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# Measuring Dimensions of Professional Learning Communities to Predict Secondary School Climate

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Walden University
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Abstract

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Dissertation Submitted in Partial Fulfillment

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## Abstract

Schools are experiencing many reform initiatives, yet creating positive school climates as a way to promote increased student achievement has been omitted from the policy discussion. Whether the professional learning community (PLC) construct can predict school climate is a gap in the current literature. Using change theory and distributed leadership as a framework, the purpose of this quantitative study was to examine the relationships between the dimensions of a PLC (shared values and vision, intentional learning and application, supportive and shared leadership, supportive conditions and shared personal practice) and school climate variables (academic emphasis, initiating structure, consideration and morale). Four multiple regression models were used to analyze data collected from the Organizational Health Inventory and School Professional Staff as Learning Community (SPSaLC) survey ($n$ = 131). According to the study results, there is a relationship between the dimensions of a PLC and school climate variables. Based on the regression analysis, shared values and vision significantly predicted academic emphasis, intentional learning and application significantly predicted morale, supportive and shared leadership significantly predicted consideration and initiating structure, supportive conditions significantly predicted consideration and morale, and shared personal practice significantly predicted consideration. The result of distributing leadership through the PLC structure can improve school climate. These findings promote positive social change through the analysis of this relationship, a first of its kind. School leaders looking to create PLCs with the intent of improving both student achievement and school climate will directly benefit from this research.

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# Dedication

I want to dedicate this dissertation to my family, in particular my wife, Carmelina. Carmelina has supported me through each step of this doctoral journey. No matter what obstacle I faced, she encouraged me to keep moving forward. My wife's passion for education and her own work with her students inspired me each step of the way. She is an amazing educator. Her passion for teaching has influenced my desire to conduct this research study.

I also want to thank both of my boys, Nicholas and Anthony. Their love for life and learning inspires me to remain committed to working every day to improve education for all students. I want my boys to always know that with hard work, focus, effort and determination, anything is possible.

Finally, I dedicate this work to my father, one of the hardest working men I know. Throughout my entire life he has always inspired me to pursue excellence in everything that I do. His constant example every day to "finish strong" inspires me to be the best educator and researcher I can be.

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# Chapter 1: Introduction to the Study

## Introduction

In secondary schools, the link between the dimensions of a professional learning community (PLC) and school climate is an area of literature that has not been studied extensively (Hord, 1997). Research is unclear as to whether there is overlap between these two constructs (Hord, 1997). Many of the dimensions of PLC are also components of school climate. This gap provides an opportunity to further contribute to the existing body of knowledge on school climate and PLCs during a time when top-down policy in Ohio and across the United States has been focused on increased testing and increased standards. In 2012, Ohio adopted new curriculum standards and new assessments. The focus of current reform efforts is to raise the academic rigor for all students. Changes to the state report card emphasize student performance in both reading and mathematics (Ohio Department of Education [ODE], 2013). The No Child Left Behind Legislation, Race to the Top, and other reform efforts such as teacher evaluation and implementation of the Common Core curriculum continue to impact public education and instruction in Ohio's schools (ODE, 2015). Reform efforts in Ohio and across the United States continue to focus on top-down solutions. Further investigation of the importance of the PLC model and the resulting impact on school climate provides a path for school leaders seeking to implement lasting change.

This study added to the existing body of knowledge by exploring the relationship between the dimensions of PLCs and school climate in select secondary schools in Ohio. School leaders who are driven to create positive climates focus on teaching and learning

and work to prepare their students for the demands of a global world. Thomas 2013 noted:

> Education reforms have framed the need for national standards, increased testing, and greater teacher accountability as essential for creating a world class work force and to keep the U.S. competitive internationally. But this narrative serves as a mask for the ultimate results promised by such reform. Shifting the locus of authority and expertise away from teachers, professors and scholars to state created and enforced instruments that render people powerless. (p 205)

The current policy and reform focus is not consistent with the promise of the PLC model. Presently, there is little evidence to suggest that current reform efforts will positively impact student achievement (Fullan, 2009; Ravich, 2013). A new approach to school improvement needs to be considered in Ohio that focuses on creating PLCs focused on improving and cultivating positive school climates.

One component of school reform that has been omitted from the current testing and accountability discussion is the importance of creating school communities with positive climates. In order to improve student achievement and maximize the likelihood that students will have the opportunity to learn, school leaders should focus reform efforts on improving and cultivating positive school climates that help to create authentic learning communities (Scherff & Piazza, 2008). Lindhal (2011) noted, "school climate and culture are essential elements to both school performance and school improvement" (p. 16). Many schools in Ohio have responded to new policy mandates by creating PLCs. The focus of this study was to determine if the five dimensions of a PLC, shared values

and vision, intentional learning and application, supportive and shared leadership, supportive conditions, and shared personal practice can be used to predict measures of school climate in secondary schools (Hord, 1997).

## Background of the Problem

There are several different ways to view the construct of school climate. Zullig, Huebner, and Patton (2011) proposed that school climate "refers to the level of safety a school provides, the kind of relationships that exist within, and the larger physical environment, in addition to shared vision and participation in that vision by all" (p. 135). From this work, Zullig et al. identified five dimensions of school climate. Those dimensions include order, safety and discipline, academic outcomes, social relationships, school facilities, and school connectedness. The construct of school climate can also be understood in terms of organizational health (Hoy & Feldman, 1999). Hoy and Feldman (1999) described a healthy organization as one that not only can survive over time but adapt to day to day changes as well. For this study, school climate was considered through the lens of an organizational health model. Hoy and Feldman identified a healthy school as a place where each level of the organization is in balance and where the needs of stakeholders are met. In addition to these characteristics, the healthy school is an organization that is able to adapt and cope with external pressure from parents and community members. Macneil, Prater, and Busch (2009) noted that "the reform efforts of the past 30 years have failed to improve student achievement in schools because they have failed to adequately address the importance of the culture and climate of schools"

(p. 75). The creation of a positive school climate focused on high levels of academic achievement for all students is linked to the PLC construct (Servage, 2008).

There are five dimensions that describe what constitutes a PLC. Hord (1997, 2004) identified five dimensions of a PLC: shared values and vision, intentional learning and application, supportive and shared leadership, supportive conditions, and shared personal practice. Creating collaborative school environments, focused on teaching and learning, has been accomplished through the adoption of PLCs (Rismark & Solvberg, 2011; Riveros, Newton, & Burgess, 2012; Servage, 2008). Dufour and Eaker (1998) noted, "the engine of improvement, growth, and renewal in a professional learning community is collective inquiry, people in such a community are relentless in questioning the status quo" (p. 25). School faculty commit to becoming a PLC with the intention of improving student achievement. PLCs provide faculty an opportunity to collaborate and reflect on teaching practices (Cranston, 2009; Thompson, Gregg, & Niska, 2004). At the school level, this commitment to collaboration creates a sense of community that may influence the overall climate within the organization in a positive way (Thompson et al., 2004).

Currently, the Ohio legislature is in the midst of developing policy that could significantly alter the educational landscape throughout the state. The new legislation will facilitate the implementation of new rigorous state learning standards, a new assessment system, a new teacher evaluation system, and new report cards detailing how well schools address the needs of all students. The relationship between the dimensions of a PLC and school climate was an area that required further study. The policy environment

in Ohio will require well-designed and meaningful professional development. A more comprehensive understanding of how the dimensions of a PLC impact school climate can help contribute to the existing body of knowledge and provide guidance for those working in schools on how to implement the required reform initiatives.

## Statement of Problem

The use of the PLC model as a way to improve student achievement and promote robust professional development in schools is a new idea for education (Servage, 2008; Wallace & Thomas, 2006). The majority of the research on the PLC construct is qualitative. While some quantitative data exists, presently there is a lack of information available on the relationships between the creation of a PLC and the resulting impact the PLC structure has on the overall climate in the school. Creating a positive school climate is one of the most important things a principal can do to improve student achievement (Gaziel, 2001; Murphy, 2001; Zullig et al., 2011). Perhaps when school leaders focus on creating authentic learning communities the result may be more sustained, positive school climates. More quantitative research into the relationship between the dimensions of a PLC and the dimensions of a school climate can provide school leaders with insight into the importance of these critical constructs. Research on the relationship between school climate and the creation of a PLC can assist school leaders in the planning and implementation of meaningful professional development during this historic period of reform. School leaders who focus on improving the academic climate within their schools by embracing the PLC construct may have greater success with implementing reform initiatives.

## The Nature of the Study

In this quantitative study, I used a cross sectional design and included both descriptive and inferential statistics in order to determine the following: (a) if a relationship exists between the dimensions of a PLC and the dimensions of school climate and (b) whether the dimensions of a PLC can be used to predict the dimensions of school climate. The use of multiple regression allows a researcher to extend data analysis beyond simple correlation. Multiple regression can be used to fit a predictive model to a data set where the model is then used to predict values of the dependent variable (Field, 2009). Multiple linear regression is a way to conduct a deeper analysis of the relationship between the PLC construct and school climate. Multiple regression is an extension of simple linear regression; however, multiple independent or predictor variables are now included. For this experiment the independent variables, or the predictor variables, included the five dimensions of a PLC. The dependent variable for this experimental design was school climate. School climate was measured using the Organizational Health Inventory for Secondary Schools. I focused on measures of stakeholder morale, consideration, initiating structure, and academic emphasis. The data were collected using a survey. One composite score was used to measure differences in stakeholder perception. Multiple linear regression was used to explore how much of the variance in the school climate might be explained by the predictor variables. The unit of analysis for this study was the school.

Quantitative data were collected using online surveys. Five high schools that use some variation of the PLC model were selected as the population sample for the study. The PLC survey was used to measure stakeholder perceptions of the dimensions of a PLC. The Organizational Health Inventory was used to measure school climate. With permission, the School Professional Staff as Learning Community (SPSaLC) survey was used to measure the five dimensions of a PLC (Hord, 1996). More details on both of these survey instruments, as well as an overview of the methods used to sample the population are described in Chapter 3.

## Research Questions and Hypothesis

The research question that was addressed in this quantitative study was

RQ1- When holding age, gender, position, and school district constant, do the PLC dimensions account for variance in school climate ratings?

$H_0$: The PLC dimensions do not account for any of the variance in school climate ratings.

$H_1$: The PLC dimensions do account for variance in school climate ratings.

## The Purpose of the Study

The purpose of this quantitative study was to develop a better understanding of how the five dimensions of PLCs (shared values and vision, intentional learning and application, supportive and shared leadership, supportive conditions, and shared personal practice) may influence measures of school climate (Hord, 1997). An investigation of the relationship between the dimensions of a PLC and school climate can contribute to the current research on school climate by highlighting the importance of understanding school climate when seeking to implement new policy and embrace continuous

improvement. Hellner (2008) noted that "individual teacher learning and professional growth no longer keeps pace with change" (p. 50). The response to the increasing pace of change in education requires a shift in how schools operate. The creation of a PLC provides the context where teachers can collaborate on how to improve both teaching and student learning (Hellner, 2008). In order to accomplish this shift, attention must be given to the development of positive school climates (MacNeil et al., 2009). The PLC model empowers teachers and embraces a distributed leadership perspective where instructional leadership becomes the responsibility of all stakeholders (Timperley, 2005). This study was guided by the construct of distributed leadership and emphasized the importance of sharing leadership through the PLC structure.

## Theoretical Framework

Change theory and the construct of distributed leadership present a unifying framework that links the construct of the PLC with the construct of school climate. In order to implement and develop a PLC and create a positive school climate, you have to have a leader willing to embrace these ideas. Leadership that is focused on the work of one person, often the principal, does not provide a complete view of leadership. In a distributed model of leadership, the ability to lead others has been identified as a critical variable when seeking to implement change (Gronn, 2008; Spillane, Halverson, & Diamond, 2004; Timperley, 2005). Spillane and Harris (2008) noted, "Distributed leadership perspective recognizes that there are multiple leaders and that leadership activities are widely shared within and between organizations" (p. 31). The theoretical framework for this study was based on the change theory and distributed leadership

(Fullan, 2009). According to Fullan (1996), change theorists posit that "change is inevitably, empirically, and theoretically nonlinear" (p. 2). In essence, change is a chaotic process (Fullan, 2009).

Schools are organizations that are complex social systems that share some underlying common purpose for existing. Implementing reform and advancing continuous efforts are often difficult (Fullan, 2009). Historically, power and decision making in schools has been concentrated at the top in one person, often a principal. Research suggests that sharing leadership within an organization may increase the likelihood that reform efforts will be implemented with fidelity (Spillane & Harris, 2008). Connected to this concept of distributed leadership is the construct of the PLC. The successful adoption, implementation, and use of the PLC model is rooted in the notion of shared leadership. Shared leadership is one of the five PLC dimensions. Spillane and Harris (2008) described this as follows,

> from a distributed leadership perspective, leadership is a system of practice comprised of a collection of interacting components: leaders, followers and situation. These interacting components must be understood together because the system is more than the sum of the component parts. (p. 150)

The PLC model is one vehicle through which a school organization can distribute leadership and address constant change. The result of this leadership sharing may be a more vibrant academic community and a positive school climate. Studying the PLC model to predict how it influences school climate is ultimately an examination of how

leadership is shared. This relationship is often a direct result of how the leaders, followers, and school environment interact (Hord, 2008).

