvement, principals remain the central figures as change facilitators. The type of catalyst for change, which principals will be during the strategic
process, may be influenced by their chosen change management and leadership approaches. Not only will the principals’ management and leadership approaches be revealed in the change process, but the very nature of the organization itself is often revealed. Because of this phenomenon, it is imperative that school principals should engage in effective change management and leadership practices to ensure success for their school organizations.

Ultimately, a principal’s leadership will affect student learning outcomes (Petersen & Young, 2004; Waters et al., 2004). It is vital that as change agents, principals, partake in both change management and leadership. Also known as transition management, the school leader is responsible for planning, diverting resources, and implementing change initiatives (Paton & McCalman, 2008). However, principals should also exhibit related leadership qualities, such as vision setting, to ensure that a clear picture of desired outcomes is constructed for the stakeholders. In order to partake in effective educational reforms, school administrators should successfully transition from educational management roles to new leadership roles (Barron & Henderson, 1995). When suggesting ways to achieve effective school change, Davies (2004), “declared a shift in thinking about strategy as a management function to that of strategy as a leadership process” (as cited in Eacott, 2010, p. 10). However, it can be argued that the degree to which principals engage in management and leadership will also be driven by the nature of the change itself. Depending on where the planned changes fall on the “change spectrum”, different degrees of management and leadership, as well as differing leadership styles may be required (Paton & McCalman, 2008, p. 21).
**Strategic leadership.** Principals may need to implement internal school changes to fulfill successfully external mandates for improvement (O’Day, 2002). In order to address effectively the issue of changing internal school norms to achieve external mandates, such as those inherent in NCLB legislation, principals may adopt characteristics associated with strategic leadership (O’Day, 2002). As defined by Barron and Henderson (1995), “Strategic leadership is a style of leadership demonstrated by the individual who possesses skills to create and communicate vision and effect improvement outcomes in elementary and secondary schools” (p. 178). Additionally, strategic leaders are “informed leaders who are able to apply theories to practice and who serve as agents for positive change in schools and school systems” (Barron & Henderson, 1995, p. 178). Research has shown that a strategic leader, rather than simply a leader, must develop skills in “problem-solving, decision-making, and creative/critical thinking” (Barron & Henderson, 1995, p. 178). Thus, strategic leadership approaches may be more useful when engaging in strategic change for improvement, especially as it relates to schools.

Evidence exists that “strategic leadership is a critical component in the effective development of schools” (Davies & Davies, 2005, p. 241). Therefore, a strategic leader may utilize strategic approaches for exacted change with the end result of school improvement. Analysis of a 2005 study by Davies, Davies, and Ellison (Davies & Davies, 2005) revealed that highly skilled strategic leaders engage in some of the following activities within their organizations:

1. they set direction of the school;
2. they translate strategy into action;
3. they align people, the organization, and strategy;
4. they determine effective...
strategic intervention points; (5) they develop strategic capabilities in the school; (6) they challenge and question—they have a dissatisfaction or restlessness with the present; (7) they prioritize their own strategic thinking and learning, and build new mental models to frame their own and others’ understanding. (pp. 247-253)

Using these actions as a guiding framework for defining effective strategic leadership, it is clear that the role of a strategic leader is complex and requires a highly refined skill set which may not be understood and addressed by principals who only exhibit the attributes of managers.

Strategic leaders may also link long-term goals and visions with short-term or operational planning (Davies & Davies, 2010). When engaged in planned change for improvement, this connection is critical in order to realize goals in the foreseeable future. Davies and Davies (2010) referred to strategic leaders as “change champions” because they bring their organization from their present state into a changed and improved state in the future (p. 6). The key responsibility of a strategic leader is to conceptualize what the future may bring and what actions are needed in the present to achieve long-term goals and meet accountability mandates. However, Eacott (2010) concluded that literature and research on strategic leadership often foregoes some fundamental practices of what should be included in the strategic process. Eacott (2010) argued that a strategic leader must be reflective of the organization’s past and the historical dimension of those actions, in addition to understanding the current state of the organization and envisioning the future. Therefore leadership decisions regarding change must be made within a context which encompasses the past, present, and future.
Criticism to strategic leadership exists as the “leadership fallacy” may be overlooked in literature on the topic (Bell, 2002, p. 413). Bolman and Deal (1991) (as cited in Bell, 2002) described this “leadership fallacy” as:

The principal is presented as the locus of management expertise and the individual who carries the burden of responsibility of planning. Thus, principalship is located within a hierarchical view of school management in which the principal is the solitary, heroic, and accountable leader who personifies and exemplifies the totality of leadership skills and managerial competences. (p. 413)

To dispel this myth of “hero-innovator” strategic leaders should be identified as operating as part of the entire school organization, in which others are included in the formation and execution of the strategic plan (Bell, 2002). While the leader is critical in strategic planning and setting the stage to do so, it is the larger organization which ultimately engages in the plan. For example, Bell (2002) cited the example of teachers who may implement strategies for improvement or senior staff members who may have valuable insights. If the principal is the central player for creating strategic planning and reform, the plan may fail to include changes associated with other forms of leadership within the organization. Thus, it may be important that multiple stakeholders give insights for change, and that the strategic leader not be so central to the strategic planning process. So instead the term strategic leadership differs from that of a strategic leader, as leadership can include multiple parties or “distributed leadership” which is shared (Davies, 2003, p. 21; Ireland & Hitt, 2005). Therefore strategic leadership can be defined “as a person’s ability to anticipate, envision, maintain flexibility, think strategically, and work with
others to initiate changes that will create a viable future for the organization” (Ireland & Hitt, 2005, p. 63). However, strategic leaders remain central to facilitating and driving the strategic cycle, and they must be able to communicate effectively the vision of the current state of the organization and where it should be to others (Davies, 2003). Strategic leaders “achieve this collaboration by working to build engagement, capability, and alignment” (Davies, 2003, p. 7).

**Leadership approaches.** The ways in which principals approach their school organizations as leaders may have significant effects to the degree in which the organization will engage in planned change for continuous improvement. Leadership approaches also affect the climate/culture of organizations, just as an organization’s climate/culture can affect the type of leadership approach taken (Bass & Avolio, 1993). As a result, the relationship between the leader and an organization is critical. To increase the likelihood that effective change will occur, leaders may strive to create a climate and culture which encourages change. Depending on the leadership approach taken by principals, their effectiveness as strategic leaders will vary. The primary domains of leadership approaches in organizations include transactional and transformational leadership. School principals may find themselves identifying with one or the other in terms of their approach to school change, although an effective leader may need to engage in both transactional and transformational leadership styles (Pepper, 2010).

When discussing leadership for change and strategic planning, researchers assert that transformational leadership styles lend themselves more to the nature of managing
change when “formulating and implementing strategic initiatives” (Paton & McCalman, 2008, p. 63). While, transactional leaders “work within their organizational cultures following existing rules, procedures and norms; transformational leaders change their culture by first understanding it and then realigning the organization’s culture with a new vision and a revision of shared assumptions, values, and norms” (Bass & Avolio, 1993, p. 112). This is not to say that transactional leaders do not partake in any change, rather the approach in doing so differs from that of the transformational leader. Both types of leadership approaches have positive and negative attributes associated with them depending on the situation, and can aid or deter from the change process.

In the case of strategic change for school improvement, both types of leadership may be necessary to support successfully the creation of change which results in improved student achievement. For example, a transactional leader may be more apt to understand past practices in the organization and to keep those which have proved to be successful while a transformational leader may change past practices even at the risk that the new practices are not necessarily best for the organization. In the latter case, the cure may be worse than the disease (Senge, 1990). Moreover, a transactional leader may be unresponsive to past and current practices which need changed to move the organization forward whereas the transformational leader may embrace such change in the name of achieving a new vision for the school organization in the future. The transactional leadership approach can sometimes retard growth and change while a transformational approach may embrace change too rapidly. In some cases when change is too hurried, an
organization may become overloaded with change initiatives and the change process may actually be slowed rather than advanced by such actions (Senge, 1990).

Regardless of the leadership approach taken by school leaders, change on some level is necessary in order to address internal as well as external forces. Transactional leadership approaches tend to exhibit characteristics more closely associated with organizational management, while transformational approaches exhibit characteristic most closely related to those of leadership (Burke & Litwin, 1992). For the reason that strategically-focused schools may require strategic leadership approaches rather than management approaches, transformational leadership appears to be more appropriate. However, the actual process of strategic planning also relies on quality management attributes more readily inherent in transactional approaches.

Debate continues as to which approach to leadership is most affective in achieving change for school improvement. In order to address continually evolving problems, new ideas and changes are critical in problem solving within an organization; characteristics typically associated with transformational leadership (Pepper, 2010). Furthermore, change leadership may focus on shared decision-making, which is also typically associated with transformational leadership qualities (Pepper, 2010). However, some studies examining transformational leadership have shown transformational leaders as having no or a weak impact on student achievements and having “moderate” impact on staff (Quong & Walker, 2010, p. 23). A more balanced approach would suggest that leaders possibly adopt characteristics of both transactional and transformation leadership to encompass their managerial duties as well as leadership functions to achieve change.
which results in continuous improvement (Pepper, 2010). This balanced approach may better ensure no essential functions of leadership are overlooked or neglected because too narrow an emphasis on one particular style was used.

**Strategic planning for continuous improvement in school organizations.** In order to make changes to meet and exceed federal and state mandates of student achievement and school accountability, schools may engage in planning for improvement. Whether this planning process is mandated or elective, formal or informal, planning remains an essential component in the school improvement process (Beach & Lindahl, 2007). School improvement planning is readily accepted as a form of strategic planning (Bell & Chan, 2005). Strategic planning in schools can be defined as “the systematic analysis of the school and its environment and the formulation of a set of key strategic objectives to enable the school to realize its vision, within the context of its values and its resource potential” (Davies & Ellison, 1998, p. 462). Strategic planning, by nature, is considered to be proactive planning. This means that a plan is devised in the present and will be enacted in the future to enhance the standing of the organization, such as that of the school organization. A link between continuous improvement and organizational change can be the use of strategy (Choi, 1995).

Strategic planning does not use a single process or model. Instead various forms of suggested processes and strategic approaches are provided in the literature for which leaders are often free to choose (Davies, 2003). Just as strategic planning approaches can differ, so can the approaches taken in developing School Improvement Plans (SIPs), which can be considered a form of strategic planning. The federal government has not
enlisted any one way in which schools could or should engage in school improvement and improvement planning. Instead, NCLB legislation has only set mandates when SIPs must be completed and provides general guidelines which must be incorporated when producing the plans (Fernandez, 2011). In the state of Ohio, schools which are encountering student achievement problems must engage in the Ohio Improvement Process (OIP). The OIP for struggling schools includes the use of the Comprehensive Continuous Improvement Plan (CCIP), a strategic planning tool for school improvement. While the ODE provides schools with a rubric as part of the CCIP process, and some districts use a uniform SIP template, the practices and approaches to the task remain diverse. Additionally, few studies have investigated exactly the manner that principals engage in and approach the planning process (Howley et al., 1999, p. 166). However, some literature pertaining to continuous improvement suggests that the improvement should be addressed by top-down management practices (Choi, 1995; Bhuiyan & Baghel, 2005). This is due to top-managers often having the responsibility for overall performance but also having the position to make decisions which affect eventual outcomes.

While terminology can vary, school improvement planning is generally associated with the SIP. When produced, SIPs can come in various forms. However, these plans can be used both externally and internally as a guide to change and to monitor a school’s journey towards improvement (Mintrop & MacLellan, 2002). Analysis of SIPs can reveal a good deal of detail regarding the manner that schools are creating plans to engage in change and can provide details as to the ways that principals approach their school
organizations as leaders. For example, a national study by Mintrop and MacLellan (2002), focusing on the use of SIs in middle and elementary schools that were on probation, revealed that the principals tended to adhere to external expectations and experts rather than consulting with classroom teachers within the school organizations. In essence, this study was used to understand the leadership approaches by principals in regards to change by using SIP data. While studies of SIP documents and their effects on academic performance appear to be a worthy task, this particular study will instead be used to examine the role of the principal in the process to create the SIP as part of school improvement rather than an examination of the SIP document itself.

The strategic planning process. As previously mentioned, strategic planning in schools is typically manifested as a form of planning for school improvement. SIs have emerged as part of the school improvement planning process for school development. While debate remains as to the effects and usefulness of SIs (Fernandez, 2011; Mintrop & MacLellan, 2002), strategic frameworks are often applied to school improvement planning when creating SIs. Furthermore, “Strategic processes are critical in making strategy a reality and a force for real change in schools” (Davies & Davies, 2005, p. 242). Since there is no standardized method in which to engage in the strategic process, strategic leaders must make decisions regarding the ways to partake in the process and these decisions typically drive the strategic cycle (Davies, 2003). The process of strategic planning for principals in school improvement can differ depending on leadership approaches and the degree in which principals engage as strategic leaders and change agents in the strategic processes. The reason for such variances can best be
summarized by Fullan (1993) who stated that “change is a journey, not a blueprint” (as cited in Stevahn & King, 2010, p. 16). The ways in which principals partake in such journeys will vary and may result in diverse levels of effects as to the success of such endeavors.

While various strategic processes exist, one of the primary steps in the planning process can arguably include the “conceptualization” process (Davies, 2003, p. 6). Literature concerning this initial step, as opposed to later steps, will be analyzed due to the step’s relevance to the study. Later steps in the strategic process can include execution of plans and evaluation of plans and their effectiveness. This first step of the conceptualization process of the organization includes reflection. According to Fernandez (2011), “careful planning helps organizations become more introspective…” (p. 339). Reflection of the organization includes problem recognition, diagnosis, and resolution (Paton & McCalman, 2008). Ewy (2009) explains reflection, as part of conceptualization, as “SWOT analysis” in which the “strengths, weaknesses, obstacles, and threats” to the organization are determined (p. 52). In determining strengths, weaknesses, obstacles, and threats in relation to the organization, data should typically be gathered and analyzed as part of the strategic process for improvement (Ewy, 2009).

**Organizational needs assessment.** Another aspect in the first stage of strategic planning, in what Davies (2003) referred to as the conceptualization process, includes needs assessment. Needs assessment aids leaders in developing the contextual wisdom on which they will build a framework for planning change for the organization. The needs assessment process is concerned with determining whether a problem or need
exists and making recommendations to ameliorate the problem or need (Fitzpatrick et al., 2004). Where needs assessment differs slightly from strategic planning is that strategic planning encompasses a broader view of the total organization while needs assessment views the organization in specifics related to particular programs and populations within the larger school context (Fitzpatrick et al., 2004). While strategic planning tends to focus on whether the goals or objectives of the organization are being met, needs assessment is more concerned with setting the context within the organization in which goals and objectives will be met. When the needs assessment process has determined that a sufficient problem or need exists, strategic leaders can develop plans to fix or improve upon such deficiencies. Therefore, while needs assessment and strategic planning use different lenses when viewing the organization, needs assessment is encompassed in the larger strategic planning process. In understanding the larger organization, it may be necessary for leaders to understand specific needs as revealed through needs assessments. This is when the leader must not only see the forest (the overall strategic plan) but also see the trees (specific needs of the organization).

In order to make determinations about the needs and problems, as well as to determine which aspects are working effectively within the organization, front-end or pre-assessment during conceptualization and needs assessment should take place (Fitzpatrick et al., 2004; Witkin & Altschuld, 1995). Front-end analysis, or pre-assessment, entails collecting data to make judgments and determinations about the state of the organization. Most importantly, “information provided through a comprehensive needs assessment can play a vital role in organizational transformation. The results of
needs assessment can be a catalyst for developing a strategy by which change (and improvement) can be introduced in the organization…” (McClelland, 1995, p. 221). Data collected during this process then can be used to make successful links to the next step of strategic planning which involves creating plans of action to address the organization’s deficiencies (McClelland, 1995; Stevahn & King, 2010). The creation of the plan for change will emerge from the Data-Driven Decision Making (DDDM) process in which front-end data is analyzed to make decisions regarding the best way to move the organization forward. Additionally, needs assessment can reveal information as to “the organization’s state of readiness to accept and undergo change” (McClelland, 1995, p. 227). This statement purports that the identification of matters that need attention also necessitates giving attention to capacity-building in order that the change and improvement can occur (Davies & Ellison, 1998).

**Criticisms to strategic planning.** While strategic planning is often championed as a useful tool in conducting change for improvement, criticism to strategic planning also remains plentiful in contemporary literature. Some literature on strategic planning has concluded that little empirical evidence and published information exists which successfully links planning to increased student achievements (Fernandez, 2011). For example, Mintzberg (1994) stated that “agencies can become so bogged down in planning and become incapable of ‘doing’ anything; and that due to their rigidity, SIPs are actually a waste of valuable resources” (as cited in Fernandez, 2011, p. 343). Another criticism of strategic planning comes from the observation that while schools may have quality plans, in reality, they are restricted in their options for obtaining the desired
improvements as their resources are often limited and their environments may or may not be receptive to such changes. Another limiting factor is the lack of clarity if district, state, and federal agencies support such plans. Support can include the availability of fiscal resources and adoption of policy changes which are often needed to enact such changes (Fernandez, 2011).

One condemnation to strategic planning and school improvement planning includes criticism regarding the linear nature of strategic planning. Because change may be chaotic, a linear approach may not be effective. Decision making for change may be described as chaotic as one organization may be contending with a “mix of choices available at one time, the mix of problems that have access to the organization, the mix of problems looking for solutions, and the outside demands on the decision makers” (Cohen, March, & Olsen, 1972, p. 16). As observed by Burke and Litwin (1992), change is not rational nor is it linear in its nature. Linear thinking processes may also fail to incorporate systems thinking (Senge, 1990). Systems thinking “means to see interrelationships rather than linear cause-effects chains” and allow us to “understand deeper patterns behind events and details” (Senge, 1990, p. 73). Therefore linear approaches, such as those associated with strategic planning, may fail to view the organization in an overall context and instead only see the organization as being isolated within a closed system.

Another pit-fall associated with strategic planning includes the “predictive fallacy” (Bell, 2002, p. 415). This is to say that strategic planning must be predictive as to the manner in which the future will emerge. It is dependent on the “Newtonian paradigm” in which the world is an environment that adheres to predetermined rules
(Bell, 2002, p. 417). In the school setting, this may include applying rational approaches to forces associated with humans, as schools are living systems (Senge, 1990). Humans are not necessarily rational and linear by nature, as they tend to react to the larger environment, which is not always rational. Therefore, strategic planning cannot always account for the many unpredictable internal and external events and changes which will occur as plans are being enacted. Applying the “Newtonian paradigm” to a living organization such as a school may not account for the unpredictability of human behaviors and external forces to the school organization.

Strategic planning as a form of linear planning includes strategic timing (Davies, 2003). This approach may be problematic as school leaders cannot always plan for exactly when the best time will be to initiate certain changes. Instead, parallel planning may need to take place as multiple events in complex organizations occur simultaneously, but not always in conjunction with one another. For example, a change or event may occur which will alter the planned actions for other changes within the organization. Davies (2003) described this phenomenon in complex and changing organizations as “sequential and parallel development” (p. 8). Just as one change initiative is enacted it can affect other aspects of the organization. There may also be overlap in what the organization may already be doing and the new types of operations which are being put into place. These change continuums and time continuums overlap and greatly affect one another. Again, this is part of the uncontrollable and unforeseeable chaos which may take place in both external and internal forces on the organization. Change is therefore not isolated and remains complex. Instead, certain aspects of
organizational change may not necessarily be planned using traditional strategic and linear approaches associated with strategic planning.

When school improvement planning is approached at the individual school level, strategic plans for change may be in vain. This is due to the possible difficulty for schools to make changes that would not be embraced on a district-wide basis. However, organizational theories emphasize the importance of making changes in a system-wide manner. For this reason, school principals who develop SIPs can find their efforts and the plans to be inhibited if they are not embraced at the district level. For that matter, changes made at the district level can be enhanced and inhibited at the state and federal levels. Principals’ plans for change at the school level are best made with consideration of the district systems and structures in which they will be implemented. The contexts in which schools exist will ultimately “moderate the school’s capacity for improving student learning” (Hallinger & Heck, 2011, p. 2).

Another concern regarding strategic planning is that may focus more on current issues as opposed to the future (Davies & Ellison, 1998; Senge, 1990). Strict adherence to strategic plans may limit the ability of an organization to recognize and be prepared to address unforeseen changes which arise in the future. The level of rigidity found in some strategic plans may have significant negative effects regarding an organization’s capacity to engage in unanticipated issues or useful opportunities. To combat the unknown, leaders may need to exhibit more transformational leadership qualities in approaching strategic plans. Davies and Ellison (1998) suggested that “strategic planning may be more useful for the more predictable and controllable elements within the planning
process” (p. 462). Therefore, strategic planning may not be effective in planning for all types of changes.

Debate also continues as to whether or not strategic planning is especially appropriate for use in education and schools. Critics have argued that strategic planning has a place in the business world rather than in the field of education (Bell, 2002; Eacott, 2010). For example, strategic planning may be considered a “technical-rationalist approach” and may fail to incorporate the “ethical dimensions of leadership” as it uses narrow goals in approaching education as “an economic utility” rather than having “intrinsic value” (Bell, 2002, pp. 413-414). Eacott (2010) reported that, “The very notion of strategic planning finds its roots in an industrial economic origin, arguably Taylor’s scientific management” and links strategic planning to “cooperate managerialism in education” (p. 62). However, it may be argued that since the NCLB mandates do include rewards and sanctions for schools and that schools are judged on numerical metrics, as are businesses, that the use of strategic planning may be necessary and appropriate in today’s political and educational climates.

An alternative to strategic planning, which has been offered, is emergent planning (Davies, 2003). An emergent planning strategy is an ongoing process in which “leaders work to shape and create the future by constantly scanning the environment and analyzing their own responses to it” (Davies & Davies, 2010, p. 9). This approach to planning addresses problems as they arise instead of attempting to predict and plan for them in the present. In fact, emergent planning could be incorporated into the strategic planning process, as it involves a continuous cycle in which plans are created, enacted,
and reevaluated. At the school level, most strategic plans are created annually and may not become part of a continual process in which principals divert attention and resources. This possible shortcoming of strategic planning would not likely be the case with the use of emergent planning. Principals, if using emergent planning, could incorporate targets within their improvement plans, which once reached or failed to be reached, could induce review and modification of the current plan. Regardless of the strategy selected, “current theoretical models propose that successful schools engage in intentional strategies and actions to improve learning environments and teaching practices” (Hallinger & Heck, 2011, p. 6).

**The role of data in strategic planning for continuous improvement.** School leaders, who wish to enact change for improvement, typically need to identify the best approach. One way to aid in this decision-making process is through the use of data (O’Day, 2002). Leaders and stakeholders, who use data typically engage in a process that is commonly referred to as data-informed decision making (Hopson & Lawson, 2011; Lee et al., 2012) or data-driven decision making (DDDM) (Lange et al., 2012). Instead of simply using intuition or general observation, leaders formulate decisions regarding change using data sets, which replace hunches and hypotheses with evidence concerning the changes which are needed (Bernhardt, 2004; Leithwood & Steinbach, 1995). Data can be used to guide change initiatives and provide useful support when making decisions. In the school setting, educational leaders such as principals “have always had ‘data’ of some kind available to them when making decisions” (Knapp et al., 2007, p. 74). However, “information is the lifeblood of all accountability mechanisms”
(Ehren & Swanborn, 2012; Lee et al., 2012; O’Day, 2002, p. 296) and the collection of such data is increasingly systematic, specifically for the purposes of DDDM (Knapp et al., 2007), in the era of school improvement. Systematic collection of data and DDDM are central to mandated data reporting and are an essential component to NCLB legislation (Luo, 2008).

The types of data which are collected, for whom they are collected, the sources of the data, and the manner in which data will be analyzed, interpreted, and used may all influence the DDDM process. While data can provide useful insights, data are not always completely unbiased, factual information. Depending on the sources and uses, data sets can be manipulated depending on the ends that their creators wish to justify. This is not to say all data are biased and unrealizable. However, careful choices must be made concerning data, especially during the DDDM process, as methods of collection, sources of data, and uses of data can all influence the conclusions that are reached. Suggestions can be found in the literature that school leaders can avoid such pitfalls includes using multiple and robust measures of school performance in order to enhance the likelihood that the DDDM process will be based upon a sound foundation (Bernhardt, 2004; Ehren & Swanborn, 2012; O’Day, 2002).

Types of data, methods of collection, and sources of data. Data can come in a variety of forms and can be collected, processed, and reported in quantitative, qualitative, or mixed-method formats. In schools, data can generally be grouped as “archival, communication, or interactive” (Witkin & Altschuld, 1995, pp. 48-49). Archival data sources include “records, logs, social indicators, demographic data, census data,
epidemiological studies, and data from assessment programs” (Witkin & Altschuld, 1995, p. 48). Archival data are typically quantitative and are usually found in “organizations, agencies, or governmental bureaus” (Witkin & Altschuld, 1995, p. 48). In terms of NCLB mandated data, archival data would include graduation rates, student attendance, student demographic information, and student scores on state mandated tests. Communication data sources include the outcomes of written questionnaires and key informant interviews and are chiefly qualitative and produce data concerning “values, perceptions, opinions, judgments of importance, and information from personal observations” (Witkin & Altschuld, 1995, p. 48). Interactive data sources include “public hearings, community group-forums, and nominal and focus group techniques” (Witkin & Altschuld, 1995, p. 48). Both communication data and interactive data are mainly qualitative and offer data on “opinions, expert judgments, group perceptions, and information on causes” (Witkin & Altschuld, 1995, p. 48). Communication and interactive data are almost never reported to state and federal agencies for the purpose of NCLB mandates. However, communication and interactive data could be utilized when making judgments and decisions concerning school climate. While not all three types of data are included in NCLB mandated reported data, schools may use any one or a combination of these three types of data, when seeking to understand their organizations and identify needs in order to pursue improvement as part of the DDDM process.

The manner in which data can be collected should be considered as another significant factor in the DDDM process. Data can be collected through a variety of methods and research approaches and can be considered experimental, non-experimental
(also referred to as ex post facto research), or quasi-experimental (Creswell, 2007; Hoy, 2010). Research and collection methods for qualitative data which are typically used in schools commonly follow techniques associated with social and human behavioral sciences (Hoy, 2010). However, methods for quantitative data gathering, such as those used to collect information regarding attendance rates, graduation rates, and standardized testing tend to use systemic methods associated with “quantified measures of performance” and are best used in these instances (Hoy, 2010, p. 1). Quantitative data from schools are used when reporting measures of performance in regards to NCLB mandated data reporting.

Educational data can be collected using multiple instruments and methods. This can include, but is not limited to, case studies, ethnographies, experiments, interviews, observations, review of documents, narrative research, surveys, and testing (Creswell, 2007; Hoy, 2010; Marshall & Rossman, 2006). The methods used to obtain data, including whether they were collected in a quantitative or qualitative format, can have a significant impact upon their analysis and application. In addition, the purposes, which the data are intended to serve, can influence whether multiple data sets will be needed in order to construct an accurate depiction of particular aspects of any school organization (Bernhardt, 2004; O’Day, 2002). For example, the results from the collection and reporting of quantitative data on student performance by state and federal governments are limited to the type and depth of information they produce (Anderson et al., 2010; Ehren & Swanborn, 2012). For this reason, multiple data sets may need to be examined
in addition to and in conjunction with the mandated data sets provided by state and federal measures in order to assess student learning, fully and accurately.

Just as the types of data collected and the methods of collection may vary, so can the sources of data used during the DDDM process. For organizations, especially schools, data may be generated externally and internally. Externally generated data on schools are typically collected by government agencies. While the externally generated data are collected to evaluate internal aspects of schools, outside agencies, such as state and federal governments, set guidelines for the collecting and reporting of such data. Data that are generated internally may vary depending on the school organization. Internally generated data are typically not mandated at the state or federal levels. In addition, a lack of clarity exists regarding the types and the manner in which the internal data would be produced and used within school buildings.

Advantages and disadvantages exist for both externally and internally generated data. Externally generated data may be viewed as more impartial or objective; but may fail to measure all critical aspects of school organizations. However, externally generated data are also “likely to be seen as more credible to outside audiences” (Fitzpatrick et al., 2004, p. 185). Internally generated data may allow for a variety of variables to be measured; but may lack objectivity as the researcher may not be independent of the data collection (Hoy, 2010). However, internally generated data and evaluations may better lend themselves than externally generated data to an assessment of a school’s needs (Fitzpatrick et al., 2004). Using a combination of both externally and internally generated data may allow for more precise outcomes during data review and analysis, as
internal knowledge would be combined with external objectivity. This approach of including both types of data may work best as school improvement is “an internalized process under conditions of external accountability” (Mintrop & MacLellan, 2002, p. 187).

Data can also be categorized as original or existing (Fitzpatrick et al., 2004). Original data are newly generated while existing data may not need to be generated or collected but rather compiled. Existing data can include documents and public databases in which data are housed for extended periods of time. Therefore, data used in the DDDM process does not always need to be in the form of original data. As suggested earlier in this chapter, Eacott (2010) cited the importance of including the history of an organization that is being examined as part of the DDDM strategic planning process. Existing data can be used to understand better the history and context in which the organization exists, and to identify organizational patterns (McClelland, 1995). Thus data can be used to understand past and present conditions and practices of an organization in order to plan effectively for the future. However, in cases where existing data does not generate a complete understanding of the organization, original data may need to be collected to supplement such voids.

The ways in which data are collected, the entities who collect data, and the sources of the data are important, in addition to the types of data that are collected. The sources from which data are derived may be “target and respondent groups” (Witkin & Altschuld, 1995, p. 50). In terms of needs assessment, “The target group is the one whose needs are being assessed, and the respondents are those who can give information
about the needs” (Witkin & Altschuld, 1995, p. 50). In some cases, target and respondent groups can include the same participants. In other situations the participants are different for each of the groups. In the case of schools, students (the target group) are assessed, but governmental agencies, principals, and teachers (the respondent group) can be used in order to obtain specific information regarding the needs of a school. Students, which compose the target group, and the administrators, parents, and teachers, which compose the respondent group, are sources upon which the circumstances of achievement are identified. By using a combination of both target and respondent group data, a fuller picture regarding the needs exists, the context in which needs exist, and the reason needs may exist can be identified.

**Using data in school contexts to create effective SIPS.** In an era of accountability, data matters (Ehren & Swanborn, 2012). Data drives much of what schools do today. The data are used to determine the effectiveness of schools, the levels of student achievement, and the implications of the results on the stakeholders, such as communities, principals, students, and teachers. While the production, collection, and analysis of particular data sets are mandated under NCLB legislation, other forms of elective data collection can also serve school communities, especially when creating plans for change and improvement. Given the narrowness of the focus on mandated data sets, other useful perspectives, which could be used to understand a school organization, may fail to be compiled and reviewed. For example, “school climate data has largely been neglected in assessment and improvement planning” (Hopson & Lawson, 2011, p. 106). Such data are critical for strategic planning, particularly for change. However,
schools remain mandated data-focused and driven, due to the current culture of evidence-based accountability.

To summarize, data for school improvement initiatives are generally externally generated, are collected by government agencies, and have clear guidelines as to the types and methods which are used for collection (Ehren & Swanborn, 2012). Student data, which is mandated by the NCLB legislation, are collected in the form of results from criterion, standards-based tests, attendance and graduation rates as reported by schools, and student demographic information. However, schools may collect and compile other types of data, but these data are considered elective rather than mandated.

In 2009, the ODE issued a rubric for districts and schools in Ohio to use when conducting needs assessment while creating SIPs, as part of the state’s Comprehensive Continuous Improvement Plan (CCIP) process. Included in this rubric were recommendations for effectively using data to evaluate the needs of districts and schools as part of the DDDM and school improvement planning processes. One criterion for the evaluation of the needs assessment process includes the level to which “a variety of data gathering techniques are used in the Needs Assessment to target student improvement and provide a baseline for monitoring progress” (Ohio Department of Education, 2009, p. 1). Another rubric indicator proposes that “quantitative and qualitative data are included in the Needs Assessment” (Ohio Department of Education, 2009, p. 2). In addressing assessment and accountability, the CCIP rubric rates the needs assessment process based upon the degree to which districts and schools “disaggregate student assessment data (screening diagnostics and achievement) driving curriculum and instruction aligned to the
Academic Content Standards for all student groups” (Ohio Department of Education, 2009, p. 2). According to the ODE, a quality needs assessment should also include “prevention, intervention, order, discipline, and school climate data” (Ohio Department of Education, 2009, p. 3). The rubric, which is part of Ohio’s CCIP program for creating SIPs, indicates that data concerning teacher and principal experiences should also be used for the purpose of needs assessment (Ohio Department of Education, 2009).

Additionally, the ODE’s rubric recommends that schools and districts include parent and community involvement data when identifying needs and crafting their SIPs (Ohio Department of Education, 2009). Lastly, the rubric recommends that “areas of greatest need are clearly identified based on needs assessment data” (Ohio Department of Education, 2009, p. 5).

Using the standards set by the ODE as part of the CCIP’s needs assessment process, it is clear that effective schools in Ohio should include multiple data sets when creating SIPs. This process would include using mandated and elective data which would need to be internally generated by a school organization. Current data, which are present in mandated data reporting for state and federal agencies, would not encompass all components of the CCIP needs assessment rubric. Instead, a principal, who follows the ODE rubric when creating their annual SIP, would need to include data sets outside of the mandated, archival data. While using the recommended approach of including multiple data sets to conduct needs assessment is suggested in the ODE rubric, it remains unclear exactly the manner in which a principal would engage in such tasks. For example, the state encourages the use and collection of multiple data sets (data outside of mandated...
data) but does not set guidelines for accomplishing such ends as part of strategic planning for school improvement, nor does the rubric indicate that resources would be supplied to schools to achieve such ends.