The PLC construct is designed to engage all stakeholders in the continuous improvement process. Hall and Hord (2011) provided five PLC dimensions: (a) shared values and visions, (b) intentional collective learning and application, 9c) supportive and shared leadership, (d) supportive conditions, and (e) shared personal practice (p. 27). School organizations seeking to improve student achievement involve stakeholders in the process of continual improvement. School organizations that embrace the PLC construct empower stakeholders by involving them in the decision-making process. Stakeholder involvement impacts both the level of professionalism and climate of the organization (Hall & Hord, 2011). Each of the dimensions of the PLC construct serves to promote distributed leadership in an organization. The purpose of this study was to explore the relationship between the dimensions of the PLC and school climate.

Distributing leadership in a school can lead to improved school health. Hoy and Feldman (1999) posited that "a healthy school is one in which the technical, managerial and institutional levels are in harmony" (p. 87). Distributed leadership theory allows for an analysis of each level of the school organization. Hoy and Feldman also noted "healthy schools have harmonious relations among teachers, administrators and board members and focus their energies on the accomplishment of the instrumental goals of achievement and intellectual growth" (p. 87). A study exploring if the dimensions of PLCs can be used to predict school climate at the technical level of a school organization would provide further insight for educational leaders who are seeking to build school

cultures focused on teaching and learning. A deeper understanding of the relationship between the dimensions of a PLC and school climate, framed from the perspective of distributed leadership, can provide educational leaders with deeper insight into the impact that continuous improvement models have on the whole system. The use of distributed leadership theory to identify barriers to teacher collaboration and improve student achievement may be a more holistic approach to understanding the complex interworking of a school community and the overall school climate. The result of distributing leadership through the PLC structure may be improved school climate and improved academic achievement. The following is a visual depiction of the conceptual framework for this study. The framework identifies the relationships between the variables in this study and highlights how distributed leadership is embedded in the PLC and may influence school climate.

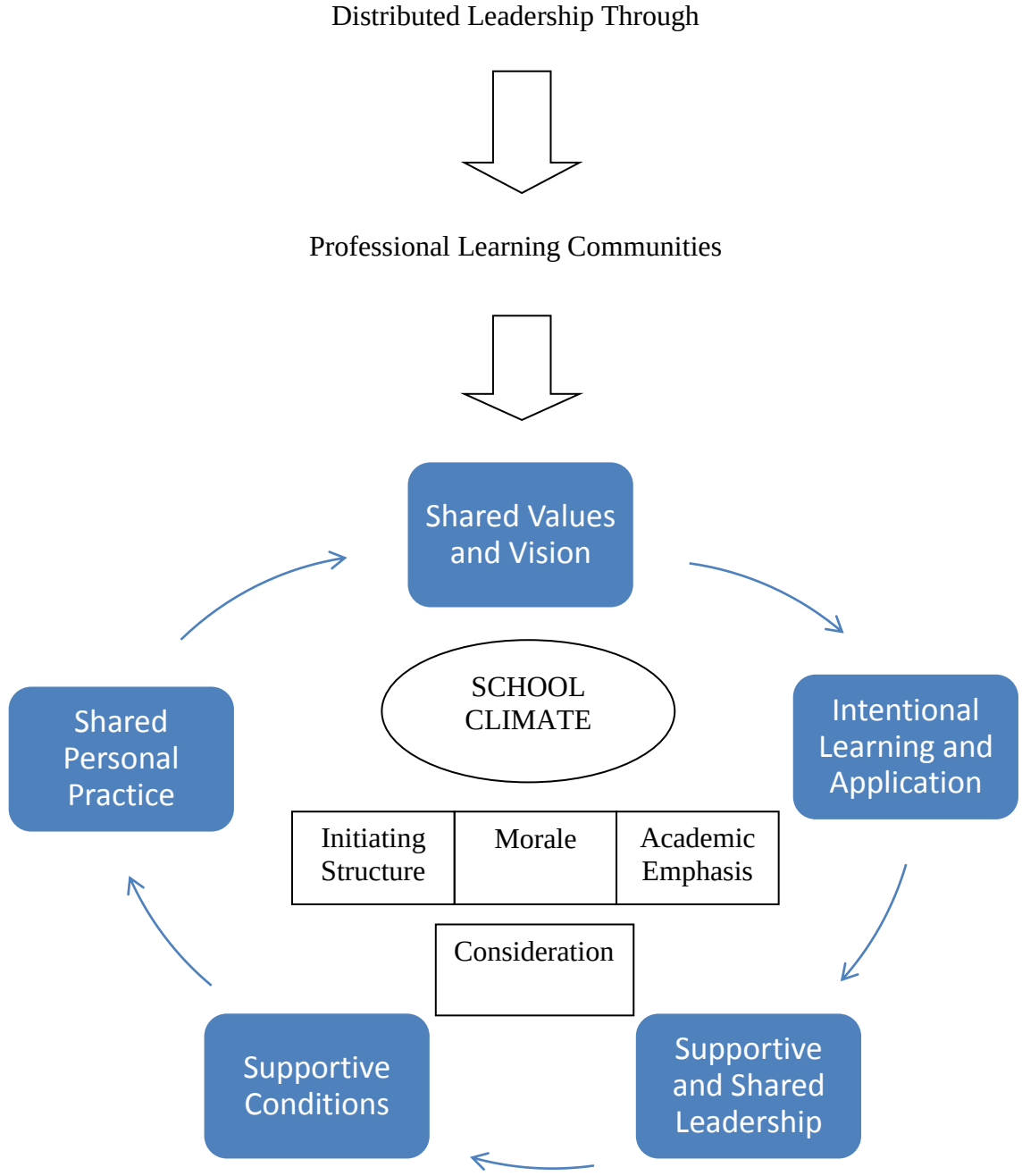


*Figure 1*. Conceptual framework

## Definition of Terms

*School stakeholders*: A teacher or an administrator employed by a school district in Ohio. Only teacher and administrators will be included in the population for this study.

*A suburban school district:* Any district surrounding a major city school system (ODE, 2013). The focus of this study was on suburban school districts in Northern Ohio

*Professional learning community*: A learning organization focused on "people who take an active, reflective, collaborative and learning oriented, and growth promoting approach toward the mysteries, problems and perplexities of teaching and learning" (Hellner, 2008. p. 50).

*Dimensions of a professional learning community*: Shared personal practice, supportive conditions, supportive leadership, intentional learning, and application and shared values and vision as measured by the School Professional Staff as Learning Community survey (Hall & Hord 2011). Each of these dimensions are defined conceptually below.

*Shared personal practice*: Central to the PLC construct is the notion that faculty work together, share best practice, and offer feedback for improvement. Shared personal practice is accomplished by providing teachers the opportunity to, as Hord (1997) described, "visit each other's classroom to observe, script notes, and discuss observations with each other" (p. 23). Shared personal practice creates a work environment where school faculty feels comfortable debating and discussing best practice (Hord, 1997).

*Supportive conditions*: Hord (1997) noted that "supportive conditions determine when, where and how the staff regularly come together as a unit to do the learning,

decision making, problem solving and the creative work that characterize a PLC" (p. 20). In order to successfully implement a PLC, school principals must provide teachers with the time to collaborate and analyze student data. Successful PLCs provide the conditions that support the work of a learning organization (Hord, 1997).

*Supportive and shared leadership*: The construct of supportive and shared leadership redefines the traditional power structure evident in most school communities (Hord, 1997). A school that uses the PLC model for continuous improvement and professional development embraces a model of shared leadership. With the PLC model, the notion of having one principal that uses positional power to influence change is replaced by a principal that shares leadership, empowers teachers and engages in ongoing professional development. Collectively, these elements create conditions where supportive and shared leadership is valued (Hord, 1997). Hord (1997) noted that central to this form of leadership is the ability for a principal to "share authority, to facilitate the work of staff, and the ability to participate without dominating" (p. 16).

*Intentional learning and application*: Successful PLCs create a culture of inquiry and innovation (Hord, 1997). Part of this culture of inquiry is a focus on student learning. Teachers are encouraged to use research and employ best practice in the classroom. When principals and teachers share decision making and work together to solve issues related to student learning, a stronger sense of community develops. The result is increased student achievement (Hord, 1997).

*Shared values and vision*: Sharing a vision is an important component of a PLC. Hord (1997) noted "sharing a vision is not just agreeing with a good idea; it is a particular

mental image of what is important to an individual and to an organization" (p. 19). A common vision for all stakeholders focuses the work of the PLC (Hord, 1997). An unwavering focus on student learning is a critical attribute of a PLC. Hord (1997) described, "These shared values and visions lead to binding norms of behavior that staff shares" (p. 19). Placing an emphasis on a shared vision and shared values assures that high quality teaching is being used at all times (Hord, 1997).

*School climate*: Measure of the health of the school as defined by stakeholder morale, academic emphasis, and stakeholder cohesiveness. School climate was measured by the Organizational Health Inventory for Secondary Schools (Hoy, 1990).

## Assumptions and Limitations

This study was based on the following assumptions and was limited in scope to the parameters described here. First, the study pertained to secondary school teachers who taught Grades 9 to 12 and administrators who have a wide range of differing roles. I focused on suburban schools, and it was limited to schools within Ohio. I assumed that the teachers who are asked to respond to the survey have an awareness of the PLC concept. Other limitations include the time of year that the survey was administered. Because the survey was administered only once, studying if climate and the health of an organization change based as a function of the time of the school year as not possible. Finally, based on the context and nature of the study, the findings cannot be generalized without further investigation.

## Delimitations and Scope

This study included a sample of high school teachers from all content areas and administrators from suburban schools in Northern Ohio. Each school was similar in demographics and size. The schools selected all used the PLC concept or some variation.

## Significance, Summary and Implications for Social Change

This study was significant because I addressed a component of school improvement that has not been included in recent educational policy discussions. Improving the climate of a school is also an important focus area for school leadership when planning professional development. Granger (2008) noted that increased accountability measures have impacted the relationship between student and teacher negatively. The impact on student learning has also been minimal. Reform in education must begin by creating strong and vibrant academic communities. This can only be done by exploring the role that school climate plays in creating and sustaining healthy school organizations focused on academics (Fullan, 2009; MacNeil et al., 2009; Song, 2012; Stoll et al., 2006). The implementation and use of the PLC concept is a direct way to impact the academic climate in a school and thus impact the school environment. In this study, I investigated if a relationship existed between the dimensions of a PLC and school climate. Ohio will be faced with significant reform initiatives in the next several years. These reforms include changes to teacher evaluation, curriculum, and state assessments. Further exploration of the relationship between the dimensions of a PLC and school climate is an area of the literature that required further study. The insight gained from this study contributed to the existing body of knowledge and added to the current discussion

on school reform. The results of the study can also inform building level professional development for schools that have implemented or plan to implement the PLC model with the intent of improving the school climate.

Finally, this study can impact social change by providing further information for school leaders on the construct of school climate. Creating schools where all students achieve at high levels can be realized. The nature of the reform efforts that might accomplish this goal should be analyzed and articulated. The current focus on testing, increased standards, and accountability has failed to produce the desired results. A new perspective for education reform requires an analysis of how distributed leadership, the PLC construct, and school climate are all related. Improved schools and increased student achievement are both at the heart of social change. It is through education that a society elevates what people can accomplish. Understanding the relationship between the PLC and school climate can ultimately improve the educational experience for all students; however, further study of these constructs was necessary.

# Chapter 2: Literature Review

## Introduction

The purpose of this quantitative study was to develop a better understanding of how the five dimensions of PLCs (shared values and vision, intentional learning and application, supportive and shared leadership, supportive conditions, and shared personal practice) influenced measures of school climate (Hord, 1997). The following review of the literature includes topics related to PLCs, dimensions of PLCs, school climate, and distributed leadership. This chapter is organized into five sections: an overview of PLCs, PLCs and school culture, the dimensions of a PLC, overview of school climate and school climate, and organizational health. Relevant research for this chapter was acquired through various electronic and printed journals, seminal books, and databases such as ProQuest, Education Research Information Center (ERIC), Academic Search Complete, and Education Research. Key search terms for this review of the literature included the following: *PLCs, collaboration, school improvement, school climate, organizational health, PLCA, distributed leadership, shared practice, supportive conditions, supportive leadership, adult learning, shared vision, shared values, school culture, academic emphasis,* and *academic optimism*. The majority of the articles used were from the last five years. Exceptions to this are detailed below.

The first section of this literature review provides a background on the PLC model and a description of the five dimensions of a PLC as identified by Hord (1997). Most of the foundational literature on the PLC construct is older than 3 to 5 years. It is important that some of this research be included in this literature review because the PLC

construct is a relatively new idea for education. In addition, it is important to highlight that much of the current research on the PLC construct is qualitative. The abundance of qualitative research further supports the need for a quantitative study that can help fill gaps and provide more empirical research on PLCs as they relate to creating positive school climates.

## Professional Learning Communities

Creating a positive school climate is one of the most important things that a principal can do when seeking to improve student achievement (Gaziel, 2001; Murphy, 2001; Zullig et al., 2011). Mitchell, Bradshaw, and Phillip (2010) noted, "school climate has been linked with improved academic achievement and reduced discipline problems, and thus is often a target of school improvement initiatives" (p. 1). Despite the research on school climate that suggests it may be a factor that can improve student achievement, recent efforts to improve schools have focused on increased accountability, raising standards, and data-driven decision making. One important construct that is lacking from current school reform discussions is the importance of creating and sustaining positive school climates focused on teaching and learning.

Public Education has been the focus of reform efforts. The Nation at Risk Report (1983) created a renewed impetus for improving the public education system in the United States. The report detailed how students were falling behind academically and struggling to keep pace internationally (National Commission on Excellence in Education, 1983). As a result of this report the public began to focus on the need to improve and reform public schools. The result of this public outcry was an increased

focus on student achievement tests (Tobias & Hord, 2012). Since the publication of A Nation at Risk, most education reform efforts have failed to produce improved results. Harris (2011) highlighted

> the inability of so many reform processes to make a difference to the classroom, where it matters most, is explained quite simply in the fact that they have not put children at the center; they have not put children first. (p. 3)

When school leaders commit to creating, implementing, and cultivating PLCs, there an increased likelihood of realizing lasting change. Harris (2011) noted, "The PLC work is a way of putting professionals at the heart of the reform process by giving them a platform to instigate and manage change" (p. 9). Stoll, Bolam, McMahon, Wallace, and Thomas (2006) described, "understanding effective PLCs in schools and research into their existence, operation and effectiveness are at a relatively early stage in development in many countries" (p. 222). The PLC model has a positive impact on school improvement (Stoll et al., 2006). Given that the PLC concept is new to education, further research into the relationship between the dimension of a PLC and school climate can contribute to the existing body of research and further support current efforts to more fully understand the implementation of the PLC construct.

The use of the PLC model to advance continuous improvement efforts and promote change has gained popularity over the last decade. Providing educators with meaningful opportunities to learn and collaborate may lead to an increase in student achievement. This is the basic premise of the PLC construct (Dufour & Eaker, 1998; Hord, 1997; Newmann & Wehlage, 1995; Senge, 1990; Tobias & Hord, 2012; Walther-

Thomas, Korinek, & McLaughlin, 1999). Riveros, Newton, and Burgess (2012) noted, "the underlying assumption in professional learning communities is that peer collaboration has the potential of transforming teaching practices in ways that will bring about higher rates of student achievement" (p. 204). Dufour, Dufour, Eaker, and Many (2006) described "the very essence of a learning community is a focus on and a commitment to the learning of each student" (p. 2). The commitment to become a PLC provides a viable path for school leaders seeking to improve student achievement for all students and create positive school climates. The PLC model places an emphasis on continuous improvement and professional development. In a PLC teacher isolation is replaced with ongoing dialogue between professional educators. Teachers in a PLC engage in peer collaboration with the sole focus of improving student achievement (Fullan, 2007). In this paradigm both students and teachers engage fully in the learning process. If the goal of educational reform is to improve learning for all student populations, then the research on the PLC model provides guidance on how to transform schools into learning organizations (Bezzina, 2006; Dallas, 2006; Psencik & Baldwin, 2012; Richmond & Manokore, 2011; Song, 2012; Waldron & McLeskey, 2010).

The PLC Construct has been defined in several ways. Hipp and Huffman (2010) defined a PLC as "professional educators working collectively and purposefully to create and sustain a culture of learning for all students and adults" (p. 12). This definition places emphasis on the role that school culture and school climate play in creating and sustaining a PLC. With an increased emphasis on accountability and testing, the PLC model provides school leaders with the opportunity to create positive school climates that

are focused on teaching and learning. Principals shape the culture of a school (Mullen & Jones, 2008). The PLC model stretches conventional thinking about school improvement and provides school leadership with an opportunity to transform the school community. This may be a critical variable that can lead to substantial improvement over longer periods of time (Harris, 2010). Melville, Bartley, and Weinburgh (2012) contended that when schools are viewed as communities there is the potential for long lasting, transformational change (p. 2). Rather than focusing on a new program or new curriculum, the PLC model seeks to transform the way schools operate with the purpose of increasing student learning (Servage, 2008).

In order for the PLC concept to be fully realized it must become part of the daily culture of the school (Huffman, 2010). School leaders who do not take the time to understand what constitutes an authentic learning community run the risk of not realizing the promise of increased student achievement and improved school climate. In order to become a PLC the entire culture within a school must be transformed. This transformation requires an understanding of what dimensions constitute a PLC. Tobias and Hord (2012) summarized this as, "the movement called professional learning communities must become the norm in every school for teacher to claim their place as respected professionals" (p. 18). Working to create a PLC within a school can support a vision that increases student achievement for all students and improves the environment where teachers carry out their daily work in the classroom. This may also impact school climate.

Few scholars have explored the dimensions of a PLC in practice. Most of the current literature on the PLC model is qualitative. While the importance of qualitative analysis cannot be diminished, an exploration of the PLC construct using a quantitative lens can provide empirical data that might further support the use of the PLC model as a way to rethink the concept of school reform and focus on creating schools with positive school climates. For schools that operate as a PLC, all students are provided with the opportunity to achieve at high levels. The creation of a PLC and a positive school climate both include a commitment to rigorous academics and high levels of student achievement. Understanding the complex nature of what constitutes a PLC may be a starting place when attempting to improve the climates within schools. The next section explores in more detail the dimensions of a PLC as identified by Hord (1997). The five dimensions of a PLC do not exist in isolation; rather, in an effective PLC there is a harmony and balance between these five core dimensions. Teaching and learning are complicated constructs. Creating conditions in schools that favor the development of a positive school climate may closely be related to the fostering the dimensions of a PLC. This emphasis may lead to improved student outcomes. Further analysis of this relationship supports the need for this study.

## Dimensions of a PLC

The following section is a review of the literature on the five dimensions of a PLC. The work of Hord (1997) and the Southwest Educational Development Laboratory (SEDL) led to the identification of five dimensions of a PLC, those being: a) supportive

and shared leadership, b) shared values and visions, c) intentional collective learning and application, d) supportive conditions and e) shared personal practice. These dimensions were identified after careful analysis of schools that were operating as effective PLCs. In order to understand how the five dimensions of a PLC influence a school community it is important to explore the relationship between school culture and the dimensions of a PLC. After a review of school culture each of these dimensions will be explored further in the following review of the literature.

## School Culture and the Five Dimensions of a PLC

The term PLC is an elusive term that is often used to reflect a wide range of activities that occur within a school community. Often department meetings, faculty meetings, or school committees have assumed the designation of a PLC. Huffman (2010) described, "the lack of a consistently used, common definition of a PLC, only serves to confuse the practitioner" (p. 2). Huffman outlined the following characteristics of a PLC, a) a whole school focus, b) efforts based on the five PLC dimensions identified by Hord (1997) and c) participation by all professional staff in the school. When seeking to implement the PLC model it is important for school leaders to have a solid understanding of the theoretical underpinnings that anchor the work occurring in a PLC. Current school reform efforts emphasize the importance of high stake tests, increased accountability, and higher standards (Granger, 2008). Minimal attention is placed on the importance of building strong academic communities focused on both adult and student learning. Current reform efforts ignore the importance of building strong academic cultures in

schools. Research supports the view that strong academic cultures impact school climate in a positive way (Chen and Weikart, 2008; Hoy, 1990; Killion and Hirsch, 2011; Murphy and Hallinger, 2001). It is important to make a distinction between the construct of school culture and school climate. Engels, Hotton, Devos, Bouckenooghe and Aelterman (2008) defined school culture as "the basic assumptions, norms, values, and cultural artifacts that are shared by school members, which influence the functioning of the school" (p. 159). School culture is often studied from a qualitative perspective and describes the character or atmosphere of a school organization (Hoy, 1990). An effective PLC can only be accomplished by incorporating the five dimensions of a PLC into the existing culture of a school community (Huffman, 2010). This require a deep understanding of the school culture and the five dimensions of a PLC.

Changing the culture of a school is complicated work (Hoy, 1990). Hellner (2008) noted, "a PLC can enable educational institutions to capitalize on change, on research, on technology and on self-management, in order to secure the benefits for the school, for the teachers, and most importantly, for the students" (p. 50). Creating a school where educators are committed to developing a community of professional learners requires that leaders understand the five dimensions of a PLC. The importance of understanding how the five dimensions of a PLC can be incorporated into an existing school culture has been conceptualized by Huffman (2010). The first step is initiation, the second step is implementation and the third step is institutionalization (p.5). Huffman studied each of the dimensions of a PLC and concluded, "It is clear that institutionalization across all five PLC dimensions is essential for schools to engage in

sustained improvement and for continuous improvement to occur" (p. 5). In other words, to realize the achievement gains often associated with the PLC, each dimension must become part of the school culture. Later the term institutionalization was replaced with the term sustainability to describe a school where all dimensions have been incorporated into the school culture (Huffman). In order to improve school climate, the culture of the school must support the creation of a PLC.

Understanding the PLC construct requires an in-depth exploration of how each dimension is manifested in the daily operation of a school. Current literature on the PLC model provides evidence that supports the use of the five dimensions as way to describe a PLC (Hord, 1997, Huffman and Hipp, 2003). Further investigation of the dimensions of a PLC and their resulting impact on school climate may provide further insight for school leaders seeking to move from implementation to institutionalization (Fullan, 1990). In order to become a high functioning PLC, research supports the view that each of the five dimensions of a PLC should be embedded in the culture of the school (Hipp and Huffman, 2003). This study contributes to the exiting research by analyzing the perception that both teachers and administrators have about each dimensions of the PLC in their school. Successful implementation of each of the five dimensions of a PLC is an important consideration for school leadership seeking to improve student academic outcomes. One reason schools that use the PLC model do not get the desired academic results could be a failure to understand each of the five dimensions. Further analysis of each dimension follows.

*Dimension 1: Supportive and Shared Leadership*

In a PLC supportive and shared leadership is evident when school administrators share power, authority, and decision making with all stakeholders (Hipp and Huffman, 2002; Helterbran, 2010; Margolis and Deuel, 2009; Williams, 2009). The construct of shared and supportive leadership represents a paradigm shift for educational leaders. The primary role of the principal has shifted over the past several decades from principal as manager to principal as instructional leader (Gronn, 2008; Mullen and Jones, 2008; Spillane and Harris, 2008; Spillane, Halverson and Diamond 1999). As instructional leader, the principal must work with the faculty to build leadership capacity. Building leadership capacity differs from delegating tasks to subordinates (Mullen and Jones, Huffman, 2010; Spillane, Halverson and Diamond, 2004). This is an important distinction when seeking to understand how to build a culture where shared and supportive leadership is nurtured and valued. Mullen and Jones (2008) described shared leadership as the opportunity for teachers to create conditions where innovation and creativity lead to increased student achievement. Fullen (2002) explained, "the role of leadership is to 'cause' greater capacity in the organization in order to get better results" (p. 65). Providing teachers with the opportunity for leadership outside of the classroom is a relatively new area of research. Vernon-Dotson and Floyd (2012) defined teacher leadership as:

> the ability of school professionals to forge a sense of community and share a commitment for increasing student achievement by engaging all faculty

> and staff and enhancing school climate with the overarching goal of building capacity for change (p.40).

Successful change requires a commitment from all stakeholders in the school. The link between increased student achievement, school climate and teacher leadership is tied closely to the construct of shared and distributed leadership. One area of school reform that requires further investigation is the link between shared leadership and overall climate in a school. This research study can further contribute to the existing knowledge base. Teacher leadership, as a critical dimension of a PLC, might help keep stakeholders focused on teaching and learning and create stability during periods of change.

Akert and Martin (2012) argued that when educators assume leadership roles you have lower rates of teacher turnover. As a result of low turnover, stronger teacher teams emerge. Having a culture that promotes teacher leadership in a school can increase the likelihood that reform efforts will remain implemented even if formal leadership changes (Akert and Martin, 2012). This is a key component of this dimension. In this view supportive and shared leadership extends beyond the involvement in decision making. When teacher leadership is valued, time is provided and structures are put in place to more fully engage teachers in the collaborative process. Schools that value shared and supportive leadership work to build a culture where participation and teacher engagement is an ongoing process (Akert and Martin; Williams, Brien and LeBlanc, 2012). Mullen and Jones (2008) noted, "successful schools enable teacher leaders to apply their creative energy for the purpose of constant improvement" (p. 2). Song (2012) described, "Many scholars see the establishment of a PLC as an important condition for empowering

teachers and increasing their receptivity to reform" (p. 83). Reform in education that begins with teachers and moves from the classroom up to other levels of the organization has the best chance of impacting lasting change. Developing shared and supportive leadership structures is an important step in realizing this type of change.

Shared leadership is a significant departure from the traditional view of the principal as the sole leader within a school. One barrier to implementing the PLC model and promoting a distributed form of instructional leadership is the traditional leadership hierarchies in most schools. Most schools are organized in a way that promotes teacher isolation and values positional power. This structure has proven to make reform and change in schools difficult. Akert and Martin (2012) stated, "the concept of teacher leadership and the influence it has on schools is significant" (p. 285). The PLC model provides an opportunity to reduce teacher isolation and distribute instructional leadership throughout the organization. Eaker, Dufour and Burnette (2002) summarized this:

> One of the most fundamental shifts that takes place as schools become professional learning communities involves how teachers are viewed. In traditional schools, administrators are viewed as being in leadership positions, while teachers are viewed as implementers or followers. In professional learning communities, administrators are viewed as leaders of leaders (p. 22).

At the core of this PLC dimension is the concept of distributed instructional leadership. Spillane and Harris (2008) noted, "in the increasingly more complex world of education the work of leadership will require diverse types of expertise and forms of leadership

flexible enough to meet changing challenges and new demands" (p. 31). The commitment to embrace the PLC model provides an opportunity to distribute leadership throughout an entire school organization and provide all stakeholders with the opportunity to become instructional leaders. In the PLC model, teachers assume leadership roles and engage in robust discussions about teaching practices and student learning.

Central to the concept of shared and supportive leadership is the belief in cultivating leaders from within the organization. Hipp, Huffman, Pankake and Oliver (2008) noted that "as schools transform into professional learning communities, the conceptualization of the PLC becomes rooted within the school culture" (p. 177). For shared and supportive leadership to take root and be fully realized, school leaders need to embrace a shared vision of promoting change.