**Data-Driven Decision Making (DDDM) in strategic planning.** The decision-making process can be described as “the conversion of information into action” (Luo, 2008, p. 605). In the case of schools, decision-making can mean using data to determine the next steps that are right for best moving the organization forward. The notion of converting information (data) into action (decisions) is known as Data-Driven Decision Making (DDDM). American schools are currently being assessed using data reflecting student learning outcomes, which have been predetermined by states in the form of standard-based assessments. For example, Ohio uses high-stakes, criterion-based testing to determine levels of student achievement. The high school tests in Ohio are called the Ohio Graduation Tests (OGTs). Additional quantitative data sets such as school graduation rates and attendance rates are also used in evaluating the effectiveness of schools under NCLB legislation. When using the NCLB system of evaluation, districts, schools, and principals must concern themselves deeply with the data, as they are being used by state and federal agencies in order to measure school effectiveness. In addition, the data may have significant effects on the perceptions of the stakeholders of the schools.

Indications have been made in related studies that “shaping an evidence-based plan that meets the needs of a particular school’s context remains a challenge” (Hallinger & Heck, 2011, p. 21). An evidence-based plans, such as a SIP, would include the use of
data to make decisions, the manner in which to address best those needs and the organizational contexts in which those changes would take place would need to be given careful attention. The strategic leader, through strategic analysis, would ask and answer the question: “What do we know?” (Davies & Davies, 2010, p. 8). The collecting and analyzing of the data, as part of the DDDM process, would provide the leader with answers to the question.

The use of data is typically given careful consideration during the conceptualization stage of the needs assessment portion of the strategic planning process (Davies, 2003). Needs assessment is described as a multi-step process (Altschuld & Eastmond, 2010; Stevahn & King, 2010; Witkin & Altschuld, 1995). Witkin and Altschuld (1995) described a three-phase needs assessment process. The primary phase includes pre-assessment in which potential sources for data, methods of collection, and uses for the data are identified. Additionally known problems and data sources are also identified during this stage. Potential needs are identified and decisions regarding the collection of data are made. While all needs cannot be known during this stage of the pre-assessment process, an attempt is made to reveal best unknown needs during future data collections.

The second phase of a needs assessment, according to Witkin and Altschuld (1995), is known as main assessment in which data gathering will occur. During this phase, data are also analyzed. During the final phase of a needs assessment, known as post-assessment, data are linked to plans, especially plans for change. The post-assessment step for strategic planning is critical in creating an effective plan, as the
needs, which are identified, may affect the possible outcomes of future change efforts. If a need is incorrectly identified or if a significant need of the organization is not discovered, future planning attempts and the execution of such plans could be ineffective in reaching the end goal of improvement. Thus, the task of the DDDM process remains complex and quite important, as the process attempts to bring the seen and unseen (in terms of organizational needs) into view when planning.

During the DDDM process, the amount of data available may be as important as the types (kinds) of data which are used, the manner in which the data is analyzed, and if the results of the analysis will lead to improvement (O’Day, 2002). Because the decision-making process for change is often data-driven, considerable thought should be given as to the identification of the data sets that will be used and the intersections of these data sets. When describing schools, Davies (2003) said, “We are what we measure” (p. 18). In terms of strategic planning for continuous improvement in schools, the plan of action may in some cases only reflect the particular data which were included for analysis in the DDDM process. However, the use of diverse sources of data can reveal different needs which can be addressed by SIPs, making them more effective (Bernhardt, 2004). Diverse sources of data can include externally and internally generated, quantitative and qualitative, and data from multiple stakeholders (Bernhardt, 2004; Fitzpatrick et al., 2004).

Since student learning is not isolated and is cumulative, multiple measures should be used to understand the various levels of student achievement (Bernhardt, 2004). Data from state accountability assessments may likely be used and preferred by principals in
forming an effective SIP, as these data sets will also be used in measuring the effectiveness of the school by state and federal governments. However, solely using annual state mandated assessments measurements, such as OGT results, may not be enough to effectively construct comprehensive plans for improvement which produce desired and useful changes (Ehren & Swanborn, 2012). More than one type of assessment data may be needed to understand fully student achievement and ability levels (Strike, 2007). Assessments, other than those prescribed by state and federal agencies, can give insight into student achievement levels. Such alternative assessments can also measure educational goals besides those identified by the state and federal government. In essence, “test data should be viewed as one measure of good education, not the meaning of it” (Strike, 2007, p. 134). Furthermore, mandated testing data may only be collected annually, and may not be reflective of more current student achievement levels.

Additional data sets, which could be included during the DDDM process when creating SIPS, may include measurements of external factors outside of the school environment which may influence student learning. Many external variables, which are not controlled within the school environment, can impact student achievement and could be examined, especially in conjunction with mandated data sets (Bernhardt, 2004; Shapiro & Stefkovich, 2005). External variables can include data concerning students’ backgrounds, home environments, and demographic information. Internal factors such as school processes and school leadership can also influence student achievement and data on these aspects could also be considered in order to acquire a fuller understanding of the school organization, particularly in regards to student learning and achievement.
One key aspect of using multiple measures of data in the DDDM process can include the analysis of multiple stakeholders and their perceptions. Stakeholders’ perceptions data, which are commonly associated with school climate data (Kohl, Recchia, & Steffgen, 2013), can be especially critical when attempting to understand an organization’s needs and when devising a SIP (Hopson & Lawson, 2011). Perception data can be included as part of a more comprehensive DDDM process. Using perceptions or climate data would allow for the inclusion of multiple perspectives from various stakeholders, which may impact student achievement outcomes. Analysis of perspectives or climate data is also valuable in that they may reveal underlying forces, which may not be apparent in other data sets, especially mandated data.

In addition to incorporating multiple data sets, their intersections may be used for a more holistic and comprehensive needs assessment which can aid in creating more effective SIPs (Bernhardt, 2004). Using multiple measures of data, which account for numerous variables and the relationships between those variables, is critical as multiple interactions are inherent in complex organizations (O’Day, 2002). Variables can be examined independently, one at a time, or can be triangulated with other data. Various conclusions can be drawn from data depending on whether data are viewed independently or in relation to other data (Bernhardt, 2004). As suggested by McClelland (1995), a
“comprehensive data analysis should reveal the emergence of repetitive patterns while also indicating causality” (p. 91). Inferences may then be made as to the needs that are present in the organization and the possible actions for change that may need to be taken when data sets are examined in union with one another. However, “the complexity of interaction patterns inside and outside the organization and of the learning process itself makes attribution of cause and effect difficult and unreliable” (O’Day, 2002, p. 302). One way to counteract such pitfalls in data usage may be to incorporate multiple data sources and kinds of data to identify best accurate patterns within the school organization (Bernhardt, 2004; O’Day, 2002). Furthermore, organizational diagnosis, as part of needs assessment and organizational change, “consists of recognizing problem symptoms and identifying root causes of these symptoms” (Armenakis & Harris, 2009, p. 130). These problem symptoms could be identified by using mandated data sets and root causes could be discovered by using climate data. Therefore, using multiple sources of data would not only allow for the identification of problems, but also their possible causes.

**The principal and DDDM in change initiatives and school improvement.**

School accountability mandates have increased the efforts of school principals to partake in the DDDM processes, thus “DDDM has become an emerging field of practice for school leadership” (Luo, 2008, p. 604). Because schools are assessed using a specific set of quantitative data selected by federal and state agencies, principals may immerse themselves in understanding such data and making efforts to improve available data sets for their respective schools. Within the school organization, “Data-Driven Decision Making is an interactive, multifaceted, and contextual practice” (Luo, 2008, p. 610).
Principals may take a central role in the DDDM process, especially when creating SIPs, and in turn may influence the way that such a task is undertaken and executed in schools.

Principals may be held responsible for making ethical decisions, especially in schools which are accountable to the public. In order to make ethical decisions, principals need to make “legitimate decisions” (Strike, 2007, p. 5). One way to help ensure that ethical and legitimate decisions are made in the best interest of a school organization is through principals’ use of data-driven or evidence-based decisions (Strike, 2007). Strategic leaders are also ethical leaders when they do the right thing (Quong & Walker, 2010). The DDDM process can assist principals when deciding what the next right step should be for their school organizations, especially as they make changes for improvements. Using data can also allow principals to become more objective rather than making decisions out of personal preferences or pressure. DDDM can be used to make decisions that are more credible to other stakeholders and that can aid in relaying the rationale behind the principals’ decisions. This is typically true when multiple stakeholders’ voices have been represented in the data which have been collected and are used to make decisions regarding change. By including multiple stakeholders in the DDDM process, the process can become shared decision making (Fitzpatrick et al., 2004). Furthermore, a team can be “assembled for gathering and organizing data use at schools (which) can make principals’ data-driven analysis more efficient” (Luo, 2008, p. 609). By basing decisions on data, which are similarly available to and shared with stakeholders, principals make transparent their decision-making processes for a larger
audience, which helps to build authentic and ethical decision-making processes on behalf of the school organization.

School leaders may also use DDDM as a means to approach their school as a learning organization (Hopson & Lawson, 2011). In this sense, stakeholders and leaders begin to understand better the organization in which they operate. Principals may begin to recognize more effectively patterns within their school and gain a clearer perspective of intricacies of the entire school (Hopson & Lawson, 2011). In fact, the DDDM process can provide organizational members with a way in which to view the entire organization more objectively, as gaining a complete understanding can be difficult, particularly if one is responsible for a limited aspect of the organization. As an organization grows in self-reflection and understanding, it may better identify and understand barriers to its success. The organization may also grow in its understanding of the current practices that are working and helping to move the organization forward. Approaching the school as a learning organization can be facilitated by the involvement of the principal and other members in the DDDM strategic process for school change and continuous improvement.

School principals may assume the primary role in strategic planning for change and improvement. Because of the principals’ central roles in strategic planning, they may significantly influence the data that are included or excluded from the DDDM strategic planning process. As strategic leaders, principals may make decisions regarding data that are reviewed and may make decisions about any additional data that may need to be collected or complied. Principals may also make judgments if available data are reliable and worthy of inclusion in the DDDM process. Some schools however tend to remain
“fixated on a small range of accountability measures and data used to evaluate their performance” (Ehren & Swanborn, 2012, p. 257). Decisions regarding data may affect the entire strategic planning process. Strategic planning is typically data-driven, thus the responsibility of the principal as a strategic leader is important to ensuring that an effective and comprehensive plan is created, and that the right data are included and analyzed as part of the process.

DDDM is not simply compiling data and making decisions. Instead, the DDDM process may mean that a principal engages in data creation. A key characteristic of strategic leaders is that they are “evidence-based and research-led” (Quong & Walker, 2010, p. 25). This situation implies that strategic leaders may need to collect school and student data on a continual basis in order to make “appropriate decisions about the school’s direction” (Quong & Walker, 2010, p. 25). In essence, principals may undertake the role of a researcher as they collect or oversee the collection of various data sets to understand best schools’ existing practices in order to identify areas of strengths and weakness that may need to be addressed. In essence, “Strategic leaders may create new knowledge through their own research into what their schools are doing” (Quong & Walker, 2010, p. 25).

Multiple factors may influence the ability and degree to which principals use DDDM when making decisions for improving their school organizations. One of the most significant of these factors includes the principal’s own education. For example, “high school principals without a background in research and measurement have difficulty in understanding and interpreting the data presented to them for their decision
making” (Luo, 2008, p. 606). Furthermore, “to deal with school improvement in a data-rich world, school leaders have to develop a research minded way of working” (Geijsel et al., 2010, p. 62). That is not to say principals must be researchers, but instead must view themselves as able and qualified to partake in such tasks as data collection and analysis. Principals, who may not view themselves as being qualified, are less likely to see the value of using data for school improvement (Geijsel et al., 2010).

Another factor, which contributes to the extent in which principals engage in DDDM, is the degree to which particular school districts use data (Anderson et al., 2010). In a study by Anderson, Leithwood, and Strauss (2010), several findings were made in regard to principals’ engagement with DDDM. The study found that districts, which require principals to submit more data and which use DDDM themselves, increase the likelihood that principals within those districts will do the same. In some cases, districts set expectations for their principals in regards to using data to monitor school improvement. Districts, which also have resources to provide specialized personnel who would facilitate data collection and interpretation, and that have provided principals with tools for assessment, were also more likely to engage in DDDM. District size ultimately plays a role as to whether special attention is given to DDDM, both by districts and principals. Larger districts often have more resources including personnel, whom they can devote to the tasks associated with DDDM. Anderson et al. (2010) concluded that principals tended to use data more for “problem solving” rather than “decision making”, as “problem solving” was more closely related to school improvement (p. 324).
Barriers to using data. While DDDM may aid in effectively creating SIPs for change, the process may also be a barrier. For example, “few people in schools and districts are adequately trained to gather and analyze data or to establish and maintain databases” (Bernhardt, 2004, p. 6). Principals may lack the resources, skills, or time needed to perform such tasks. In the case of school climate data, principals tend to exclude such data from the DDDM and school improvement processes, as the principals may not have received training for engaging specifically with data that may influence student learning (Hopson & Lawson, 2011). Furthermore, “Administrators and teachers do not see gathering and analyzing data as part of their job” (Bernhardt, 2004, p. 6).

Another drawback to using data as a source for decision-making is the way in which data could be perceived, especially within a school organization. Data are often “used in negative ways and there tends to be confusion about which data to focus on” (Bernhardt, 2004, p. 7). Lastly, because some state legislatures continually change accountability mandates, those within a school organization may see DDDM as a waste of time and resources, since data which are considered meaningful today may be seen as irrelevant tomorrow.

Because there is no single mandated procedure in terms of SIP creation and data collection, the task may appear overwhelming and confusing to some principals. When there is a lack of quality leadership, this perception can be magnified. If data collection and analysis are not done using scientific and methodical approaches, incomplete or false conclusions may be reached. Additionally, different methods of collecting data can influence the results. In a study conducted by Demarest, Holey, and Leatherman (1984),
three different methods were used in determining the educational needs of a nursing staff in a hospital (as cited in Witkin & Altschuld, 1995). In the conclusion of the study, “A major finding was that the three data collection mechanisms did not yield the same information and therefore did not identify the same needs” (Witkin & Altschuld, 1995, p. 52). This dilemma can aptly be applied to SIP creation. The way in which school needs are identified using data will affect which area of needs improvement are identified and addressed. Without thoughtful consideration and know-how, DDDM can produce distorted results (Ehren & Swanborn, 2012). Those analyzing data “must not be subjected to willful manipulation, deception, or distortion just to support a hypothesis, theory, position, or belief” (McClelland, 1995, p. 166).

Data are sometimes inconclusive or can give false representations of reality. Due to the small population sizes (samples) in many schools, economies of scale are significant (Kane & Staiger, 2002). For example, a few outliers on a standardized test may have significant implications on a small school’s data. This can be demonstrated in test scores associated with student subgroups, such as those used for NCLB accountability measures. Changes in test scores in subgroups appear to be more “volatile” since small population group data can be significantly changed by the scores of a very few students (Kane & Staiger, 2002, p. 103). The law of averages may also become significant and not capture the true nature of particular situations. In fact, schools, for this reason, often experience very little change in their achievement numbers from one year to the next (Kane & Staiger, 2002).
Another issue related to data, especially data used in education, is the selection and control of variables. In education, “variables such as leadership, creativity, school effectiveness, school climate, empowerment, and trust are more complex, more problematical, and harder to isolate from other variables” (Hoy, 2010, p. 4). When using data to attempt to understand such variables, as is done during needs assessment, results may be difficult to interpret. It is often the case that such variables are nearly impossible to isolate and that perceived needs cannot be contributed to any one cause (O’Day, 2002). Furthermore, it may be difficult to measure some variables and reach definitive findings that any single or series of variables are the source for particular outcomes. In complex organizations, like schools, such challenges with attribution may be difficult to completely overcome (O’Day, 2002).

Leaders may rely on intuition, especially when making decisions. Intuition cannot be quantified, but it is a real and driving force for decision making. In contrast to Bernhardt (2004) and Leithwood and Steinbach (1995), Davies and Davies (2003) argued “that most of the toughest school administrative decisions made by principals are the ones in which the computer or lots of quantitative data just are not useful. Instead, most of the difficult decisions are made with a considerable amount of intuition or gut feelings” (as cited in Luo, 2008, p. 607). While there is merit in this argument, it rarely is enough for principals to cite a gut feeling to explain using public resources for certain initiatives and changes, especially with heightened levels of accountability. Thus it remains critical for purposes of accountability that data be used to justify a principal’s
actions. Data can provide an open view of decision-making, which is often important in publically funded institutions such as schools.

**School climate as part of continuous improvement, DDDM, and strategic planning for change.** While principals may tend to focus on data directly related to federally and state mandated achievement benchmarks such as the OGT results, daily attendance rates, and graduation rates, school climate data can provide critical insight into student achievement outcomes (Anderson, 1982; Bernhardt, 2004; Hopson & Lawson, 2011). Since student achievement and school improvement can be influenced by a multitude of variables including community environments, parental involvement, school processes, socio-economic status, stakeholders’ perceptions, and student learning, principals may be served to examine such forms of information (Bernhardt, 2004; Shirvani, 2009). By using multiple data sets, principals can analyze a variety of factors to gain a more insightful understanding of the current state of their schools’ organizations and then develop action plans, which may improve their schools’ achievements. To summarize, increased public pressure and public reporting of school performance, has caused some principals to give priority to attending to educational standards and to improving their schools’ outcomes, especially those related to NCLB measurements (Hopson & Lawson, 2011). To achieve the desired improvements, the principals may also need to include climate and related qualitative data (Hopson & Lawson, 2011).

The ODE’s Comprehensive Continuous Improvement Plan (CCIP) includes an assessment rubric (2009), which addresses the standards for schools to collect and use “a variety of data” for accurate needs assessment in school organizations (p. 1). This
particular assessment rubric also recommends that schools utilize “school climate data” (p. 3). By choosing to include school climate data in the assessment portion of the DDDM process, principals may recognize the impact of school climate when planning for change and continuous improvement. School climate (input) on eventual student achievement (outcome) is a clear correlation that should be considered to make effective change (Hopson & Lawson, 2011). However, “those who plan for school improvement often overlook these key components and fail to adequately take a school’s unique climate and culture into consideration when implementing reforms” (Hopson & Lawson, 2011; Lindahl, 2011, p. 16). By including school climate data in the DDDM process, as part of strategic planning and needs assessment, the results of such plans may be more effective. In fact, studies have found that including school climate data in improvement planning can be a significant factor in successful school reform (Bulach & Malone, 1994; Hopson & Lawson, 2011).

While the ODE recommends the use of climate data as part of a quality and comprehensive needs assessment for school improvement planning, the ODE does not mandate the use of climate data. At the federal level, the reporting of school climate data is not mandated as part of the NCLB legislation (Hopson & Lawson, 2011). However, “You can’t mandate what matters” (Stevahn & King, 2010, p. 16). In this sense, simply because school climate data are not mandated by the state or federal governments in regards to the collection, reporting, and analysis processes, does not mean that they lack significance or fail to have influence on the school organization, especially in relation to student achievement (Hopson & Lawson, 2011). In addition to a lack of government
mandates, a lack of conceptual models for using climate data as part of school improvement planning may also be a reason that school climate data are often omitted in the data analysis portion of school improvement planning (Hopson & Lawson, 2011). While levels of accountability and role expectations have changed due to heightened government requirements, principals have not necessarily received education, support, or training to incorporate school climate data as part of school improvement planning (Pepper, 2010). If school principals do not understand the ways in which school data can be collected and used, then principals may be less likely to engage in the use of such data when planning for school improvement and change. Furthermore, principals may have become too saturated with data in general, and may not necessarily welcome additional data which they must consider. Additionally, a gap exists in the literature regarding the use of school climate data for planning school change, improvement, and reforms.

**Defining school climate.** The understanding and definition of school climate have been evolved. According to Hoy, Tarter, and Bliss (1990), “there is no standard definition of organizational climate; in fact, climate is conceptually complex and vague” (p. 260). The creation of one concise definition of the term *school climate* may prove difficult as there remains debate as to what climate includes and excludes (Anderson, 1982). Depending on the source and the instruments which are being used to measure it, the term *climate* can vary. Kelley, Thornton, and Daugherty (2005) concluded:

Researchers have used various definitions of climate; Hoy and Miskel (2005, p.185) defined climate as “the set of internal characteristics that distinguish one school from another and influence the behavior of each school’s members.”
Kottkamp (1984) suggested that climate consists of shared values, interpretations of social activities, and commonly held definitions of purpose. Hoy, Tarter, and Kottkamp (1991, p. 10) stated that “school climate is the relatively enduring quality of the school environment that is experienced by participants, affects their behavior and is based on their collective perceptions of behaviors in schools.” (p. 19)

In general, school climate is a broad term that refers to members’ perceptions of the organization (Burke & Litwin, 1992; Hoy & Miskel, 1987; Hoy et al., 1990). An early review of research on school climate by Anderson (1982) revealed that:

School climate has been studied with a multitude of variables, methodologies, theories, and models, resulting in a not easily defined body of research. The difficulty of defining school climate is reflected in the diversity of climate typologies that have evolved despite their common roots. (p. 368)

Common themes appear in the literature that seek to define school climate, including the concept that climate reflects an understanding of human ecology in school organizations (Anderson, 1982; Hopson & Lawson, 2011). Renato Tagiuri’s (1968) model of school climate is focused upon four dimension of the environment which included:

...ecology (the physical and material aspects), its milieu (the social dimension concerned with the presence of persons and groups), its social system (the social dimension concerned with patterned relationships of persons and groups), and its
*culture* (the social dimension concerned with belief systems, values, cognitive structures, and meaning). (Anderson, 1982, p. 369)

As suggested by Anderson (1982), Tagiuri’s “taxonomy provides an effective sort system (which fits data both rationally and empirically) for categorizing the school climate literature” (p. 369). While the literature on this topic has expanded since the inception of Tagiuri’s model, the model still represents an effective tool to gain insight regarding school climate.

More recently, The National School Climate Council (NSCC) (2013) has described school climate as the, “quality and character of school life.” School climate is also “based on patterns of students’, parents’ and school personnel’s experiences of school life and reflected norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures” (NSCC, 2013, “How do we define School Climate?,” para. 1). This definition offered by the NCSS described what Hoy (2010) has designated as the critical aspects and multidimensional nature of school climate. A more limited definition of school climate includes simply the stakeholders’ perceptions, but the NCSS definition expands upon this notion by detailing the ingredients needed in those perceptions in order to conceptualize the term. While an exact definition may remain elusive, Hoy (2010) described school climate using the analogy that, “Climate is to organization what personality is to the individual” (p. 27). This personality may be made of the many perceptions found within the school and its associated stakeholders.
Some literature relating to school climate also includes discussions regarding culture. The two terms are different and yet interrelated, and are often discussed jointly in the related literature. Selected literature on school climate includes discussions and implications for school culture, just as literature pertaining to school culture discusses and has implications relating to school climate (Burke & Litwin, 1992; Hoy & Miskel, 1987; Hoy et al., 1990; Hoy et al., 1991; Lindahl, 2011). Hoy et al. (1990) have purported the lack of an understanding regarding the differences between climate and culture. However, while there may not be a “large conceptual leap” between the two terms, some differences between climate and culture do appear to exist (Hoy et al., 1990, pp. 260-261). For example, Burke and Litwin (1992) have concluded that:

Climate is much more in the foreground of organizational members’ perceptions, whereas culture is more background and defined by beliefs and values. The level of analysis for culture is the organization. Organizational climate is, of course, affected by organizational culture, and people’s perceptions define both, but at different levels. (pp. 526-527)

Because of this proposed relationship, some variables which can be used to measure climate may also be used to measure culture and vice versa.

Climate tends to be more current while culture remains more imbedded in the organization (Burke & Litwin, 1992). Thus, an elusiveness exists regarding the exact point in which climate becomes culture and the particular ways in which culture may manifest itself in climate. In many ways, studying climate may also reveal, by default, information concerning culture within an organization. One possible way to distinguish
between climate and culture may include the manner in which they are viewed, with school or organizational climate being understood from a personal and emotional perspective, and school culture from a historical perspective (Hoy et al., 1991). However, single validated survey instruments can provide data on both school climate and culture (Freiberg & Stein, 1999). The theoretical framework surrounding organizational climate and culture provides guidance. However, no definitive answers appear to exist to distinguish as to whether climate or culture is the source for stakeholders’ perceptions about a particular organization. Climate and culture can be “discussed as a combined entity and are presumed to operate in both idiographic (individual) and nomothetic (organizational) dimensions of the school” (Lindahl, 2011, p. 17).

In regard to organizational change, Burke and Litwin (1992) have noted significant differences between climate and culture. Burke and Litwin (1992) have suggested that organizational culture changes are difficult to manage, as much of an organization’s culture may not be totally transparent. Instead, organizational climate is able to be influenced through deliberate change and transformational leadership (Burke & Litwin, 1992). Changes in climate may then, if accepted, become imbedded into the organization’s culture. However, the imbedded culture may affect the daily climate as seen in an organization’s members’ perceptions. In this case, climate and culture in organizations are different phenomena, but they are continually influencing one another and in many ways are intertwined.
While exacted definitions and differences between climate and culture may be abstract and overlapping, such differences, such as the levels at which each are experienced within an organization, and the ability to change and influence them, may be critical when measuring and using climate data rather than cultural data. Hoy and Feldman (1999) suggested that:

One suggested difference is that culture consists of shared assumptions, values, and norms, while climate is defined by shared perceptions of behavior. There is not a large contextual step from shared norms (culture) to shared perceptions (climate), but the difference is real, often meaningful, and important in selecting a research strategy or developing an organizational improvement plan. We prefer the concept of climate. Because shared perceptions of behavior are easier to map than shared values, climate is a little less abstract (more descriptive and less symbolic) than culture and measurement is less of a problem. (p. 85)

Furthermore, Hoy and Feldman (1999) described the functionality of collecting and focusing on climate data rather than on the cultural data of school organizations as a means to assist in school improvement planning. Such functionality remains another reason why climate data, in particular, are useful for school principals seeking to improve their organizations.

**Theoretical lenses for understanding school climate.** Anderson (1982) described three major theoretical lenses for understanding school climate research. While research regarding school climate has expanded since Anderson’s (1982) review, the perspectives proposed in his article appear to represent a useful tool for understanding
this field of study. The first proposed theoretical lens is that of “input-output” (Anderson, 1982, p. 379). This lens uses an economic perspective in which “some combination of school inputs is thought to create a climate in which positive school outputs are produced” (Anderson, 1982, p. 379). The input-output theory is reflective of earlier views of schools in which scientific management had been used to control student outcomes and ensure organizational efficiency (Callahan, 1962). This theory tends to be simplistic in the sense that a school organization would be viewed by using a linear perspective. The theory may be criticized, as it fails to consider the complexity of school organizations in which inputs are numerous. Input factors affecting schools may not be limited to those imposed by forces within the school environment. Additionally, linear approaches to complex organizations may not allow for unintended outcomes, which are common and cannot always be controlled through planned inputs to schools (O’Day, 2002). Furthermore, environments, which influence school climate, are complex and may include a variety of variables.

A second major theoretical lens for understanding school climate is the sociological theory (Anderson, 1982). This theory approaches school climate as a result of “a cultural system of social relationships among family, teachers, students, and peers” (Anderson, 1982, p. 382). Using this lens, school climate is influenced by a school’s “norms, expectations, evaluations, and relationships” (Anderson, 1982, p. 382). This theoretical lens differs from the input-output theory, as the variables which influence school climate are based on the “taxonomic categories of social system and culture”
These relationships and cultural influences on school climates may not necessarily be linear or controlled, as is the case with the input-output theory.

The third theoretical lens, as presented by Anderson (1982), is the ecological theory. This third lens combines both the input-output theory and the sociological theory. The ecological theory “views all variables as potentially modifiable for the benefit of student outcomes” (Anderson, 1982, p. 382). The variables, which are considered using this lens, include both “social processes and culture of an environment,” as well as ecological variables controlled by school inputs such as “the creation of, maintenance, and distribution of resources” and “the temporal and physical aspects of the environment” (Anderson, 1982, p. 382). Thus, the ecological theory encompasses both uncontrollable social elements of the school organization, as well as controlled inputs which influence school climate. Contemporary research may be more inclined to view school climate through the ecological lens, as this lens tends to be the most inclusive of the three. The ecological theory of school climate appears to be the most appropriate model to use when viewing schools as complex organizations.

**Significance of school climate data.** School climate is a significant factor which influences school performance (Hopson & Lawson, 2011; Kelley et al., 2005; Lindahl, 2011; Stevens & Sanchez, 1999). The climate of a school can directly affect student achievement and the development of the health of the organization, which may also aid or detract from student and school successes (Bulach, Malone, & Castleman, 1995; Goddard et al., 2000; Heck, 2000; Hopson & Lawson, 2011). In essence, “A positive school climate can enhance staff performance, promote higher morale, and improve
student achievement” (Kelley et al., 2005, p. 19). In order for schools to achieve student outcomes, which fulfill the NCLB’s proficiency mandates, a “nurturing, positive climate” is necessary (Hopson & Lawson, 2011, p. 106). While a positive school climate can contribute to student achievement outcomes, as measured by the NCLB standards, school climate may not typically be viewed as imperative, especially when compared to other areas of achievement. Additionally, school climate may be more difficult to improve in comparison to other dimensions of schools that are assessed by the NCLB standards (Hopson & Lawson, 2011).

If the goal of strategic planning for change is continuous improvement, then school climate should be considered when creating comprehensive plans (Hopson & Lawson, 2011). School climate data can aid in the ability of the principals to understand their schools as they exist. Hoy and Feldman (1999) explained that, “Organizational climate is a characteristic of the entire organization” (p. 84). By understanding the collective state of the organization, principals may be better equipped with a broader view of the entire school within a given context. This expanded perception of the organization can lead to more informed decision-making, which may result in school improvement. This enhanced perspective can contribute to effective change (Stevahn and King, 2010). When climate data are part of, or are a driving force in the DDDM process, “school improvement planning focuses on schools as organizations and their organizational ecologies” (Hopson & Lawson, 2011, p. 106).

School climate data also aids in understanding the health of an organization (Hoy & Feldman, 1999; Hoy et al., 1990). As previously discussed, a healthy school climate
may help lead to positive outcomes for students, whereas an unhealthy climate can hinder student and organizational growth. Because school organizational health and school climate are interrelated, understanding school climate data can assist principals in creating a context in which their plans for school improvement will be successfully implemented. School climate data can help principals to understand if their schools contain a healthy climate or one which is toxic. A healthy school climate is necessary to achieve positive student outcomes (Hopson & Lawson, 2011). Therefore, principals may first need to diagnose a school’s health using organizational health measurements, such as the Organizational Health Inventory (OHI), before creating plans for change. In other words, a school’s climate needs to be improved before entering into other change initiatives (Hoy & Feldman, 1999). In essence, a school’s climate needs to be improved in order to provide a framework for which other changes can successfully take place.

School climate data can be used to reveal the uniqueness of an organization (Lindahl, 2011), including the specific needs of a school. Understanding of school climate may provide insights into the internal workings of school organizations, not necessarily evident or obvious in other types of data (Freiberg, 1998). When looking at mandated student achievement data for schools, most schools’ data remains relatively unchanged from year to year (Kane & Staiger, 2002). Because of this phenomenon, it may be difficult for principals, who are planning for change, to isolate the specific pitfalls of the school which may be negatively impacting student achievement, when just using mandated data. Additionally, extreme changes in test scores can be a result of only minor shifts in small sample populations within individual school buildings. Test scores,
as part of mandated data, thus remain limited in their value in understanding areas of needs improvement. Instead, school climate data may reveal deeper aspects affecting student performance not evident in testing data, attendance rates, or graduation rates. For example, mandated NCLB data may inform a principal that a school is experiencing low achievement in a particular area, but the data may not fully explain the reasons that the deficiency is occurring. Climate data would instead allow leaders to better understand the “why” of the mandated data. Therefore, climate data can be used to increase dialogue among stakeholders regarding the reasons that problems and needs exist, not simply stating that they do exist (Eacott, 2010).

When undergoing school improvement, “Numerous factors enter into any change effort, and countless forces—many of which are unforeseen—affect the process” (Stevahn & King, 2010, p. 15). In addition to identifying needs which are not apparent in mandated data, school climate data can reveal the ability and readiness of the organization to undergo change. Therefore, “Assessing an organization’s readiness to change is generally considered an indispensable early step in any organizational improvement process” (Beach & Lindahl, 2007, p. 31). The preparedness of a school to engage in change for improvement is critical when developing effective strategic plans. A healthy school climate may be more adapt to undergo significant changes, while a toxic school environment may first need re-culturing during the school improvement process in order to handle intense changes (Lindahl, 2011). If an improvement plan is created and enacted without the use of this information, negative, as opposed to positive outcomes, may emerge. When a school climate is not strong or stable enough, the school’s primary need
may actually be to improve upon the climate before other change initiatives take place. Furthermore, “since changes must ultimately be implemented by change recipients, understanding their motivations to support organizational change or not provides practical insight into how to best lead change” (Armenakis & Harris, 2009, p. 128).

Besides revealing the preparedness and capacity of an organization to engage in change and school improvement, school climate data also allows leaders to understand the types of planning and change that will work best for the uniqueness of their schools. School climate data may then guide school leaders as they choose from alternative improvement approaches, deciding upon which will best corresponds with the climate and culture of their organizations (Lindahl, 2011). School climate data may aid leaders in foreseeing “which planning models offers the greatest likelihood for success” (Lindahl, 2011, p. 23). For example, large-scale changes may not be successfully implemented if a school has a weak or toxic climate or culture, and instead would best be served using limited incremental planning models that were attentive to the inadequacies of the culture (Lindahl, 2011). Alternatively, “Schools with moderately healthy climates and cultures have greater options including incremental planning and rational planning models” (Lindahl, 2011, p. 23). By including the insights provided by school climate data, schools can “adopt strategies that match their developmental needs and address concerns regarding the limitations of rational, linear approaches to change” (Lindahl, 2011, p. 23). This approach could then “resolve the problem of the wrong strategies being applied to the wrong setting and would help to improve the probability of successful school improvement” (Lindahl, 2011, p. 24).
Climate data are also significant as they can assist in disclosing the way in which a school organization views, interacts with, and is impacted by its leadership. In addition to revealing and measuring variables which may affect student achievement, school climate data can also give insight into the effectiveness of school leaders (Kelley et al., 2005). School climate data can contribute to leadership assessment and provide valuable insights for principals. School climate data regarding the stakeholders’ perceptions of leadership may provide insights for principals to better understand their positions as change agents within their particular organizations. Just as school climate and culture may need to be restructured to ensure positive changes for improvements, principals may also need to amend their own practices and approaches to best lead the organization, especially in relation to change initiatives.