*Dimension 2: Shared Values and Vision*

Without a common purpose and clear focus the PLC concept cannot take hold. Williams (2009) highlighted this concept and described how opportunities to assume leadership roles in a school will not be maximized and resistance will be common when a shared vision is lacking (p. 33). In order to create a PLC school leadership needs to work on establishing a common set of values and a clear vision that all stakeholders are vested in. The vision and values need to be more than a slogan. In order to fully implement this dimension, school leadership needs to develop a shared set of expectations, often focused on student learning and achievement (Timperley, 2011; Walther-Thomas et al., 1999). The concept of a set of shared values and vision is closely linked to the previous

dimension, shared leadership. Without a sense of empowerment, teachers will be less likely to engage in the conversations necessary to begin to foster and develop the vision. Owen (2010) studied two schools and explored how the vision and shared values emerged as a PLC begins to develop. He noted, "the vision and mission for each community can be seen to have continually evolved alongside the ongoing learning of the teachers who were participating within it" (p. 49). He further described that the involvement of the school principal in the process of teacher learning was a critical variable in the progressive development of a shared mission and vision. In the first study the principal was directly involved in the collaborative process as a key stakeholder. The PLC continued to thrive and developed over time. At school two in the study the principal was not involved and the development of a PLC and the building ceased to show progress towards creating a PLC (Owen, 2010). Stoll, Bolam, McMahon, Wallace and Thomas (2006) contended that "the nature and quality of the leadership provided by the principal has a significant impact on the nature of the school culture" (p. 235). In essence, the ability for teachers to meet, reflect and talk about student achievement helped to facilitate the process of developing a shared set of values. This relationship between engaging in collaboration and the development of shared vision and set of values is an important distinction. Research supports the view that when teachers are provided with opportunities to assume leadership roles conversations about shared values are easier to facilitate (Akert & Martin, 2012). The role of the principal in the process cannot be ignored. Owen (2010) summarized the study:

> in each PLC, distributed leadership proved to be a crucial factor affecting not only the breadth and depth of the work being conducted by teachers, but also the ongoing life and sustainability of the communities themselves (p. 50).

Research supports the position that in order to begin to develop a shared set of values, expectations and beliefs teachers must be given the opportunity to meet regularly and accept an increased leadership role within the organization (Garret 2010; Korkmaz, 2006). Critical to establishing a shared mission, vision and set of values is an unrelenting focus on student learning. In a PLC, this singular focus helps transform a school from a typical school to a true learning organization (Dufour and Eaker, 1998; Garret, 2010; Wells and Feun, 2008). In order to move a school towards a shared vision and set of values, the culture of the school needs to be understood. Garret (2010) summarized, "a professional learning community is perhaps best defined as a fundamental shift in a school's culture" (p. 5).

Research on learning organizations suggests that in order to transform a school into a PLC a shared set of values and a common vision must become part of the culture of the school community (Dufour and Eaker, 1998; Pockert, 2012). As identified earlier, in order for a PLC to take hold the culture of the school must support the change. Changing school culture begins by articulating a school vision and shared set of values that focuses the work of the school on student and adult learning. Research suggests that the school principal plays an important role in developing an academic culture with a shared set of values and purpose (Stoll et al., 2012). MacNeil et al., (2009) noted, "when the principal

supports clear goals for the school that are accepted and supported by the staff, then organizational health scores will be higher, reflecting his/her leadership influence on the climate" (p. 82). Lippy and Zamora (2012) conducted a study using the PLCA-R survey which measures teacher perceptions of the dimensions of a PLC. An ANOVA was conducted to examine differences in mean results between 12 school sites. Based on the results the dimensions that reflected the greatest level of implementation are shared values and vision (M= 3.14) and supportive conditions-relationships (M=3.24). The researchers conclude that shared values and vision is an important foundational dimension when seeking to develop a PLC. (p. 61). Developing a shared set of values and a common vision requires the involvement of all stakeholders, alignment of decisions with the school vision and guidance from the district level in order to create a common focus. Lippy and Zamora concluded that a common vision and common purpose should be reflected in district policy and training manuals, they noted, "the results of this study evidence the need for an overarching vision of PLCs" (p. 66).

Poekert (2012) conducted a study investigating the implementation of a PLC at two schools. Both schools partnered with representatives from the local university. Training, resources, and material necessary to sustain a PLC was provided. In general, improvements in teacher practice were only observed when teacher participated in professional development and collaboration. The researcher stressed the importance of having a strong commitment to common goals. He concluded that, "creating a collaborative school culture requires professional dialogue about student learning, teacher practice and school policy" (p. 108). The importance of a shared vision and a shared set

of values is important component of creating a PLC. For a school that is seeking to transform the culture and focus on student learning, this dimension may be a natural starting place. An effective PLC, characterized by Leclerc, Moreau, Dumouchel Sallafranque-St. Louis (2012) has "a clear and shared vision that is evident in its pedagogical practices" (p. 2). The link between vision and classroom practice will be explored in the next section.

*Dimension 3: Intentional collective learning and its application*

Creating a shared vision and providing educators with the opportunity to assume leadership roles is not enough for an authentic PLC to develop. The third dimension of a PLC is collective learning and its application. This dimension highlights the critical link between teacher collaboration, the school vision, and instruction. A PLC cannot improve student achievement and transform the culture of a school if teachers do not apply what they have learned to their classroom instruction. Cosner (2012) described this as "diagnosis followed by intervention" (p. 30). In other words, in a PLC teachers take time to analyze student data and then adjust instruction as a result of the information (Crumrine and Demers, 2007). Cosner (2012) noted, "intervention follows from diagnosis and involves actions to address specific areas of weakness, correct or strengthen processes, and improve performance" (p. 30). Teachers working together in teams use both quantitative and qualitative data to not only identify student errors or misconceptions but also to teach content that students struggled to master. The focus in a PLC is to assure all students are learning. Focusing teacher collaboration on helping students that are on the fringe may help improve achievement (Posner, 2012). This can

only be accomplished when teachers collaborate and then apply what they learned. This connection cannot be overstated. Connecting the work that occurs in a PLC to the daily classroom instruction can be accomplished through meaningful collaboration, followed by action (Prytula and Weiman, 2012).

A critical component of effective collaboration is providing time for teachers to review data and talk about instructional practices. Talking is not enough. Collaboration has to be followed up with a change to the way instruction is delivered (Nelson and Slavit, 2008; Prytuala and Weiman, 2012). This is what is meant by collective learning and its application. Doolittle, Sudek and Rattigan (2008) stated, "a learning community classroom functions in partnership with the entire school community" (p. 305). The emphasis on creating a PLC that connects multiple levels of a school organization helps define what is meant by intentional collective learning and its application. In an authentic PLC each level of the organization is connected. When teachers collaborate instruction is improved and consequently student achievement is impacted. This can be accomplished by engaging teachers in meaningful professional development. Nelson and Slavit (2008) described "professional development must look to provide teachers with opportunities for influencing the contexts and impacting the forces that originate outside their immediate work environment" (p. 100). For this dimension, teachers not only meet to discuss best practice but also learn from each other and then make changes to the way instruction is delivered. Effective school reform is teacher centered so that students can gain the immediate benefit (Buchanan, 2012). This is only accomplished when the work that teachers do in collaborative teams is applied both intentionally and systemically to the

delivery of instruction in the classroom. When conditions are created by school leadership that favor this type of collaboration school improvement is more likely to be realized. The concept of supportive conditions will be explored in the next section.

*Dimension 4: Supportive Conditions*

In an effective PLC resources are aligned with the school's vision and allocated to help support the work of improving student learning. Establishing supportive conditions involves providing time, resources and space for collaboration to occur (Hord 1997; Dufour and Eaker, 1998; Moller 2008; Boyd, 1992; Panucci, 2008). When implementing a PLC it is important to provide time in the school schedule for teachers to meet. Stoll et al., (2012) noted that "opportunities for professional exchange appear to be further facilitated by proximity" (p. 240). The importance of providing time was further identified by LeClerc et al., (2012) in a study designed to identify factors that influence the functioning of a school as a PLC. One factor outlined in the study was time. The importance of having time set aside as part of the school day was identified over 50 times by teachers and 3 times by school principals. When developing, implementing and attempting to sustain a PLC, providing supportive conditions through structured, uninterrupted meeting time is a priority.

Research supports the view that common planning can lead to an increase in positive results for students and teachers. There is also evidence that when teachers meet together in regular, predictable increments, school climate can be positively impacted (Caskey and Carpenter, 2012; Cook and Faulkner, 2010). Craston (2009) conducted a

study using a naturalistic inquiry approach. In the study 12 principals' were interviewed to identify their perceptions of what constituted a PLC. Eight themes were identified as a result of the work. Theme two stressed the importance of structural supports when implementing a PLC. The principals' identified the following pre-conditions when embarking on the creation of PLC, time, school plans, interconnected teacher roles, teacher empowerment and institutional identity (p. 10). The importance of creating time during the school day or school week for teacher teams to meet and engage in the process of collaboration is important component of providing supportive conditions. Cranston (2009) summarized the findings:

> it seems that participants support the general belief that, as a result of providing structural supports in the form of formal organizational structures for engaging teachers in their work and engaging them with others, professional learning communities will grow and mature (p. 10).

Wells and Feun (2008) conducted a study where the levels of implementation of a PLC were examined at six high schools. In the study they noted, "time is an important factor in a PLC implementation, but the time must be carefully constructed, it can degrade" (p. 55). When planning to implement a PLC it is important to provide time within the context of the normal school day or week. However, research suggests that this time must be a balance between providing autonomy for teacher teams and oversight so the time is used well (Dufour, 2004). The final dimension is shared personal practice. This dimension requires the first four to be well established. Dimension five will be reviewed in the next section.

*Dimension 5: Shared Personal Practice*

Hord (1997) noted "the review of teacher's behavior by colleagues is the norm in a professional learning community" (p.26). The fifth dimension, Shared Personal Practice, is the most difficult to realize. In PLCs where this dimension is practiced teachers spend time regularly observing each other teach. In addition to this teachers meet to share student work samples with the intent of identifying whether all students have met learning objectives. Garrett 2010 highlighted, "the process of analysis, reflection and action is continual. Less successful teachers receive help and support from successful team members" (p. 5). The purpose of collaboration is to provide feedback that can help everyone grow professionally. Teacher collaboration and sharing is not meant to be an evaluative process. Rather this is an opportunity for teachers to reflect on best practice and then make changes that may increase student achievement (Hord and Sommers, 2008). Walther-Thomas et al., (1999) noted, "the ultimate purpose of professional collaboration is to support the ongoing efforts of individual educators to improve student learning" (p.4). In schools where this dimension is practiced teachers are invited by colleagues to observe instruction and data is shared to promote improved student learning (Tobia and Hord, 2012). The interaction between teachers where best practice is shared and then used to improve instruction captures what is meant by the term professional in a PLC (Tobia and Hord, 2012; Servage 2008).

Creating a school culture where teachers hold each other accountable is an essential component of an effective PLC (Levine and Marcus, 2007; Tobia and Hord, 2012). Nelson and Slavit (2008) described this as collaborative inquiry. They noted,

"various structures have been used to support teachers' professional growth in collaborative settings, including professional learning communities, lesson study, communities of practice, and peer observation" (p. 100). Providing educators with the opportunity to collaborate about best practice captures what is meant by the concept of shared personal practice. In a PLC these conversations take place in the context of teacher based teams supported by the principal (Cosner, 2012). Akert and Martin (2012) explored the relationship between teacher leadership and school improvement (p. 295). The results from their qualitative study support the important role that a principal plays in creating a culture that values teacher leadership. In order for teachers to collaborate and work together and share personal practice support from the principal must be provided (Akert and Martin, 2012).

Meirink, Imants, Meijer and Verloop (2010) explored the relationship between teacher learning and collaboration in innovative teams. Both qualitative and quantitative data was collected to examine collaboration, teacher learning and the context for collaboration and learning (Merink et al.) Their study outlined two paradoxes that school leadership should consider when working on developing a sense of shared personal practice (Meirink et al., 2010). Collaboration in teams was characterized as sharing, however the nature of the sharing differed based on the content and the type of teacher learning. In their study, the researchers concluded that one critical component of effective collaboration is the ability to experiment with new teaching methods. When teachers get together to solve a shared problem and are permitted to innovate and apply new ideas collaboration is likely to flourish (p. 176). Meirink et al., noted, "merely

exchanging ideas appears not to be sufficient for teachers to learn from collaboration with colleagues in teams" (p. 176). The results supported a need to further study the relationship between collaboration and learning (Meirink et al.)

In addition shared personal practice includes the use of common assessments so to allow teachers to share data and discuss student achievement. Hord and Sommers (2008) refer to the ongoing monitoring of student results as a critical component of shared personal practice. Using data to drive instruction is a critical step in the evolution of a PLC. Crumrine and Demers noted, "a useful arsenal of formative assessment tools becomes nothing more than a cluster of gimmicks if not used in a way to inform instruction" (p. 68). In an authentic PLC, teachers not only plan instruction but also spend time reflecting on and responding to student achievement data. Teachers then use achievement data to identify students who appear to be struggling and then provide those students with the appropriate intervention.

## School Climate

Research on school climate developed first from a theoretical perspective (Thapa, Cohen, Guffey and D'Alessandro, 2013). As a result most of the research on school climate is often framed from the perspective of the researcher. For this study, school climate will be considered though the lens of Organizational Health (Hoy, 1990). Hoy (1990) makes a distinction between school culture and school climate. He outlined, "scholars of climate tend to use quantitative techniques and multivariate analysis to identify patterns of perceived behavior" (p. 161). He noted, "climate, conceived as health, seems especially useful for linking properties of schools with positive student effects,

cognitive as well as affective outcomes" (p. 163). Hoy (1990) contrasted school climate with school culture. Scholars of organizational culture tend to use the qualitative and ethnographic techniques of anthropology and sociology to study the character of organizations. For this study, school climate will be studied using a quantitative approach.

A healthy school is described by Hoy (1990) as being able to adapt to environmental needs and meet organizational goals. This view of school climate implies that the climate within in a school is a balance between several measurable factors. The school health framework, presented by Hoy (1990), is based on Parsonian social systems theory. Social systems theory posits that schools have three distinct levels of organization. Those levels include the technical, managerial, and institutional level (p. 154). The technical level of the school addresses the teaching and learning process and is linked closely to the main purpose of all schools, which is to educate students. Variables measured at this level include academic emphasis, cohesiveness and teacher morale. The institutional level connects the school to the outside community. Characteristics often measured at this level relate to the school's ability to communicate effectively with stakeholders and gain the support of the community. The variable measured at this level is institutional integrity. Finally, the managerial level is best described by the sum of the management tasks that help the organization function. The managerial level often includes the work of administration to keep a school building functioning (Hoy, 1990). Variables measured at this level include principal influence,

consideration and resource support. Healthy schools are schools where all three levels, technical, institutional and managerial are balanced (Hoy, 1990)

A shift towards understanding the construct of school climate from an empirical perspective has gained momentum over the past several decades. Interest in studying school climate from this perspective first originated from literature on organizational climate (Thapa et al.). One relationship that has not been explored extensively in the literature is the possible overlap between the PLC construct and measurements of school climate. The purpose of this study is to further explore if the dimensions of a PLC can be used to predict measures of school climate at the technical and managerial level. The technical level includes measures of teacher morale, cohesiveness or initiating structure and academic emphasis (Hoy and Wolfolk). Teacher morale is defined by Hoy (1990) as "a collective sense of friendliness, openness, enthusiasm, and trust among faculty members. Teachers like each other, like their jobs and are proud of the school" (p. 154). The second variable is academic emphasis. Hoy (1990) defined academic emphasis as "the extent to which a school is driven by a quest for academic excellence" (p. 154). Both of these components of school climate can be measured using the Organizational Health Inventory which was developed in 1987 (Hoy, 1990). The instrument is a series of short descriptive statements that describe interactions between teachers, administration and students within a school community (Hoy, 1990). The following study supports the need for further analysis of the relationship between academic emphasis, cohesiveness and morale as they relate to the dimensions of a PLC.

Mitchell, Bradshaw and Leaf (2010) investigated student and teacher perceptions of school climate. The research conducted in this study considered the construct of school climate from different levels within the school organization. These levels included school-level factors, classroom level factors, and individual-level factors. This multi-level perspective provided an opportunity to identify characteristics that contribute to teacher and students perceptions of school climate (Mitchell et al., 2010). The researchers identified school, classroom, and individual level factors that influence climate. The study explored how each level impacted teacher and student perceptions'. The study included a sample of 1, 881 fifth grade students and their 90 homeroom teachers. The authors found that teacher ratings were more sensitive to classroom-level factors and student ratings were more sensitive to school-level factors. The study focused on overall climate and academic emphasis across a wide range of variables. Students were asked in the study to rate their own level of commitment to academics and teachers were asked to rate their students more globally. This difference may account for the inverse relationship between teacher and student perceptions of academic emphasis (Mitchell et al.). Further study of academic emphasis and the dimensions of a PLC at the secondary level can fill in gaps and contribute to the existing body of knowledge. In order to further explore the concept of school climate, further analysis of what constitutes a positive school climate is necessary.

## Positive School Climates and Organizational Health

It is important to understand what constitutes a positive school climate. Hoy (1990) used the term healthy school to describe schools that have a positive school

climate. A positive school climate includes several characteristics. Schools with positive school climates are free from unreasonable pressure from the community, have strong leadership that addresses management issues and also focus on increasing student achievement. In a healthy school teachers are focused on teaching and learning and they enjoy their work (Hoy). The focus of most reform efforts has been on increasing student achievement for all subgroups within a school. Most of this work occurs at what Hoy (1993) referred to as the technical level. The focus of this literature review on school climate is the technical level, which pertains to teaching and learning. At this level there is a connection between the goal and purpose of creating a PLC, a positive school climate and improved student achievement. The role of the principal should not be omitted from the analysis. Thus, the managerial level of a school has also been included in this study.

The construct of organizational health as a measurement for school climate allows for a focused examination of climate at three distinct levels within a school organization (Hoy, 1990). The technical level of school is the level focused on teaching and learning. Three metrics can be measured at this level, they are: morale, initiating structure and academic emphasis (Hoy, 1990). McGuigan and Hoy (2005) further developed this concept and described the term academic optimism as

> a shared belief among faculty that academic achievement is important, that the faculty has the capacity to help students achieve, and that student and parents can be trusted to cooperate with them in this endeavor (p. 204).

The concept of academic optimism includes three components, the faculty's collective efficacy, faculty trust in students and parents and the school's academic emphasis. The

concept of academic emphasis describes how well a school makes academics a central priority and commits to improving student learning (McGuigan and Hoy, 2005). There is an overlap here between the purpose of a PLC and the measurement of academic emphasis within a school. The main purpose behind developing a PLC is to focus the work of a school on improving achievement. Further analysis of the relationship between the dimensions of a PLC and school climate can provide further insight into both of these important constructs.

Several studies have shown a relationship between school climate and student achievement as measured by standardized tests. In these studies socioeconomic status was held constant (Hoy, 1990; Hoy and Miskal, 2005; Hoy, Tarter, and Kottkamp, 1991). Understanding school climate, specifically academic emphasis, and the possible impact on achievement can significantly contribute to the school improvement conversation. School climate research illustrates that the climate in a school can have an effect on students' motivation to learn and is positively correlated to student achievement (Lee and Bryk, 1989; MacNeil, Prater, and Busch, 2009; Stewart, 2008; Thapa et al., 2013; Zullig et al., 2011). Developing and fostering positive school climates is an important consideration when seeking to improve student achievement. Thapa et al., (2013) noted, "there is not a national or international consensus about how to define school climate, a positive and sustained school climate, or the school climate process" (p. 15). For this study school climate will be viewed through the lens of organizational health. The purpose of studying climate is to identify elements that might assist in facilitating change within a school (Hoy, 1990).

Macneil, Prater and Busch (2009) explored the effect of school culture and climate on student achievement. In particular, the authors investigated how the climates in Exemplary, Recognized and Acceptable schools differ. The study population was 29 schools in suburban Texas. Schools were sorted based on their state ranking. The OHI was used to measure school climate. A MANOVA was conducted and results indicated a significant difference between schools that were rated Exemplary, Recognized and Acceptable across each of the dimensions of the OHI. For each of the dimensions surveyed, statistical significance was found at $p < 0.05$. Overall, schools that performed better on the state test and were rated Exemplary also scored higher on measures of school climate as compared so schools that were rated in the Recognized category. Schools with higher student achievement also had positive school climates. However, Tukey's HSD found that statistical significance was not found between recognized and acceptable school (Macneil et al., 2009). Macneil et al., (2009) noted "school principals that focus specific aspects of the dimensions of school climate that affect the culture of school impact student achievement" (p. 77).

Hoy and Woolfolk (1993) studied the relationship between teacher efficacy and the organizational health of schools. The researchers studied general and personal efficacy and aspects of a healthy school climate, institutional integrity, principal influence, consideration, resource support, morale and academic emphasis (Hoy and Woolfolk, 1993). The study included 179 teachers, randomly selected from 37 elementary schools in New Jersey. A version of the Teacher Efficacy Scale was used. The alpha coefficients of reliability were ($\alpha$=.77) for personal teaching efficacy and ($\alpha$=

.72) for general teaching efficacy (Hoy and Woolfolk, 1993). The Organizational Health Inventory was administered to determine school climate. Each subscale had the following alpha coefficients, institutional integrity (α=.87), principal influence (α= .83), consideration (α=.91), resource support (α=.87), morale (α=.89) and academic emphasis (α=.72) (Hoy and Woolfolk, 1993). The researchers concluded that a healthy school climate, with strong measures of academic emphasis and a principal who has influence with superiors was closely linked to increases measures of efficacy (Hoy and Woolfolk, 1993). The study is significant to the present study because it highlights several possible gaps that require further exploration. First, this study was conducted at the elementary level. Study of the secondary school level would contribute more research to the existing knowledge base. Second, substituting the dimensions of the PLC as a set of variables would further describe components that might influence the climate of a school. A better understanding of this potential relationship is needed to fill these gaps.

Zullig, Huebner, and Patton (2011) provided a framework for the construct of school climate. The researchers provided a working definition and a set of domains that further explain the concept of school climate. These domains help focus the variables that impact the climate in a school building and provide an interesting conceptual framework for studying school climate. The study investigated the magnitude of relationship between eight school climate domains and a measure of school satisfaction. 2, 049 students in both middle and high school were included. Results suggested that five school climate domains are significantly related to school satisfaction with $p < .01$. The domains included academic support, positive student-teacher relationships, school connectedness,

order and discipline, and academic satisfaction (p. 133). This study is of particular interest because of the focus on academic support and academic satisfaction. Both of these domains are similar in scope to academic emphasis as measured by the organizational health inventory. This study illustrates the importance of having an academic component when studying school climate. Further exploration of the relationship between the dimensions of a PLC and organizational climate would contribute to the research presented here and provide a deeper understanding of how schools can focus on improving the total school experience for students. Linked closely to the concept of satisfaction and climate is the relationship between leadership and climate in schools.

## Summary

The implementation and use of the PLC construct is a relatively new concept for those working within the field of education. While many schools are seeking to create PLCs, few studies exist that explore the relationship between the PLC construct and school climate. Educators are currently faced with significant educational reform. Districts in Ohio will have to implement new standards, a new teacher evaluation system and prepare students for new more rigorous exams. Given these changes, more attention needs to be paid to the relationship between the PLC and school climate. The creation of vibrant academic communities, through the adoption of PLCs may influence the climate within a school. This needs to be further explored. After reviewing the literature on both the PLC and school climate it is evident that several of the dimensions of a PLC are also key components of school climate. Further analysis of this is needed.

The purpose of this literature review was to summarize the existing research on the PLC and school climate as viewed from the organizational health perspective. Ultimately, creating schools that improve learning for all students will require a commitment to transforming the culture within a school. In order to do this, more information is needed to more fully understand how the dimensions of a PLC and measures of school climate may be related. In the next section, the methodology for this study will be explained in more detail.

# Chapter 3: Research Methodology

## Introduction

The purpose of this quantitative study was to investigate the relationship between the dimensions of a PLC and school climate. It was unknown to what extent a relationship might exist between the five dimensions of a PLC (shared and supportive leadership, shared values and vision, collective learning and its application, shared personal practice, and supportive conditions) and measures of school climate at the school level (morale, academic emphasis, and initiating structure and consideration). Researchers have supported the use of the PLC as one way to transform a school into a learning community (Cranston, 2009; Jacobs & Hoppey, 2010). School leaders who implement and develop PLCs may also influence school climate in a positive way. Wenger, McDermott, and Snyder 2004 noted, "professional learning communities are groups of people, who share a common concern, a set of problems, or passion about a topic, who deepen their knowledge about a topic by interacting on an ongoing basis" (p. 4). PLCs represent teams of teachers working together over a sustained time period as part of a broader school community. When teachers work closely together on a daily basis and are committed to improving student learning, the school climate may be impacted in a positive way.

The use of the PLC model as a way to improve student achievement and promote robust professional development in schools is a relatively new idea for education (Servage, 2008; Wallace & Thomas, 2006). The majority of the research on the PLC construct is qualitative. While some quantitative data exists, presently there is a lack of

information available on the relationships between the creation of a PLC and the resulting impact the PLC structure has on the overall climate in the school. An empirical study investigating the possible relationship between the PLC construct and school climate would provide school principals seeking to improve student learning and school climate with direction on where gaps might exist within their school. A quantitative analysis of the relationship between the dimensions of a PLC and school climate can provide school leadership with information to help target professional development.

Creating a positive school climate is one of the most important things a principal can do to improve student achievement; (Gaziel, 2001; Murphy, 2001; Zullig et al., 2011). When school leaders focus on creating authentic learning communities, the result might be more sustained, positive school climates. More quantitative research into the relationship between the dimensions of a PLC and the dimensions of a school climate can provide school leaders with insight into the importance of these critical constructs. A deeper understanding of how the dimensions of a PLC may influence school climate would serve as a guide for school leadership seeking to improve the culture and climate of a school. In order to direct resources at improving the dimensions of a PLC, quantitative research was needed to identify gaps and provide school leadership with more frequent data on the overall status of the PLC model and its potential influence on school climate.

This chapter contains the research design and approach, research questions, population and sampling techniques, instrumentation and materials, data collection, data

analysis, threats to validity, ethical issues, and the summary. Each section contains researched-based justification for all decisions made.