By including the perception data, which are encompassed in climate data, of critical stakeholders in the DDDM process, principals can become reflective in understanding the level of their influence on the school organization. This type of perception data may lead to principals who become more effective and exacted leaders in regards to organizational management and change. Thus, as part of planned change for improvement, principals may modify their leadership styles to contribute to positive school climates, which then would likely contribute to the overall student achievement. As suggested by Kelley et al. (2005) in the conclusion of their study of leadership and school climate:

Principals must have power, authority, and position to impact the climate of the school, but lack feedback to improve. If principals are blind to critical
information about their schools, then they could make erroneous decisions. In the complex and dynamic environment of schools, all principals need to understand effective leadership behaviors…Principals must know how to provide the foundation for creating an atmosphere conducive to change. (p. 23)

School leaders, such as principals, can help to foster school climates in which change initiatives will be positively received, supported, and then enacted. By understanding the perceptions of stakeholders, principals can be met, when engaging in organizational change, with contributions rather than objections. Such contributions can result in improved school climates and increased student achievement. The capacity of the principals to create an organizational climate within the school which embraces change can have a substantive influence on the organization’s ability to achieve positive and lasting outcomes. By understanding and influencing their school’s climate, school principals may effectively engage in appropriate leadership styles which will result in optimum increases for student achievement. Additionally, principals may be more successful in capacity-building for change within their schools (Crowther, 2002; Pepper, 2010). Capacity-building remains significant in the strategic planning process for change, as it allows the organization to bind together and be able to perform under the constraints typically associated with organizational change and improvement (Davies, 2003; Davies & Davies, 2010; Hallinger & Heck, 2011).

Principals and their staff members are central to on-going reforms, and school climate data can offer an additional layer of needs assessment information, which is not student-centered, and instead evaluates other components and persons central to
encouraging school improvement. Change in schools can be complex and can create tension. Therefore, principals often need to understand their roles in addressing these tensions prior to beginning change processes. Davies and Davies (2005) described principals’ awareness of the organization and its environmental context as “contextual wisdom” (p. 258). Hopson and Lawson (2011) explained the same awareness and understanding of schools described by Davies and Davies (2005) as an ecological perspective of organizations. This contextual wisdom, or ecological perspective, can be gleaned from school climate data.

The climate of an organization is essentially created by the overall perspectives which may emerge through data collection. In a school organization, this can include a multitude of stakeholders’ perceptions including those of administrators, community members, parents, staff, students, and teachers (Stevens & Sanchez, 1999). Because everyone within an organization is a possible change agent, their input as stakeholders is critical in the change process (Stevahn & King, 2010). One way to solicit stakeholders’ input is through the collection of climate data. For example, Stevahn and King (2010) described this process as:

Instead of creating and trying to sell an action plan to organizational members, needs assessors and organizational leaders would do well to involve everyone within the organization in conversations about the plan- at best obtaining widespread input for its development…Such conversations focus on discovering the types of actions already underway that support the plan, personal concerns
about implementing it, what resources individuals believe they need, and so on. (p. 16)

By including the views of multiple stakeholders, a process that is usually accomplished when compiling climate data during the needs assessment phase of strategic planning, a more effective plan for change may be crafted. Therefore:

The perceptions of students, parents, and the neighboring community are key components of creating an atmosphere where teachers can teach, students can learn, parents can take an active role in the education of their child, and excellence can be achieved. (Stevens & Sanchez, 1999, p. 124)

**Assessing school climate data: matrixes, measurements, and instruments.**

When investigating the assessment of school climate, Lindahl (2011) found that:

The assessment of a school’s climate and culture is a complex, difficult, and highly subjective process. Partially, this is because these constructs operate on several levels, e.g., organizational, sub-cultural, and individual, or artifacts, espoused values, and underlying assumption. Nevertheless, assessment must be done, and done well in order to determine the cultural gaps and fit of the school to the proposed school improvement and improvement process. (p.21)

Thus, careful considerations regarding matrixes, measurements, and instrumentation should be made by principals when including school climate data in the DDDM process, as part of strategic planning for school improvement.

School climate research may be categorized as non-experimental, or ex post facto research (Hoy, 2010). Non-experimental research can best be described as “systematic
empirical inquiry in which the researcher does not have direct control of the independent variable because the variable has already occurred” (Hoy, 2010, p. 17). For example, the study of school climate “typically involves measuring the property in existing schools and not manipulating climate to produce a wanted type” (Hoy, 2010, p. 17). As a result, school climate data may be collected without conducting experiments. Instead, existing data are collected and analyzed to better understand the organization as it already exists.

Accepted approaches of measuring and assessing climate are plentiful. School climate can be assessed using quantitative, qualitative, or mixed methodologies, and may be measured directly or indirectly (Freiberg & Stein, 1999). Direct measures of climate can include, but are not limited to, the use of classroom observations, climate surveys, focus groups, journal narratives, interviews, student drawings, and videotaping (Freiberg & Stein, 1999). Indirect measures of climate can include:

…existing data sources, usually records that are kept by the teacher school or local education authority, including attendance records of students and teachers; visits to the nurse’s office (these are effect measures of student stress levels); discipline referrals to the office; suspensions and expulsions; teacher and administrator turnover rates; student achievement; student mobility rates and the like. There are other types of indirect measures including an analysis of the physical presentation of the building, hallways, and classrooms. (Freiberg & Stein, 1999, p. 23)

Whether direct or indirect measurements are taken, the task of collecting climate data is complex and can encompass almost every aspect of the school organization. While this
task may seem overwhelming, principals may choose to focus on particular areas of a school’s climate, such as the perception data of particular groups. Thus, principals may also choose to limit the inclusiveness of the measures, which may be used to analyze for their particular change needs.

School climate data and research vary depending on the aspects of the organization that are being measured (Anderson, 1982). For example, early measures of school climate included “four dimensions (ecology, milieu, social systems, and culture)” (Anderson, 1999, p. 369). Contemporary literature on school climate data includes the measurement of areas such as “safety, relationships, teaching and learning, and structure of the learning environment” (Hopson & Lawson, 2011, p. 107). The National School Climate Center (2013) recognizes the “social, emotional, civic, and intellectual” aspects of student learning in regards to the measurement of school climate (NSCC, 2013, “Promoting a Positive School Climate, and Social, Emotional, Ethical, and Civic Learning,” para. 1). While the variables included in the measurement of school climate may vary, “most researchers agree that outcomes stem from the combined characteristics of interacting variables” (Anderson, 1982, p. 382). However, “the difficulty comes in choosing the variables that best explain climate” (Anderson, 1982, p. 382). Some research and data on school climate include more subjective variables, which includes “easily measurable organizational attributes such as size, structure, and finances” (Anderson, 1982, p. 382). Other constructs of school climate remain “more abstract” and “findings in turn are harder to compare because the variables and constructs are not necessarily operationalized in the same way” (Anderson, 1982, p. 383).
In order to better control for the multitude of variables and aspects which are included or excluded when considering school climate data, causal models can be used or developed (Anderson, 1982). However, “The concept of climate with causal links must be specified before it can be operationalized or measured” (Anderson, 1982, p. 384). The difficulty for understanding or developing causal models may be attributed to the multitude of ways in which variables associated with school climate are always interacting (Anderson, 1982). Depending on the combination of variables measured by any particular model, the results of such measurements may “lead to different substantive conclusions,” even if the data were collected regarding the same school organization (Anderson, 1982, p. 384). Furthermore, “many researchers believe that the influences on school climate and outcomes are not one-way,” and that most climate variables are both “dependent and independent” (Anderson, 1982, p. 385). However, the degree and type of relationships that variables have with one another and whether these variables occur simultaneously, remains critical for understanding and establishing reliability of school climate data.

Those posed with the task of collecting climate data have a variety of tested instruments to use or they may elect to create their own instruments, in order to best fit the specific characteristics of a needs assessment for their organization. There remains a multitude of valid and accepted instruments, developed in the past few decades, which measure different aspects of school climate (Anderson, 1982; Hoy, Smith, & Sweetland, 2002). One of the first widely accepted instruments measuring school climate was created in 1963 by climate study pioneers Halpin and Croft. The Organizational Climate
Description Questionnaire (OCDQ) has been used for a considerable period of time (Anderson, 1982; Hoy et al., 2002). Later versions of the OCDQ were created for measuring school climate, such as the OCDQ-RE for elementary schools, OCDQ-RM for middle schools, and the OCDQ-RS which was developed specifically for secondary schools (Hoy et al., 1991). These instruments are used to pursue an understanding of the level of openness of a school’s climate, with open climates being preferred to those of closed organizational climates (Hoy et al., 2002).

The Organizational Health Inventory (OHI) was developed to understand the health of an organizations. The Organizational Health Inventory (OHI) is based in part on Miles’ 1969 metaphor of health and well-being in organizations (Hoy, Tarter, & Kottkamp, 1991). The OHI seeks to measure the health of a school’s climate. In a healthy school climate, the administrators, staff members, and students pursue the needs of the organization. Currently, there are three versions of the original OHI. They are respectively the OHI-E, OHI-M, and OHI-S for elementary, middle, and secondary schools. Climate research specialists Hoy, Smith, and Sweetland (2002) later developed the Organizational Climate Index (OCI), which combined elements of both the OCDQ and OHI. The OCDQ, OHI, and OCI all employ Likert-scales and are used primarily as survey instruments, collecting what Freiberg and Stein (1999) categorized as direct measurements of climate. However, school climate measurements are not limited to these instruments. Alternative methods of collection remain plentiful for the purpose of gaining an understanding of the range of variables and causal models associated with school climate data.
In the state of Ohio, the ODE has recommended guidelines for collecting and using school climate data. According to the ODE:

While these guidelines target building and district administrators, they also can be useful as springboards for policy discussions with staff, students, parents, school boards and other community members. Use of the guidelines is voluntary, and policies that are established from these guidelines will be developed by local school boards. (Ohio School Climate Guidelines, 2013, “Ohio School Climate Guidelines,” para. 2)

In addition to the recommended guidelines, the ODE offers recommendations regarding their implementation. When instructing schools on the collection of school climate data, the ODE offers examples of direct and indirect forms of collection and recommends that schools seek the assistance of the National School Climate Center (NCSS) for “school climate surveys, a newsletter, professional development, research and guidance on policies and practice” (Ohio School Climate Guidelines, 2013, “School Climate Guidelines and Guidance”).

The National Association of Secondary School Principals (NASSP) encourages principals to use the Breaking Ranks Comprehensive Assessment of School Environment (CASE) survey to provide a “meaningful way to bring staff, students, and parents into a collaborative school improvement process” (National Association of Secondary School Principals, 2013, “Tools for School Improvement,” para. 1). The survey provides principals with data related to school climate including “stakeholder satisfaction, perceived strengths and weaknesses of the school, and areas for future improvements”
School climate surveys, in the high schools of the district which was studied, have been distributed to families, students, and teachers for the past nine years. Originally the family, student, and teacher surveys were distributed by the district as early as 2005. Beginning in 2013, the teachers’ association (union) in the district became responsible for the distribution and collection of data for the teachers’ school climate survey. The district has continued to oversee the outcomes of the family and student climate surveys, including their storing and archiving. These data are publicly available upon request, but have not been published. As previously mentioned, results from the family and student surveys are given to each principal by the district, but there are no mandates that principals use the data for any particular reason.

A reliable source regarding the origin and basis of the development and administration of the family, student, and teacher climate surveys has not been identified. However, an interview with a district official responsible for overseeing the current family and student surveys, revealed that the survey instruments have changed slightly from year to year since their inception. Beginning in the 2012-2013 school year, the family and student surveys changed more dramatically from those used in previous years. The 2012-2013 family survey instrument, which is still currently in use, was developed using federal Race to the Top funds in conjunction with input from The Ohio State
University’s Center for Learning Excellence. The district then added demographic questions that have been placed at the beginning of the family surveys. The revised student surveys, which were initiated in the 2012-2013 school year, were created by the American Institutes for Research (AIR). The instrument was adapted from AIR’s Conditions for Learning survey. As with the family survey instrument, the district added demographic questions to the beginning of the student surveys. These revised student surveys, which are still in use, allowed for expanded data collection as more grade levels were surveyed than in the years prior to the 2012-2013 school year.

In the past, the district distributed the family surveys through the mail with return envelopes. Due to the increasing costs of this form of distribution, the family surveys were made available for one year only via an online process. After a low response rate to the online family surveys, the district began, in 2012, to distribute paper copies of the survey through individual schools. Each building principal was able to decide the manner in which the family surveys were distributed. Some schools elected to mail paper copies of the surveys home with grade cards, others distributed them to students in class to take home, and some schools dispensed them at school events such as parent/teacher conferences and open house sessions.

The current family surveys are still distributed in this manner, with school principals deciding on the manner to dispense them. However, beginning in the 2012-2013 school year, families could make the choice of completing the surveys electronically or using the paper copies. Families wishing to take the survey electronically, are given instructions on the paper copy of the survey to use an URL
address link or to scan the QR code to complete them. Families choosing to use the paper copies must return the completed surveys to the school, rather than through a direct electronic online submission. The district’s accountability and data departments, which oversees the collection of the survey data, have expressed that they prefer distributing the surveys only through the mail, as was done in the past. This is because each survey was coded, thus allowing for control over duplicate submissions.

The current family surveys are offered in three languages: English, Somali, and Spanish. The surveys have a total of 32 questions. The first five questions make inquiries related to demographic information. These questions request information about: (a) annual household income, (b) the relationship of the person completing the survey to the student(s), (c) the respondents’ race/ethnicity, (d) the number of persons living in the household, and (e) the number of adults living in the household. Next, the respondents are requested to address 27 items, with Likert scale ratings. These items pertain to: (a) the family’s perception of the school in relation to home and school communications, (b) parental involvement with the school, (c) satisfaction with the teaching and instructional practices of the school, (d) satisfaction with academic support, (e) requested involvement in decision making at the school, (f) availability of information for community services such as adult education, health, mental health, and utilities, (g) the safety and friendliness of the school environment, and (h) respect for the students’ cultures and diversity.

The student surveys are given to students throughout the district in Grades 2 through 12. There are five different versions of the student school climate survey which exist. One survey is for Grades 2 through 5, a second is for middle school students in
Grades 6 through 8, and a third student survey is for high school students in Grades 9 through 12. Students in Grade 12 respond to the items included on the high school survey, with an additional seven questions. These additional questions for Grade 12 inquire about internship opportunities, post-secondary preparedness and plans, as well as the students’ overall experience with the district. The fifth student survey is given to high school students at the vocational schools. This survey includes the items on the other high school survey, along with some additional questions specifically focused upon their vocational training experiences.

Each of the five student surveys begins with questions related to general information and demographics about the students. The surveys solicit responses regarding: (a) what grade the students are in, (b) the respondent’s sex, (c) the respondent’s ethnic/racial group, and (d) the respondent’s general academic performance. The surveys for students in Grades 2 through 5 are 27 questions long. Elementary students are given a Likert scale of no, sometimes, and yes as their possible responses to the item statements. The item statements pertain to the students’ views on: (a) the fairness of teachers and school staff, (b) the safety of the school, (c) respect between students, (d) the degree of difficulty of their studies, and (e) the level of interest they have in the content being taught.

Student surveys for Grades 6 through 8 includes 29 items, the survey for Grades 9 through 12 includes 65 items, the 12th Grade surveys have an additional 7 questions, and the surveys for vocational students has 70 items total. The student surveys for Grades 6 through 12 and vocational students are given a somewhat more detailed Likert scale.
which allows them to respond to item statements by choosing from strongly disagree, disagree, agree, and strongly agree. Students in Grades 6 through 8 are given item statements to rank concerning: (a) their safety at school including school violence, (b) teacher and staff performance, (c) the relationships between students, (d) homework, (e) the degree of cheating, and (f) the opportunity to share their problems with adults. The students in Grades 9 through 12 are given statements to rank concerning: (a) school safety such as bullying and fighting, (b) teacher performance such as the quality of feedback and the availability of extra help, (c) the degree of difficulty of school work assigned and the availability of academic enrichment programs such as Advanced Placement (AP) class offerings, (d) the relationships among the students in the building, and (e) college preparedness and readiness. The surveys for students attending vocational schools have additional item statements that relate to: (a) the confidence levels of students to obtain job placement in their career fields, (b) the adequate equipment in their programs and the facilities for training, and (c) the learning of skills which are transferable to the expectations of the work place.

Both the family and student surveys are typically distributed between February and May. Recently there has been pressure from the district office overseeing the surveys to distribute them earlier in the school year so that the data can be complied and used during the current school year. However, there remains resistance from some district officials to giving the surveys so early in the school year, as giving surveys too early would possibly affect the validity of the results. Results from the family and student
surveys are given to the principals, but any specific use of the data, as previously mentioned, is optional.

As of the 2012-2013 school year, the teacher climate surveys, which had previously been distributed by the district, were instead administered by the teachers’ association (union). The decision for the union to oversee the distribution of the teachers’ survey was made when the union was able to technologically support the endeavor, rather than relying on the district for their access to certain technological resources, which were necessary to distribute and analyze the surveys. The teachers’ association (union), in agreement with the district, added the distribution of the annual climate survey to their master agreement in 2011, to begin during the following school year. The addendum to the contract stated that teachers in each school would evaluate: (a) the co-curricular programs, (b) democratic procedures, (c) the professional environment, and (d) teacher involvement. Furthermore, teacher surveys would be used to collect school climate information in February, and the results from the surveys would be given to the school principals, staff, superintendent, and union office no later than April of each year. The new teacher surveys also allow for written comments from teachers. According to the revised contract, the teachers’ association (union) was also responsible for safeguarding the responses to ensure anonymity of the respondents. The teachers’ association (union), in this particular district, distributes the survey electronically through a secure online program.

The teacher school climate survey instruments, beginning in the 2012-13 school year, were changed from those previously used by the district to survey teachers. Instead,
the union developed their own instruments when they also took control over the
distribution and analysis of the survey results. The surveys use a scale for Likert item
statements concerning: (a) the school’s vision, (b) maintenance of school facilities, (c) the
behavior of students, (d) sexual harassment, (e) school safety and violence, (f) staff
morale, (g) administrator-teacher relationships, (h) teacher accountability, (i)
administrative feedback for teachers, (j) the fairness of evaluations, (k) the adherence of
administration to the teachers’ contract, (l) teacher in-services, (m) decision-making, (n)
the availability of resources and instructional materials, (o) the availability of technology,
(p) staff meetings, (q) the reduction of paperwork for teachers, (r) the discipline for
students, (s) the communication between administration and staff, and (t) community and
family involvement in the school. The 2012-2013 version of the teachers’ survey is still
currently used by the teachers’ association (union).

Principals are provided by the district with summative data from the results of the
family, student, and teacher surveys in a spreadsheet format. For each survey item, the
principals are provided with the percentage of responses according to the Likert scale.
Additionally, the district average for all schools is displayed next to the results of the
particular school being reported. Finally, an average score for each response is provided
This average score is created by assigning a numerical value to each of the Likert scale
intervals (for example: strongly agree=5, agree=4, undecided=3, disagree=2, and strongly
disagree=1). Results from the student surveys are reported using disaggregated data by
each grade level. The results are also reported as aggregated data for all grade levels
combined within the school buildings. The rate of return for the family, student, and teacher surveys is also reported.

**Criticisms to school climate data.** Some criticism, according to the literature, remains regarding the significance and functionality of including school climate data as part of strategic planning for change in school improvement initiatives, especially with the lack of educational mandates and conceptual models for such data (Hopson & Lawson, 2011). Variables which influence school climate may not necessarily be attributed to or a direct result of internal school variables (Anderson, 1982). For example, students’ backgrounds may influence their perceptions of internal aspects of the school organization. However, these external variables may affect the outcomes measured by school climate instruments. Because schools are open-systems, internal and external variables influence their climate data (Burke & Litwin, 1992). Thus, some principals may choose to exclude the use of school climate data because some school-based initiatives seek to improve only upon variables controlled within the school organization. In fact, some of the external influences which influence school climate may be viewed as being out of the scope of change for which the school is empowered to make.

Another criticism to climate data includes the subjectivity of “individual perceptions” (Anderson, 1982, p. 386). Personal attributes such as “previous experiences, needs, and values” may not be independent of perceptions measured concerning a school’s climate (Anderson, 1982, p. 387). Additionally, it remains unclear “whose view of a school’s climate is most accurate” (Anderson, 1982, p. 387).
Perception data remains largely qualitative and those with similar perspectives may have amassed such views through widely different experiences, perhaps related or unrelated to any particular interactions with a school. Therefore, this type of climate data is non-linear, and would not follow the input-output theory of school climate.

An additional criticism to the use of climate data, especially as it relates to planned change for school improvement, includes the argument that:

Although a few critics question the importance of climate and culture in the school improvement process, some have questioned whether it is feasible to change an existing climate and culture. The majority of the authorities in the field, however, recognize the pivotal role that culture and climate assumes in large-scale organizational change and contend that climate and culture can be shaped through careful assessment, planning, and administrative actions. (Beach & Lindahl, 2007, p. 37)

When compared to the task of improving other NCLB mandates, such as increasing test scores or graduation rates, the creation of a positive climate may be more difficult (Hopson & Lawson, 2011).

In order to address the criticisms associated with attribution issues, climate variables, and the subjectivity of some climate data, more objective variables associated with school climate may be needed (Anderson, 1982). Objective variables could include measuring quantitative environmental factors such as class size, gender ratios, or the socioeconomic make-up of a student population. However, by narrowly measuring school climate through such objective variables, researchers may negate the collection
and use of other school climate variables which are critical contributors to understanding a total organization. Rather than limiting the variables used to understand school climate, variables can be isolated using “large-scale regression analysis surveys” (Anderson, 1982, p. 384). However, this approach may “assume that each variable entered into the equation is independent and cumulative in its effect” (Anderson, 1982, p. 384).

Additionally, causal models for school climate, especially those associated with perception data, can be applied to identify more clearly and account for multiple variables (inputs) affecting results (outputs). Causal models may not only allow for a better understanding of variables affecting school climate data, but also the relationships between such variables (Anderson, 1982).

With evidence that climate impacts student achievement and that strategic planning using DDDM can improve school improvement initiatives, the use of school climate data appears beneficial (Hopson & Lawson, 2011). While climate data are not mandated by federal NCLB accountability measures or state measures in Ohio, they can assist principals in the change process, especially when attempting to identify and understand the current needs of the school organization (Hopson & Lawson, 2011). While the internal climate of the school may be influenced by a mixture of forces, the information from such data can lead to positive changes. Although not all external variables and forces, which contribute to the climate, can be affected by the school itself, simply understanding these factors can aid in the development of more comprehensive SIPs (Hopson & Lawson, 2011).
Summary and Conclusions

School accountability matters have become primary focuses for many schools, since the implementation of the NCLB legislation (Ewy, 2009; McDermott, 2003; McDonnell, 2005). With the implementation of federal regulations on school performance, states have adopted accountability measures to meet federal AYP standards (Peterson & Young, 2004; Porter et al., 2005). The state of Ohio, in compliance with the federal government, has developed a system of mandated data collecting and reporting in which students’ attendance rates, graduation rates, and state-mandated standardized test scores are utilized to identify and designate school effectiveness. Local districts and schools are responsible for reporting such data and for demonstrating continuous improvement. To ensure that the goals, which have been established by the responsible federal and state agencies are met, some principals engage in planned change initiatives for school improvement (Fernandez, 2011). Plans for such change are developed at the schools and the principals are significantly involved in forming these plans for improvement (Isernhagen, 2012; Starr, 2011).

Principals can have significant roles in school organizations and may be central figures for organizational change. Their leadership can affect student learning, influence school climate, and may ultimately affect achievement outcomes, such as those measured by federal and state standards (Hallinger & Heck, 1996; Kelley et al., 2005; Lee et al., 2012; Petersen & Young, 2004; Sweeney, 1982; Waters et al., 2004). Principals may also participate in the creation of strategic plans to initiate and implement change in their schools, which are often developed in the form of SIPs (Fernandez, 2011). Such plans
may be used to enact change for continuous improvement and may be influenced by the various leadership approaches of the principals and the degree to which they engage in strategic leadership, especially during the planning process.

One of the primary steps in strategic planning includes organizational needs assessment (Davies, 2003). In order to determine possible needs and areas of improvement for school organizations, principals may collect and compile data that can be used when they engage in the provision of leadership for the DDDM process (Lange et al., 2012). Through the use of data, principals may then understand the needs and overall health of schools (Hoy & Feldman, 1999; Hoy et al., 1990), the context in which schools exist (McClelland, 1995), and the capacity of schools to engage in change initiatives. The way in which principals engage in the DDDM process may be highly individualized, and the types of data which are used during this process are not necessarily always mandated. For example, principals may make determinations as to which data sets are included or excluded in the DDDM process when creating SIPs. Principals may elect to focus only on mandated data sets or may choose to collect and use additional data. Additional data sets could include the use of school climate data, although some principals may tend to focus only on mandated data (Hopson & Lawson, 2011; Lange et al., 2012). However, research has shown that a variety of data should be used to best accomplish a comprehensive needs assessment when engaging in the DDDM process (Bernhardt, 2004; Ehren & Swanborn, 2012; O’Day, 2002).

School climate remains a significant factor in student achievement (Anderson, 1982; Bulach et al., 1995; Goddard et al., 2000; Heck, 2000; Hoy et al., 1998; Kelley et
al., 2005; Lindahl, 2011; Stevens & Sanchez, 1999) and organizational success. While these data sets are not mandated by federal or state agencies, using school climate data can aid principals in creating effective plans for change and continuous improvement (Hopson & Lawson, 2011). It remains unclear, however, if school principals are including school climate data during strategic planning, especially during needs assessment and the DDDM processes. However, “school improvement planning needs to be informed by ecological data related to school climate, because these data illuminate the processes within students’ environment that impede or support healthy development and student success” (Hopson & Lawson, 2011, p. 107).

In regards to the DDDM process for school improvement, there remains a “lack of empirical research on the topic, especially from principals’ perspectives” (Lou, 2008, p. 604). This study represents an attempt to contribute to the body of literature about principals’ use of data, specifically climate data, for the purpose of inclusion in the DDDM process when creating SIPs. The study will endeavor to ascertain if school climate data are used by principals when planning for change and school improvement and will specifically examine the manner in which such data are used. Such knowledge may result in an enhanced understanding of the utilization of school climate data, the roles of principals as change agents, the school improvement processes, the use of non-mandated data sets, the DDDM process, leadership approaches used by principals, and strategic planning in schools.
Chapter 3: Methodology

Introduction

The focus of this study has been an investigation regarding the use of climate data by school principals, coupled with an examination of the use of the data for school improvement planning. For example, the use climate data for improvement planning was investigated. The objective of this study was to attempt to address the following research question and sub-questions:

Question: What are the perceptions of the high school principals in the Ohio district of this study regarding to the formal use of climate data, particularly as they pertain to school improvement planning?

Sub-questions:

1. Do the principals use climate data, when they are available, for the purposes of creating and implementing change and school improvement, specifically when creating SIPs?

2. If the answer to question # 1 is yes, in what manner and to what extent are the school climate data used?

3. If the answer to question # 1 is no, what are the reasons that principals offer for not using available climate data when creating SIPs?

4. What values do principals express that they associate with the use of the climate data, especially as it relates to school improvement planning?

5. What are principals’ experiences with school climate data in general?
In order to explore the research question and sub-questions, a qualitative research design was used. The design seemed appropriate for this study, as this method complements a pursuit of the experiences of the participating principals regarding the phenomenon under study (Roberts, 2010). Semi-structured interviews with open-ended questions were used to gather data regarding the phenomenon. Next, the responses were analyzed through an emergent coding system in an attempt to recognize possible themes or patterns (Creswell, 2009). A classification coding system was developed in order to create a coding table for further analysis and display of the participants’ responses. This coding table included each interview question, each participants’ response, and the appropriate codes, sub-codes, and the identification of outliers. Next a codebook was developed, which contained the codes and sub-codes for each questions, code and sub-codes descriptions/meanings, raw data examples, and the frequency of such responses (Roberts, 2010). A constructivist approach to the data was used, as the participants’ responses were applied to generate possible understanding and theories regarding their experiences (Creswell, 2009).

Anticipation existed that the information gathered from the participants would lead to insights regarding the ways in which school climate data may be utilized for the purposes of school improvement planning. Knowledge was gained regarding specific methods in which school climate data are used by principals for such endeavors. The study also revealed the perceptions regarding the significance or non-significance of school climate data, as viewed by the participating principals. Additionally, perceptions on mandated and non-mandated data sets, in general, were revealed by school principals.
The data that were collected also allowed for an increased understanding of the Data-Driven Decision Making (DDDM) process, which is sometimes used during strategic planning activities for school improvement.

This chapter of the dissertation includes a description of the qualitative methodology used to investigate the research question and sub-questions. First, the chapter begins with an introduction which includes an explanation of the research design and methodology. Next, a personal biography of the researcher is given. Then the site and participants of the study are described. The description is followed by an explanation of the data collection and analysis procedures that were used. Trust and ethical considerations are also discussed. The chapter concludes with a summary of the research methodology.

**The Researcher- Personal Biography**

As a former high school teacher, the pressure of accountability mandates was recognized as influencing daily instruction. Some of the administrators with whom I worked emphasized the importance of improving mandated test scores to ensure compliance with district, state, and federal standards. While increasing student achievement appeared to be a worthy goal, the best way to address the objective remained unclear. Mandated data sets were often examined to identify areas of deficiency, and plans for corrective action were made. However, significant factors contributing to student successes and failures were overlooked and not addressed, especially when the focus was on limited mandated data sets. While such data sets assisted in identifying some of the areas which needed improvement, the reasons that
these deficiency existed often remained vague or were not completely addressed. Without a more complete picture, planning for change, which would result in substantial and lasting improvements to student achievement levels, remained a barrier.

During my tenure as a classroom teacher, I began to observe the multitude of factors which could contribute to individual student successes and failures. Many of these factors were not evident simply by examining mandated data sets. For example, the ways that the students felt about their school community often contributed to the levels of achievement levels that were pursued and obtained. The views of their parents and families of the school organization also played a role in the students’ achievement. Teachers’ attitudes and perspectives of the school environment appeared to influence the levels of achievement of the students. Overlooking these factors, which are often encompassed in school climate data and are not part of mandated data sets, left an exceedingly large gap in the knowledge needed to make changes which would result in real progress for student learning.

One example of the importance of climate data includes a rather typical approach used by the principals in the district under examination to identify areas which need improvement. Mandated Adequate Yearly Progress (AYP) data sets indicated that many students did not attend school regularly and standardized test scores showed that a significant number of students failed to reach state required proficiency levels. However, by examining only the mandated data sets, a complete explanation regarding the reasons that regular attendance and poor test scores were an issue for students in this particular school, remained vague. As a teacher who personally worked and conversed with
students, I observed that some students expressed that they perceived the school as an unsafe place. Other students indicated that they did not like the school or did not feel that education was important or of value to them. Therefore, many students did not want to come to school on a regular basis. For some students, poor daily school attendance then led to struggles with achievement, and ultimately some of these students failed their classes. These students also had difficulty in passing mandated high-stakes tests. Additionally, some of the students’ parents and families expressed that they did not perceive consistent school attendance as a significant contributing factor to student success, and therefore did not encourage their students to attend school regularly.

While the mandated data sets alerted the administrators to the issues of poor attendance and low test performances, the data were incomplete regarding the reasons that the problems existed. Without knowing the perceptions of the students and of some of their families, the basis of the problems associated with poor attendance and low test scores could not be addressed. Plans for change were not successfully created since the root causes of the problems had not been identified. In this instance, school climate data may have significantly influenced the understanding needed to create meaningful plans for change which could improve student achievement.

When teaching in public schools, I personally experienced a multitude of change initiatives, which had the end goals of increased student achievement. These proposed plans for change, which had been proposed by governmental agencies, appeared to have been created without an understanding of the factors which influence the critical stakeholders in a school’s community. The plans often identified problems using
mandated data sets. However, the plans failed to include the possible contributing causes and in what contexts the problems existed. Additionally, the proposed implementation of such plans sometimes overlooked critical factors, which needed attention in order for success to be a more likely outcome. In other words, the plans lacked contextual information which may have been needed for successful implementation. Furthermore, some of the change initiatives, which were eventually enacted, resulted in decreases rather than increases in student achievement. In fact, these plans appeared to have been created without complete knowledge of the communities, families, schools, students, and teachers which they sought to aid. While demographic information may have provided some insights to the educational policy makers, the true inner-workings of the school environment seem to have been excluded from the planning process.

After personally experiencing a teaching climate which is data-driven, I find great importance in more fully understanding the possibilities of using data to increase student achievement. In organizations as complex as schools, individual voices, such as those of families, students and teachers, may often be overlooked. One possible way to give voice to stakeholders, who may influence achievement outcomes, is through the use of school climate data. Climate data may add an ecological understanding which is needed to make effective plans for organizational change. While mandated data sets may be necessary to assist in quantifying the effectiveness of schools, the use of such data appears to remain limited. By including multiple data sets, a more meaningful picture of the effectiveness of schools can be created. While end results such as test scores and graduation rates undoubtedly contribute to an understanding of school success and can aid in informing
the public of the situation, these data sets may give incomplete, and in some cases, false
information for an effective assessment of school achievement. Furthermore, by
including school climate data in the planning process for school improvement, a useful
plural perspective may be gleaned. By including stakeholders’ perceptions, a more
democratic change process may occur in which positive results could emerge in schools.

School leaders, such as principals, may be on the forefront of including school
climate data when making decisions regarding planned change. With increased site-
based management in some school districts, principals may be the most likely
stakeholders to use and benefit from the inclusion of school climate data, especially when
creating plans for continuous improvement. While including climate data as part of
mandated data as required by the federal and state governments seems unlikely in the
near future, better understanding of the use of such data at the school level could be
useful. In fact, a goal of this study is that a recognition would emerge that an increased
understanding of the value of the use of climate data would lead to improved education
for students.

Site and Participants

For this study, selected sources for the collection of information were used.
Collection sites for data were focused to ensure that all the participants were describing
their experiences regarding the specific phenomenon under study. Purposive sampling
was employed, as participants were encouraged to provide specified information
regarding their personal experiences. The approach was used to nurture the possible
obtainment of an enhanced understanding of the specific experiences of the participants.
in this study and thus would aide in fulfilling the objectives of this study regarding the research question and sub-questions.

An Ohio district was chosen for this study. Accountability systems differ from state to state. Additionally, “many scholars have identified broad cultural and political ways in which the states differ from each other” (McDermott, 2003, p. 157). Therefore, only one state was selected. In addition, the researcher has had considerable experience working within the district being studied. Furthermore, data collection sites of this study were focused on specific high schools in the district under study. The school district under study was also chosen because it is a large district, the size of which allows for a greater number of possible participants to be interviewed. The district was selected as the district and the teachers’ association (union) annually collect district-wide school climate data using surveys for families, students, and teachers. Finally, the particular district under study was selected because each principal is required by the district to create an annual SIP.

For this particular study, purposive sampling procedures were employed. Each of the selected possible participants met the following criteria, which are within the phenomenon for this study:

1. Work in the school district under study,
2. Is a high school principal in a traditional high school,
3. Has been provided with school climate data by the school district and teachers’ association (union),
4. Is required to create annual SIPS.
Only high school principals, who oversee traditional high schools, were included in the study. High school principals, rather than elementary or middle school, were selected. The high school principals are expected to address uniform high-stakes accountability measures from state and federal mandates regarding school improvement. While elementary and middle school principals contend with state and federal accountability mandates and measures, high school principals may approach school improvement differently as they have more indicators to meet on Ohio’s state report card, including the specific pressure to be attentive to graduation rates. In addition, student climate surveys for elementary and middle schools in the district have been limited, specifically in regards to the depth of information which is pursued and obtained. Therefore, elementary and middle school principals have not had access to detailed school climate data for their schools in the same ways that have been had by the high school principals.

The school district had, at the time of the study, a total of 22 high schools. Of the 22 high schools in the district, 12 are considered to be traditional. Traditional high schools include schools which serve only Grades 9 through 12 and are not vocational, arts-focused, or alternative schools. Excluded from the study are 10 high schools which are considered non-traditional. The non-traditional high schools include schools which serve students in Grades 7 through 12 in a single building, vocational schools or arts-centered schools, schools designed specifically for students who do not report English as their primary language, or are considered alternative schools. These non-traditional high schools were excluded from this study, as they have different federal and state school
improvement mandates. For example, some non-traditional schools’ state issued report cards use alternative AYP calculations. Therefore, a relatively strong possibility appeared to exist that the principals in the non-traditional high schools may use different approaches when creating SIPs and therefore may consider school climate data differently, as the degree of high-stakes school improvement is different in these schools from traditional high schools in this district. Additionally, some of the non-traditional high schools, such as vocational schools, use different versions of the student school climate surveys, thus giving these principals different climate data sets to use when creating their SIPs.

By focusing the study on traditional high school principals, the researcher was better able to control for the variables of the school climate data that the principals are provided, as different school climate data sets may lead principals to use such information differently when creating SIPs. Additionally, principals of traditional high schools in this particular district, experience identical state and federal accountability mandates and measures. In other words, the use of these principals controlled for the variable of principals creating SIPs for different expected school improvement outcomes. Therefore, a possibility of 12 participants were considered for participation in the study. It was a goal of the study that this sample would allow for generalizable findings to be produced.

Data Gathering Methods and Procedures

The researcher in this study, as with many qualitative studies, is a key instrument used to collect data from participants (Creswell, 2007). The researcher’s role was to
conduct semi-structured interviews with building principals, collecting detailed notes from the participants’ responses. The researcher also ensured the responses, offered by the participating principals during the interviews, were maintained in a confidential manner. It was an objective of the researcher that rich-descriptions in relation to the research question and sub-questions would emerge from the interviews which were conducted. The researcher collected detailed responses through guided interview and follow-up questions to ensure that complete and thorough information was gathered.

This research study was conducted using semi-structured interviews. The research question and sub-questions were used to create guiding questions which were utilized to conduct the interviews. The questions were open-ended, which allowed for the researcher to ask follow-up and clarifying questions when necessary. By using open-ended questions, the participants were able to describe their experiences regarding the usage or non-usage, of school climate data when creating annual SIPs. Because there is no standardized or mandated manner in which school climate data can or should be used for such purposes, participants were able to describe their unique experiences and perspectives regarding the research question and sub-questions.

Formal permission was obtained from the district in order to perform the study (See Appendix D). After the requested consent was secured, perspective participants were informed, via email, of this study and the desire to include their insights through interviews (See Appendix A). The recruitment email to perspective participants discussed in general the topics which would be discussed during the interviews, as well as the purpose and relevance of the study. Follow-up emails and phone calls were also
made to ensure that the prospective participants were aware that information regarding the study had been sent to them and that their participation in the study was desired. Once participants had made an initial agreement to participate in the study, copies of informed consent forms were sent so that they could review the materials prior to the interviews (See Appendix B). The review provided the participants with an opportunity to contact the researcher with any questions or concerns before the initiation of the interviews. Next, the researcher scheduled interviews with principals, to take place within their respective schools. Once the interviews were scheduled, the researcher began to conduct them with each participant at their respective schools. Guiding interview questions, which had been generated prior to the onset of the interviews, were used to conduct the interviews (See Appendix C). Because these were open-ended questions, the researcher found it necessary to include follow-up questions, outside of the guiding questions when clarification was needed.

For the interviews, school climate data referred only to the formal data, which the principals are provided by the school district and teachers’ association (union). Formal school climate data included the responses provided by parents, students, and teachers on the surveys, and did not include additional school climate information collected from alternative and informal sources. However, some interview questions addressed school climate more generally or referred to informal school climate data. During the interviews, the researcher clarified when formal or informal school climate data were being discussed. The researcher informed the participants when referring to the specific climate data, which they had been provided by the district and the teachers’ association
For the purpose of this study, school improvement planning referred only to activities associated with the formal SIPs, which the district mandates that each principal completes annually for their particular school. The researcher communicated to the participants that the term “School Improvement Plan (SIP)” referred only to this specific document. In cases when the principals were new to their school buildings, but were not new to the school district, or had not received school climate data for the current year, and/or had not completed their mandated annual SIP, inquiry was made into their past experiences as high school principals in this particular district. This was necessary as principals tend to move or be placed in different high schools from year to year or within the same school year, even though these principals would be provided with climate data and would be required to complete the mandated SIP, regardless of which school they were overseeing.

Guiding questions were used to conduct the interviews. However, the researcher asked for clarifications and examples when necessary to understand the participants’ responses. For example, principals, who indicated that they did not use the formal school climate data provided to them by the district and teachers’ association (union), were asked if they instead used informally collected school climate data for the purpose of creating SIPs. This approach helped in gaining an understanding of the perspectives of the principals regarding the formal school climate data which had been provided. Also, principals were asked to describe any other related experiences with school climate data. The responses offered by participants allowed for the obtainment of a better
understanding regarding the reasons that the principals chose to use or not use the school climate data, as well as their perceptions of the usefulness of climate data.

In the district under study, current organizational issues made privacy for the participants to be important and for that matter to increase the likelihood that perspective participants would agree to partake in the study. For this reason, interviews were not tape recorded. Instead notes were taken by the researcher, in anticipation that the participants would be more likely to express their true beliefs, which would further the objective of the study. While tape recording the interviews may have increased the thoroughness in which participants’ responses were documented, concerns and efforts to promote authentic and honest responses from the participants were considered to be achieved best without tape recording. Therefore, the interviews were not tape recorded in order that the study likely benefit from authentic responses. Instead, the researcher took notes on a laptop. To ensure that the participants’ responses were accurately recorded, the researcher reviewed and verified the notes with the participants during the interview process. The researcher checked with participants to ensure that responses had been correctly quoted, as well as to confirm that the correct intent and meaning of the responses had been recorded by the researcher. Additionally, a summary of the interviews were verbally reviewed with participants at the conclusion of the interviews. Providing these member checks allowed another chance for participants to add any information that they wished to communicate and to clarify any specific points which were made during the interviews. Member checks also increased assurances of “the accuracy on the descriptions, explanations, and interpretations” of the participants’ responses as noted by
the researcher (Brantlinger, Jimene, Klinger, Pugach, & Richardson, 2005; Miles, Huberman, & Saldana, 2014, p. 58).

**Data Analysis Procedures**

Once the data had been collected through the interview process, the initial coding cycle was used to apply descriptive codes to the participants’ responses. This was accomplished by manually analyzing responses to each guiding interview question. A coding table was created with each interview question, each participants’ responses, the codes, the sub-codes, and the identification of outliers. When necessary, these codes were broken into sub-codes, depending on the codes which emerged. Sub-codes were used in cases where initial code schemes appeared to become too general (Saldana, 2013). From this table, a further coding system was created, which followed patterns that emerged from the participants’ responses. During this initial coding cycle, a separate codebook was created by the researcher to record emergent codes and sub-codes. This codebook contained a “compilation of the codes, their content and descriptions, and a brief data example for reference,” as well as the frequency of the codes and sub-codes (Saldana, 2013, p. 25).

Throughout the first coding cycle, descriptive emergent coding was used in relation to interview questions, which were used to ask participants to describe the manner in which they had engaged with school climate data. In addition to descriptive coding, emotion and value coding was used. Because some of the guiding interview questions asked the participants to reveal their personal perspectives regarding the usefulness of school climate data, emotion and value coding was implemented to create
codes which reflected the attitudes, perspectives, and values which participants expressed (Saldana, 2013). Great care was taken on the part of the researcher to capture the meaning of participants’ perspectives when creating codes for these particular guiding interview questions. This was accomplished by analyzing data, which were noted by the researcher during member checking in the initial interview process.

Once codes and sub-codes had been crafted during the initial cycle coding, the researcher began the second cycle of coding in which themes were created for each of the interview questions. Codes and sub-codes from first-cycle coding were analyzed and reorganized into the appropriate themes. These categories were created by analyzing patterns which emerged from initial codes and sub-codes. During third-cycle coding, themes for each question were identified to create a summary of themes in relation to the phenomenon under study. An analytical narrative explored the themes, which emerged. In addition, the researcher offered explanations as to the ways in which such themes were coded, recoded, and generated from the interview data. Responses, which fell outside of the patterns and possible generalizations were also be noted, as the possibility remained that the participants would reveal unique and individualized experiences, and variability would emerge as an outcome for the study.

**Trustworthiness**

Trustworthiness was pursued through the use of qualitative validity procedures (Creswell, 2009). Thick and rich descriptions were used to ensure that the meanings presented by the participants were clearly described. This approach included the use of quotes to provide detailed records of the responses offered by the participants.
Additionally, transferability was enhanced by ensuring that detailed notes of rich description were documented during the interview process. To better ensure that the participants’ responses were accurately recorded, the notes, which were taken by the researcher during the interviews, were shared with the participants during member checking. Participants were asked to accept or reject the accuracy of the recordings, before the researcher used them during the analysis.

Another way in which the researcher pursued validity was to “present negative or discrepant information that runs counter to the themes” (Creswell, 2009, p. 192). This approach included the reporting and recognition of outlying responses during the analysis and summaries of the study. Negative case analysis and inclusion of outliers were used in instances when participants described unique experiences and perspectives (Saldana, 2014). This outcome seemed likely to emerge, especially since the use of the school climate data under question are not mandated. Furthermore, the researcher identified these unique experiences which were outside of the developed coding schemes.

The researcher also promoted trustworthiness of the study through reflexivity and the transparency of personal biases during the analysis phase of the study. To better ensure this was done, the researcher received oversight and approval from the dissertation committee. This oversight enhanced the researcher’s ability to identify such occurrences during the analysis phase, which may have influenced the identified themes that emerged from the data gathered from participants’ responses. Additionally, a biography of the researcher was included in order to communicate possible biases in relation to the research topic under study. Furthermore, the researcher disclosed, in detail, the data
analysis process to communicate the way in which in the data were coded and the rationale behind the approaches. This approach was used to enhance the likelihood of transparency for outside audiences when viewing coded and analyzed data.

**Ethical Considerations**

Protection of participants was of the highest importance to the researcher. It was the goal of the researcher that anticipated ethical issues would be identified and addressed prior to the onset of the research study. In order that no harm occurred due to possible conflicts of interest between the school district and principals, approval from the district in which the study took place was secured, as previously mentioned. Furthermore, the study was approved by the researcher’s dissertation committee and Ohio University’s Institutional Review Board.

For this study, an anticipated ethical issue was the assurance that participants’ responses were accurately represented. To better ensure this objective, the researcher used member checking. Participants were allowed to add to or omit any responses which were recorded by the researcher during the interviews. The researcher asked follow-up questions for clarity, as well as reviewed the notes which were taken during the interviews with the participants. This step of member checking took place prior to the data analysis phase. The researcher also offered rich descriptions and quotes to ensure that the participants’ responses were accurately recorded.

Another ethical consideration was the guarantee of confidentiality of the participants. Specific information regarding the identity of the participants was omitted from the study. This was accomplished by the researcher excluding names, job locations,
and any information which would allow outside sources to identify the participants.

Names of participants or work locations were not used in the analysis or publication of the research. To better ensure that identifiable information was omitted from the study, member checks were used, and any information which the participants perceived as identifiable was removed (Brantlinger et al., 2005; Miles et al., 2014). Confidentiality of the participants was secured by the researcher. Participants’ responses were electronically secured using password protected external hard drives. The external hard drives were only accessible by the researcher. All data and responses were handled by the researcher. No other parties were given access to data in order to ensure the desired security.

To ensure the ethical treatment of participants, informed consent was obtained from participants in this study. Participants, who agreed to participate, signed informed consent forms prior to the beginning of the study. Participants were made aware of the purpose of the study, the contact information of the researcher, the institution which the researcher represented, and any possible risks and benefits associated with the study. Additionally, participants were made aware that participation in the study was completely voluntary and that they could withdraw from the study at any point and for any reason. The informed consent forms also provided information about guarantees of confidentiality. Participants were sent the informed consent information prior to the interview process and were able to ask the researcher for clarifications and explanations prior to agreeing to participation in the study. The signed consent forms will be kept by the researcher for a period of two years after the conclusion of the study.
Summary of Methodology

With expectations and mandates for increased student accountability being placed on principals in order to improve their schools, understandings of the manner in which to address the objective appears to have become invaluable. There remains multiple ways which principals can elect to engage in actions to improve their schools. One such way includes strategic planning for school improvement. In order to plan for improvement, principals must first identify the needs of the schools and their students. The manner in which such needs are identified remains plentiful. In an era when data are used to evaluate the effectiveness of schools, data are also used to make decisions regarding the areas of needed improvement. While mandated data sets provide some information, such information should not be viewed in isolation and instead may need to be understood in conjunction with non-mandated data. School climate data, especially when used concurrently with mandated data sets, may allow principals to gain a greater understanding of their schools. By using school climate data, especially when engaging in the DDDM process during school improvement planning, a richer perspective of areas of need may be identified. Only when areas of need are accurately identified, can principals begin to plan improvement initiatives which will result in real and sustainable outcomes. However, uncertainty exists regarding if and the reasons that principals are choosing to use school climate data for school improvement planning, especially when such data sets are provided for them.

This qualitative study investigated the use of school climate data for the purpose of school improvement through the creation of SIPs. Principals, in the specific district
under study, were asked, during in-depth interviews, to describe their experiences and perspectives regarding the use of school climate data. Open-ended questions were utilized to nurture the obtainment of rich descriptions of such perspectives and the manner in which principals have used school climate data. The researcher analyzed data from the interviews to develop and describe themes of the participants’ responses in order to create generalizable findings. It was the objective of the study that the data gathered from the investigation of the research question and sub-questions would contribute to the literature pertaining to school climate data, school improvement, the DDDM process, and strategic planning. Furthermore, a better understanding of school leadership, specifically, the role of principals with the use school climate data, was pursued.
Chapter 4: Findings

Introduction

The objective of this study has been to investigate the engagement of school principals with climate data. The manner in which principals use climate data for the purpose of school improvement planning, specifically when creating School Improvement Plans (SIPs) has been examined. This study has attempted to address the following research question and sub-questions:

Question: What are the perceptions of the high school principals in the Ohio district of this study regarding to the formal use of climate data, particularly as they pertain to school improvement planning?

Sub-questions:

1. Do the principals use climate data, when they are available, for the purposes of creating and implementing change and school improvement, specifically when creating SIPs?

2. If the answer to question # 1 is yes, in what manner and to what extent are the school climate data used?

3. If the answer to question # 1 is no, what are the reasons that principals offer for not using available climate data when creating SIPs?

4. What values do principals express that they associate with the use of the climate data, especially as it relates to school improvement planning?

5. What are principals’ experiences with school climate data in general?
This chapter of the dissertation describes the findings of the study based on the data collected during the interviews with selected high school principals, particularly in relation to the research question and sub-questions. First, a description of the data demographics of the study and the manner in which the data were collected are described. Secondly, the validity of the research is addressed. Next, the emerging themes for each interview question are identified and discussed, as well as the unique experiences and outliers which emerged from the responses of the participating principals.

**Data Collection and Data Demographics**

Interviews, using identical open-ended questions, were conducted over a period of four months. Twelve participants were identified who met the boundaries of this study. The possible participants were all head principals in traditional high schools in a specific district. These principals are provided with formal school climate data and are required to create SIPs, each year. Of the possible participants who were identified for inclusion in the study, seven agreed to participate. Four possible participants declined to partake in the study and one participant was unable to be contacted. Due diligence was taken by the researcher in pursuing obtainment of interviews for all of the identified possible participants. Multiple attempts via email and telephone to reach the possible participants were made, and personal visits to the schools in which the principals worked were also pursued by the researcher. The researcher identified that the data collected from the seven willing participants may be considered valid in addressing the proposed research question and sub-questions. Levels of saturation were reached as the seven respondents
generally reported similar experiences and the data that they provided was thorough and complete.

After the interviews were completed, the responses from the participants were initially segmented and coded by question. For each interview question, a table was created, which listed each principal’s responses, the initial codes and the sub-codes, as well as codes for unique responses considered to be outliers (See Appendix E). Codes and sub-codes were created by summarizing the respondents’ statements. Statements from respondents which were similar in nature were assigned the same codes. Sub-codes were created to detail further the specifics of the general codes. After each interview question was initially coded, sub-coded, and outliers were identified, a codebook was created.

The codebook (Appendix F) provides a description of the meaning of the codes and sub-codes created for each interview question, raw data examples of the participants’ responses that pertained to each question, and reports of the frequency of responses that aligned with each question. The results of the codebook were further analyzed and themes emerged which are reported in this chapter. These themes were created by the researcher by observing the frequency of the codes and the patterns which emerged from the process. For example, codes and sub-codes, which appeared multiple times in an interview question, were considered as being significant themes. Less significant themes were created for less frequent codes and sub-code. Codes and sub-codes, which only appeared once for a particular question, were described as unique outliers. These outliers are included in the descriptions of the themes for each question, as these unique
experiences of the participants may help to answer the proposed research question and sub-questions of this study. Primary themes were derived from the collective study based upon those which occurred repeatedly in multiple questions. These thematic ideas were designated based on patterns that were identified as existing throughout the data.

The responses of the seven principals, who participated in the study, reflected a variety of approaches to leadership and management. The schools, in which the principals worked, are located in a wide array of geographical areas throughout a rather large urban district. Each of the schools serves students from multiple racial, ethnic, and socioeconomic backgrounds. In total, one female principal and six male principals participated in the interviews. The seven principals represented multiple racial and ethnic backgrounds. Two principals reported having prior experience as head principals in districts outside of the state of Ohio. One participant had an earned doctoral degree. The average number of years as a head principal among the participants was 8.14 years, with an average of 6.2 years of experience being in the particular district under study. Therefore, principals with various experience levels were represented in the data collected for the study. Each of the principals generally spent on average of one hour in the interview with the researcher.

Validity of Research and Outcomes

In order to address validity, the researcher was able to apply a number of credibility techniques. When collecting the data during the interview process, the researcher used “first level member checks in which transcripts were reviewed and confirmed” with respondents at the end of the interviews to check for “accuracy and
inaccuracy” before the data were analyzed and interpreted (Brantlinger et al., 2005, p. 201; Miles et al., 2014). Disconfirming evidence was also presented in the findings. The researcher, “after establishing primary themes/categories,” reported data which were “inconsistent with these themes (outliers)” (Brantlinger et al., 2005, p. 201; Saldana, 2013). Through the use of negative case analysis, outliers were identified to “ensure an accurate portrayal of the range and variation of the target phenomenon” (Nastasi & Schensul, 2005, p. 185).

Another credibility technique, which was applied to this study by the researcher to address concerns about validity, was the use of detailed descriptions of the participants’ responses (Brantlinger et al., 2005; Nastasi & Schensul, 2005). Rich descriptions with direct quotes were used “so that readers can determine the degree of transferability to their own situation” (Brantlinger et al., 2005, p. 201). Furthermore, an audit trail was created by the researcher, as the data were systematically documented for “the purpose of which is to permit review (audit) of the study and potential replication of the research process” (Nastasi & Schensul, 2005, p. 185). Appendices to the dissertation include a sample of the initial coding schemes for the interview questions (Appendix E), as well as a codebook which also reports the raw data as reported by the participants (Appendix F). Additionally, the interview questions “are reasonable (clearly stated, not leading, appropriate and sufficient for exploring domains of interest)” (Brantlinger et al., 2005, p. 202). Referential adequacy for “the purpose of verifying findings” was facilitated by including the interview questions, the data which were gathered during the interviews,
and the codes and sub-codes which were designated by the researcher (Brantlinger et al., 2005, p. 202).

**Emerging Themes by Question**

The following sub-sections provide explanations of the data in relation to each of the interview questions. Each interview question is addressed and themes which emerged from the data are discussed. Participating principals are referred to as respondents and were assigned numbers randomly by the researcher in order to protect their identities.

**Question 1.** Question 1 of the interviews inquired about the total number of years that the respondents had worked as a head principal, in and outside the district under study. Three of the seven principals indicated they had worked 5 or fewer years as a head principal, one reported having worked between 6 and 10 years, and three of the seven principals reported working more than 10 years as head principals. The average number of years the respondents reported having worked as head principals, in any school district, was 8.14 years.

**Question 1-a.** The next question in the interviews made inquiries as to the total number of years the respondents had worked as head principals in the particular district under study. Four of the seven respondents indicated they had worked 5 or fewer years in the particular district under study, two respondents indicated they had worked in the particular district between 6 and 10 years, and one respondent reported having worked in the district for more than 10 years, specifically for 14 years.

**Question 2.** The next question in the interviews asked the respondents to describe their experiences with Data-Informed or Data-Driven Decision Making
(DDDM). The principals indicated having varied experiences with the process. However, some common themes emerged from the responses of those being interviewed. Four of the seven respondents described using data pertaining to student discipline for DDDM, which included using discipline data as part of a district initiative called the Positive Behavior Interventions and Supports program (PBIS). PBIS is a program which focuses on improving student behavior and using positive reinforcement for improved school performance. Additionally, one respondent indicated having used the formal school climate surveys conducted by the district and the teachers’ association (union) to “formulate the approach which will be used to improve student behavior.”

Another theme which emerged from this particular interview question was the use of data in relation to students’ grades. One respondent reported having retrieved students’ grade data from a district database, which houses information on student discipline, grades, and attendance. However, multiple ways existed for the principals to obtain and compile data regarding students’ grades, in order to make decisions. For example, data reflecting student academic progress in individual courses and for specific teachers, once compiled, could be used to make decisions in relation to improving academic achievement. One respondent also specified having experience using student academic data from the short-cycle assessments that are administered at the school level in order to make data-driven decisions. Short-cycle assessments, in this particular school, are assessments given by individual teachers every three weeks and are used to provide more frequent data on student academic progress. Respondent 1 specifically mentioned using the DDDM process to create “School Improvement Plans to set academic goals for
the year.” This particular principal indicated setting academic goals “during the summer prior to the start of the school year to strategize what areas of the school can make the most academic improvement.”

Four of the seven respondents also cited the Ohio Graduation Test (OGT) scores as data that they used as part of their experiences with DDDM. These particular data sets are reported on the state of Ohio’s Local Report Cards (LRCs). The OGT data were specifically mentioned by principals, as having been used separately from the student grade data that some of the principals used as part of the DDDM process. One reason that the principals may have viewed OGT data as being separate from classroom student academic performance is that the OGT data are used as part of the mandated data sets assessed by the state and reported on LRCs. In addition to the use of OGT scores, three of the seven principals stated that they had experiences using attendance records for DDDM purposes. Student attendance data are part of mandated data sets and are available to principals, in the district under study, on the LRC for their schools and on a district database to which the principals have access.

Three principals reported using the DDDM process in relation to school improvement. One principal indicated having previously worked for another school district outside of the state of Ohio, which focused on using data to make decisions. The principal reported continuing this practice to make major decisions after having moved to the district under study. Two principals reported using data to make decisions regarding the allocation of resources, which included decision-making for hiring practices. For example, Respondent 6 described using data from the OGT, which indicated that the
school was not performing well in the mathematics content area. Therefore, the principal allocated more resources to this department, which included hiring support staff specifically to help increase the mathematics achievement that is assessed on the OGT and reported on the LRC by the state of Ohio.

Two principals stated having experiences using data as part of the DDDM process with their school Building Leadership Teams (BLTs). BLTs consist of a school’s assistant principals, content area department chairs, and the head principal. Therefore, the principals used the data in order to make decisions collectively with their BLTs. The data, which were considered in such meetings, included OGT scores, ACT scores, and student discipline data.

Two principals reported that they used data to support decisions regarding the professional development that they should plan for their staff. Respondent 3 indicated using “data to direct professional development for the staff to better support students.” Respondent 4 stated that data were used to drive the “subjects for teacher professional development and grade-level meetings.” While the respondents did not directly state that professional development would be geared toward school improvement, that is often the purpose of such developmental activities. Therefore, the data were used to help improve aspects of the organization, which could be addressed by informed and properly trained staff members.

One noticeable outlier emerged from an answer of Respondent 2 who reported having used trend data to make decisions. The principal recalled having used “data for each quarter, the previous year, and sometimes over several years to look for building
The principal then reported using the data to “make decisions based on the trends I find.” This response seemed unique, as the other principals cited using data in the DDDM process with a comparably shorter-term perspective. Short-term data would include quarterly grades, attendance, discipline data, as well as OGT and attendance data which are reported annually by the state on the LRC. While trends can be identified from short-term data sets, only one principal indicated using the DDDM process in relation to longitudinal data.

**Question 2-a.** All seven respondents indicated that they use the DDDM process when creating their annual SIPs. The next interview question (Question 2-b) followed this question to obtain understanding regarding the types of data that the respondents used as part of the DDDM process when creating their SIPs.

**Question 2-b.** Question 2-b of the interviews inquired as to the specific types of data which the principals focused on during the DDDM process. All seven of the principals reported focusing on mandated data, which are reported on the LRC, as part of their DDDM process when creating SIPs. The principals all indicated that they focused on OGT related data, but some respondents indicated that they used these particular data sets for different aspects of the development of their SIPs. For example, Respondent 2 reported using the OGT data when creating the SIP in order to “determine where to focus resources,” while respondent 7 reported using the OGT scores to “set goals” and to “focus instruction.” One principal reported using pre-OGT test data during the DDDM process when creating SIPs. These pre-OGT data were generated within the school and
were collected as students in grade nine took the practice OGT tests. However these data are not reported to the state as part of mandated data.

Other data sets reported on the LRC, which the principals focused on as part of the DDDM process for creating SIPs, included graduation rates and attendance rates. One principal reported having focused on the Adequate Yearly Progress (AYP) data related to federally designated sub-groups which are reported on the LRC in order to “make special consideration for them to meet AYP.” One principal described using the ACT data, which are reported on the LRC in Ohio, but are not factored into scores for school designations. However, the principal reported using the ACT information to set the SIP goals to increase the number of students taking the test.

Another theme, which was discovered when analyzing this particular interview question, pertained to the DDDM practices of principals when focusing on data which are assessable from a district database when creating SIPs. While the data on the district database are not directly reported to the state of Ohio and do not appear on the LRC as part of mandated data, many of the sets in the district database influence data which are eventually reported on the LRC. For example, principals report using attendance data, matriculation data, and student grade data from the district database. While these data are not the final numbers reported to the state, they would influence outcomes. Matriculation and student grade data, for example, would eventually influence the final graduation rates which are reported as part of mandated data and which appear on the LRC. Attendance data, which can be accessed from the district database, would also eventually be reported to the state. Two of the seven principals reported using student discipline data, which are
stored in the district database, but these data are not linked to any mandated data sets which are eventually reported to the state of Ohio. In total, four of the seven principals used some type of data that they accessed from the district database.

One principal reported using the data emerging from the school climate surveys when creating the SIP. This is the climate data from the survey that is administered by the teachers’ association (union) of the district. No other principal indicated using the climate survey data when creating a SIP. In a later interview question (question 5), three of the seven principals indicated using some of the formal school climate data when creating SIPs, when asked if they specifically did so.

**Question 2-c.** This particular interview inquired as to the types of information or data that the principals found useful for school improvement planning. This question differed slightly from the previous interview question, which asked principals to identify the specific data that they focus on during the DDDM process when creating SIPs. Similar to the themes generated for the previous question, principals reported that the data published on the LRCs and the data which were retrieved from the district database as being useful when creating their SIPs. While not reported directly to the state, the data from the district database could give indications of the nature of the data which would eventually be reported to the state, such as student attendance and graduation rates.

One theme that emerged was the perception that mandated data sets, as reported on the LRCs, were useful for school improvement planning. Six of the seven principals stated that they found data from the LRCs useful for school improvement planning. One principal expressed that attendance data were particularly useful, six principals reported
they found the OGT data to be useful, two principals indicated that the ACT data were useful, and one principals reported having found graduation rates data useful. Respondent 2 indicated having found the data related to school demographics, as reported on the LRC, useful for school improvement planning.

Four of the seven principals interviewed stated that they viewed data provided on the district database as being useful when engaging in school improvement planning. These data include attendance data, discipline data, and student grades. One principal, Respondent 4, noted that the information given on the district database reported whole group information, as well as information on individual students. This is in contrast to the LRC data which are reported as whole group and for AYP federal sub-groups, but are not reported for other smaller groups of students within a school, such as by grade-level or for individual students. Respondent 1 also reported using the district database to understand “overall achievement of students and in each subject area.” This detailed information may be more useful, especially in relation to planning for improved academics, as OGT test scores are only reported on the LRCs for students in Grade 10 and any students in Grades 11 and 12 who are re-taking the tests, and would not provide information on other student groups.

One respondent noted having found the results from the district distributed reading tests useful for school improvement planning. These tests are given to all students in the district to determine their reading levels. The students’ scores are given to the principals, but the results are not reported on the district database, nor are they shared with the state as part of mandated data reporting.
**Question 3.** For this question, the principals were asked generally what role, if any, they thought school climate has in the DDDM process. Four principals said that they felt school climate has a role in the DDDM process, with one principal specifically indicating “positive school climate was a huge factor to have an effective building.” Two principals described that they thought school climate data, as part of the DDDM process, helped them to understand the status of their school organizations in order to make decisions. Respondent 5 said, “Climate indicates the state of the school environment, which you need to know when making decisions.” Respondent 5 also noted that, “You need information to help get a feel for the building.”

Another theme, which emerged regarding the analysis of the data, was that school climate was significant as part of the DDDM process, as the climate influenced other areas of the school organizations. Four of the seven principals expressed this perspective for this particular interview question. For example one respondent said, “Since a positive climate of the school can enhance attendance, discipline, and academics, I do include it in the DDDM process.” Another principal reported, “You cannot ignore the environment for the sake of academics as they go together. You need a certain type of setting that lends itself to successful learning and teaching.” Yet another principal indicated a belief that, “You must have a positive school climate in order to be productive. For example, you must address behavioral needs since it influences testing data.” Lastly, a principal stated, “Until you address the climate of the building, which includes making a safe environment, and one which is conducive to learning, you can’t improve.”
Respondent 1 said that school climate data are important in the DDDM process, especially in relation to change. Specifically, the principal stated that, “For example you need morale, especially if you’re in a transformative process and especially when dealing with change since there is often tension with change.” The same respondent talked in detail stating, “Informal data can be useful, however, the formal climate data can be used to start conversations as to what needs to be addressed in the DDDM process.” Similarly, another principal indicated the use school climate to understand other data sets.

Respondent 2 said that:

I look at school climate to understand other data sets in order to make decisions. For example, I look to see if the school discipline could be influencing academics. I might also look at involvement levels of students in extracurricular activities to better understand school attendance.

Only one principal reported that school climate does not play a role in the DDDM process. Respondent 7 specified that, “I usually look at other information I have gathered to make important decisions for the school. This information is more reliable.” This respondent reported, in other interview questions, focusing on data which are reported on the state report cards and data from the district database during the DDDM process. The same respondent also reported having viewed climate data, especially formal climate from the district and teachers’ association (union), as invalid.

**Question 4.** For the following interview question, principals were asked if the school climate survey instruments, of the district and teachers’ association (union) to collect data from families, students, and teachers, were useful. Three of the seven
principals said that the surveys were useful to them. One principal specifically indicated that the formal climate data collected by the district and teachers’ association (union) were useful, as the data aided in a better understanding of the informal climate. The respondent said, “Yes, it (the formal climate data provided by the district and teachers’ association) is useful as a way to transition into conversations about some of the informal climate which is discussed.”