## Research Design and Approach

The use of a quantitative methodology was supported by the nature of the research questions, the type of data being collected, and the statistical analysis. In this quantitative study, I used a survey design and included both descriptive and inferential statistics in order to determine (a) if a relationship existed between the dimensions of a PLC and the dimensions of school climate and (b) whether the dimensions of a PLC can be used to predict the dimensions of school climate. Creswell (2009) described, "a survey design provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population" (p. 145). The data collected for this survey were cross-sectional, conducted at one moment in time during a school year (Creswell, 2009). The cross sectional design allowed for data to be collected on educator perceptions of both the dimensions of a PLC and school climate. While individual teachers were surveyed, the data were aggregated to gain a larger snap shot of the strength of the PLC and overall climate of the school. The unit of analysis for this study was the school level. Two surveys designed to ascertain this information were used. The School Professional Staff as Learning Community survey (Hord, 1996) and the Organizational Health Inventory for Secondary Schools (2000) was administered to a sample of educators at five school sites in Ohio.

## Research Questions

The research question that was addressed in this quantitative study was

RQ1- When holding age, sex, position, and school district constant, do the PLC dimensions account for variance in school climate ratings?

$H_0$: The PLC dimensions do not account for any of the variance in school climate ratings.

$H_1$: The PLC dimensions do account for variance in school climate ratings.

## Setting and Sample

The population for both the PLC dimensions analysis and the climate analysis came from five suburban high schools in Ohio. All certified employees within the school were included in the population. The total population was approximately 535 certified employees. The sampling strategy that was used to address my research question was a stratified random sample. Stratified random sampling was the best choice for this study. Nachmias and Nachmias (2008) noted, "researchers use stratified sampling to ensure that different groups of a population are represented adequately in the sample so as to increase the level of accuracy when estimating parameters" (p. 171). This method of sampling allows the researcher to use information about the population to make sure that members from each academic department are represented in the sample. For this sampling strategy 50 certified employees were originally drawn from each school site for a total of 150. Attention was given to assure that members from each department were included in the population sample (Nachmias & Nachmias, 2008). In order to draw the sample, participants were selected at random from a list of faculty, organized by department. Five different schools were used. One benefit to this approach is that it is more convenient

than a simple random sample and assures that multiple stakeholder groups had the opportunity to respond. This method is also more convenient given the limited scope of the research study. This did not yield the appropriate sample size, thus, the population was expanded to include all stakeholders.

Based on the total available population, an appropriate sample size must be selected. To determine sample sizes the G* power test was used. When attempting to identify a sample it is important to consider sample size, effect size, alpha level, and power. The following values were used for this study: a medium effect size of 0.15, an alpha level of 0.05, and a power of 0.80. There were five predictor variables for the study: shared and supportive leadership, shared values and vision, collective learning and its application, shared personal practice, and supportive conditions. After inputting these values into the G*Power calculator the suggested sample size was approximately 127 participants. This was used as a starting point.

The sample must be selected carefully. It was important to use multiple school settings to account for any effect that the school environment might have in accounting for variance in the outcome or dependent variable. When looking to oversample, Bartlett, Kotrlik, and Higgins (2001) suggested, "take the sample in two steps and use the results of the first step to estimate how many responses to expect from the second step" (p. 46). The target was to draw a sample of at least 150 people from four different locations using the stratified sampling technique. Given that there were five school sites, this was done in two steps. After the initial population was identified a follow up was conducted because the response rate was not adequate. Nachmias and Nachmias (2008) also noted that, in

order to reduce the likelihood of a large sampling error, the population size can be increased. The population was recruited from five suburban school districts in Ohio. Notification was sent to the selected participants indicating that their participation is optional and that they were not compensated. All participants were told that their responses were for research purposes only. The responses will be kept strictly confidential. Survey data were collected electronically through Survey Monkey.

## Survey Instruments

### PLC Survey Instrument

Stakeholder perceptions of the dimensions of a PLC can be measured. Hord designed the School Professional Staff as a Learning Community survey (PLCA-R) to "assess the maturity of a school's professional staff as a learning community" (as cited in Meehan, 2003, p. 13). The survey consists of 52 statements. Participants can respond by indicating that they *strongly disagree*, *disagree*, *agree*, or *strongly agree*. A pilot study was conducted by Appalachia Educational Laboratory (AEL) staff in 1996 to determine the reliability and validity of this instrument (Meehan, Orletsky, & Sattes, 1997). Researchers measured internal consistency and stability of the survey to assess reliability. The Cronbach's alpha for the instrument was determined to be 0.92. The internal stability was measured using a test, retest method and was determined to be 0.94. Three measures of validity were tested: content validity, concurrent validity, and construct validity. For content validity, literature on PLCs was reviewed and independent researchers from AEL reviewed each question on the survey. For concurrent validity, a survey was used that assesses similar items and the correlation between the instruments was 0.74 with a

significance level of $p$ <0 .001. Construct validity was determined using a known-group methodology and factor analysis. A *t*-test was used to determine if the scores between the known group and the field test participants were significantly different at the $p < 0.0001$ level. Factor analysis indicated that the survey represented the PLC construct (Meehan et al., year).

**School Climate Survey Instrument**

With permission, the Organizational Health Inventory is the second survey that was used. The survey measures school climate. The survey consists of forty four statements. Participants can respond to each prompt by indicating, *rarely occurs, sometimes occurs, often occurs, and very frequently occurs*. In a field test of the study with 78 secondary schools and 1,131 participants cronbach's alpha analysis were run on variables to examine reliability. These values describe the instruments reliability. Measurements of institutional integrity were found to be highly reliable d= .91, principal influence, .87, for consideration, .90, for initiating structure, .89, for resource allocation, .95 and for academic emphasis, .92 (Hoy and Feldman, 1999).

**Procedures**

Proper protocol for conducting research was strictly followed. Once permission was granted from the IRB, all practice and district policies regarding research were adhered to. Letters requesting permission to survey were sent to appropriate district personal. Teachers and administrators selected to participate in the study were invited through e-mail to respond to two sets of survey questions delivered using a link through

Survey Monkey. The completed surveys were collected electronically and mean scores for each question were tabulated. The survey responses will be kept in a secure location for five years. The period for data collection was three weeks once formal approval for research was granted. Reminders were sent to participants twice, once at the end of the first week and then again at the end of the research period.

**Data Analysis**

After the period of information collection was completed data was entered into the Statistical Package for the Social Sciences (SPSS) Version 22.0 for windows. The research questions were analyzed using both descriptive statistics including mean and standard deviation (on interval and ratio data) as well as multiple regression analysis. Mean scores were tabulated for each of the dimensions of a PLC measured on the PLCA-R survey. Mean scores were also be tabulated for each dimension (morale, initiating structure, consideration and academic emphasis) measured on the OHI survey. Multiple linear regression was selected in order to examine the relationship between the five dimensions of a PLC and the three dimensions of school climate. For this research study the predictor variables were the five dimensions of a PLC. These predictor variable were used to determine how much of the variance in the dependent variables (morale, initiating structure, consideration and academic emphasis) was accounted for by the predictor variables (Field, 2009). Interaction effects between variables were also be explored during the statistical analysis. A demographic analysis was conducted to determine if by school there are significant differences based on gender, years of experience and education level.

Table 1 provides an outline of the research questions, data sources, and statistical procedures that were used. Both the PLC survey and Climate Survey were combined into one electronic survey for teachers to respond to.

*Table 1: Research Questions, Data Sources, and Statistical Analyses*

| Research Question | Data Source(s) | Statistical Analysis |
|---|---|---|
| To what degree, if any, is there a relationship between the dimensions of a Professional Learning Community and the dimensions of school climate? | School Professional Staff as a Learning Community survey (PLCA-R)<br><br>Organizational Health Inventory (OHI) | Spearman Rho Correlations |
| To what extent, if any, do the dimensions of a PLC predict the dimensions of school climate? | School Professional Staff as a Learning Community Survey (PLCA-R)<br><br>Organizational Health Inventory (OHI) | Multiple Regression/ Multivariate Analysis |

To examine the first part of the research question, Spearman rho correlation were conducted to assess the degree to which a relationship might exist between the dimensions of a PLC and the dimensions of school climate. Spearman rho correlation can be used to analyze bivariate data and is useful in determining if an association between two variables exists (Field, 2009). This statistical test can be used to determine if a relationship exists between the variables in this study. For the dimensions of a PLC the variables include the following dimensions, shared values and vision, intentional learning

and its application, supportive and shared leadership, supportive conditions, shared personal practice. For the dimensions of school climate the variable include, morale, academic emphasis, initiating structure and consideration). Correlation is appropriate when the purpose of the research question is describe whether a relationship exists and the magnitude of that relationship (Field, 2009; Pallant, 2010)

Positive coefficients indicate a direct relationship, where negative correlation indicates an indirect relationship (Field, 2009). When determining the strength of the relationship between two variables, Cohen's standard will be used. For Cohen's standard, 0.2 represents a weak correlation, 0.5 represents a moderate association and 0.8 represents a strong association (Field, 2009; Howell, 2007).

For deeper analysis of the research question, multiple regression was used to determine if the dimensions of a PLC (shared values and vision, intentional learning and its application, supportive and shared leadership, supportive conditions, shard personal practice) can be used to predict measures of school climate (morale, academic emphasis and cohesiveness). For this study the independent variables or predictor variables were the five dimensions of a PLC. The dependent variables were the four dimensions of school climate measured at the school level. Standard multiple regression was used. All independent variables were entered simultaneously (Field, 2009). Each independent variable was evaluated to determine the predictive power of the dependent variables over all the other independent variables (Field, 2009; Pallant, 2010)

The F-test was used to determine if the set of independent variables collectively predicted the dependent variables. R-squared were reported to determine how much of

the variance in the dependent variable could be accounted for by the set of independent variables (Field, 2009). A t-test was used to determine the significance of each predictor variable. Beta coefficients were used to determine the magnitude of each prediction for the independent variables (Field, 2009). All assumptions for multiple regression analysis were assessed. These will include linearity, homoscedasticity, and absence of multicollinearity.

## Threats to Validity

The researcher made every attempt to maintain validity throughout the period where data was collected and during the time data was analyzed. The validity of the study would be impacted by a low return rate. In order to maximize the likelihood of a strong rate of return a time frame was established for participants to respond. During the period of data collection a follow up reminder e-mail was sent to alert participants to the data collection window.

## Ethical Issues

Each participant was informed that their participation in the study is strictly voluntary and that they can chose to not complete the survey at any point. The proposal was submitted to the IRB for approval and letters seeking permission to conduct research were sent to school district leadership prior to conducting research.

## Summary and Implications for Social Change

The purpose of this study was to investigate if teacher and administrator perceptions of each dimension of a PLC can be used to predict measures of school climate. Analyzing stakeholder perceptions of each dimension of a PLC may help

identify possible areas of overlap between the dimensions of PLC and school climate. Highlighting where these two constructs are similar may assist school leaders in planning to respond to change. Improving student achievement for all subgroups will require a commitment to building vibrant learning communities with positive school climates. Understanding the possible variables that influence this work can add to the existing knowledge base and provide assistance to school leaders seeing to impact positive social change in schools.

This study can impact social change by providing further information for school leaders on the construct of school climate. Creating schools where all students achieve at high levels can be realized. The nature of the reform efforts that might accomplish this goal should be analyzed and thoughtfully articulated. The current focus on testing, increased standards and accountability has failed to produce the desired results. A new perspective for education reform requires a thoughtful analysis of how distributed leadership, the PLC construct and school climate are all related. Improved schools and increased student achievement are both at the heart of social change. It is through education that a society elevates what people can accomplish. Understanding the relationship between the PLC and school climate can ultimately improve the educational experience for all students, however, further study is necessary.

# Chapter 4: Results

## Introduction

The purpose of this research study was to examine the PLC dimensions account for variance in school climate ratings. In order to examine the hypotheses for this study, Spearman rho correlations and standard multiple linear regressions were conducted. Spearman rho correlations were used to assess if the statistical relationships between each of the dimensions of a PLC and the variables used to measure the dimensions of school climate (academic emphasis, initiating structure, consideration and morale). Once the correlational relationship was examined, the PLC dimensions were used as predictor variables in multiple linear regressions conducted to answer the research question. Four multiple linear regressions were conducted to examine the hypothesis for the study. This chapter is organized into the following sections: introduction, overview of survey instruments, demographic information about respondents, data analysis, analysis of hypothesis and summary. The results are reported below to address the stated research question.

## The Professional Learning Community Dimensions and School Climate

In order to determine if a relationship existed between the dimensions of a PLC and school climate, several variables were examined. The independent variables included (a) supportive and shared leadership, (b) shared values and vision, (c) intentional learning and application, (d) shared personal practice, and (e) supportive conditions. When schools adopt the PLC model for continuous improvement, each of the five dimensions should be present, to some degree. The dependent variables that were examined included

in this study were the following: (a) academic emphasis, (b) initiating structure, (c) consideration, and (d) morale. A deeper understanding of this possible relationship can contribute to the existing literature on the PLC construct, helping to further bridge the gap between theory and successful implementation of the PLC construct and potentially improve school climate. Both descriptive and inferential statistics were used in the analysis of the survey data.