One theme, which emerged from the interviews, was the view that the data from the climate survey could assist principals in understand the buildings that they oversee. Three of the seven principals said that the formal climate survey data were useful, as the data aided principals in understanding their buildings. For example, Respondent 2 said, “I use it (data from the results of the school climate surveys) to gage my thinking of how I understand the building.” One principal described the survey information as useful, specifically to help with the obtainment of an objective understanding of the climate of the school, as opposed to relying solely on day-to-day experiences. Respondent 5 reported that the formal school climate data provided by the district and the teachers’ association are helpful with the obtainment by the principals of an enhanced understanding of their own work. The same respondent also reported finding that the climate surveys were useful in offering information about a principal’s relationship with teachers and providing a useful perspective of the school’s climate, particularly the productivity of the school and manner in which people felt about the school. Respondent 4 described that the climate surveys were useful for identifying major issues and concerns which may need to be addressed.
Two principals reported that the formal school climate surveys were generally not useful. Three of the seven principals stated that the surveys may not be useful depending on the rate of return, which tends to be typically low. For example Respondent 2 said, “However, the results can sometimes be inaccurate since not all people complete it (the climate surveys).” Respondent 4 noted, “It usually depends on the rate of return for each survey. Usually because the rate of return on the district and union surveys are low, they really do not have a significant role.” Respondent 6 said, “There seems to be low response rates and no follow-up from the district about the results.” The low rate of return on the surveys continued to be a theme throughout the interviews with principals, as to the reason that the available climate data were perceived as being less than valid and for this reason not useful.

**Question 5.** For the next question, principals were asked about their use of the parts of the results of the formal climate surveys from the district and teachers’ association (union) for the purpose of creating their annual SIPs. Four of the seven principals interviewed stated that they did not use all or parts of the formal climate data results when creating their annual SIPs. Three principals responded by saying that they did use the school climate survey results when creating their SIPs. Follow-up questions were used to gain a better understanding of the manner in which the formal climate data were and were not used.

**Question 5-a.** For this question respondents, who indicated that they used all or part of the formal school climate data when creating their SIPs, were asked to describe the manner and the extent to which the data were used. Each of the three principals
responded in different ways. Respondent 1 described focusing on the family climate survey distributed by the district. This principal used the results from the family school climate survey when planning and working with the school Parent-Teacher Association (PTA), as part of the SIP process, in order to plan for ways to increase support for the needs of parents and to plan for parent engagement. This principal described not using the climate data extensively as there are “generally low response rates.” The same principals also indicated not using the data extensively as, “The formal climate data are limiting and need to be supplemented with informal climate data.”

Respondent 2 replied to the interview question by indicating a use of the formal climate data as part the SIP process for the planning of professional development days. The same principal also revealed using the survey results as “an additional voice to consider when creating the plans in general.” Respondent 3 explained having focused on the student climate surveys distributed by the district when creating their SIP. The respondent indicated having used the student survey results when planning to “look at the students’ perceptions of their interactions with the staff.”

**Question 5-b.** Question 5-b asked the principals if they used the results of the surveys differently depending on the type of survey (family, student, and teacher). Four respondents indicated that they did not use the surveys when creating SIPs. For this reason, they were not able to specify using the surveys differently depending on the type. One principal, who indicated using the surveys, stated that the survey results were all used and seen “as equally important.” This principal also reported having used all of the
survey results as “one of many tools to understand climate and other data sets I work with.”

Two principals described using the surveys differently. Respondent 1 commented about focusing on the family surveys. The principal indicated using the information in conjunction with the PTA. However, the principal noted that while the family survey feedback was important, the families, which were already engaged with the school, typically completed the survey, and for this reason the survey results might not “always represent the majority of our parents and families.” Respondent 3 reported focusing on the student survey results rather than the family or teacher surveys.

**Question 5-c.** The four principals, who indicated that they do not use the formal climate data provided by the district and teachers’ association (union) when creating their annual SIPs, were asked to explain the reasons for their approaches. A major theme, which emerged from the responses of the principals, was that they did not see the results of the surveys as being accurate or valid. This view was reportedly created, in part, by the low rates of return for the surveys and the high teacher and student turn-over rates in the district. Three of the principals explained that they do not use the available climate data when creating SIPs due to the low response rates. Respondent 4 stated, “No, I do not use the results of the surveys because the results are not always very comprehensive. This is usually due to a small number of people completing the surveys.” Respondent 6 also cited low response rates as a reason for not using the survey results and said the “response rate is too low to validate the results.”
Along with the responses to the questions about the validity of the surveys due to the low response rates, two principals said they perceived the results of the surveys as being inaccurate. Respondent 4 observed, “The formal surveys can quantify the many aspects which make-up school climate, but do not always reflect it.” Respondent 7 noted:

The information provided is not very reliable. The averages for the district may not show trends which apply to my school. This could be due to the large size of the district. What is a trend in other areas of the district may not apply to my school.

In addition to reactions about the low response rates and views that the results are inaccurate, two principals indicated that had chosen not to use the results as part of SIPs because of the teacher and student turn-over rates in the district. Both of the principals specifically cited the high turn-over rates of teachers who may have completed the surveys and left the school or district. Respondent 5 stated:

I do not really use the data as it isn’t comprehensive. For example, the school may have high teacher turn-over, which may change the results. Some teachers are placed in or removed from the school throughout the year, so they may skew the data, especially on the teacher survey results.

Respondent 7 noted:

There are high movement rates of administrators, teachers, and students so it is difficult to attribute the results to any one person or group of people. The results of the teacher survey could reflect teachers who have already left or administration which has changed.
Another explanation given by the principals regarding the reasons that they had chosen not to use the available data is because of the very nature of school climate data. Respondent 5 explained the choice for foregoing the available data when creating their SIPs as “there are many factors that influence the outcomes of the climate survey, outside of the school.” Respondent 7 explained not using the formal climate data because, “The information from the surveys is not a district focus, so I do not consider the results.” Furthermore, the same respondent reported not using the results because surveys were only distributed and results given once a year.”

**Question 6.** This question asked the principals if they used the results from the formal school climate surveys provided by the district and teachers’ association (union) for any other purposes other than creating SIPs. Six of the seven principals indicated that they used the results for purposes other than creating SIPs, and one principal indicated not using the available data for any other purposes. A follow-up question was used when principals indicated that they used the climate surveys for purposes other than creating the SIPs. The purpose of the follow-up question was to obtain a detailed understanding of the perspectives and rationales of the principals.

**Question 6-a.** For this question, the principals who indicated that they had used the available formal school climate data for purposes other than creating SIPs, were asked to describe the rationales for their approaches. One theme that emerged pertained to the use of the formal school climate data during meetings. All seven principals indicated that they used the climate data during meetings. Five of the seven principals described using the formal climate data in staff meetings. For example, Respondent 5 indicated “sharing
the results of the student surveys with the staff to inform teachers of areas we might need to improve.” More specifically, three principals indicated that they used the available climate data to plan for and implement professional development meetings for staff. Respondent 4 specified using the formal climate data in teacher grade-level meetings. Two principals used the data when meeting with the school PTA. For example, Respondent 3 said, “I use the information from the family survey…when guiding the work of the parent consultants (PTA).” Two principals described using the formal climate data from the district and teachers’ association (union) during meetings with administration. Respondent 3 said, “I tend to use the data from the teachers’ surveys for administration meetings.” Respondent 1 explained, “I use the data in administrative meetings to describe ways to increase parent involvement, which might not be included in the SIP.” Respondent 1 also explained using the formal data in meetings, as a way to start conversations about informal climate data, specifically when meeting with the administration and the PTA.

One principal described using the available formal school climate data other than in meetings. While this principal also used the formal climate data in teacher meetings, the respondent reported using the data for self-reflection. The principal also indicated using the data in group settings, as reported by the other principals. Respondent 6 said, when asked about using the formal climate data for other purposes, “I use it more for self-reflection.”

**Question 7.** The next interview question asked the principals to give examples of other ways (outside of the formal climate data that are provided to them by the district
and teachers’ association) that they obtain information to understand climate as it exists in their school. The intention of this question was to encourage the principals to reveal the types of informal climate data that they may collect, in an effort to understand their schools. A theme, which emerged during analysis of the resulting data, was that the principals gather data through conversations with others. More specifically, all seven principals, who participated in the study, indicated that they have gained an understanding of climate by talking with others including parents, teachers, BLTs, and students. Respondent 4 explained, “You can’t always make everyone happy, but it’s the informal conversations which allow me to understand the school day-to-day.” Three principals stated they specifically conversed with parents to gain an understanding of the climate which exists in their schools. For example, Respondent 1 said:

I have conversations with parents via phone calls and also talk to them at various school events. I like to see what parents are aware of and not aware of that is happening in our school and with our programs.

Respondent 2 described a similar experience by saying, “I talk with parents to see how informed they are as to what is happening in the school.” Respondent 1 reported having talked with parents at PTA meetings to “understand the needs and climate of our building.”

Two principals cited using conversations with community members to understand climate as it exists in their schools. Respondent 2 indicated talking “to people in the community and articulating the vision of the school, and discuss this with them.”
Respondent 7 reported that the school had a unique program which works to connect the community with the school. The principal described the program when saying:

Our school has a site-based council which includes stakeholders from the community (business leaders, community members, and pastors) who give input. These different parties talk to come-up with ways to create a positive school climate and improve the image of the school.

The respondent continued by giving an example of the work the group had done in the past. Respondent 7 explained:

One example of the use of input from the site-based council was the decision to adopt school uniforms. After looking at research and talking with students, staff, and community members, we decided that school uniforms could help improve school climate since it has been proven to improve grades, school pride, help make an educationally focused environment, and address safety issues.

Three principals described talking specifically with teachers to gather information to understand climate as it exists in their schools. Respondent 3 explained, “I get information about the concerns from teachers in union meetings. I listen to teachers who voice their concerns and the solutions they offer.” Respondent 5 reported, “I talk to teachers about what they see and what they want to see in the school.”

Two principals revealed that they have conversations with their BLTs to understand the climate in their schools. Respondent 6 explained, “I get a lot of qualitative data and information from my meetings with department chairs as part of the Building Leadership Team.” Respondent 7 said, “I talk with the Building Leadership
Team to understand what is happening in the school and classrooms.” Respondent 7 reported talking with students to understand and gather informal data regarding the climate in the school. This principal described meeting with students, who were designated student leadership members, once a month to “gather input on how to improve the climate of the building.” This particular principal also described talking with students, as being a valuable asset in understanding school climate. The respondent said, “There is a lot you can learn about the students and the school by buying a little pizza and pop and taking the time to talk with your students.”

Another theme, which emerged from the interview data for this particular question, pertained to the use of existing data in order to understand school climate. Four principals expressed having gained an understanding of the climate in their schools by examining existing data sets. All four principals indicated having reviewed the discipline data for their schools in order to understand climate. For example, Respondent 6 said, “I look at the number of suspensions for students.” Respondent 5 reported, “I look at the number of discipline referrals, which teacher is writing them, and the type of offenses which are happening.” The principal went on to say, “I also look at the number of formal disciplinary and expulsion hearings.”

In addition to discipline data, one principal reported using data regarding the attendance levels of teachers in the building. Another principal reported viewing data collected on the number of tickets sold for after-school events to understand better the levels of student engagement and involvement, a factor considered to be part of understanding school climate. One principal used existing data regarding students’
grades and indicated reviewing “students’ quarterly grade cards” as reflecting the climate in the school. Another theme, which emerged from the interviews regarding the manner that the principals described gaining an understanding of the informal climate as it exists in their buildings, involved the use of walk-throughs. Three principals described using walk-throughs as a means by which they could better understand their schools.

Respondent 2 said, “I gather climate data every day. I do this when conducting walk-throughs in the building and classrooms.” The same respondent also specified looking at the visual presence of the building during the walk-throughs to understand better the climate of the building. Respondent 6 reported, “I get the most feedback by doing walk-throughs and observations. I am not in my office much and am in classrooms.”

An additional theme, which emerged concerning the way that the principals have gained an understanding of their schools’ climates, involved an examination of the relationships that exist in the buildings. Three principals described examining relationships and interactions to understand the climate of the school. For example, Respondent 1 said, “I reflect upon the relationships between the principal and teachers, the principal and parents, and the principal and students.” The same principal indicated looking “at how well the Teacher Based Teams (TBT) and the staff are working together as a team.” Respondent 4 explained, “To me, climate has more to do with my interactions with staff, students, and parents to understand if something needs to be changed.” Similarly Respondent 6 reported, “I consider my interactions with staff and students.” Two of the principals described obtaining an enhanced understanding of the climates which exist in their buildings by using more abstract means. For example,
Respondent 2 described looking for “a sense of belonging to the school community” and trying to “understand the norms for our school.” The same respondent indicated looking for “the level of leadership taken by teachers.” Respondent 4 explained gaging “the climate of the building in a more abstract way. I just seem to understand the pulse of the school.” The principal went on to say, “I look for the little things to indicate the bigger picture.”

Another theme which emerged from the interviews of the principals was their use of technology to gather information to understand climate as it exists in their buildings. More specifically, two principals reported using technology to understand the climate in their schools. Respondent 1 indicated looking “at Facebook to see community, school, and student reactions to school events.” Respondent 2 indicated looking at the “school’s website and determine how the technology is increasing or decreasing accessibility.”

**Question 7-a.** For this question, the principals were asked if they use any of the informal climate data that they collect when creating SIPs. Two of the principals confirmed that they use the informal climate data when creating SIPs and five principals reported that they do not use the informal climate data when creating SIPs. Of the principals, who indicated not using the informal data when creating SIPs, Respondents 3 and 5 indicated that they use the informal data specifically for staff development and in staff meetings. Respondent 6 reported focusing on academic-based data for SIPs, and Respondent 7 indicated focusing on “mandated assessments of the school” during SIP creation. Respondent 4 failed to comment as to the reason for not using informal climate
Question 7-b. The two principals, who responded that they use informal climate data when creating their SIPs, were asked to describe the manner in which and the extent to which they use the informal climate. Each of the two principals reported using the informal climate in different ways. Respondent 1 specified using the informal data to “understand attendance and academics.” The principal explained that, “I use it (informal climate data) to see what is causing these factors to be successful or not.” Respondent 2 explained:

Informal data can help to understand how students are feeling about the school. I use the information to set future goals for improvement. I may use the information to develop plans for change to change the conversations which student and community may have about the school in the future. I feel that word of mouth and marketing is the best way to improve climate, so I focus on that to improve the school and plan for improvement.

Question 8. Principals were asked if they thought school climate data were useful, in general. All seven principals stated that they thought school climate data were generally useful, which in effect represented a theme that emerged from the results of the study. For example, Respondent 2 said, “Yes, I do value it (school climate data).” Three principals (Respondents 5, 6, and 7) confirmed that they found school climate data useful, however, they felt the data must be collected in the “right” way to be accurate,
meaningful, and useful. Respondent 5 noted, “However, climate data can vary depending on what time the year you collect it to reflect upon the state of the building.”

Another theme, which emerged from the responses of three of the principals, was that school climate data can be useful to gain an enhanced understanding of the relationships that exist with their schools. Respondent 1 commented, “Climate is a combination of the attitudes and expectations that are brought to the building by students and staff and the way in which those expectations work together in concert and/or conflict.” Respondent 2 noted, “School climate allows you to better understand what others’ perspectives are on the school. It (school climate) also gives me an idea of what peoples’ perceptions are and how I might give more thought to address them for the positive.” Lastly, Respondent 4 stated, “Yes it (school climate data) can sometimes tell us things that we might not otherwise see or understand.”

Three principals detailed the reasons that they personally found school climate data to be useful. Respondent 1 indicated that school climate data can be useful for understanding the health of the school organization. The principal said, “Climate data can be used to show the healthy movement of students forward academically, emotionally, and socially.” Respondent 3 reported that school climate data were useful for the purpose of creating a balance between the ramifications of mandates and the culture and climate needs of a school. The principal commented, “While it (climate data) is very subjective, especially compared to standardized test results, climate (data) also helps to balance the data from the standardized state scores.” Respondent 5 found school climate data as being useful “especially when starting as a new principal.” One principal
specifically explained finding informal climate data useful to understand school issues. Respondent 6 said, “I tend to use informal data, which is very important, in understanding issues to increase school performance.” Another principal specified that formal, rather than informal, climate data sets appear more useful. Respondent 1 said, “Climate can be really difficult to understand since it’s not always so tangible. However, the formal data tries to quantify climate.”

**Question 8-a.** After asking the principals if they found school climate data to be useful in general, they were asked if they found school climate data to be useful specifically when creating SIPs. A theme emerged in which four principals indicated that they found school climate data to be useful when creating SIPs. Respondent 2 noted, “Yes I use it (school climate data) to create my plans. However, I tend to rely on informal information rather than the district and union surveys.” Respondent 3 indicated finding school climate data useful when creating SIPs and said:

Yes, SIPs should go beyond just addressing academics. It helps to develop other areas of the school that the school serves as a function for. For example, we should be looking at how to improve students’ and parents’ lives in many ways. Climate also reflects the values of the school, so those values should be part of the SIP as we create it.

Respondent 5 similarly explained, “Yes. School climate data can allow you to help understand how to move the academics forward since climate and academics work hand in hand.” Another principal, Respondent 6, indicated that school climate data are useful in helping principals understand the manner in which to address areas of needed
improvement when creating a SIP. The principal said, “Yes. It (school climate data) allows you to best understand how to set goals for specific areas such as attendance improvements.”

Two principals stated that school climate data are not useful when creating SIPs. Both principals indicated that they tend to focus on mandated data. Respondent 4 explained, “No, I usually focus on the report card (LRC) data when creating my SIPs.” Respondent 6 also described using mandated data and stated, “I use mandated data to make plans to improve academics which then would improve the climate of the school.” In this case, the principal reported using mandated data sets when creating the SIP. Furthermore, the principal offered using climate to understand and improve on deficient areas as reflected on the school’s LRC.

One principal was undecided as to whether school climate data were useful when creating a SIP. Respondent 1 replied to the question by saying, “Yes and no. It (school climate data) helps me to better understand the school and what is working and what is not. However, sometimes the data illuminates what goes beyond the scope of the school.” In this case, the principal described the benefits of using school climate data when creating SIPs, but also indicated that school climate data may not be reflective of all the aspects of the school.

**Question 9.** The next interview question asked the principals if they would like to be provided with data or other information, to which they do not currently have access, in order to make decisions regarding school improvement. Two principals stated that there were no other data or information that they would like to have in addition to that
which they are currently provided. A theme, which emerged, was described by two principals who indicated that they would like current data sets to be more detailed in order to be used in making decisions regarding school improvement. Respondent 4 noted that, “The OGT scores do not always specifically indicate very detailed data of where students are struggling in order to offer interventions.” Respondent 5 explained, “The data which I am provided with right now is not telling me the whole picture. For example, we are given demographic information but this is not really telling me what is happening at home for my students.” Two principals described another theme, which was the concern about current data sets being considered valid. Respondent 6 said, “I have access to a lot of information though sometimes the information is incomplete or not always what I would consider valid data, for example the school climate surveys.” Similarly Respondent 7 voiced concern about the validity of the information which principals are currently provided. The respondent reported, “I have access to enough data to make decisions about school climate. It is not that I don’t have enough data, it is just the task of determining what data is accurate and useful that I focus on.”

A few outliers were identified when analyzing the results to this particular question. One principal expressed a desire for the current available data sets to be more centralized, perhaps in one database, rather than accessible from various databases. Respondent 2 indicated a request for data concerning “the number of kids who graduated and went to college and graduated college.” The same respondent also expressed a request for relevant data from the feeder schools (middle school), which send their students to the high school that this particular principal oversees, in order to be able to
make more effective decisions regarding school improvement. Furthermore, this respondent stated, “In general, I would like more longitudinal data rather than short-term data sets.”

**Question 9-a.** Principals were asked about the data, other than the types that are currently being provided by the district and teachers’ association (union), which would help them understand the climate of their schools. Four principals indicated that they were not aware of other types of data that they would like to have in order to better understand their schools’ climates. However, three principals remarked that they would like qualitative data to increase their understanding of their schools’ climates. Respondent 5 indicated a desire “to better understand students’ responses by having narrative (qualitative data) added to the surveys.” Respondent 6 suggested that student responses to open-ended questions could be helpful. Respondent 7 explained:

I would like more narrative data about what students actually think and feel.

Most students do not take the current survey seriously since the answers are pre-determined and they are just bubbling in the circles which may not really represent how they feel.

A number of outliers emerged when analyzing the responses for this particular interview question. One principal, Respondent 5, offered a suggestion that the level of participation in the surveys be increased. The respondent went on to say that the current school climate surveys, due to low participation rates, are “not always what I consider valid data.” Another principal expressed a desire for the students to be asked more questions regarding individual teachers and the climate of their classes. The respondent
indicated that such information could be used “more for the teachers to have to increase the reflection of their practices.”

**Question 10.** This interview question asked the principals to describe their school climate experiences (such as district initiatives, professional development, special training, and university course work), especially as the experiences relate to school improvement. Two principals reported having no prior experiences with school climate in relation to school improvement. For example, Respondent 5 reported, “I have not received any training or any specific course work on this topic.” Several references were made by the principals to Positive Behavior Intervention and Supports (PBIS) training. Three principals indicated that they had received training related to PBIS, which was focused upon school climate and improvement. Other principals reported that the PBIS program is a district initiative that is attentive to behavioral and discipline concerns, which are considered to be significant variables influencing the climate of the schools. However, Respondent 6 explained that the training “seems to be more reactive to climate issues than for training to address the possibilities of climate and school improvement.”

Two principals answered the interview question by indicating that they have received related professional development, as the district has moved towards a model of site-based management, which allows for understanding of school climate in individual schools. Respondent 4 explained, “The district may not address climate since it is so different from building-to-building in the district. The district has gone to site-based management, which may be another way to deal with climate and culture in a meaningful way.” Respondent 7 provided details related to the movement towards a site-based
management model and its relation to school climate and school improvement. The principal revealed:

I have recently attended some professional development training which has been site-based and tends to focus on special education, which can include improving school climate by understanding how to better service students. By making our school environment more inclusive and integrated, our focus is on the students. This is a major focus on school climate. This is an instance of the school coming together to service all students and teachers working together. As a staff, we have tried to address the climate in the school by diversifying our instruction for many types of learners. This helps to promote a healthy school climate.

One principal indicated having read books “in relation to helping me understand climate and school culture.” The same respondent indicated having personally attended a conference “to better understand the importance of relationships in schools.” One principal reported having engaged in online learning to better understand school climate in relationship to school improvement. Respondent 7 explained:

I have completed some online modules from the district which did address some aspects of school climate, such as sexual harassment. I have also taken a district-sponsored course online about having compassion for students in order to change the climate of the building.

**Question 11.** The final question of the interviews asked the principals if they used any types of non-mandated data, when creating their SIPS. The district database was mentioned frequently for the development SIPS. Six principals said that they used the
data, which are available on the district database, when creating SIPs. The database provides principals with updated data related to student discipline, grades, and attendance. The discipline and attendance data, which are provided on the database, are constantly updated, and students’ academic progress data are updated quarterly when teachers electronically record final grades for courses. For example, Respondent 7 said:

I use information from the district database which includes student academic progress in their classes, student behavior, and attendance on a quarterly basis to look for trends to include in the School Improvement Plan. I use this information to set some academic goals in the School Improvement Plan.

One principal specifically described using the student discipline data, which are stored on the district database. Respondent 5 indicating using the discipline data to “direct school improvement, especially to address behavioral needs since they influence testing data. I use the data as part of the Positive Behavior Intervention and Supports (PBIS) process as part of the School Improvement Plan.”

While some of the data housed in the district database are not specifically designated as being mandated, such as student discipline information, some of the data are eventually reported to the state as part of mandated data which are published on the LRCs. For example, student attendance data are eventually reported to the state, and students’ grade data may ultimately be reflected in graduation rates which are reported on the LRCs, as well. An appealing factor of the data on the district database is that they are more frequently updated, compared to the LRCs. Respondent 3 commented on this when stating the use of the “district database which includes discipline, academic, and
attendance data which are more frequently updated than state report cards. This allows for a more responsive way to make improvements and allows for course correction which is more proactive than reactive.”

Outliers from the interview data for this particular question emerged when the principals described using other non-mandated data. One principal indicated using data from informal daily observations to create the SIP. Respondent 1 said, “I use informal daily observations of the school to think about what the school may need. Some of these informal observations come out in the formal surveys and some do not.” The same respondent also reported using information from conversations with the staff about the data provided by the state. The respondent said, “I use the information they (staff) give to better understand the mandated data.” Respondent 2 described using data, when creating the SIP, from an outside organization that works with the school to help students attend college. The principal explained that the organization provides data on the “students’ needs for college.” Another principal collects data regarding the number of students who are trying to recover credit for failed classes and uses this information when developing the annual SIP. Lastly, Respondent 7 indicated reviewing student grade distributions for the teachers and rates of retention to “see how students are performing in particular classes.”

Summary of Themes

The following section of this chapter summarizes and discusses themes derived from the interview data in relation to this study’s research question and sub-questions. The main research question of the study sought to reveal the perceptions of the high
school principals in an Ohio district regarding the use of formal data, particularly as they pertain to school improvement planning. The participating principals revealed a number of perceptions. While all seven participants revealed that they found school climate data useful, only three principals indicated using the available formal climate data from the district and teachers’ association (union), specifically for school improvement planning. The principals generally indicated a perception that the available formal climate data is invalid and not comprehensive. This is largely due to the low response rates of families, teachers, and students to the surveys, which are used to gather the data. Furthermore, principals expressed that due to the quantitative nature of the survey results, few details can be exacted which could be used for improvement planning. Instead, principals suggested that informally and qualitative collected data would be a more useful tool for school improvement planning. Principals in this study also perceived that the district’s data regarding such topics as student discipline, grades, and attendance, as being more useful for school improvement planning, than the formal climate data which are provided for them. While the principals generally expressed that the availability of climate data was an important part of the DDDM process, they did not focus on the formal climate data when describing the manner that they approach the DDDM process for school improvement planning.

The first research sub-question sought to discover if the principals used climate data, when available, for the purpose of creating and implementing change and school improvement, specifically when creating SIPs. While all seven principals indicated finding climate data being generally useful, only three of the seven respondents reported
using the available formal climate data sets when creating their SIPs. Each of the three respondents, who reported using the formal climate data, did so in different manners. In addition, the principals indicated that they relied more readily on informal climate data, mandated data sets, and data from a district database when creating SIPs. Again, the principals cited the low response rates and the resulting lack of validity as the main reason for not using the available climate data. Therefore, principals did not generally use the formal climate data, when available, for the purposes of creating and implementing change and school improvement, specifically when creating SIPs. Principals instead reported using the formal climate data for purposes other than when creating SIPs. Principals also described using the available formal climate data in meetings. These included meetings with other administration, PTA meetings, staff meetings, and professional development meetings.

The second research sub-question requested the principals, who use the available climate data when creating SIPs, to describe the manner and extent to which the data are used. All three principals, who described having used the available climate data, reported not doing so extensively. Furthermore, each principal described using the available climate data in different manners when creating their SIPs. Each respondent reported having used data from different surveys (family, teacher, and student surveys). One respondent reported using the data from the family surveys when planning and working with the school PTA, as part of the SIP to plan for ways to increase support for the needs of parents and to plan for parent engagement. Another principal indicated using the formal climate data to plan staff professional development days, as part of the SIP.
Lastly Respondent 3 described using the student surveys when planning to “look at students’ perceptions of their interaction with the staff” and to “look at how students feel about their school.”

The third research sub-question sought to discover rationales that the principals gave for not using climate data when creating SIPs. The four principals, who reported not using the available formal school climate data when creating SIPs, generally indicated perceiving that the results of the surveys were incomplete or invalid. This perception was primarily due to the low response rates of families, teachers, and students to the surveys. Furthermore, there appeared to be a lack of district and teachers’ association (union) initiative and oversight to encourage participation in the surveys or to foster the use of the survey results by principals. Two principals also cited not using the formal climate data due to the high turn-over rates of principals, teachers, and students in schools, which could skew the results. As noted above, principals did not perceive the surveys as valid instruments. Respondent 4 explained, “The formal surveys can quantify many aspects, which make-up school climate, but do not always reflect it.” Another principal, Respondent 7, noted the trends revealed in the surveys may not apply to a particular school, as the district is “geographically large and therefore diverse.”

Another reason the participating principals offered for not using the available formal school climate data when creating SIPs was due to a preference for other data sets. Principals expressed that they preferred informally collected school climate data to formal climate data sets. Principals expressed that they were able to collect in a variety of ways the informal data, which may have offered more accurate climate information for
them to use when creating SIPs and making decisions associated with school improvement. Furthermore, principals expressed that they focused on mandated data sets as well as data on student attendance, discipline, and grades via a district database. The principals generally reported using and focusing on data related to student attendance, OGT scores, and graduation rates when planning for school improvement. This information is available via the schools’ LRCs. Principals also revealed that they preferred to use data from the district database when creating SIPs, especially because the information is frequently updated and provides details regarding particular groups (such as by grade-level) and for individual students. The principals focused specifically on the student discipline data from the district database when planning for school improvement. A focus on these data may be due in part to the district PBIS initiative which works to improve student conduct as a way to increase mandated data results and improve school climate. For the same reason, the principals also reported focusing on student attendance data, which are also available on the schools’ LRC and the respective district database.

The fourth research sub-question sought to gather data regarding the values that the principals expressed associating with the use of school climate data, especially in relation to school improvement planning. Principals generally described the available school climate data as not being useful. Instead, the principals reported finding informally collected data sets as more valuable for making decisions, especially in regard to school improvement planning. One principal, Respondent 3, may have best described the reason that the school climate data were generally not considered during improvement planning, indicating the obtainment of more value from focusing on the mandated data.
since these data are what the state focuses on, especially when evaluating schools. However, the principals indicated that the formal data could be of more value if collected in ways which would be perceived as valid, including an increase of the response rates to the formal surveys.

The principals also reported that they value school climate data, specifically for the DDDM process. The principals revealed that school climate data helped them to better understand other available data sets, especially mandated data. The use of climate data was perceived as a way to understand underlying factors which influence the outcomes reported in mandated data sets. Climate was perceived as a factor, which could ultimately influence the factors of the schools that were assessed with the use of the mandated data. However, climate data reportedly allowed some principals to understand the state of their schools in order to make decisions regarding change and school improvement.

The fifth research sub-question inquired as to the principals’ general experiences with school climate data. Most principals reported not having any experiences (such as district initiatives, professional development, special training, or university coursework) with school climate, especially in relation to school improvement. Principals described having little experience with using formal climate data for school improvement. The main reason that the principals cited for not considering formal school climate data, especially for school improvement purposes, was due to the view that the results of the available climate data are incomplete and/or invalid. While few principals reported having experiences associated with formal climate data sets, principals overwhelmingly
described the collection of informal climate data and the manner in which they used such data for school improvement and school improvement planning. The principals generally expressed that informal climate data were useful, especially when making decisions regarding school improvement. Principals reported mainly collecting informal climate data by talking with others (BLTs, community members, families, parents, students, and teachers) and when conducting walk-throughs. Principals also reported focusing on student attendance and discipline data. While student attendance data are reported on the LRC and discipline data are not, both of these data sets could be considered as part of climate data. Therefore these two factors, which could be considered as part of climate data, appear to be viewed by the principals as especially important factors to consider when planning for school improvement. However, attendance data may be considered as a primary focus to which principals give their attention, not because the data would be considered climate data, but rather because such data are part of mandated data that are reported to the state. Discipline data, which could also be considered as part of school climate data, was also perceived as being significant, perhaps due to the district focus on the PBIS program.

**The Nine Themes Derived from the Collective Study.** To summarize, the following nine themes were derived from the collective study:

1. Overall, the participating principals use the DDDM process when creating their SIPs;

2. Principals in this study revealed using multiple data sets and sources to create their SIPs;
3. The principals of this study expressed that they feel school climate data are generally useful;

4. Principals in this particular study did not use available formal climate data for school improvement planning, especially when creating SIPS;

5. Principals generally expressed not using the available formal school climate data when creating SIPS, as they viewed the current data sets as invalid, primarily due to low response rates;

6. Principals expressed a preference for informally collected school climate data, but did not necessarily use the informal climate data when creating their SIPS;

7. While principals indicated they did not use the available formal climate data when creating their annual SIPS, they used the formal climate data for other purposes, especially when conducting meetings with other administrators, BLTs, parents, and staff;

8. Principals indicated having little or no training in relation to school climate data, specifically in relation to school improvement planning;

9. Principals expressed a preference to using mandated data sets and related data from the district database when creating their annual SIPS.

The nine themes were identified by the researcher after synthesizing and analyzing the responses from the interview questions. Furthermore, the themes, which appeared frequently throughout the overall analysis, were included above and considered to be of most importance. The nine themes also reflect the generalizable findings which the
researcher experienced during the interviews. These nine collective themes are discussed in Chapter 5 of the dissertation in relation to the research question and sub-questions.
Chapter 5: Discussions, Recommendations, and Conclusions

Introduction

This chapter describes and discusses the research question and sub-questions of this study. The discussion is conducted based upon the data that were obtained from interviews and an analysis of the data. In addition, the collective themes, which were identified from the analysis, have been used in an attempt to answer the research question and sub-questions. This chapter also addresses the manner in which the results of the study pertain to the components of a related theoretical framework as discussed in Chapter 2, the Literature Review of this dissertation. Recommendations for practice and future research are offered later in the chapter. Finally, a summary of the chapter is provided.

Answering the Research Question and Sub-Questions

Themes reflecting the outcomes of each interview question were identified based upon an analysis of the answers to each question, using initial codes and sub-codes. Next, the question-by-question themes were summarized into nine overall themes. These themes, as well as the data from interview questions, are discussed in relation to the study’s question and sub-questions.

Research question. The research question of this study sought primarily to gain an enhanced understanding of the perceptions of the high school principals in an Ohio district regarding the formal use of climate data, particularly as they pertain to school improvement planning. Interview question 2-b asked the principals, who had indicated that they used the Data- Driven Decision Making (DDDM) process for school
improvement planning, to identify the data upon which they had focused. This interview question was followed by question 2-c, which asked the principals to describe further the types of information or data that they found to be useful for school improvement planning. Interview question 4 was used in an attempt to better glean an understanding if the principals found the formal climate data, which is provided to them by the district and the teachers’ association (union), to be useful.