## Demographic Information and Respondents

One hundred and thirty certified employees, comprised of both teachers and administrators ($n$=130) from four school districts and five high schools, participated in this study. Frequencies and percentages for participant characteristics are represented in Table 2. The data collection window for each school spanned 2 weeks in length. All five of the high schools used the PLC model. After sending e-mails to only 50 certified members at each school, as outlined in Chapter 3, the initial response rate was low. The survey was then provided to all certified staff in each building. This increased the participation rate. The participants in this study represented a wide range of years of experience (from 1 year to 21 years or more). The majority of the participants (42, 32.06%) reported more than 21 years or more of experience. Those educators working for 11 to 15 years represented the next largest group (28, 21.37%) followed by those with 16 to 20 years of experience (25, 19.08%). Those with 6 to 10 years represented (23, 17.56%) and 2 to 5 years (9.16%). Only one educator who responded had less than a year of experience. Respondents were classified into one of 12 job types. The participants represented came from the following departments, English (26, 20.00%), special

education (18, 13.85%), technical education (15, 11.59%), math (13, 10.00%), science (12, 9.23%), social studies (11, 8.46%), foreign language (11, 8.46%), art (10, 7.09%), health & PE, special services and administration (4, 3.08%), and music (2, 1.59%). In instances where $n \neq 130$, not all respondents answered every question.

Table 2

*Frequencies and Percentages on Participants Characteristics*

| Characteristics | n | % |
|---|---|---|
| Years of teaching experience | | |
| 1 year | 1 | .076 |
| 2-5 years | 12 | 9.16 |
| 6-10 years | 23 | 17.56 |
| 11-15 years | 28 | 21.37 |
| 16-20 years | 25 | 19.08 |
| 21 years or more | 41 | 32.06 |
| Years of experience at current school | | |
| 1 year | 6 | 4.58 |
| 2-5 years | 27 | 20.61 |
| 6-10 years | 31 | 23.66 |
| 11-15 years | 24 | 18.32 |
| 16-20 years | 31 | 23.66 |
| 21 or more years | 11 | 9.16 |
| Current Assignment | | |
| English | 26 | 20.00 |
| Math | 13 | 10.00 |
| Science | 12 | 9.23 |
| Social Studies | 11 | 8.46 |
| Special Education | 18 | 13.85 |
| Technical Education | 15 | 11.54 |
| Special Services | 4 | 3.08 |
| Health & PE | 4 | 3.08 |
| Music | 1 | 1.54 |
| Art | 10 | 7.69 |
| Foreign Language | 11 | 8.46 |

For this study, two survey instruments were used to answer the research question. The dimensions of a PLC (supportive and shared leadership, shared values and vision, intentional learning and application, supportive conditions and shared personal practice) were measured using the PLCA-R. While there was some variation between the minimum and maximum scores, the mean score for each dimension was a 3 or higher, with the exception of shared personal practice, which had a mean score (*M*=2.76, *SD*=.533). The means and standard deviations on the composite scores are provided in Table 3.

*Table 3*

*Descriptive Statistics for PLC Dimensions*

| Variable | N | Minimum | Maximum | M | SD |
|---|---|---|---|---|---|
| Supportive and Shared Leadership | 92 | 1.73 | 4.00 | 3.05 | .573 |
| Shared Values and Vision | 91 | 1.44 | 4.00 | 3.12 | .486 |
| Intentional Learning and Application | 88 | 1.00 | 4.00 | 3.13 | .566 |
| Shared Personal Practice | 93 | 1.14 | 4.00 | 2.76 | .553 |
| Supportive Conditions | 91 | 1.40 | 4.00 | 3.06 | .501 |

The Organizational Health Inventory for Secondary Schools was used to measure the dimensions of school climate (morale, academic emphasis, initiating structure, and

consideration). While there was some variation between the minimum and maximum scores, the mean score for each dependent variable was a 3 or higher with the exception of morale (*M*=2.81, *SD*= .396). The means and standard deviations on the composite scores are provided in Table 4.

Table 4

*Descriptive Statistics for School Climate Variables*

| Subscale | N | Minimum | Maximum | M | SD |
|---|---|---|---|---|---|
| Morale | 84 | 1.56 | 3.67 | 2.81 | .396 |
| Academic Emphasis | 84 | 1.75 | 4.00 | 3.12 | .440 |
| Initiating Structure | 81 | 2.20 | 4.00 | 3.26 | .459 |
| Consideration | 83 | 1.00 | 4.00 | 3.10 | .701 |

## Data Analysis

In order to determine if a relationship exists between the five dimensions of a PLC and school climate variables, Spearman rho correlations were conducted. The results of the Spearman rho correlation test indicated that all five of the predictor variables (supportive and shared leadership, shared values and vision, intentional learning and application, shared personal practice, and supportive conditions) showed a positive correlation when compared to each of the dependent variables (academic emphasis, initiating structure, morale, and consideration). These results are reported in Table 5. It is worth noting that most of the associations between the independent and dependent

variables showed a large effect. This further supports the decision to include all variables in the regression models. The only exceptions were for the following dependent variables. For academic emphasis, there was a medium effect for shared personal practice ($r_s$=.382, p<.01). For morale and shared personal practice, there was a medium association at ($r_s$=.449, p<.01). Given none of the associations were small, all predictor variables were used in the multiple linear regression model to further assess the research hypothesis. As a first step, a standard regression analysis was conducted to examine whether or not the five dimensions of a PLC predict measures of school climate as measured by academic emphasis, initiating structure, consideration and morale.

Table 5

*Spearman rho correlations between School Climate Dimensions and Dimensions of a PLC*

| Subscale | Dim 1 | Dim 2 | Dim 3 | Dim 4 | Dim 5 |
|---|---|---|---|---|---|
| Morale | 0.645 | 0.557 | 0.658 | 0.449 | 0.746 |
| Academic Emphasis | 0.562 | 0.520 | 0.573 | 0.382 | 0.551 |
| Initiating Structure | 0.706 | 0.688 | 0.658 | 0.511 | 0.692 |
| Consideration | 0.752 | 0.629 | 0.640 | 0.535 | 0.735 |

*Note. *Correlations are significant at the 0.01 level (2-tailed).*
*Note. Dim 1=shared and supportive leadership, Dim 2=shared values and vision, Dim 3=intentional learning and application, Dim 4=shared personal practice, Dim 5=supportive conditions*

## Analysis of Hypothesis

In order to examine the research hypothesis for this study, four multiple regressions were conducted to investigate which of the PLC dimensions (supportive and shared leadership, shared values and vision, intentional learning and application, shared personal practice and supportive conditions) are the best predictors, if any, of school climate (academic emphasis, initiating structure, consideration, and morale). In order to control for school, gender, and teaching assignment, comparisons were run by school and it was determined that there were no significant differences. Prior to reviewing the data the assumptions for multiple regression were assessed. The assumptions of normality, linearity and homoscedasticity were evaluated for this data set by examining residual scatter plots: The assumptions were met. Second, the absence of multicollinearity was assessed by reviewing the Variance Inflation Factors (VIF); values over 10 suggest the presence of multicollinearity (Fields, 2009). For all four of the dependent variables, the VIF scores were below ten. Based on a review of the information above, all assumptions for multiple regression were met. All of the predictor variables were included in each of the models. Four linear regression models were run. The results of each model are presented and summarized in the next section. An analysis of each regression model is also included.

### Academic Emphasis

For the first model, all five dimensions of a PLC were included in the regression model with academic emphasis. Academic Emphasis measures "the extent to which a school is driven for a quest for academic excellence" (Hoy & Feldman, 1999). The

purpose of this analysis was to determine to what extent, if any, the five dimensions of a PLC predicted academic emphasis. The regression with five predictors (supportive and shared leadership, shared values and vision, intentional learning and application, shared personal practice, and supportive conditions) predicting academic emphasis was significant, $F(5, 67) = 8.72$, $p < .001$. For the model, $R^2$ was .394. The adjusted $R^2$ was .349, indicating the predictors accounted for 34.9% of the variance in the dependent variable. Table 6 summarizes the unstandardized regression coefficients (B) and the standardized regression coefficients (β).

Results indicated the following for the relationships between the independent variables and academic emphasis, for supportive and shared leadership ($t$=1.01, p= .318), shared values and vision ($t$=2.63, p=.010), intentional learning and application ($t$=1.01, p=.315), shared personal practice ($t$= -1.53, p=.132), and supportive conditions ($t$=.203, p= .839). Based on these results, shared values and vision significantly predicted academic emphasis. The unstandardized regression coefficient for shared values and vision indicate that for every one unit increase in shared values and vision, academic emphasis scores increase by .410. Of all the variables in the model, shared values and vision was the only variable that was a significant predictor of academic emphasis. For example, a one unit increase in the rating for shared values and vision on the scale from disagree to agree is related to a .410 increase in academic emphasis. The null hypothesis was rejected. The regression model indicated that the PLC dimensions accounted for significant variance in academic emphasis. A closer look at the specific PLC dimensions showed that the shared values and vision dimension was the only dimension that

significantly contributed to the model.

**Initiating Structure**

All of the five dimensions of a PLC were included in the regression model with initiating structure. Initiating structure measures stakeholder perceptions of the extent to which principal behavior is both task and achievement oriented (Hoy & Feldman, 1999). The purpose of this analysis was to determine to what extent, if any, the five dimensions of a PLC predicted initiating structure. The regression with five predictors (supportive and shared leadership, shared values and vision, intentional learning and application, shared personal practice, and supportive conditions) predicting initiating structure was significant, $F(5, 64) = 11.44$ $p<.001$. For the model, $R^2$ was .472. The adjusted $R^2$ was .431, indicating the predictors accounted for 43.1% of the variance in the dependent variable. Table 7 summarizes the unstandardized regression coefficients (B) and the standardized regression coefficients (β).

The results indicated the following for the relationships between the independent variables and initiating structure, for supportive and shared leadership ($t$=2.59, p= .012), shared values and vision ($t$=1.08, p=.283), intentional learning and application ($t$=.103, p=.918), shared personal practice ($t$= -1.17, p=.247), and supportive conditions ($t$=.718, p= .476). Based on these results, supportive and shared leadership significantly predicted initiating structure. The unstandardized regression coefficient for supportive and shared leadership indicated that for every one unit increase in supportive and shared leadership, initiating structure scores increase by .387. Of all the variables in the model, supportive and shared leadership was the only variable that was a significant predictor of initiating

structure. For example, a one unit increase in the rating for supportive and shared leadership on the scale from disagree to agree is related to a .387 increase in initiating structure. The null hypothesis was rejected. The regression model indicated that the PLC dimensions account for significant variance in initiating structure. A closer look at the specific PLC dimensions showed that the supportive and shared leadership dimension was the only dimension that significantly contributed to the model.

**Consideration**

For the third regression model, all of the five dimensions of a PLC were included with consideration. Consideration is a measure of the perception of principal behavior and can be described as being friendly, supportive, open and collegial (Hoy & Feldman, 1999). The purpose of this analysis was to determine to what extent, if any, the five dimensions of a PLC predicted consideration. The regression with five predictors (supportive and shared leadership, shared values and vision, intentional learning and application, shared personal practice and supportive conditions) predicting consideration was significant, $F(5, 67) = 22.65$, $p<.001$. For this model, $R^2$ was .628. The adjusted $R^2$ was .601, indicating the predictors accounted for 60.1% of the variance in the dependent variable. Table 8 summarizes the unstandardized regression coefficients (B) and the standardized regression coefficients (β) for this model.

Results indicate the following for the individual relationships between the independent variables and consideration, for supportive and shared leadership ($t$=4.86, p= .001), shared values and vision ($t$=-.247, p=.805), intentional learning and application ($t$=-.051, p=.959), shared personal practice ($t$= -2.05, p=.044), and supportive conditions

(*t*=1.78, p= .081). Based on these results, both supportive and shared leadership and shared personal practice significantly predicted consideration. The unstandardized regression coefficient for supportive and shared leadership indicate that for every one unit increase in supportive and shared leadership, consideration scores increase by .927. This is an interesting finding, given the relationship between these variables indicated a strong relationship ($r_s$=.752, p< .001). Shared personal practice was also a significant predictor of consideration. The unstandardized regression coefficient for shared personal practice indicates that for every one unit increase in shared personal practice, consideration scores decrease by -.352. At first review this data seems contradictory. Deeper analysis and conclusions will be explored in the next chapter. The null hypothesis was rejected. The regression model indicted that the PLC dimensions accounted for significant variance in consideration. A closer look at the specific PLC dimensions showed that the supportive and shared leadership and shared personal practice dimensions significantly contributed to the model.

**Morale**

For the final model all of the five dimensions of a PLC were included in the regression model with morale. Morale is best described as "the collective sense of friendliness, openness, enthusiasm, and trust among faculty members" (Hoy & Feldman, 1999). The purpose of this analysis was to determine to what extent, if any, the five dimensions of a PLC predict morale. The regression with five predictors (supportive and shared leadership, shared values and vision, intentional learning and application, shared personal practice, and supportive conditions) predicting morale was significant, F (5, 72)

=16.92, p<.001. For the model, the $R^2$ was .504. The adjusted $R^2$ was .508, indicating the predictors accounted for 50.8% of the variance in the dependent variable. Table 9 summarizes the unstandardized regression coefficients (B) and the standardized regression coefficients (β) for this model.

Results indicate the following for individual relationships between the independent variables and morale, for supportive and shared leadership (*t*=1.68, p= .098), shared values and vision (*t*=-.402, p=.689), intentional learning and application (*t*=2.06, p=.043), shared personal practice (*t*= -1.40, p=.167), and supportive conditions (*t*=2.14, p= .036). Based on these results, both intentional learning and application and supportive conditions predicted morale. The unstandardized regression coefficient for intentional learning and application indicates that for every one unit increase in intentional learning and application, morale scores increase by .330. For every one unit increase in supportive conditions, morale scores increase by .380. Of all the variables in the model, intentional learning and application and supportive conditions were the only variables that were significant predictors of morale. These findings are consistent with the expectation of a PLC. When supportive conditions and opportunities for faculty to learn are emphasized, morale is generally improved. A deeper analysis of this relationship will be examined further in the next chapter. The null hypothesis was rejected. The regression model indicated that the PLC dimensions accounted for significant variance in morale. A closer look at the specific PLC dimensions showed that the intentional learning and application and supportive conditions dimensions were the only dimensions that significantly contributed to the model.