Question 5 asked the principals if they used the available formal climate data, which had been provided by the district and the teachers’ association (union), specifically for the purpose of creating School Improvement Plans (SIPs). If the principals indicated that they used the formal data sets when creating a SIP, interview question 5-a was asked in which the principals were requested to describe the manner and the extent to which the district and teachers’ association data were used.

Principals, who expressed that they did not use the formal climate data sets for the creation of a SIP, were asked to describe the reasons that they chose not to use the data. Interview question 6 asked the principals if they used the formal climate data for purposes other than creating SIPS, which could have included the use of the data in general for school improvement planning. Principals indicating that they used the formal school climate data for purposes other than formal SIP creation, were asked in question 6-a to describe the manner and to the extent that the data were used. Interview question 8 was used to gather data as to whether the principals found formal and/or informal school climate data to be useful. This question was followed by question 8-a which asked the
principals if the school climate data, were found to be useful, specifically when creating SIPs.

Based on the data that the principals provided for the interview questions, collective themes were designated for the purpose of answering the research question relating to the principals’ perceptions of the use of the formal climate data, particularly for school improvement planning. Collectively, principals in this particular study expressed that they felt school climate data are generally useful. However, only three of the seven principals indicated that they used all or part of the formal climate data when creating their SIPs. The remaining four principals stated that they did not use the available formal climate data for school improvement planning, especially when creating SIPs. Only one principal, Respondent 1, indicated using the formal climate data for school improvement planning in general. This respondent indicated specifically using the results of the teacher climate survey. Principals frequently expressed that they perceived the available formal climate data, which they have been provided, as being invalid, primarily due to the low response rates to the surveys.

The principals indicated that the available formal climate data were used for purposes other than for SIP creation. The principals expressed that they used the formal climate data sets when conducting meetings, specifically meetings with other administrators, their Build Leadership Teams (BLTs) members, parents, and staff members. While it remains unclear if these meetings were directly linked to school improvement planning, the relationship seemed likely. However, the non-use of the available formal school climate data was not reported as being due necessarily to a view
that formal school climate data are of little use. The lack of use in this scenario appears to be attributed to the perception of some of the principals that the particular data sets, which they had been provided, were incomplete. Regardless, the principals indicated that they generally preferred informally, as opposed to formally, collected school climate data for school improvement planning.

The data revealed that the principals were engaging in the DDDM process when creating their SIPs and using multiple data sets and sources to create the plans. Principals generally expressed that they perceived mandated data sets and related data from a district database as being more useful. The principals reported focusing on these data sets when engaging in school improvement planning. During the interviews, principals spent little time addressing formal climate data and spent a considerable amount of time discussing the mandated data sets.

**Research sub-question 1.** The first research sub-question of this study sought to understand if the principals use the formal climate data, when they are available, for the purposes of attempting to cause and implement change and school improvement, specifically when creating SIPs. The data gathered from interview questions 3, 5, 5-a, and 5-b were used to understand the answer to this particular research sub-question. Question 3 of the interviews asked the principals what role, if any, school climate data may have in the DDDM process. Question 5 of the interview questions asked the principals if they used all or parts of the available formal climate data when creating their SIPs. If the principals indicated using the formal climate data, follow-up questions 5-a and 5-b were asked to gain further details. Question 5-a asked the principals to describe
the manner and the extent to which they used the available data when creating SIPs.

Question 5-b asked the principals if they used the available formal climate data
differently depending on the demographics of the families, students, and teachers.

While three of the seven principals indicated that they used the available formal
climate data sets when creating SIPs, four of the seven said that they did not. All seven
principals indicated that they generally found school climate data useful, but only three
principals specifically indicated using the formal climate data for SIP creation. Instead
of focusing on formal school climate data, the principals reported be attentive to
mandated and related data. These particular data were retrieved by the principals from
the state of Ohio Local Report Cards (LRCs), as well as a district data base.

Research sub-question 2. Research Sub-Question 2 sought to understand the
manner and the extent to which principals, who indicated that they used the available
formal climate data when creating their SIPs, engaged in the practice. Interview
questions 5, 5-a, and 5-b attempted to discover the manner and the extent to which the
available climate data were used by principals, specifically when creating SIPs. Three of
the participating principals indicated that they used the available formal climate data
when creating SIPs. These principals further indicated that they used the formal climate
data for various purposes when creating their SIPs. One principal, Respondent 1, stated
that the use of formal climate data was limited when creating SIPs. While the other
principals did not specifically indicate the extent to which they used the formal climate
data, their responses appeared to reflect limited use of the data, which may have reflected
they did not use the data to any significant extent.
Of the respondents who indicated using the formal climate data, Respondent 1, indicated using the formal data specifically to “plan on ways to assist parents in engagement with the school.” The same principal also specified using the data to understand the needs of parents. Respondent 2 indicated using the formal climate data when planning for professional development days for the staff members “who are part of the SIP.” The same respondent indicated using the formal climate data to add “an additional voice to consider when creating plans in general.” The other respondent, who indicated using the formal climate data when creating SIPs, specified that information from the student climate survey results were used. This principal, Respondent 3, indicated using the data to “look at the students’ perceptions of their interactions with the staff.” Additionally, the data were used by this particular principal to understand “how students feel about their school” and to “set expectations.”

Overall, the principals who reported using the available formal climate data when creating SIPs, appeared to use the data in a limited manner. The principals reported focusing on mandated data and related data sets. In this case, the formal climate data were not significantly used to guide the principals during the DDDM process when creating SIPs.

**Research sub-question 3.** This research sub-question sought to understand the reasons that the principals, who indicated they did not use the available formal climate data when creating SIPs, chose to take such a view. Interview question 5-c, asked the principals, who indicated that they did not use the formal climate data when creating SIPs, to explain the reasons for their approach. Three of the principals stated that they did
not use the results due to the low response rates to the climate surveys and the likely lack of validity to their results. For example, Respondent 4 said, “I do not use the results of the surveys because the results are not always very comprehensive. This is usually due to a small number of people completing the survey.” Two respondents said that they did not use the results of the climate surveys when creating their SIPs because the results were not necessarily accurate and reflective of the entire situation. For example Respondent 4 stated, “The formal surveys can quantify the many aspects that make-up school climate, but do not always accurately reflect it.” Respondent 7 stated that:

The information provided is not very reliable. The averages for the district may not apply to my school. This could be due to the large size of the district. What is a trend in other areas of the district may not apply to my school.

Two respondents also stated that they did not use the results of the surveys due to the high turn-over rates among the administrators, students, and teachers in the district who participated in the survey. For example, Respondent 7 reported:

There are high movement rates of administrators, teachers, and students so it is difficult to attribute the results to any one person or group of people. For example, less than 20 percent of the graduating class has attended the school for all four years of high school.

Respondent 5 stated:

I do not really use the data as it really isn’t comprehensive. For example, the school may have high teacher turn-over, which can change results. Some teachers
are placed in or removed from the school throughout the year, so they may skew the data, especially on the teacher survey results.

Another reason offered by Respondent 5 for not using the data when creating an SLP was the principal’s perception that “there are many factors that influence the outcomes of the climate survey, outside of the school.” Respondent 7 reported not using the formal climate data because, “The information from the survey is a district focus so I do not consider the results.” In other words, the principal considers the results to pertain to the district, not a particular school. Additionally the same respondent indicated not using the data because the “results are only taken once a year.”

A significant theme of this study, which emerged from the data, was that the participating principals only occasionally and for specific purposes used the formal climate data when creating SIPs. Furthermore, the principals indicated that they did not feel that the data was useable due to being incomplete and invalid. Instead, the principals used other data sets during the DDDM process, such as those reported on the schools’ LRCs and on the district’s database.

**Research sub-question 4.** This research sub-question sought to investigate the values that the principals expressed having associated with the use of climate data, especially as the data related to school improvement planning. A multitude of interview questions were asked in order to attempt to obtain data to answer this particular research sub-question. Collectively, the data from the answers to these questions provided the researcher with information, which could be used to extrapolate the values that the
principals associated with the use of school climate data, especially as they relate to school improvement planning.

Through the coding and sub-coding and the analysis of the answers to these interview questions, several insights to this research sub-question have been revealed. Three participants indicated that they used formal climate data for the purpose of creating SIPs, but no principal indicated that the use of formal climate data was their focus when using data to create SIPs. Furthermore, four of the seven principals revealed that they did not use the available formal school climate data when creating SIPs. However these four respondents did not express a lack of perceived value of formal school climate data as being part of the DDDM process in relation to creating SIPs. Instead, the respondents indicated that the climate data must be considered to be valid in order to be useful, which in true in this case.

A single respondent expressed that school climate does not have a role in the DDDM process. The other six principals expressed that climate data has a role in the DDDM process, with Respondent 1 stating, “Positive school climate is a huge factor to have an effective building.” Four principals indicated that school climate was important to consider in the DDDM process, as climate influences other aspects of the school organization. For example Respondent 2 stated, “Since a positive climate of the school can enhance attendance, discipline, and academics, I do include it in the DDDM process. School climate feeds into itself. Positive climates can increase results which then feeds back into positive climate.” Respondent 3 remarked, “You cannot ignore the environment for the sake of academics as they go together. You need a certain type of
setting that lends itself to successful learning and teaching.” Respondent 5 said, “You
must have a positive school climate in order to be productive. For example, you must
address behavioral needs since it influences testing data.” Respondent 6 reported, “Until
you address the climate of the building, which includes making a safe environment and
one which is conducive to learning, you can’t improve.”

Two principals, when asked if school climate has a role in the DDDM process,
stated that knowledge of the climate provides them with an understanding of the state of
the organization of their schools. Respondent 5 said, “Climate indicates the state of the
school environment, which you need to know when making decisions.” Respondent 6
stated that, “You need information (school climate data) to help to get a feel for the
building.” The only principal, who indicated that school climate does not have a role in
the DDDM process, explained this perspective by saying, “I usually look at other
information that I have gathered in order to make important decisions for the school.
This information is more reliable.”

Three of the seven principals suggested that the available formal climate data
were useful to them. The principals expressed different reasons for perceiving that the
data were useful. One principal, Respondent 1, reported that the formal climate data “is
useful as a way to transition into the conversation about the informal climate which are
discussed.” The same respondent went on to say, “That is to say, the formal climate data
is not an end to understanding school climate. Instead the quantitative data (formal
climate data) can lead to ways understand the qualitative data (informal climate data).”
The results of the study generally reflected that formal climate data were not a focus of the principals, especially when planning for school improvement. This included general school improvement planning, as well as strategic planning such as when creating the formal SIPs. The principals in this study, instead, described in detail a preference of using mandated data sets and related data from a district database. However, six of the seven principals described using the formal climate data for purposes other than creating SIPs. While the principals did not explicitly reveal that these other uses related to school improvement purposes, some of the results appeared to support such an assumption. For example, five respondents reported using the formal climate data in staff meetings. Respondent 5 explained, “I share the results of the student surveys with staff to inform teachers on areas we might need to improve. I do this in staff meetings.” Respondent 4 said, “The only time I use the data (formal climate data) is to address a major concern, usually in professional development days for staff or to discuss in grade level meetings.”

Question 7 asked the principals to describe ways that they gather information to understand climate as it exists in their buildings, other than through the formal data that is provided for them. This question was asked in order to understand the ways that principals may collect informal climate data. While the principals identified a multitude of ways in which they have collected informal climate data, only two principals indicated that they use this informal climate data when creating SIPs. Regardless, the principals generally seemed more knowledgeable and understanding of informal, than formal, data sets. This reported understanding of informal climate, however, should not be construed to suggest that the principals feel that informal climate data are significant and should be
included in school improvement planning. For example, Respondent 4 described in detail collecting informal data from conversations with others, during walk-throughs, interactions that the principal had with staff, students, and parents, and observations made of student behavior. However, the principal indicated not using this information for school improvement planning.

While all seven principals expressed, during the interviews, that they valued school climate data in relation to school improvement planning, they did not appear to transfer this value about climate data to the DDDM process associated with school improvement planning. In other words, while school climate data are reportedly perceived by the principals as being of value, this perception does not necessarily translate into an active use for school improvement planning. One reason for this reaction may pertain to the pressures that are placed on principals to make changes directly associated with mandated data rather than school climate data. Furthermore, the principals expressed that they generally did not have training or effective experiences in order to use climate data explicitly for the use of school improvement planning purposes. These factors may have contributed to the principals expressing that they valued climate data, but were not applying the data to the DDDM and school improvement planning processes. Additionally, principals may have been less likely to value and use the formal climate data, as the data were reportedly viewed as being invalid.

**Research sub-question 5.** Research Sub-Question 5 sought to reveal the principals’ experiences with school climate data, in general. While the interview reactions to the related questions were collectively used to gather data to answer this
research sub-question, one of the interview questions particularly focused on this research sub-question. Interview question 10 asked the principals to describe their experiences, such as district initiatives, professional development, special training, and university course work, with school climate, especially in relation to school improvement. The principals, in general, indicated that they had little or no training regarding the use of school climate data, specifically in relation to school improvement planning. Three of the principals discussed having received training related to Positive Behavior Intervention and Support (PBIS). This program, which is being used in the district, focuses on improving student behavior and addressing discipline issues. According to Freiberg and Stein (1999), discipline and behavior can be included in the indirect measurements of school climate data. For this reason, such training could be considered as an experience with school climate data. This focus on discipline and behavior also reflected a significant theme of the study. More specifically, six principals reported, in response to interview question 11, using discipline related data, which are provided on a district database, when they are creating their annual SIPs.

Overall, the principals were unable to provide detailed information on school climate, school climate data, or using school climate data for school improvement. Instead, the principals described, in detail, their use of mandated data sets. While principals understood multiple ways to collect and measure school climate informally, this information was not reported by the principals as being important to include in the DDDM process when creating SIPs. While the principals expressed that they generally
valued climate data, this value did not translate, as previously mentioned, into the inclusion of these particular data sets as part of school improvement planning and action.

**How the Results Informed the Related Theoretical Frameworks**

The next section of this chapter discusses the outcomes of the study in relation to the theoretical frameworks discussed in the Chapter 2, the Review of Literature. These theoretical frameworks are based on the relevant literature related to the research question and sub-questions of this study. The outcomes of this study may inform and add to the body of literature associated with DDDM, school climate, school climate data, school improvement planning, and school leadership.

The results of this study may add to the body of literature associated with DDDM. According to the existing literature, the DDDM process entails that data sets be used for the development of plans of action and the identification of related decisions (Lange et al., 2012). This claim was supported by the results of this study in which all of the seven participants indicated that they had engaged with the DDDM, especially when creating SIPs. Literature related to the DDDM process has suggested that in order to understand the current state of the school organization and determine its needs, principals may need to consider multiple data sets, sources of data, and perspectives to glean a more comprehensive perspective upon which they will base their plans for change (Bernhardt, 2004; Knapp et al., 2007; O’Day, 2002). Furthermore, the inclusion of multiple data sets can enrich the strategic planning process by creating a context in which related data are understood and analyzed thoroughly (Bernhardt, 2004; Hopson & Lawson, 2011). Principals in this study revealed that they used multiple data sets and sources to create
their SIPs. These sources include both mandated and non-mandated data sets. For example, the principals reporting using formal climate data, informal climate data, discipline data, state report card data related to student attendance rates, Adequate Yearly Progress (AYP) demographic sub-group information, graduation rates, standardized test scores, student grade data, matriculation data, short-cycle assessment data, ACT data, and student demographic information. Furthermore, a principal reported using formal climate data to better understand the other data sets.

Extant literature relating to the DDDM and school improvement processes has noted that school improvement is typically measured using archival data (Witkin & Alschuld, 1995). This claim is supported by the outcomes of this study, as the principals tended to focus on mandated data sets when creating SIPs. This existing information includes using data, which were available on the schools’ LRCs and from the information stored in the district database, which the principals reported focusing on when creating their SIPs. The literature also suggests that multiple data sets should be used to create meaningful and effective plans. Furthermore, Strike (2007) suggested that testing data should not be a primary focus as “test data should be viewed as one measure of a good education, not the meaning of it” (p. 134). While the principals reported using multiple data sets, they reported primarily focusing on Ohio Graduation Test (OGT) data when creating their SIPs. This focus on student test data is complemented in the literature. For example, Peterson and Young (2004) asserted, “Building and district leaders use student test data to make decisions about effective services and practices, develop School Improvement Plans, and if necessary take corrective action when schools miss the mark”
Literature also reported that principals may tend to focus on increases in educational outcomes, which are measured and reported to the public, such as those directly related to student achievement (Hopson & Lawson, 2011; Lange et al., 2012). Again, this claim was supported by this study, as its data revealed that the principals primarily focused on using data and improving upon data related to mandated data sets.

Literature pertaining to school climate data was discussed in Chapter 2, the Literature Review of this dissertation. The results of this study supported the multiple claims found in the literature regarding the value of school climate. Research suggests that school climate impacts eventual learning and achievement outcomes (Anderson, 1982; Bulach et al., 1995; Goodard et al., 2000; Heck, 2000; Hoy et al., 1998; Kelley et al., 2005; Lindahl, 2011; Stevens & Sanchez, 1999). While the study did not investigate the impact of school climate on eventual learning outcomes, four of its respondents noted this rationale as a reason that school climate data has a role in the DDDM process. For example, Respondent 2 stated, “Since a positive climate of the school can enhance attendance, discipline, and academics, I do include it (school climate data) in the DDDM process.”

School climate data, as noted in the literature (Bernhardt, 2004; Hopson & Lawson, 2011; Lindahl), are frequently omitted from the planning stages of change initiatives, even though climates often contribute to such outcomes. Furthermore, “school climate data has largely been neglected in assessment and improvement planning” (Hopson & Lawson, 2011, p. 106). The results of this study support the claim that school climate data are largely neglected and frequently omitted from the
improvement process and planning. While three of the seven principals reported using the available formal climate data when formulating their SIPs, no principal reported doing so to any significant extent. Additionally, the principals reported focusing on mandated data sets, perhaps at the expense of school climate data. The literature also noted that school climate data may be excluded due to the lack of mandates and conceptual models for such data (Hopson & Lawson, 2011). This claim is supported by the outcomes of this study, as the principals reported having little training associated with the use of school climate data and school improvement. In fact, the principals in this study appeared to lack knowledge regarding conceptual models which exist to support such actions.

School climate data, as noted in the literature, may reflect variables outside the boundaries of what can be attributed to internal school variables (Anderson, 1982). Because schools are open-systems, internal and external variables influence their climate data (Burke & Litwin, 1992). Principals, who participated in this study, described the reasons that formal school climate data were not included when creating their SIP. For example, Respondent 5 stated, “I also think there are many factors that influence the outcomes of the climate survey, outside of the school.” When discussing if school climate data were useful for creating SIPs, Respondent 1 noted, “Yes and no. It (school climate data) helps me to better understand the school and what is working and what is not. However, sometimes the data illuminates what goes beyond the scope of the school.”
Literature pertaining to school climate data has asserted that there are multiple ways in which school climate can be measured. School climate can be measured directly or indirectly (Freiberg & Stein, 1999). Direct measures of climate can include climate surveys and indirect measures can include attendance records of teachers, the physical condition of the building, hallways, and classrooms (Freiberg & Stein, 1999, p. 23). In this study, the principals reported using both formally and informally collected school climate data sets. The principals expressed multiple ways in which school climate data are collected, outside of formal climate surveys. For example, informal and indirect measures of school climate were indicated by the principals.

When discussing data, in general, the literature has reported that they are sometimes inconclusive or can give false representations of reality. Due to small population sizes, samples, in many schools, economies of scale are significant (Kane & Staiger, 2002). Some of the principals in the study expressed that they viewed the results of the formal school climate surveys as being invalid and incomplete, due to the low response rates. For example, Respondent 6 stated, “I do not use the results (of the school climate surveys) since the response rate is too low to validate the results.” Furthermore, Respondents 4 and 7 stated that they did not use the available formal climate data due to the low response rates.

While the literature pertaining to the use of school climate data, as part of the DDDM process, has suggested that the data should be included as one of multiple sources (Bernhardt, 2006), barriers exist to such an approach. For example, principals may have not received training for engaging with ecological data, such as school climate data
pertaining to student learning (Hopson & Lawson, 2011). The results of this study have supported this claim, as the principals generally expressed that they found school climate data useful, but did not use such data when engaging in school improvement planning. Furthermore, the principals generally reported having no special training or related experiences to help them understand the ways in which school climate data could be used for the school improvement planning and DDDM processes. This lack of training may explain a portion of the reason that the principals did not focus on or include the formal climate data when planning for school improvement.

Literature has also suggested that school leaders use the DDDM process as a means to structure their schools as a learning organization (Hopson & Lawson, 2011). Principals in the study reported using the results of the formal school climate data when planning for staff development and in staff meetings. For example, Respondent 2 reported, “I use it to plan professional development days for staff, which are part of the SIP.” Additionally, Respondent 4 stated, “The only time I use the data (formal school climate data) is to address a major concern, usually in professional development days for staff or to discuss in grade level meetings.” These responses may reflect one of the ways in which the principals in this study approached their schools as learning organizations. Professional development can be used to create a learning organization, especially when conducted in response to data which reveal organizational weaknesses.

**Recommendations for Practical Purposes**

The results of this study have informed the researcher in regard to recommendations for practical purposes. Principals cited not using the available formal
school climate data due to the low response rates to the surveys. For example, Respondents 4, 6, and 7 all indicated that they did not use the results for this reason. Respondent 7 stated, “The data which is provided by the district and teachers’ union could be okay, but there needs to be a push to increase participation.” For this reason, the district and teachers’ association (union) are encouraged by this researcher to consider creating ways to increase the likelihood that families, students, and teachers will complete the climate surveys. For example, the district may want to make more readily known that the surveys exist, as a way to increase participation. The district may also want to devote time and resources in their follow-up on the collection of survey results, especially in relation to the use of such data by principals. Respondent 7 noted that, “The information from the surveys is not a district focus, so I do not consider the results.” Principals may be more likely to use the formal climate data if the response rates increased and the district created a focus on using the results, especially for school improvement.

Furthermore, the principals expressed that they lacked training in using school climate data, especially in relation to school improvement planning. The district may want to promote training and professional development which aids principals in understanding the possibilities of using school climate data during the use of the DDDM process to drive school improvement planning. This training could include information about the use of both formal and informal climate data. Additionally, professional development on using mandated and non-mandated data sets to plan for school improvement could be useful, with the hopeful outcome that the use of multiple data sets
would lead to more effective SIPs. Furthermore, if there was a focus on using the results by the district, principals may in turn encourage participation in completing the climate survey at the school level. If principals let families, students, and teachers know that the results were being actively used to plan for school improvement, those receiving the surveys might be more likely to complete them.

Another recommendation for the purposes of increasing the completion and use of the climate surveys could be the addition of questions to the family and student surveys which would solicit qualitative climate data. For example, open-ended response questions could be added to the current surveys. Three principals, when asked if there were any additional information in relation to understanding climate, reported a need for qualitative climate data. For example, Respondent 5 said, “I would like to better understand students’ responses by having narrative added to the surveys.” Respondent 6 stated, “I would like to improve the student climate surveys by adding the option of open student responses and feedback.” Additionally, Respondent 7 said:

I would like more narrative data about what students actually think and feel.
Most students do not take the current survey seriously since the answers are pre-determined and they are just bubbling in the circles which may not really represent how they feel.

By adding open-ended survey questions, the participants might be able to describe more accurately their perspectives by providing detailed feedback. Furthermore, more families and students might complete the surveys if they perceived that such detailed feedback would be used by the principals with the development of improvement planning.
The final recommendation for practical purposes is to distribute the formal climate surveys more frequently during the course of a school year. When the principals were asked the reason that they did not use the results of the surveys when creating SIPs, two principals attributed their non-usage to the high movement rates of principals, students, and teachers in the district. For example Respondent 7 said:

There are high movement rates of administrators, teachers, and students, so it is difficult to attribute the results to any one person or group of people. The results of the teacher survey could reflect teachers who have already left or administration which has changed.

Respondent 5 stated:

I do not really use the data as it isn’t comprehensive. For example, the school may have high teacher turn-over, which can change results. Some teachers are placed in or removed from the school throughout the year, so they may skew the data, especially on the teacher survey results.

By distributing the surveys more frequently, the results could be more accurate and the principals might be exposed to changes in school climate throughout the year, rather than just annually. More frequent distribution of the surveys would hopefully diminish the influence of the movement of teachers, students, and principals on the climate data. Additionally, more frequent distribution of the surveys might increase awareness of their existence and importance.
Recommendations for Further Research

While the results of this study may add to relevant bodies of literature, the researcher identified related issues not addressed in the study that may benefit from further examination. For example, a larger group of administrators could be investigated to understand better the study’s research question and sub-questions. Future research could include principals, possibly outside of the high school setting, who have been provided with formal climate data and who are required to create an annual SIP. A larger sample size, in future investigations, might increase the transferability of the results of such studies.

Further research could also include performing a study in other districts which would provide principals with formal school climate data. The inclusion of a district in which response rates to climate surveys are higher than in the district of this particular study could reap additional, useful perspectives. Because the principals in the district of this study cited low response rates as a reason for not using available formal climate when creating their SIPs, useful comparisons could be made with the results of a district with higher response rates. While the existence of other districts that collect formal climate data is not known, a possibility, maybe even a strong possibility, exists of their existence. Regardless, the validity of the respondents’ claims of not using the formal climate data due to the low response rates could be further investigated with an examination of districts with larger response rates.

Another study, which could possibly add a useful perspective to the use of school climate data, would involve principals who have more experience and training with the
use of the data for school improvement planning than the principals in this study. Such a study could reveal if principals with more training with school climate data understand and use the data to a more significant extent than principals with less training and experience. The results could help to offer insight regarding whether training would increase the likelihood that principals would use school climate data for school improvement planning. Additionally, a study could be conducted in a school district, if one exists, in which the inclusion of school climate data are required when planning for school improvement.

This study did not focus on the success of the SIPS, which the participating principals created and enacted. A study of the outcomes of SIPS could be useful. More specifically, a study of SIPS, which did and did not incorporate school climate data, could be of value. While isolating for the variable of using school climate data in a SIP and then measuring the success of the SIP could be challenging, the results of such a study could add to the body of literature pertaining to the value of using climate data for school improvement planning. After all, the value of using climate data when creating SIPS remains unclear, as a gap exists in the body of literature regarding the usefulness of school climate with school improvement planning.

Principals in this particular study reported multiple ways of gaining an understanding of the climate, as it exists in their buildings. One of the most popular ways was the collection and analysis of informal climate data. While some of the principals suggested that they use informal climate data when creating SIPS, further understanding of the relationship of the data to school improvement appears to be needed. No interview
question in this study inquired if principals used informal climate data for school improvement planning other than when creating SIPs. Further studies could explore the manner in which principals use informal climate data for school improvement. Such an investigation could help to substantiate the value or lack of value of such data.

One goal of this study was to better ascertain the relationship between the leadership styles being exhibited by the participating principals to school improvement planning, especially in relation to the use of school climate data. After the study was completed, the relationship seems to remain unclear. For example, uncertainty exists if principals who exhibit the traits of certain leadership styles are more or less likely to include school climate data when creating SIPs. So, the matter of the relationship of leadership styles to the use of school climate data is recommended for further investigation.

Conclusions

Principals, based on the results of this study, value school climate data. School climate, while valued, may not necessarily be viewed as being needed for inclusion when engaging in the DDDM process for the creation of SIPs. This study revealed that principals engage in the DDDM process and make decisions regarding school improvement based upon data sets. However, the principals expressed that they generally focus on mandated data sets and related data, which do not include climate data, in order to make strategic decisions regarding the manner to move their organizations forward.

Given the findings of this study, the researcher hopes further investigations regarding school climate, school improvement planning, and school leadership will be
conducted. The researcher particularly hopes that the findings of this study contribute to the body of literature regarding school improvement planning and school improvement. While school improvement remains a critical and complex task for schools and principals, further research could aid in the process and ultimately improve American public education. Schools are evolving organisms and obtaining a better understanding of the most effective ways to guide school change remains a critical function for school leaders.

Current and future leaders of schools, especially principals, may need detailed training regarding ways to move schools forward. This training may include ways to collect and understand multiple data sets. The effectiveness of such training may be enhanced if it includes attention to the use of data sets during the DDDM process. These sets could include both mandated and particularly non-mandated data, such as school climate data. In order to provide effective and ethical leadership, principals may need to understand their school organizations on multiple levels. This understanding likely needs to focus on student achievement from multiple perspectives. An understanding of school climate, may allow principals to understand their schools as organizations, composed of individuals with many needs and perspectives. Therefore, schools may also need to focus on data, which are mandated and not mandated. Principals may embrace the idea of using non-mandated data sets, particularly school climate data, for school improvement if school climate is viewed as being an important factor for student and school success. Until stakeholders’ needs are understood and addressed, other change initiatives for the purpose of school improvement may be unsuccessful. School climate may very likely
have ramifications which directly influence mandated data sets, upon which schools are evaluated. For example, basic climate issues, such as safety, are typically prerequisites to attendance and engagement in learning. Teachers’ attitudes regarding the school and administration can also influence the productivity of teachers and can eventually have measureable effects on student learning. Factors such as these, which can be understood by using climate data, ironically influence the mandated data which principals typically have given their primary focus.

While mandated data sets allow for an understanding of schools on one level, there remains multiple ways to assess schools. Schools, which can contribute to the good of society, may need to be understood beyond what is reported in mandated data sets. Instead, the dimensions of schools may need to be understood and measured in multiple ways. Perhaps, adding school climate to be part of the mandated data, as prescribed by state and the federal governments, would increase the likelihood that climate data would be collected and valued. In this way, multiple stakeholders could be included in discussions regarding the educational needs which exist in schools today. Furthermore, school climate data may help to reveal underlying issues and needs, which must first be given attention in order for academic needs to be addressed effectively. Until school climate data are valued, especially at the state and federal levels, local school leaders may not commit time and resources to addressing the data. Addressing school climate, may therefore help to improve schools and build more democratic communities, in which the perspectives of multiple stakeholders’ are understood when making plans for change and school improvement. School climate data, especially in the form of qualitative data, can
give a voice to stakeholders, which typically needs to be heard and understood in order for school leaders to best understand the communities which they serve. School climate, may therefore become a critical foundation upon which accountability mandates are created.
References


Davies, B. (2006). Process not plans are the key to strategic development. *Management*


Nastasi, B. K., & Schensul, S. L. (2005). Contributions of qualitative research to the


7, 2013, from https://saferschools.ohio.gov/content/ohio_school_climate_
guidelines

Ohio Department of Education. (n.d.). *State/local report cards and resources: Guide to
understanding Ohio’s accountability system 2010-2011*. Retrieved April 14,
110337

Ohio Department of Education, Center for School Finance, Office of Federal Programs.
Retrieved May 16, 2013, from
http://www.ode.state.oh.us/GD/Templates/Pages/ODE/ODEDetail.aspx?page=3&
TopicRelationID=115&ContentID=46854&Content=115422

Assessment Scoring Rubric*. Office of Federal Programs.

implementation. Los Angeles, California: SAGE Publications.


Quong, T., & Walker, A. (2010). Seven principles of strategic leadership. *ISEA, 38*(1), 22-34.


Appendix A: Recruitment Letter

Dear (Participant’s Name),

I am writing to ask for your participation in a research project that I am conducting as part of my dissertation study at Ohio University. The study pertains to the use of school climate data by principals. You have been asked to participate in this study since you are provided annually by the school district and teacher’s union with school climate data for parents, students, and teachers. I am attempting to investigate if principals are using this data for school improvement planning purposes, specifically when creating district SIPs, as being representative of principals in other districts and state. I would also like to ask you about your general perspectives and experiences concerning school climate data.

If you volunteer to participate in this study, I would schedule a time to interview you using the guiding interview questions attached to this email. The interview would last approximately 45 minutes. All information that you share would be kept highly confidential. Identifiable information, including your name and your school will never be disclosed.

If you choose to participate, you will be asked to sign an informed consent prior to the interview, which I need to obtain for the university in order to exhibit evidence that I have described the study thoroughly to you. The consent form is attached to this message. Your participation in this study is completely voluntary, and you would be able to withdraw from the study at any time, for any reason, without penalty.

The district has approved your participation in this study. However, no information you provide will be given to the district and will be kept completely confidential. The information will be maintained in a secure manner that others will not be able to access.

If you should have any questions about the study please feel free to contact me.

I hope to hear from you soon about your desire to participate or not participate. Thanks for consideration of this request. I would be greatly appreciative of your time and effort to help me to complete this study.

Thank you,
Katherine E. Hostiuck
Ohio University Doctoral Student
Patton College of Education
Appendix B: Ohio University Consent Form

A Study of School Climate and Its Relationship to the Accountability-Focused Works of Principals
Katherine E. Hostiuck, Doctoral Program

You are being asked to participate in research. For you to be able to decide whether you want to participate in this project, you should understand what the project is about, as well as the possible risks and benefits in order to make an informed decision. This process is known as informed consent. This form describes the purpose, procedures, possible benefits, and risks. It also explains how your personal information will be used and protected. Once you have read this form and your questions about the study are answered, you will be asked to sign it. This will allow your participation in this study. You should receive a copy of this document to take with you.

Explanation of Study
This study is being done to investigate the manner in which school principals use school climate data for school improvement planning, as part of the data-driven decision making process. The study will investigate if principals choose to use school climate data which is provided for them, especially when making annual school improvement plans. This study will attempt to ascertain the perspectives and experiences of principals regarding school climate data, especially as it related to school improvement planning.

If you agree to participate, you will be asked to take part in an interview with the researcher answering questions about the use of and your perspectives concerning the use of school climate data.

Your participation in the study will last approximately one hour, which is the estimated length of the interview.

Risks and Discomforts
No risks or discomforts are anticipated.

Benefits
This study has the potential of contributing helpful insights regarding approaches to educational planning. The primary objective of this study is to explore and gain a better understanding of the possible uses of school climate data, particularly as they pertain to the use of data and data-driven decision-making in relation to the school improvement planning process, which is likely important to your work. However, the results will be general, unlikely benefiting your work directly.

Confidentiality and Records
All identifiable information associated with participants of this study will be kept confidential by the researcher, Katherine E. Hostiuck. The researcher will not publish any information which identifies the school district or the individual participants of this study. Any information which may identify participants will be omitted. Any information given by participants which they perceive as possibly revealing their identity will also be omitted. All data collected during the interview process will be kept secure by the researcher. Data which has been collected from interviews will be stored on password protected, external hard drives to which only the researcher will have access. Data will not be stored with any identifiers of the participants.

Additionally, while every effort will be made to keep your study-related information confidential, there may be circumstances where this information must be shared with:
* Federal agencies, for example the Office of Human Research Protections, whose responsibility is to protect human subjects in research;
* Representatives of Ohio University (OU), including the Institutional Review Board, a committee that oversees the research at OU.

**Compensation**
No compensation will be provided.

**Contact Information**
If you have any questions regarding this study, please contact Katherine E. Hostiuck, Researcher, or William L. Larson, Ph.D./Advisor.

If you have any questions regarding your rights as a research participant, please contact Chris Hayhow, Director of Research Compliance, Ohio University.

By signing below, you are agreeing that:
* you have read this consent form (or it has been read to you) and have been given the opportunity to ask questions and have them answered;
* you have been informed of potential risks and they have been explained to your satisfaction;
* you understand Ohio University has no funds set aside for any injuries you might receive as a result of participating in this study;
* you are 18 years of age or older;
* your participation in this research is completely voluntary;
* you may leave the study at any time; if you decide to stop participating in the study, there will be no penalty to you and you will not lose any benefits to which you are otherwise entitled.

Signature ___________________________ Date
Printed Name __________________________________________
Appendix C: Guiding Interview Questions

1. How long have you been a principal?
   a. How long have you worked in this particular district?

2. What are your experiences with Data-Driven (data-informed) Decision Making (DDDM)?
   a. Do you use the DDDM process when creating School Improvement Plans for the district?
   b. If participant indicated they use the DDDM process for school improvement planning, what data do you focus on when making decisions regarding school improvement planning?
   c. What types of information or data do you find useful for school improvement planning?

3. What role, of any, do you think school climate has in the DDDM process?

4. In general, is the school climate survey instrument used by the district and teachers’ union to collect school climate data from families, students, and teachers useful to you?

5. Do you use all or part of the formal climate, as provided by the results of the district and teachers’ union school climate surveys, for the purpose of creating your annual School Improvement Plan?
   a. If the participant indicates they use the formal school climate data, can you describe in what manner and to what extent you use the school climate data specifically?
   b. Do you use the results of the survey differently, depending on the particular survey type (family, student, and teacher)?
   c. If the participant indicated they do not use the formal school climate data, what are the reasons for not using the available climate data when creating your annual School Improvement Plan?

6. Do you use the school climate data provided by the district and the teachers’ union for purposes other than creating School Improvement Plans?
   a. If the participant indicates that they use the school climate data for other purposes, can you please describe the manner and to what extent you do so?

7. Can you please give examples of other ways (outside of the use of the formal climate data provided to you by the district and teachers’ union) you gather information to understand climate as it exists in your school?
   a. Do you use any of the above mentioned information when creating your School Improvement Plans?
   b. If so, can you please explain the manner in which you do so and to what extent you use the information?

8. In general, do you think school climate data is useful?
a. Is school climate data useful when creating School Improvement Plans?

9. What data or other information would you like to be provided with that you don’t currently have access to in order to make decisions regarding school improvement?
   a. Are there any specific areas that you would like data for to better understand school climate, outside of the information which you are currently provided by the district and teachers’ union?

10. What are your experiences (such as district initiatives, professional development, special training, or university course work) with school climate, especially in relation to school improvement?

11. Do you use any other types of non-mandated data, other than school climate data, when creating School Improvement Plans?
Appendix D: Ohio University IRB Approval

A determination has been made that the following research study is exempt from IRB review because it involves:

Category 2. research involving the use of educational tests, survey procedures, interview procedures or observation of public behavior

Project Title: A Study of School Climate and Its Relationship to the Accountability-Focused Work of Principals

Primary Investigator: Katherine Elizabeth Hostluk

Co-Investigator(s):

Advisor: Gordon Brooks

Department: Educational Studies

Rebecca Cale, AAB, CIP
Office of Research Compliance

The approval remains in effect provided the study is conducted exactly as described in your application for review. Any additions or modifications to the project must be approved (as an amendment) prior to implementation.
Appendix E: Sample Initial Coding Scheme by Question

Using individual interview questions, the researcher determined common codes, sub-codes, and outliers.

Question 5-b. Do you use the results of the survey differently, depending on the particular survey type (family, student, and teacher)?

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Response</th>
<th>Code(s)</th>
<th>Sub-Code(s)</th>
<th>Outliers</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>- The responses from the family surveys are usually used more by the parent consultants (PTA). - The family survey feedback is important but the parents/families who typically fill these out are already engaged, so it’s not always valid as the respondents are not always representative of the majority of our parents/families. - The teachers’ survey data tends to be used more by the school administration. - The teachers’ survey from the union tends to be relied upon more heavily.</td>
<td>FAMILY</td>
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<td></td>
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<td></td>
<td>• PTA</td>
<td>FAMILY</td>
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<td></td>
<td></td>
<td></td>
<td>• ENGAGED</td>
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<td></td>
<td></td>
<td>TEACHER</td>
<td>HEAVILY</td>
<td>TEACHER</td>
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<td></td>
<td></td>
<td></td>
<td>• ADMIN</td>
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</tr>
<tr>
<td>2</td>
<td>- I see each survey as equally important. - I use the surveys as one of many tools and resources to understand climate and other data sets I work with.</td>
<td>ALL</td>
<td></td>
<td>OTHER</td>
</tr>
<tr>
<td>3</td>
<td>- Yes. I use the data differently depending on the type. I tend to focus on the student surveys.</td>
<td>STUDENT</td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>- No.</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>- No.</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>- No.</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>- No, I do not really look at any of the information or use it for any purposes in the school.</td>
<td>NO</td>
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</tbody>
</table>
Using interview questions to compare responses, the researcher determined common themes which emerged and are explained in the table.

<table>
<thead>
<tr>
<th>Code/Sub-Code</th>
<th>Code Description/ Meaning</th>
<th>Raw Data Example</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>Question 1</td>
<td></td>
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<tr>
<td>5 or Less</td>
<td>Principal is within the range of five years or less of total experience as a principal.</td>
<td>R. 1-“3 years”</td>
<td>3/7</td>
</tr>
<tr>
<td>6 to 10</td>
<td>Principal is within the range of six to ten years of total experience as a principal.</td>
<td>R. 6-“10 years”</td>
<td>1/7</td>
</tr>
<tr>
<td>More than 10</td>
<td>Principal has more than 10 years of total experience as a principal.</td>
<td>R. 2-“14 Years”</td>
<td>3/7</td>
</tr>
<tr>
<td>Code/Sub-Code</td>
<td>Code Description/Meaning</td>
<td>Raw Data Example</td>
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<tr>
<td>Question 1-a</td>
<td></td>
<td></td>
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<tr>
<td>5 or Less</td>
<td>Principal is within the range of having worked five years or less in the particular district under study.</td>
<td>R. 1- “3 years”</td>
<td>4/7</td>
</tr>
<tr>
<td>6 to 10</td>
<td>Principal is within the range of having worked six to ten years in the particular district under study.</td>
<td>R. 5- “8 years”</td>
<td>2/7</td>
</tr>
<tr>
<td>More than 10</td>
<td>Principal is within the range of having worked more than ten years in the particular district under study.</td>
<td>R. 2- “14 Years”</td>
<td>1/7</td>
</tr>
<tr>
<td>Code/Sub-Code</td>
<td>Code Description/Meaning</td>
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<td>Frequency</td>
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<tr>
<td>Question 2</td>
<td></td>
<td></td>
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<tr>
<td>SIP</td>
<td>Principal indicates using the DDDM process to create the formal School Improvement Plan. R. 1- “I use School Improvement Plans to set academic goals for the year.”</td>
<td>1/7</td>
<td></td>
</tr>
<tr>
<td>SUMMER</td>
<td>Principal indicates using DDDM during the summer prior to the start of the school year. R. 1- “I do this (set academic goals) during the summer prior to the start of the school year to plan and strategize what areas the school can make the most academic improvement.”</td>
<td>1/7</td>
<td></td>
</tr>
<tr>
<td>PBIS</td>
<td>Principal indicates using the Positive Behavior Interventions and Supports (PBIS) program. R. 1- “PBIS is used to improve school climate.”</td>
<td>1/7</td>
<td></td>
</tr>
<tr>
<td>DISCIPLINE</td>
<td>Principal indicates using student discipline data as part of DDDM. R. 1- “Administration examines discipline data…to formulate the approach which will be used to improve student behavior.” R. 4-“We look at OGT, ACT, and discipline data.” R. 7-“I also make decisions based on behavioral and academic learning information from the district databases.”</td>
<td>3/7</td>
<td></td>
</tr>
<tr>
<td>CLIMATE</td>
<td>Principal indicates using the results of the teachers’ union staff climate survey for DDDM. R. 1- “Administration examines…data from the staff surveys to formulate the approach which will be used to improve student behavior.”</td>
<td>1/7</td>
<td></td>
</tr>
<tr>
<td>IMPROVE</td>
<td>Principal uses the DDDM process the make school improvements. R. 1- “Administration examines discipline data as well as use data from staff surveys to formulate the approach which will be used to improve student behavior.” R. 2- “I look to see if the practices used in the school needs to stay the</td>
<td>4/7</td>
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<tr>
<td>Code/Sub-Code</td>
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<tr>
<td></td>
<td>same or needs improvement.”</td>
<td>R. 4- “We look at different content areas and have conversations around what the data is saying about the school and how we can improve.”</td>
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<td></td>
<td></td>
<td>R. 6- “For example, I saw we needed more support staff for our math staff to make improvements as OGT data indicated that students were struggling.”</td>
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</tr>
<tr>
<td>ATTEND</td>
<td>Principal indicates using attendance data during the DDDM process.</td>
<td>R. 2- “I am using attendance data all the time to articulate to students and staff areas of needed improvement.”</td>
<td>3/7</td>
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<td></td>
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<td>R. 3- “I have primarily focused on student attendance data in the past.”</td>
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<tr>
<td></td>
<td></td>
<td>R. 4- “We also look at student attendance data from the state report cards.”</td>
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<tr>
<td>GRADES</td>
<td>Principal indicates using students’ grade data from classes in the DDDM process.</td>
<td>R. 2- “I also look at…grade cards…” R. 3- “I have also used data about students’ grades per grading period. I also look at individual teachers’ grades for students and work on ways to best move students to the next grade level.” R. 4- “We look at data by quarter for teachers at the number of student failures.” R. 7- “I also make decisions based on behavioral and academic learning information from the district databases.”</td>
<td>4/7</td>
</tr>
<tr>
<td>OGT</td>
<td>Principal indicates using the results from the Ohio Graduation Tests (OGT) in the DDDM process.</td>
<td>R. 2- “I also look at…OGT results.” R. 4- “We (BLT) look at OGT, ACT, and discipline data.” R. 4- “The OGT and ACT data helps to give a perspective on the state of the school that might not otherwise be evident.” R. 6- “For example, I saw we needed more support staff for our math staff to make improvements as OGT data indicated that students were struggling.”</td>
<td>4/7</td>
</tr>
<tr>
<td>TREND</td>
<td>Principal indicates looking at trends over various periods of time during the DDDM process.</td>
<td>R. 2- “I look at trend data for each quarter, the previous year, and sometimes over several years (3-5 years), to look for building trends. I then make decisions based on the trends I find.”</td>
<td>1/7</td>
</tr>
<tr>
<td>RESOURCE</td>
<td>Principal indicates using</td>
<td>R. 3- “I use attendance”</td>
<td>2/7</td>
</tr>
<tr>
<td>Code/Sub-Code</td>
<td>Code Description/Meaning</td>
<td>Raw Data Example</td>
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<tr>
<td></td>
<td>data as part of the DDDM process to make decisions specifically about resources.</td>
<td>information to channel resources to address this problem.” R. 6- “I use data to allocate resources to different departments.”</td>
<td></td>
</tr>
<tr>
<td>HIRE</td>
<td>Principal indicates using data to make decisions regarding hiring practices.</td>
<td>R. 3- “Using the information (attendance data) led to the hiring of a full-time social worker.” R. 6- “For example, I saw we needed more support staff for our math staff to make improvements as OGT data indicated that students were struggling. This influenced my hiring practices.”</td>
<td>2/7</td>
</tr>
<tr>
<td>P.D.</td>
<td>Principal indicates using data to make planning decisions about professional development for the staff.</td>
<td>R. 3- “I have also used data to direct professional development for staff to better support students.” R. 4- “We use the data to drive subjects for teacher professional development days and grade-level meetings.”</td>
<td>2/7</td>
</tr>
<tr>
<td>BLT</td>
<td>Principal indicates that the DDDM process is part of Building Leadership Team (BLT) meetings.</td>
<td>R. 4- “Our Building Leadership Team (BLT) looks at data together.” R. 7- “I use data to make instructional decisions along with the Building Leadership Team.”</td>
<td>2/7</td>
</tr>
<tr>
<td>ACT</td>
<td>Principal indicates using ACT data as part of the DDDM process.</td>
<td>R. 4- “We (BLT) look at OGT, ACT, and discipline data. The OGT and ACT data helps to give a perspective on the state of the school that might not otherwise be evident.”</td>
<td>1/7</td>
</tr>
<tr>
<td>PREVIOUS</td>
<td>Principal indicates having previous experience using the DDDM process in</td>
<td>R. 5- “I am well versed in using data. In a previous district I</td>
<td>1/7</td>
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<tr>
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<tr>
<td></td>
<td>another school district.</td>
<td>worked for, I gained a lot of experience as the district was focused on using data. I use data to make most major decisions for the school.&quot;</td>
<td></td>
</tr>
<tr>
<td>SHORT CY</td>
<td>Principal indicates using short cycle assessments which are given by teachers that are distributed every three weeks to collect data used in the DDDM process.</td>
<td>R. 7- “We use short cycle assessments which are assessments given by individual teachers every three weeks.”</td>
<td>1/7</td>
</tr>
<tr>
<td>DDB</td>
<td>Principal specifically identifies using a district database to collect information which they use as part of the DDDM process.</td>
<td>R. 7- “I also make decisions based on behavioral and academic learning information from the district databases.”</td>
<td>1/7</td>
</tr>
<tr>
<td>Question 2-a</td>
<td>Principal indicates using the DDDM process when creating their School Improvement Plans for the district.</td>
<td>R. 3- “Yes”</td>
<td>7/7</td>
</tr>
<tr>
<td>Code/Sub-Code</td>
<td>Code Description/Meaning</td>
<td>Raw Data Example</td>
<td>Frequency</td>
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<tr>
<td><strong>Question 2-b</strong></td>
<td></td>
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</tr>
<tr>
<td>CLIMATE</td>
<td>Principal indicates using school climate data.</td>
<td>R. 1- “Staff climate survey from the teachers’ union.”</td>
<td>1/7</td>
</tr>
<tr>
<td>• STAFF SURVEY</td>
<td>Principal indicates specifically using the data from the teachers’ climate survey.</td>
<td>R. 1- “Staff climate survey from the teachers’ union.”</td>
<td>1/7</td>
</tr>
</tbody>
</table>
| LRC | Principal indicates using data reported on the Local Report Card (LRC), which is issued by the Ohio Department of Education. | R. 1- “…State report card data for graduation rates and attendance.”
R. 2- “Attendance data from the state report card is examined.”
R. 2- “I look at past years’ state report card data to set goals for increased academic achievement on state tests and in the classroom.”
R. 3- “I also use the state report cards to look for performance trends on state tests.”
R. 5- “I look at the Ohio Department of Education report card for OGT scores…” | 7/7 |
| • OGT | Principal indicates specifically using students’ Ohio Graduation Test (OGT) score data reported on the Local Report Card (LRC), which is issued by the Ohio Department of Education. | R. 1- “…OGT data…”
R. 2- “I also look at passage rates for the various content areas on the OGT to determine where to focus resources for the upcoming school year.”
R. 3- “I also use the state report cards to look for performance trends on state tests.”
R. 4- “I focus on OGT data.”
R. 5- “I look at the Ohio Department of Education report card for OGT scores to organize teacher professional | 7/7 |
<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>GRAD</strong></td>
<td>Principal indicates specifically using the student graduation rate data reported on the Local Report Card (LRC), which is issued by the Ohio Department of Education.</td>
<td>R. 1- “...State report card data for graduation rates and attendance…”</td>
<td>1/7</td>
</tr>
<tr>
<td><strong>ATTEND</strong></td>
<td>Principal indicates using the student attendance data reported on the Local Report Card (LRC), which is issued by the Ohio Department of Education.</td>
<td>R. 1- “...State report card data for graduation rates and attendance…” R. 2- “Attendance data from the state report card is examined.”</td>
<td>2/7</td>
</tr>
<tr>
<td><strong>AYP SUB</strong></td>
<td>Principal indicates specifically using federal AYP student sub-group data reported on the Local Report Card (LRC), which is issued by the Ohio Department of Education.</td>
<td>R. 5- “I also look at the different subgroups and make special consideration for them to meet AYP.”</td>
<td>1/7</td>
</tr>
<tr>
<td><strong>ACT</strong></td>
<td>Principal indicates focusing on ACT data as part of the DDDM process.</td>
<td>R. 2- “I look at ACT data, for example, to increase the number of</td>
<td>1/7</td>
</tr>
<tr>
<td>Code/Sub-Code</td>
<td>Code Description/Meaning</td>
<td>Raw Data Example</td>
<td>Frequency</td>
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<tr>
<td>DDB</td>
<td>Principal indicates using data collected on a district-wide database.</td>
<td>R. 3- “I use data from a district database which gives information about student matriculation.”</td>
<td>4/7</td>
</tr>
<tr>
<td>• MATRICULATION</td>
<td>Principal indicates using student matriculation data from the district-wide database.</td>
<td>R. 3- “I use data from a district database which gives information about student matriculation.”</td>
<td>1/7</td>
</tr>
<tr>
<td>• ATTEND</td>
<td>Principal indicates using student attendance data from the district-wide database.</td>
<td>R. 4- “I also use a district-provided database which gives data in terms of student academic progress, discipline, and especially student attendance.” R. 7- “I focus on attendance, discipline, and academic data from our district database.”</td>
<td>2/7</td>
</tr>
<tr>
<td>• DISC</td>
<td>Principal indicates using student discipline data from the district-wide database.</td>
<td>R. 4- “I also use a district-provided database which gives data in terms of student academic progress, discipline, and especially student attendance.” R. 7- “I focus on attendance, discipline, and academic data from our district database.”</td>
<td>2/7</td>
</tr>
<tr>
<td>• GRADES</td>
<td>Principal indicates using student grade data from the district-wide database.</td>
<td>R. 1- “…Examines trends across the building through students’ quarterly grade cards. This is data is stored on a district database.” R. 4- “I also use a district-provided database which gives data in terms of student academic progress, discipline, and especially student attendance.” R. 7- “I focus on attendance, discipline,”</td>
<td>3/7</td>
</tr>
<tr>
<td>Code/Sub-Code</td>
<td>Code Description/ Meaning</td>
<td>Raw Data Example</td>
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<tr>
<td>PRE-OGT</td>
<td>Principal indicates using data from pre-OGT assessments which the school administers to 9th grade students. This data is not reported to the state of Ohio as it is not mandated data.</td>
<td>R. 5- “I also use a pre-OGT assessment given to 9th graders. This is not reported data to the state, but I use this data to set goals on the SIP.”</td>
<td>1/7</td>
</tr>
<tr>
<td>SHORT CY</td>
<td>Principal indicates using short cycle assessment data. Short cycle assessments are created by teachers and given to students approximately every three weeks.</td>
<td>R. 7- “I also use information from the short cycle assessments to look for trends in areas which the overall school needs to improve.”</td>
<td>1/7</td>
</tr>
<tr>
<td>Code/Sub-Code</td>
<td>Code Description/Meaning</td>
<td>Raw Data Example</td>
<td>Frequency</td>
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</tr>
</tbody>
</table>
| LRC          | Principal indicates data reported on the Ohio Local Report Cards (LRC) is useful for school improvement planning. | R. 1- “…OGT data for subject areas.”  
R. 2- “Information reported on the state report card (ACT data, demographic data, attendance data, graduation rates, and OGT test scores).”  
R. 3- “I use OGT results data on each content test taken and look at targeting certain trends that I can focus on to improve student learning.”  
R. 6- “I mainly use OGT information.” | 6/7 |
| **ATTEND**   | Principal indicates specifically finding attendance data reported on the LCR useful for school improvement planning. | R. 2- “Information reported on the state report card (ACT data, demographic data, attendance data, graduation rates, and OGT test scores).” | 1/7 |
| **OGT**      | Principal indicates specifically finding Ohio Gradation Tests (OGT) data reported on the LCR useful for school improvement planning. | R. 1- “…OGT data for subject areas.”  
R. 2- “Information reported on the state report card (ACT data, demographic data, attendance data, graduation rates, and OGT test scores).”  
R. 3- “I use OGT results data on each content test taken and look at targeting certain trends that I can focus on to improve student learning.”  
R. 5- “…the OGT sucks up everything, and I look mainly at this.”  
R. 6- “I mainly use OGT information.”  
R. 7- “I use information from… the state report cards which look at...” | 6/7 |
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<tbody>
<tr>
<td>学术表现,行为和出勤</td>
<td>academic performance, behavior, and attendance.</td>
<td></td>
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</tr>
<tr>
<td>ACT</td>
<td>Principal indicates specifically finding ACT data reported on the LRC useful for school improvement planning.</td>
<td>R. 2- “Information reported on the state report card (ACT data, demographic data, attendance data, graduation rates, and OGT test scores).”  R. 5- “I also use ACT scores…”</td>
<td>2/7</td>
</tr>
<tr>
<td>GRAD</td>
<td>Principal indicates specifically finding graduation rate data reported on the LRC useful for school improvement planning.</td>
<td>R. 2- “Information reported on the state report card (ACT data, demographic data, attendance data, graduation rates, and OGT test scores).”</td>
<td>1/7</td>
</tr>
<tr>
<td>DEMOGRAPHICS</td>
<td>Principal indicates specifically finding demographics data reported on the LRC useful for school improvement planning.</td>
<td>R. 2- “Information reported on the state report card (ACT data, demographic data, attendance data, graduation rates, and OGT test scores).”</td>
<td>1/7</td>
</tr>
<tr>
<td>DDB</td>
<td>Principal indicates information from a district database is useful for school improvement planning.</td>
<td>R. 1- “…quarterly grade cards for students. This includes seeing the overall achievement of students and in each subject area. This data is assessable via a district database.”  R. 4- “…using the information on attendance, discipline, and student progress from the district database allows me to understand individual student levels of progress.”  R. 6- “I also look at student grades in classes to understand what areas of learning need to be improved. I get this information from our district database.”</td>
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</tr>
<tr>
<td>Code/Sub-Code</td>
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<td>Frequency</td>
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</tr>
<tr>
<td><strong>ATTEND</strong></td>
<td>Principal indicates students’ attendance data from a district database are useful for school improvement planning.</td>
<td>R. 4- “…using the information on attendance, discipline, and student progress from the district database allows me to understand individual student levels of progress.” R. 7- “I use information from the school databases…” which look at academic performance, behavior, and attendance.” R. 7- “I use information from the school databases…” which look at academic performance, behavior, and attendance.”</td>
<td>2/7</td>
</tr>
<tr>
<td><strong>DISC</strong></td>
<td>Principal indicates students’ discipline data from a district database are useful for school improvement planning.</td>
<td>R. 4- “…using the information on attendance, discipline, and student progress from the district database allows me to understand individual student levels of progress.” R. 6- “I also examine behavioral and discipline data to plan interventions. I get this information from our district database.” R. 7- “I use information from the school databases…” which look at academic performance, behavior, and attendance.”</td>
<td>3/7</td>
</tr>
<tr>
<td><strong>GRADES</strong></td>
<td>Principal indicates students’ grades data from a district database are</td>
<td>R. 1- “…quarterly grade cards for students. This includes seeing the</td>
<td>4/7</td>
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<td></td>
<td>useful for school</td>
<td>overall achievement of students and in each subject area. This data is assessable via a district database.”</td>
<td>R. 4- “…using the information on attendance, discipline, and student progress from the district database allows me to understand individual student levels of progress.”</td>
</tr>
<tr>
<td></td>
<td>improvement planning.</td>
<td>R. 6- “I also look at student grades in classes to understand what areas of learning need to be improved. I get this information from our district database.”</td>
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<td>R. 7- “I use information from the school databases…” which look at academic performance, behavior, and attendance.”</td>
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<tr>
<td>RDG TEST</td>
<td>Principal indicates data from district-based reading tests are useful for school improvement planning.</td>
<td>R. 5- “I use the results of reading tests given by the district.”</td>
<td>1/7</td>
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<tr>
<td>Code/Sub-Code</td>
<td>Code Description/Meaning</td>
<td>Raw Data Example</td>
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<td>Question 3</td>
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<tr>
<td>CRITICAL</td>
<td>Principal indicates that climate has a major role in the DDDM process.</td>
<td>R. 1- “Positive school climate is a huge factor to have an effective building.”</td>
<td>1/7</td>
</tr>
<tr>
<td>CHANGE</td>
<td>Principal indicates that school climate is important in the DDDM process, especially as it relates to change.</td>
<td>R. 1- “For example, you need morale, especially if you’re in a transformative process and especially when dealing with change since there is often tension with change.”</td>
<td>1/7</td>
</tr>
<tr>
<td>CONVERSATION</td>
<td>Principal indicates that climate data can be used as a way to facilitate conversation about what needs must be addressed during the DDDM process.</td>
<td>R. 1- “Informal data can be useful, however, as the formal climate data can be used to start conversation as to what needs to be addressed in the DDDM process.”</td>
<td>1/7</td>
</tr>
<tr>
<td>OTHER DATA</td>
<td>Principal indicates school climate can be used to understand other data sets.</td>
<td>R. 2- “I look at school climate to understand other data sets in order to make decisions. For example, I look to see if the school discipline issues could be influencing academics. I might also look at involvement levels of students in extracurricular activities to better understand school attendance.”</td>
<td>1/7</td>
</tr>
<tr>
<td>INFLUENCE</td>
<td>Principal indicates that school climate is important to consider in the DDDM process as school climate influences other aspects of the organization.</td>
<td>R. 2- “Since a positive climate of the school can enhance attendance, discipline, and academics, I do include it in the DDDM process. School climate feeds into itself-positive climates can increase results which then feeds back into positive climate.” R. 3- “You cannot ignore the environment for the sake of academics as they go...”</td>
<td>4/7</td>
</tr>
<tr>
<td>Code/Sub-Code</td>
<td>Code Description/Meaning</td>
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</tbody>
</table>
| YES          | Principal indicates that school climate has a role in the DDDM process. | R. 3- “Yes, school climate has a role in the (DDDM) process.”  
R. 4- “School climate data is useful, and can help you to understand which decisions will work best for your individual school community.”  
R. 6- “I think school climate has a role in the DDDM process.”                                                                                             | 3/7       |
| STATE        | Principal indicates that school climate allows one to understand the state of the organization in order to make decisions. | R. 5- “Climate indicates the state of the school environment, which you need to know when making decisions.”  
R. 6- “You need information to help to get a feel for the building.”                                                                                      | 2/7       |
<p>| NONE         | Principal indicates that school climate does not play a role in the DDDM process. | R. 7- “I usually look at other information I have gathered to make important decisions for the school. This information is more reliable.”                                                                    | 1/7       |</p>
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<th>Code/Sub-Code</th>
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<th>Frequency</th>
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</table>
| YES          | Principal indicates that the formal climate data collected by the district and teachers’ union is useful. | R. 1- “Yes, it is useful…”  
R. 3- “Yes.” | 3/7 |
<p>| INFORMAL     | Principal indicates that the formal data collected by the district and teachers’ union can be used to better understand informal climate data. | R. 1- “Yes, it is useful as a way to transition into conversations about some of the informal climate data which are discussed. That is to say, the formal data is not an end to understanding climate in the school. Instead the quantitative data (formal climate data from the district and teachers’ union) can lead to ways to understanding the qualitative data (informal climate data which is observed by staff, teachers, students, parents, and administration).” | 1/7 |
| UNDERSTAND   | Principal indicates that the formal climate data collected by the district and teachers’ union can be used to understand the building. | R. 2- “I use and analyze it (data from the results of the school climate surveys) to gage my thinking of how I understand the building.” | 3/7 |
| • OBJECTIVE | Principal indicates that the formal climate data collected by the district and teachers’ union can be used to understand the building, specifically by understanding the climate of the school more objectively. | R. 3- “I use the data from the surveys to see how the school might be viewed. I have experiences day to day, but the data from the surveys allows us to look at it more objectively.” | 1/7 |
| • FIRST YR  | Principal indicates that the formal climate data collected by the district and teachers’ union can be used to understand the building. | R. 5- “The results can be used as a measuring stick, usually for a first year principal in relation to their performance.” | 1/7 |
| OTHER        | Principal indicates using | R. 2- “However, it is | 1/7 |</p>
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<thead>
<tr>
<th>Code/Sub-Code</th>
<th>Code Description/ Meaning</th>
<th>Raw Data Example</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>MAJOR</td>
<td>Principal indicates the formal climate data offered by the district and teachers’ union are useful for identifying major issues.</td>
<td>R. 4- “However, if there is an extremely large number of people expressing concern about something in particular, I look at these areas of concern and address those issues.”</td>
<td>1/7</td>
</tr>
<tr>
<td>NO</td>
<td>Principal indicates the formal climate data offered by the district and teachers’ union is not useful.</td>
<td>R. 6 &amp; 7- “No.”</td>
<td>2/7</td>
</tr>
<tr>
<td>RATE</td>
<td>Principal indicates that the formal climate data offered by the district and teachers’ union may not be useful due to the low rate of return of surveys.</td>
<td>R. 2- “However, the results can sometimes be inaccurate since not all people complete it (the climate surveys).” R. 4- “It usually depends on the rate of return for each survey. But usually because the rate of return on the district and union surveys are low, they really do not have a significant role.” R. 6- “There seems to be low response rates and no follow-up from the district about the results. The union tends to focus more on the results and reports them to members, but they have not addressed the low response rate to the surveys and the validity of the results.”</td>
<td>3/7</td>
</tr>
<tr>
<td>RELATIONSHIPS</td>
<td>Principal indicates the</td>
<td>R. 5- “The surveys can</td>
<td>1/7</td>
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<td>Code/Sub-Code</td>
<td>Code Description/Meaning</td>
<td>Raw Data Example</td>
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<tr>
<td>PERSPECTIVE</td>
<td>Principal indicates the formal climate data from the survey given by the district and teachers’ union can offer information about perspectives.</td>
<td>R. 5- “It (the surveys) can tell principals if the climate is productive or how people feel, even though it doesn’t have to directly do with academics it influences it eventually.”</td>
<td>1/7</td>
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<tr>
<td>Code/Sub-Code</td>
<td>Code Description/Meaning</td>
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<tr>
<td>YES</td>
<td>Principal indicates using all or part of the formal climate data, as provided by the district and teachers’ union school climate survey, for the purposes of creating School Improvement Plans.</td>
<td>R. 2- “Yes, I use all the information from the three surveys.”</td>
<td>3/7</td>
</tr>
<tr>
<td>NO</td>
<td>Principal indicates not using all or part of the formal climate data, as provided by the district and teachers’ union school climate survey, for the purposes of creating School Improvement Plans.</td>
<td>R. 4- “No.”</td>
<td>4/7</td>
</tr>
<tr>
<td>Code/Sub-Code</td>
<td>Description/Meaning</td>
<td>Raw Data Example</td>
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<tr>
<td><strong>PARENTS</strong></td>
<td>Principal indicates using the formal climate data to assist parents in the school.</td>
<td>R. 1- “Parent consultants (PTA) from our building meet and review the results from the family surveys to plan on ways to assist parents in engagement with the school. Administration looks at the climate data from the family surveys for the school and district to look at the needs of the parents (for example more help planning for college).”</td>
<td>1/7</td>
</tr>
<tr>
<td><strong>LIMITED</strong></td>
<td>Principal indicates limiting the use of the formal climate data due to low response rate, and supplement the formal data with informal data.</td>
<td>R. 1- “I do not use it (the formal data) to a significant extent because of generally low response rates for all the surveys. The formal climate data are limiting and the formal data needs to be supplemented with informal climate data.”</td>
<td>1/7</td>
</tr>
<tr>
<td><strong>P.D.</strong></td>
<td>Principal indicates using the formal climate data to plan for staff professional development.</td>
<td>R. 2- “I use it to plan professional development days for staff, which are part of the SIP.”</td>
<td>1/7</td>
</tr>
<tr>
<td><strong>VOICE</strong></td>
<td>Principal indicates using the formal climate data to understand an additional perspectives when creating School Improvement Plans.</td>
<td>R. 2- “I use it as an additional “voice” to consider when creating the plans in general.”</td>
<td>1/7</td>
</tr>
<tr>
<td><strong>STUDENTS</strong></td>
<td>Principal indicates using the formal climate data to look at students’ perspectives of school and relationships with staff.</td>
<td>R. 3- “I tend to focus on the data from the student surveys. I look at students’ perceptions of their interactions with the staff. I look at how students feel about their school and also use it to set expectations.”</td>
<td>1/7</td>
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<tr>
<td>Code/Sub-Code</td>
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<tr>
<td>N/A</td>
<td>Principal indicates not using the formal climate data.</td>
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<td>4/7</td>
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<tr>
<td>Code/Sub-Code</td>
<td>Code Description/Meaning</td>
<td>Raw Data Example</td>
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<tr>
<td><strong>FAMILY</strong></td>
<td>Principal indicates focusing on the family climate survey distributed by the district.</td>
<td>R. 1- “The responses from the family surveys are usually used more by the parent consultants (PTA).”</td>
<td>1/7</td>
</tr>
<tr>
<td><strong>PTA</strong></td>
<td>Principal indicates using the family climate survey with the school PTA.</td>
<td>R. 1- “The responses from the family surveys are usually used more by the parent consultants (PTA).”</td>
<td>1/7</td>
</tr>
<tr>
<td><strong>ENGAGED</strong></td>
<td>Principal indicates using the family climate survey, but the results may reflect parents who are typically already engaged and may not reflect the majority of the families in the school.</td>
<td>R. 1- “The family survey feedback is important but the parents/families who typically fill these out are already engaged, so it’s not always valid as the respondents are not always representative of the majority of our parents/families.”</td>
<td>1/7</td>
</tr>
<tr>
<td><strong>STUDENT</strong></td>
<td>Principal indicates using the student climate survey results.</td>
<td>R. 3- “Yes. I use the data differently depending on the type. I tend to focus on the student surveys.”</td>
<td>1/7</td>
</tr>
<tr>
<td><strong>NO</strong></td>
<td>Principal indicates not using any particular climate survey results depending on the particular survey type.</td>
<td>R. 4 &amp; 5- “No.” R. 7- “No, I do not really look at any of the information or use it for any purposes in the school.”</td>
<td>4/7</td>
</tr>
<tr>
<td><strong>ALL</strong></td>
<td>Principal indicates using all three (family, teacher, and student) climate surveys.</td>
<td>R. 2- “I see each survey as equally important.”</td>
<td>1/7</td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td>Principal indicates using the climate surveys to understand other data sets.</td>
<td>R. 2- “I use the surveys as one of many tools and resources to understand climate and other data sets I work with.”</td>
<td>1/7</td>
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<tr>
<td>Code/Sub-Code</td>
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<tr>
<td>Question 5-c</td>
<td>Principal indicates using the formal school climate data to create annual School Improvement Plans, and therefore where not asked this question.</td>
<td>R. 1, 2, &amp; 3- “n/a”</td>
<td>3/7</td>
</tr>
<tr>
<td>N/A</td>
<td>Principal indicates not using the formal climate data when creating annual School Improvement Plans as there are low rates of response to the surveys.</td>
<td>R. 4- “No, I do not use the results of the surveys because the results are not always very comprehensive. This is usually due to a small number of people completing the surveys.” R. 6- “I do not use the result since the response rate is too low to validate the results.” R. 7- “The information which is provided only shows the responses of a few people.”</td>
<td>3/7</td>
</tr>
<tr>
<td>RATE</td>
<td>Principal indicates not using the formal climate data when creating annual School Improvement Plans as the results are perceived as inaccurate.</td>
<td>R. 4- “The formal surveys can quantify the many aspects which make-up school climate, but do not always accurately reflect it.” R. 7- “The information provided is not very reliable. The averages for the district may not show trends which apply to my school. This could be due to the large size of the district. What is a trend in other areas of the district may not apply to my school.”</td>
<td>2/7</td>
</tr>
<tr>
<td>ACCURACY</td>
<td>Principal indicates not using the formal climate data when creating annual School Improvement Plans because the surveys may not accurately reflect the individual school as the district is geographically</td>
<td>R. 7- “The information provided is not very reliable. The averages for the district may not show trends which apply to my school. This could be due to the large size of the district.”</td>
<td>1/7</td>
</tr>
<tr>
<td>LARGE</td>
<td>Principal indicates not using the formal climate data when creating annual School Improvement Plans</td>
<td>R. 7- “The information provided is not very reliable. The averages for the district may not show trends which apply to my school. This could be due to the large size of the district.”</td>
<td>1/7</td>
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<tr>
<td>Code/Sub-Code</td>
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<td>large, has a large total student population, and has diverse school buildings.</td>
<td>What is a trend in other areas of the district may not apply to my school.”</td>
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<tr>
<td>TURN-OVER</td>
<td>Principal indicates not using the formal climate data when creating School Improvement Plans because of high rates of turn-over in the school.</td>
<td>R. 5- “I do not really use the data as it isn’t comprehensive. For example, the school may have high teacher turn-over, which can change results. Some teachers are placed in or removed from the school throughout the year, so they may skew the data, especially on the teacher survey results.” R. 7- “There are high movement rates of administrators, teachers, and students, so it is difficult to attribute the results to any one person or group of people.”</td>
<td>2/7</td>
</tr>
<tr>
<td>TEACHER</td>
<td>Principal indicates not using the formal climate data when creating School Improvement Plans because of high rates of teacher turn-over in the school.</td>
<td>R. 5- “I do not really use the data as it isn’t comprehensive. For example, the school may have high teacher turn-over, which can change results. Some teachers are placed in or removed from the school throughout the year, so they may skew the data, especially on the teacher survey results.” R. 7- “There are high movement rates of administrators, teachers, and students, so it is difficult to attribute the results to any one person or group of people. The results of the teacher survey could reflect teachers who</td>
<td>2/7</td>
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<tr>
<td>Code/Sub-Code</td>
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<tr>
<td>ADMIN</td>
<td>Principal indicates not using the formal climate data when creating School Improvement Plans because of high rates of administration turn-over in the school.</td>
<td>R. 7- “There are high movement rates of administrators, teachers, and students, so it is difficult to attribute the results to any one person or group of people. The results of the teacher survey could reflect teachers who have already left or administration which has changed.”</td>
<td>1/7</td>
</tr>
<tr>
<td>STUDENT</td>
<td>Principal indicates not using the formal climate data when creating School Improvement Plans because of high rates of student turn-over in the school.</td>
<td>R. 7- “There are high movement rates of administrators, teachers, and students, so it is difficult to attribute the results to any one person or group of people. For example, less than 20 percent of the graduating class has actually attended the school for all four years of high school.”</td>
<td>1/7</td>
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<tr>
<td>OUTSIDE</td>
<td>Principal indicates not using the formal climate data when creating annual School Improvement Plans because the results may reflect factors outside the school.</td>
<td>R. 5- “I also think there are many factors that influence the outcomes of the climate survey, outside of the school.”</td>
<td>1/7</td>
</tr>
<tr>
<td>DISTRICT</td>
<td>Principal indicates not using the formal climate data when creating School Improvement Plans because the results are not a focus of the district.</td>
<td>R. 7- “The information from the surveys is not a district focus so I do not consider the results.”</td>
<td>1/7</td>
</tr>
<tr>
<td>FREQUENCY</td>
<td>Principal indicates not using the formal climate data when creating annual School Improvement Plans because the surveys are only distributed once a year.</td>
<td>R. 7- “The results are only taken once a year.”</td>
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<td>Code/Sub-Code</td>
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<tr>
<td>YES</td>
<td>Principal indicates using the formal climate data provided by the district and teachers’ union for purposes other than creating School Improvement Plans.</td>
<td>R. 3- “Yes.”</td>
<td>6/7</td>
</tr>
<tr>
<td>NO</td>
<td>Principal indicates not using the formal climate data provided by the district and teachers’ union for purposes other than creating School Improvement Plans.</td>
<td>R. 6- “No.”</td>
<td>1/7</td>
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<tr>
<td>Question 6-a</td>
<td>ADMIN</td>
<td>Principal indicates using the formal climate data in administrative meetings.</td>
<td>2/7</td>
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<tr>
<td></td>
<td>ENGAGE</td>
<td>Principal indicates using the formal climate data in administrative meeting specifically to discuss ways to increase parent involvement.</td>
<td>1/7</td>
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<tr>
<td></td>
<td>INFORMAL</td>
<td>Principal indicates using the formal data as way to start conversations about informal data.</td>
<td>1/7</td>
</tr>
<tr>
<td></td>
<td>ADMIN</td>
<td>Principal indicates using the formal data as way to start conversations about informal data, specifically in administrative meetings.</td>
<td>1/7</td>
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<tr>
<td></td>
<td>PTA</td>
<td>Principal indicates using the formal data as way to start conversations about informal data, specifically with the PTA.</td>
<td>1/7</td>
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<td></td>
<td>P.D.</td>
<td>Principal indicates using the formal climate data for professional development for staff.</td>
<td>3/7</td>
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<tr>
<td>Code/Sub-Code</td>
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<tr>
<td>STAFF</td>
<td>Principal indicates using the formal climate data in staff meetings.</td>
<td>R. 2- “I use it mainly for staff professional development and staff meetings. It helps me to determine what is needed for professional development training.” P. 3- “I use the information from the family surveys in staff meetings and use it when guiding the work of parent consultants (PTA).” R. 4- “The only time I use the data is to address a major concern, usually in professional development days for staff or to discuss in grade level meetings.” R. 5- “I share the results of the student surveys with staff to inform teachers of areas which we might need to improve. I do this in staff meetings.” R. 6- “I have also shared feedback from student surveys with teachers in staff meetings to reflect upon.”</td>
<td>5/7</td>
</tr>
<tr>
<td>• IMPROVE</td>
<td>Principal indicates using the formal climate data in staff meetings specifically to inform teachers of areas which might need improvement.</td>
<td>R. 5- “I share the results of the student surveys with staff to inform teachers of areas which we might need to improve. I do this in</td>
<td>1/7</td>
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<td>Code/Sub-Code</td>
<td>Code Description/Meaning</td>
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<tr>
<td>PTA</td>
<td>Principal indicates using the formal climate results in PTA meetings.</td>
<td>R. 1- “I also look at the results to sometimes start conversations about the informal data I collect, usually in administrative meetings and with the PTA.” R. 3- “I use the information from the family surveys in staff meetings and use it when guiding the work of parent consultants (PTA).”</td>
<td>2/7</td>
</tr>
<tr>
<td>GRADE</td>
<td>Principal indicates using formal climate data in grade level meetings.</td>
<td>R. 4- “The only time I use the data is to address a major concern, usually in professional development days for staff or to discuss in grade level meetings.”</td>
<td>1/7</td>
</tr>
<tr>
<td>SELF</td>
<td>Principal indicates using the formal climate data for self-reflection.</td>
<td>R. 6- “I use it more for self-reflection.”</td>
<td>1/7</td>
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<tr>
<td>Code/Sub-Code</td>
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<tr>
<td><strong>Question 7</strong></td>
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</table>
| TALK         | Principal indicates talking with others to gather information to understand school climate as it exists in the school. | R. 1- “I continually converse with others to monitor school climate as it exists throughout the school year.”
R. 2- “I talk to parent to see how informed they are as to what is happening in the school.”
R. 4- “You can’t always make everyone happy, but it’s the informal conversations which allows me to understand the school day to day.” | 7/7 |
|   • **PARENT** | Principal indicates talking with others, specifically parents, to gather information to understand school climate as it exists in the school. | R. 1- “I have conversations with parents via phone calls and also talk to them at various school events. I like to see what parents are aware of and not aware of that is happening in our school and with our programs.”
R. 2- “I talk to parent to see how informed they are as to what is happening in the school.” | 2/7 |
|   • **COMMUNITY** | Principal indicates talking with others, specifically community members, to gather information to understand school climate as it exists in the school. | R. 2- “I talk to people in the community and articulate the vision of the school, and discuss this with them.”
R. 7- “Our school has a site-based council which includes stakeholders from the community (business leaders, community members, pastors) who give input. These different parties talk to come up with ways to create a positive school climate and improve the image of the school.” | 2/7 |
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<td></td>
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<td>One example of the use of input from the site-based council was the decision for the school to adopt school uniforms. After looking at research and talking with students, staff, and community members, we decided that school uniforms could help improve school climate since it has been proven to improve grades, school pride, help make a more educationally focused environment, and address safety issues.</td>
<td>2/7</td>
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<tr>
<td><strong>TEACHER</strong></td>
<td>Principal indicates talking with others, specifically teachers to gather information to understand school climate as it exists in the school.</td>
<td>R. 3- “I get information about concerns from teachers in union meetings. I listen to teachers who voice their concerns and the solutions they offer. As an administrator, I work with teachers to collaborate on understanding issues that may influence the actions of individuals and the entire school.” R. 5- “I talk to teachers about what they see and what they want to see in the school.”</td>
<td>2/7</td>
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<tr>
<td><strong>BLT</strong></td>
<td>Principal indicates talking with others, specifically the Building Leadership Team (BLT), to gather information to understand school climate as it exists in the school.</td>
<td>R. 6- “I get a lot of qualitative data and information from my meetings with department chairs as part of the Building Leadership Team.” R. 7- “I talk with the Building Leadership Team to understand what is happening in the school and classrooms.”</td>
<td>2/7</td>
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<tr>
<td><strong>STUDENT</strong></td>
<td>Principal indicates talking with others, specifically</td>
<td>R. 7- “I meet with our school student</td>
<td>1/7</td>
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<tr>
<td>students, to gather information to understand school climate as it exists in the school.</td>
<td>leadership members once a month to gather student input on how to improve the climate of the building. There is a lot you can learn about students and the school by buying pizza and pop and taking the time to talk with your students.”</td>
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<tr>
<td>FACEBOOK</td>
<td>Principal indicates viewing Facebook to gather information to understand school climate as it exists in the school.</td>
<td>R. 1- “I also look at Facebook to see community, school, and student reactions to school events.”</td>
<td>1/7</td>
</tr>
<tr>
<td>PTA</td>
<td>Principal indicates meeting with the school PTA to gather information to understand school climate as it exists in the school.</td>
<td>R. 1- “I attend PTA meetings to understand the needs and climate of our building.”</td>
<td>1/7</td>
</tr>
<tr>
<td>WALK</td>
<td>Principal indicates using walkthroughs of the school to gather information to understand school climate as it exists in the school.</td>
<td>R. 2- “I gather climate data every day. I do this when conducting walkthroughs in the building and classrooms.” R. 4- “Everyday, for example, looking at clear halls…” R. 6- “I get most of my feedback by doing walkthroughs and observations. I am not in my office much and am in classrooms.”</td>
<td>3/7</td>
</tr>
<tr>
<td>TBT</td>
<td>Principal indicates working with Teacher-Based Teams (TBT) to gather information to understand school climate as it exists in the school.</td>
<td>R. 2- “I also look at how well the Teacher-Based Teams (TBTs) and the staff are working together as a team.”</td>
<td>1/7</td>
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<tr>
<td>WEBSITE</td>
<td>Principal indicates using the school’s website to gather information to understand school climate as it exists in the school.</td>
<td>R. 2- “I look at our school website and determine how the technology is increasing or decreasing accessibility.”</td>
<td>1/7</td>
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<tr>
<td>GRADES</td>
<td>Principal indicates reviewing students’ grades</td>
<td>R. 2- “I review students’ quarterly</td>
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<tr>
<td>NORMS</td>
<td>Principal indicates attempting to understand school norms to gather information to understand school climate as it exists in the school.</td>
<td>R. 2- “I look to try to understand the norms for our school.”</td>
<td>1/7</td>
</tr>
<tr>
<td>RELATION</td>
<td>Principal indicates attempting to understand relationships to gather information to understand school climate as it exists in the school.</td>
<td>R. 2- “I reflect upon relationships between the principal and teachers, the principal and parents, and the principal and students.” R. 4- “To me, climate has more to do with my interactions with staff, students, and parents to understand if something needs to be changed.” R. 6- “I also consider my interactions with staff and students.”</td>
<td>3/7</td>
</tr>
<tr>
<td>LEADER</td>
<td>Principal indicates looking at the level of teacher leadership to gather information to understand school climate as it exists in the school.</td>
<td>R. 2- “I look at the level of leadership taken by teachers.”</td>
<td>1/7</td>
</tr>
<tr>
<td>VISUAL</td>
<td>Principal indicates looking at the visual presence of the building to gather information to understand school climate as it exists in the school.</td>
<td>R. 2- “I look at the visual presence of the building.”</td>
<td>1/7</td>
</tr>
<tr>
<td>BELONG</td>
<td>Principal indicates looking for a sense of belonging to the school community to gather information to understand school climate as it exists in the school.</td>
<td>R. 2- “I look for a sense of belonging to the school community.”</td>
<td>1/7</td>
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<tr>
<td>EXTRA</td>
<td>Principal indicates looking at levels of student engagement in extracurricular activities to gather information to understand school climate as it exists in the school.</td>
<td>R. 3- “I also look at the number of ticket sales to after school events to better understand involvement in the school.”</td>
<td>1/7</td>
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<tr>
<td>PULSE</td>
<td>Principal indicates using abstract ways to get the climate of the building</td>
<td>R. 4- “I gage the climate of the building”</td>
<td>1/7</td>
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<td>&quot;pulse&quot; of the building to gather information to understand school climate as it exists in the school.</td>
<td>in more of an abstract way. I just seem to understand the pulse of the school.&quot;</td>
<td>DISCIPLINE</td>
<td>4/7</td>
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<tr>
<td>Principal indicates looking at student discipline to gather information to understand school climate as it exists in the school.</td>
<td>R. 3- “I also look at discipline information from a district database as part of the school’s Positive Behavior and Support (PBIS) program.” R. 4- “Everyday, for example, looking at clear halls, the number of fights at lunch, and to see if students are following process and procedures.” R. 5- “I look at the number of discipline referrals, which teacher is writing them, and the type of offenses which are happening. I also look at the number of formal disciplinary/expulsion hearings.” R. 6- “I also consider the number of suspensions for students.”</td>
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<tr>
<td>Principal indicates looking at small details in the school to gather information to understand school climate as it exists in the school.</td>
<td>R. 4- “I look for the little things to indicate the bigger picture.”</td>
<td>DETAIL</td>
<td>1/7</td>
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<tr>
<td>Principal indicates looking at staff attendance to work in order to gather information to understand school climate as it exists in the school.</td>
<td>R. 6- “I look at staff attendance levels.”</td>
<td>ATTENDANCE</td>
<td>1/7</td>
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<tr>
<td><strong>YES</strong></td>
<td>Principal indicates using informal climate data to create School Improvement Plans.</td>
<td>R. 1 &amp; 2 - “Yes.”</td>
<td>2/7</td>
</tr>
<tr>
<td><strong>NO</strong></td>
<td>Principal indicates not using informal climate data to create School Improvement Plans.</td>
<td>R. 3 - “No. I use it just in staff development and for staff meetings.” R. 4 - “No.” R. 5 “No. I just use the information in staff meetings, and sometimes staff development.” R. 6 - “No, my School Improvement Plan is mostly academic-based.” R. 7 - “No, I focus on mandated assessments of the school.”</td>
<td>5/7</td>
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<tr>
<td>ATTEND</td>
<td>Principal indicates using informal climate data when creating School Improvement Plans to better understand attendance.</td>
<td>R. 1- “I use the informal data to better understand attendance and academics. I use it to see what is causing these factors to be successful or not.”</td>
<td>1/7</td>
</tr>
<tr>
<td>ACADEMICS</td>
<td>Principal indicates using informal climate data when creating School Improvement Plans to better understand academics.</td>
<td>R. 1- “I use the informal data to better understand attendance and academics. I use it to see what is causing these factors to be successful or not.”</td>
<td>1/7</td>
</tr>
<tr>
<td>GOALS</td>
<td>Principal indicates using informal climate data to set goals for improvement when creating School Improvement Plans.</td>
<td>R. 2- “I use the information to set future goals for improvement.”</td>
<td>1/7</td>
</tr>
<tr>
<td>FEEL</td>
<td>Principal indicates using informal climate data to help to understand how students feel about the school when creating School Improvement Plans.</td>
<td>R. 2- “Informal data can help to understand how students are feeling about their school.”</td>
<td>1/7</td>
</tr>
<tr>
<td>CHANGE</td>
<td>Principal indicates using informal climate data to create plans for changes when creating School Improvement Plans.</td>
<td>R. 2- “I may use the information to develop plans for change to change the conversation which students and community may have about the school in the future.”</td>
<td>1/7</td>
</tr>
<tr>
<td>CLIMATE</td>
<td>Principal indicates using informal climate data to plan for improved climate when creating School Improvement Plans.</td>
<td>R. 2- “I feel that word of mouth and marketing is the best way to improve climate, so I focus on that to improve the school and plan for improvement.”</td>
<td>1/7</td>
</tr>
<tr>
<td>N/A</td>
<td>Principal indicates not using informal climate data when creating School Improvement Plans.</td>
<td>R. 3, 4, 5, 6, &amp; 7- “n/a”</td>
<td>5/7</td>
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| **YES**      | Principal indicates not perceiving school climate data as useful. | R. 1- “Yes, school climate data is useful.”  
R. 2- “Yes, I do value it (school climate).”  
R. 3- “Yes it (school climate) is useful…”  
R. 4- “Yes, it (school climate data) can sometimes tell us things that we may not otherwise see or understand.”  
R. 5- “Yes school climate data is useful…”  
R. 6- “Yes, school climate data is useful if it is collected in the right way, it can be meaningful.”  
R. 7- “Yes, any data can be useful, you just have to determine what information is accurate and useful.” | 7/7 |
| **PERSPECTIVE** | Principal indicates that school climate data increases understanding of perspectives that exists in relation to the school. | R. 1- “Climate is a combination of the attitudes and expectations that are brought to the building by students and staff and how those expectations work together in concert and/or conflict.”  
R. 2- “School climate allows you to better understand what others’ perspectives are on the school. It (school climate) also gives me an idea of what peoples’ perceptions are and how I might give more thought to address them for the positive.”  
R. 3- “Yes it (school climate) is useful because climate tells us about perspective.” | 4/7 |
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<td></td>
<td>Climate data gives a larger picture of what that the reality for the school is.”</td>
<td>R. 4- “Yes, it (school climate data) can sometimes tell us things that we may not otherwise see or understand.”</td>
<td>1/7</td>
</tr>
<tr>
<td>INFORMAL</td>
<td>Principal specifically perceives informal school climate data as useful.</td>
<td>R. 6- “I tend to use informal data which is very important in understanding issues to increase school performance.”</td>
<td>1/7</td>
</tr>
<tr>
<td>FORMAL</td>
<td>Principal specifically perceives formal school climate data as useful.</td>
<td>R. 1- “Climate can be really difficult to understand since it’s not always so tangible. However, the formal data tries to quantify climate.”</td>
<td>1/7</td>
</tr>
<tr>
<td>HEALTH</td>
<td>Principal indicates perceiving school climate data as useful to understand the health of the school organization.</td>
<td>R. 1- “Climate data can be used to show the healthy movement of students forward academically, emotionally, and socially.”</td>
<td>1/7</td>
</tr>
<tr>
<td>DATA</td>
<td>Principal indicates perceiving school climate data useful as such data helps to create a balance with standardized (mandated) test scores.</td>
<td>R. 3- “While it’s very subjective, especially compared to standardized test results, climate also helps to balance the data from standardized state scores.”</td>
<td>1/7</td>
</tr>
<tr>
<td>NEW</td>
<td>Principal indicates that school climate data can be especially useful as a new principal.</td>
<td>R. 5- “Yes school climate data is useful, especially when starting as a new principal.”</td>
<td>1/7</td>
</tr>
<tr>
<td>COLLECTION</td>
<td>Principal indicates that school climate data are useful but considerations regarding its collection must be considered.</td>
<td>R. 5- “. However, climate data can vary depending on what time of the year you collect it to reflect the state of the building.” R. 6- “Yes, school climate data is useful if it is collected in the</td>
<td>3/7</td>
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<td>right way, it can be meaningful.”</td>
<td>R. 7- “Yes, any data can be useful, you just have to determine what information is accurate and useful. Input is always good, as long as you know that the information is good.”</td>
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<tr>
<td>Question 8-a</td>
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<tr>
<td>VARIES</td>
<td>Principal indicates that school climate data are sometimes and sometimes are not useful when creating School Improvement Plans.</td>
<td>R. 1- “Yes and no. It helps me to better understand the school and what is working and what is not. However, sometimes the data illuminates what goes beyond the scope of the school.”</td>
<td>1/7</td>
</tr>
<tr>
<td>YES</td>
<td>Principal indicates that school climate data are useful when creating School Improvement Plans.</td>
<td>R. 2- “Yes, I use it to create my plans. However, I tend to rely on informal information rather than the district and union surveys.” R. 3- “Yes, SIPs should go beyond just addressing academics. It helps to develop other areas of the school that the school serves as a function for. For example, we should be looking at how to improve students’ and parents’ lives in many ways. Climate also reflects some of the values of the school, so those values should be part of the SIP as we create it.” R. 5- “Yes. School climate data can allow you to help understand how to move the academics forward since climate and academics work hand in hand.” R. 6- “Yes. It allows you to best understand how to set goals for specific areas such as attendance improvements.”</td>
<td>4/7</td>
</tr>
<tr>
<td>NO</td>
<td>Principal indicates that school climate data are not useful when creating School Improvement</td>
<td>R. 4- “No, I usually focus on the report card data when creating my SIPs.”</td>
<td>2/7</td>
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<tr>
<td>Plans.</td>
<td>R. 7- “Not necessarily. I use mandated data to make plans to improve academics which then would improve the climate of the school.”</td>
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<tr>
<td>Question 9</td>
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<tr>
<td>NO</td>
<td>Principal indicates there are no other data or information to could be provided to make decisions regarding school improvement.</td>
<td>R. 1- “There is no other data that I need.” R. 3- “No.”</td>
<td>2/7</td>
</tr>
<tr>
<td>CENTRAL</td>
<td>Principal indicates preferring the current data to be more centralized in order to make decisions regarding school improvement.</td>
<td>R. 2- “I wish that data were more centralized. There is so much data but it is not in one system to use.”</td>
<td>1/7</td>
</tr>
<tr>
<td>COLLEGE</td>
<td>Principal indicates preferring to be given information about students who have graduated college after leaving the school, in order to make decisions regarding school improvement.</td>
<td>R. 2- “I want to know the number of kids who graduated and went to college and graduated college.”</td>
<td>1/7</td>
</tr>
<tr>
<td>FEEDER</td>
<td>Principal indicates preferring to be given information about students from feeder schools in order to make decisions regarding school improvement.</td>
<td>R. 2- “I also would like more data from our feeder schools to better understand the students that will be coming to my school.”</td>
<td>1/7</td>
</tr>
<tr>
<td>LONG</td>
<td>Principal indicates being offered longitudinal data rather than short term data sets to make decisions in regards to school improvement.</td>
<td>R. 2- “In general, I would like more longitudinal data rather than short term data sets.”</td>
<td>1/7</td>
</tr>
<tr>
<td>DETAIL</td>
<td>Principal indicates it would be useful if current data sets are more detailed in order to make decisions regarding school improvement.</td>
<td>R. 4- “The OGT scores do not always specifically indicate very detailed data of where students are struggling in order to offer interventions.” R. 5- “The data which I am provided with right now is not telling me the whole picture. For example, we are given demographic information but this is not really telling me what is happening at home for my students.”</td>
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<tr>
<td>R. 6</td>
<td>“I have access to a lot of information though sometimes the information is incomplete or not always what I would consider valid data, for example the school climate surveys.”</td>
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<tr>
<td>TIMELY</td>
<td>Principal indicates liking more current or timely information in order to make decisions regarding school improvement.</td>
<td>R. 4- “The OGT data is reported far after the test is given and this data is not timely enough to often make changes during that specific school year.” R. 5- “I would like more immediate data to show the current state of the school. I could use updated information for early warnings and interventions.”</td>
<td>2/7</td>
</tr>
<tr>
<td>VALID</td>
<td>Principal indicates the current data used to make decisions regarding school improvement may not always be valid.</td>
<td>R. 6- “I have access to a lot of information though sometimes the information is incomplete or not always what I would consider valid data, for example the school climate surveys.” R. 7- “I have access to enough data to make decision about school climate. It is not that I don’t have enough data, it is just the task of determining what data is accurate and useful that I focus on.”</td>
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<tr>
<td>Question 9-a</td>
<td>Principal indicates that there are no specific data which could be used to better understand school climate, outside of the information which is currently provided by the district and teachers’ union.</td>
<td>R. 1 &amp; 2- “No.” R. 3- “None.” R. 4- “No, the data is complete.”</td>
<td>4/7</td>
</tr>
<tr>
<td>QUALITATIVE</td>
<td>Principal indicates preferring the addition of qualitative data to the surveys distributed by the district and teachers’ union to increase the understanding of school climate.</td>
<td>R. 5- “I would like to better understand students’ responses by having narrative (qualitative data) added to the surveys.” R. 6- “I would like to improve the student climate surveys by adding the option of open student responses (qualitative) and feedback.” R. 7- “I would like more narrative data about what students actually think and feel. Most students do not take the current survey seriously since the answers are pre-determined and they are just bubbling in the circles which may not really represent how they feel.”</td>
<td>3/7</td>
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<tr>
<td>PARTICIPATION</td>
<td>Principal indicates a preference to increase the participation rate of the district and teachers’ union school climate survey to have more information to better understand school climate.</td>
<td>R. 5- “I have access to a lot of information though sometimes the information is incomplete or not always what I would consider valid data, for example the school climate surveys. The data which is provided by the district and teachers’ union could be okay, but there needs to be a push to increase participation.”</td>
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<tr>
<td>TEACHER</td>
<td>Principal indicates a preference for information about the climate of individual teachers’ classes from students to better understand climate, outside of the information provided by the district and teachers’ union.</td>
<td>R. 6- “I might also like to see surveys for individual teacher’s classes which would be completed by the students. I would want this information more for the teachers to have to increase the reflection of their practices.”</td>
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<td>Question 10</td>
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</table>
| PBIS         | Principal indicates receiving training on Positive Behavior Intervention and Support (PBIS), which addressed school climate and school improvement. | R. 1- “I have attended PBIS conferences where principals talk about how to create incentives. This was a district initiative.”  
R. 2- “I am currently receiving training from the district for Positive Behavior Intervention and Support (PBIS). I have worked with behavioral specialist to discuss and train to understand different types of behavioral issues.”  
R. 6- “I have attended Positive Behavior Intervention and Support training which seems to be more reactive to climate issues than for training to address the possibilities of climate and school improvement.” | 3/7 |
| NONE         | Principal indicates having no experiences (such as district initiatives, professional development, special training, or university course work) with school climate, especially in relation to school improvement. | R. 3- “The district has not provided any training on moving school climate or culture forward.”  
R. 5- “I have not received any training or any specific course work on this topic.” | 2/7 |
<p>| BOOKS        | Principal indicated having read books on to better understand school climate in relation to school improvement. | R. 4- “I personally like to read books in relation to helping me understand climate and school culture.” | 1/7 |
| CONFERENCE   | Principal indicates having attended conferences to better understand school climate, specifically conferences addressing relationships in schools. | R. 4- “I have attended some conferences on my own to better understand the importance of relationships in schools.” | 1/7 |
| SITE-BASED   | Principal indicates having | R. 4- “The district may | 2/7 |</p>
<table>
<thead>
<tr>
<th>Code/Sub-Code</th>
<th>Code Description/Meaning</th>
<th>Raw Data Example</th>
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<tbody>
<tr>
<td></td>
<td>professional development as the district has worked to push for site-based management, which allows for understanding of school climate in individual schools.</td>
<td>not address climate since it is so different from building to building in the district. The district has gone to site-based management, which may be another way to deal with climate and culture in a meaningful way.” R. 7- “I have recently attended some professional development training which has been site-based and tends to focus on special education, which can include improving school climate by understanding how to better service students. By making our school environment more inclusive and integrated our focus is on the students. This is a major focus on school climate. This is an instance of the school coming together to service all students and teachers working together. As a staff, we have tried to address the climate in the school by diversifying our instruction for many types of learners. This helps to promote a healthy school climate.”</td>
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</table>

<p>| ON-LINE | Principal indicates having engaged in on-line learning to better understand school climate in relation to school improvement. | R. 7- “I have completed some online modules from the district which did address some aspects of school climate, such as sexual harassment. I have also taken a district-sponsored course online about | 1/7 |</p>
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<td>having compassion for students in order to change the climate of the building.”</td>
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<td><strong>Question 11</strong></td>
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<tr>
<td>OBSERVE</td>
<td>Principal indicates using data from informal daily observations to create School Improvement Plans.</td>
<td>R. 1- “I use informal daily observations of the school to think about what the school may need. Some of these informal observations come out in the formal surveys and some do not.”</td>
<td>1/7</td>
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<tr>
<td>CONVERSATION</td>
<td>Principal indicates using data from conversations with staff to create School Improvement Plans.</td>
<td>R. 1- “I have conversations with staff about the data provided by the state. I use the information they give to better understand the mandated data.”</td>
<td>1/7</td>
</tr>
<tr>
<td>DISTRICT</td>
<td>Principal indicates using data from a district database to create School Improvement Plans.</td>
<td>R. 2- “I use data from a district database which reports discipline information.” R. 3- “I use district data-bases which include discipline, academic, and attendance data which are more frequently updated than state report cards. This allows for a more responsive way to make improvements and allows for course correction which is more proactive than reactive.” R. 4- “I use the data from the district database which reports attendance, discipline, and grades for students’ classes.” R. 5- “I use discipline data to direct school improvement especially to address behavioral needs since it influences testing data. I use the data as part of the Positive Behavior Intervention and</td>
<td>6/7</td>
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<tr>
<td>Support (PBIS) process as part of the School Improvement Plan.”</td>
<td>“I use district databases which store information about attendance, behavior, and academic progress on a quarterly basis.”</td>
<td>1/7</td>
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<tr>
<td>COLLEGE</td>
<td>Principal indicates using data from an outside organization which helps students attend college to create School Improvement Plans.</td>
<td>“I use data from an organization which works with students to help them get to college. They collect data on students’ needs for college.”</td>
<td>1/7</td>
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<tr>
<td>RECOVER</td>
<td>Principal indicates using data about the number of students trying to recover credits from failed classes to create School Improvement Plans.</td>
<td>“I also look at the number of students who are trying to recover credits from failed classes.”</td>
<td>1/7</td>
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<tr>
<td>CLASS</td>
<td>Principal indicates using data from individual classes such as grades and retention rates to create School Improvement Plans.</td>
<td>“I look at students’ grade cards, rates of retention, and grade distribution for individual teachers, to see how students are preforming in particular classes.”</td>
<td>1/7</td>
</tr>
</tbody>
</table>