Table 6

*Regression Model Summary for Academic Emphasis*

| Independent Variables | B | SE | B | *t* | *p* |
|---|---|---|---|---|---|
| Supportive and Shared Leadership | .143 | .143 | .193 | 1.005 | .318 |
| Shared Values and Vision | .410 | .155 | .465 | 2.634 | .010 |
| Intentional Learning and Application | .161 | .159 | .191 | 1.013 | .315 |
| Shared Personal Practice | -.205 | .134 | -.264 | -1.525 | .132 |
| Supportive Conditions | .034 | .167 | .040 | .203 | .839 |

Table 7

*Regression Model Summary for Initiating Structure*

| Independent Variables | B | SE | B | *T* | *p* |
|---|---|---|---|---|---|
| Supportive and Shared Leadership | .387 | .150 | .501 | 2.584 | .012 |
| Shared Values and Vision | .186 | .172 | .211 | 1.082 | .283 |
| Intentional Learning and Application | .017 | .161 | .021 | .103 | .918 |
| Shared Personal Practice | -.158 | .135 | -.198 | -1.167 | .247 |
| Supportive Conditions | .126 | .176 | .148 | .718 | .476 |

Table 8

*Regression Model Summary for Consideration*

| Independent Variables | B | SE | β | *T* | *p* |
|---|---|---|---|---|---|
| Supportive and Shared Leadership | .927 | .191 | .774 | 4.864 | .000 |
| Shared Values and Vision | -.053 | .216 | -.039 | -.247 | .805 |
| Intentional Learning and Application | -.010 | .204 | -.008 | -.051 | .959 |
| Shared Personal Practice | -.352 | .172 | -.285 | -2.050 | .044 |
| Supportive Conditions | .388 | .219 | .293 | 1.775 | .081 |

Table 9

*Regression Model Analysis for Morale*

| Independent Variables | B | SE | β | *t* | *p* |
|---|---|---|---|---|---|
| Supportive and Shared Leadership | .250 | .149 | .276 | 1.677 | .098 |
| Shared Values and Vision | -.065 | .162 | -.065 | -.402 | .689 |
| Intentional Learning and Application | .330 | .160 | .355 | 2.056 | .043 |
| Shared Personal Practice | -.189 | .136 | -.203 | -1.395 | .167 |
| Supportive Conditions | .380 | .177 | .381 | 2.142 | .036 |

## Summary

For this quantitative research study, the research hypothesis was analyzed using standard linear regression modeling. A linear regression model was run for each of the dependent variables in the study (academic emphasis, initiating structure, consideration and morale). After analyzing the data, the null hypothesis was rejected for each of the dependent variables, because for each F test, $p < 0.01$. Based on the data collected, the five dimensions of a PLC do account for some of the variance in each of the dependent variables. The research hypothesis was accepted for each dependent variable.

For school leaders using the PLC construct to create a culture where all students can achieve high standards, it is important to have a deep understanding of how each dimension of a PLC contributes to the prevailing climate in a school. The implications of this research study and how it contributes to the existing body of knowledge and helps bridge the gap between theory and practice will be further explored in the next chapter. Use of the PLC model to create a school community focused on improving academics can also improve morale, initiating structure and consideration. This relationship and the limitations of this research study are also explored in the final chapter.

# Chapter 5: Discussion, Conclusions, and Recommendations

## Discussion

The purpose of this quantitative research study was to examine the relationship between the dimensions of a PLC and school climate. For school leaders and educators seeking to improve student achievement and create learning communities, the PLC model, coupled with an understanding of the importance of school climate, is a promising path that can influence positive social change in schools. The findings from this research study provides insight and guidance for school leaders seeking to implement or further develop the PLC model with a focus on improved school climate. Current education reform initiatives in Ohio have been top down. This research study provides insights into a reform path that places the PLC construct, coupled with an understanding of school climate, as the primary paradigm to advance school improvement efforts and ultimately work to increase student achievement. The theoretical framework for this study was the theory of distributed leadership (Spillane, 2008). When leadership is distributed in an organization through the PLC model, each of the dimensions of a PLC has a potential impact on school climate variables. The following sections are found in this chapter: a discussion of the findings from the study, practical and policy implications, an explanation of the limitations, validity and trustworthiness, and a conclusion. Areas for further research are also considered. The chapter concludes with a discussion of the important implications for positive social change.

## Analysis

The regression models for the PLC dimensions predicted each of the school climate variables (academic emphasis, initiating structure, consideration, and morale). The purpose of this chapter is to analyze each of the relationships between the independent variables (PLC dimensions) and the dependent variables (school climate dimensions) and provide insight into the implications of each finding. The first school climate variable that was of interest was academic emphasis. Academic emphasis is a measure of "the extent to which a school is driven for a quest for academic excellence" (Hoy & Feldman, 1999, p. 85). When working to build a positive school culture, the primary focus of all reform and continuous improvement efforts should be improved student achievement. Central to the success of any PLC is student learning and academic achievement. This overlap between these two constructs may help explain why the regression model for the dimensions of a PLC with academic emphasis accounted for 39.4% of the variance.

When a school community focuses on creating a clear set of academic values and a vision that supports student achievement, the academic emphasis dimension of school climate can be influenced positively. For this model, the dimension of shared values and vision significantly predicts academic emphasis. When you consider these variables (shared values and vision and academic emphasis) and the role they play in a school community, this relationship is more than a statistical significance. The relationship between having a clear set of shared values and vision and the construct of academic

emphasis is also supported in the literature (Lee & Bryk, 1989; Stewart, 2008; Zullig et. al., 2011).

The implications of this finding may provide insight for school leaders and educators looking to understand the fundamentals of the PLC construct and the influence those dimensions have on the overall climate in a school. For instance, when looking to implement the PLC model, a natural starting place may be identifying a set of shared values and a vision. Understanding that this PLC dimension can overlap significantly with the construct of academic emphasis, another important component of school climate, can provide direction and guidance on how a set of shared values and vision should be developed and articulated. Schools that skip this step or minimize the importance of having a clear set of shared values and a vision may not realize the full potential of the PLC model or see improved school climate. When a school develops a clear set of values and vision that supports a focus on academics and student achievement, the overall measure of academic emphasis, is positively impacted. These two variables (shared values and vision and academic emphasis) can provide school leaders with data regarding the overall effectiveness and health of the PLC process and school climate. Based on the research conducted in this study, further analysis of the link between establishing shared values and vision and student achievement may be worth further exploration.

The second variable, initiating structure, measures stakeholder perceptions of the extent to which principal behavior is both task-oriented and achievement-oriented (Hoy & Feldman, 1999). This variable measures how well a principal can balance the managerial tasks associated with running a school with the leadership tasks associated

with advancing an agenda that promotes teaching, learning, and student achievement. The regression model for the dimensions of a PLC and initiating structure accounted for 43.1% of the variance in the dependent variable. Of all the dimensions of a PLC, the supportive and shared leadership dimension was the only dimension that significantly predicted initiating structure. Supportive and shared leadership requires school administrators share power, authority, and decision making (Hipp & Huffman, 2002; Helterbran, 2010; Margolis & Deul, 2009; Williams, 2009). In a PLC, the leadership tasks are emphasized, and the managerial tasks should operate in the background. This is most frequently accomplished by setting clear expectations for all stakeholders and holding everyone accountable for advancing this vision. When school leaders work to create supportive conditions and share instructional leadership and decision making, the result is improved climate as measured by the initiating structure component of school climate. When the relationship between these two variables is considered and the important role they play in creating a vibrant school community, there is evidence that suggests that this relationship is more than a statistical significance. This conclusion is supported in the literature and research presented in Chapter 2 (Spillane, 2011).

The implication of this finding may provide deeper insight for school leaders looking to implement or analyze an existing use of the PLC model. For example, several of the statements from the survey used to measure this variable identify the role that the principal plays in setting the tone for the school. The statements from the survey were (a) the principal asks the faculty to follow standard rules and regulations, (b) the principal makes his or her attitudes clear to the school, (c) the principal lets faculty know what is

expected of them, (d) the principal maintains definite standards of performance, and (e) the principal schedules the work to be done (Feldman & Hoy, 2000). When compared to the supportive and shared leadership dimension, several potential patterns emerge which account for the association between these two variables and the predictive power of the model. Supportive and shared leadership is a dimension that measures the capacity for a staff to be engaged in the decision making, as well as to feel empowered to influence change. This dimension also measures the extent to which teachers feel comfortable assuming leadership roles and how well they share responsibility for student achievement (Hord, 1997,2000). At first, these two realities may seem counterintuitive. However, in a PLC, direction from the principal about the importance of creating a culture focused on teaching and learning where all stakeholders are fully engaged and accountable is a component of a PLC. When looking to distribute leadership, it is important to set clear parameters around the work that has to be done. In other words, when seeking to create a PLC, a principal who understands the impact of supportive and shared leadership can also improve scores for initiating structure. Principals who focus on stewarding and developing this dimension when creating a PLC can positively impact measures of school climate.

When a principal sets professional expectations, holds faculty accountable, and reinforces this message as part of a culture where stakeholders feel supported and empowered, the likelihood that this school would rate high in both the supportive and shared leadership dimension as well as initiating structure is high. This also may help provide direction for administration analyzing the overall strength of the PLC at their

school. When scores for this dimension are low, indicating that stakeholder perception of supportive and shared leadership is low, measures of initiating structure would be expected to be low. When a school leader focuses on creating a culture where teachers feel empowered and a part of the process of school improvement and set clear positive expectations, the results can be increased measures for initiating structure and thus improved school climate. Both of these constructs are supported in the literature and research. This supports the conclusion that these findings are more than a statistical anomaly. More research to further explore this relationship might provide deeper insight into how focusing on this dimension (supportive and shared leadership) can improve school climate.

The third school climate variable, consideration, measures the perception of principal behavior that can be described as friendly, supportive, open and collegial (Hoy & Feldman, 1999). The model that included all five dimensions of the PLC with consideration accounted for 60.1% of the variance in the dependent variable. This was a significant finding compared to the other models. Both the supportive and shared leadership dimension and the shared personal practice dimension significantly contributed to the model predicting consideration. There are several interesting findings that require further explanation. First, the supportive and shared leadership dimension was a significant predictor in the model that included initiating structure, and it appears as a significant predictor in the model that included the consideration variable. When seeking to develop and create a PLC, it is important for school leaders to analyze the

important role that the supportive and shared leadership dimension plays in influencing the climate in the school and the ultimate academic goals of the organization.

When creating a PLC, school leaders should focus on developing conditions that support the process of teacher collaboration and provide opportunities for educators to assume authentic leadership opportunities. This represents a shift in the primary role of the principal, from manager to instructional leader (Mullen & Jones, 2008; Spillane and Harris, 2008). As an instructional leader, school leaders seeking to develop the PLC construct should spend time building capacity with stakeholders around the importance of shared leadership. Creating supportive conditions and distributing leadership requires a commitment from school leaders and are an important component of the overall effort to create a vibrant PLC. The result of investing in stewarding this dimension can be improved school climate. Perhaps, second to developing a clear set of values and vision should be the importance of developing a school culture committed to shared leadership with a focus on academics. This study suggests that the result of shared leadership in a school can be improved school climate as measured by the variable academic emphasis.

The second dimension that significantly predicted consideration was shared personal practice. This is one of the more challenging dimensions to fully realize in a PLC. Shared personal practice includes more than teachers meeting in teams and sharing ideas. When teachers collaborate in an authentic PLC, teachers not only share ideas but take action that modifies and change instructional practices based on achievement data (Meirink et al., 2010). Creating this type of environment in a school community can be challenging, given the history of isolation in the teaching profession (Stoll et al., 2006).

Based on the findings from this research study, it appears that it is important for school leaders to be aware of the relationship between shared personal practice and the overall impact of these ratings on the climate in a school. For this research study, the overall measure of school climate decreased as measure of the shared personal practice dimension increased. In short, as educators rated their perceptions of this dimension high, the overall measure of consideration decreased. For every one unit increase in shared personal practice, consideration scores decreased by -0.352. The important note for school leadership may be this: in developing a PLC it is important to spend time to build capacity concerning the idea of sharing personal practice. As a PLC develops, spending time providing professional development for staff members around the importance of not only sharing ideas, but changing instructional practices has to be a primary focus of the implementation of the PLC model. Failure to give this dimension the attention it requires, may inadvertently result in a decrease in school climate as measured by the variable consideration. Collaboration cannot be forced. When teachers are placed into situations where they are required to share information without a clear understanding for why these professional behaviors contribute to improved student outcomes, school climate can be affected negatively. Possible explanations for this may be perceived loss of autonomy, lack of capacity, and misunderstanding of the dimension or a lack of comfort with collaboration, given the history of isolation in the teaching profession (Hord, 1997). Further exploration and investigation of this relationship would contribute to this study and advance the work concerning implementing a PLC in a school.

The final school climate variable was morale. Morale can be described as the "collective sense of friendliness, openness, enthusiasm, and trust among faculty members" (Hoy & Feldman, 1999). In the model with the five dimensions of PLC and morale, 50.8% of the variance was accounted for by the dependent variable. Based on the model, both the intentional learning dimension and supportive conditions dimension significantly predicted morale. The intentional collective learning along with its application is the dimension of the PLC that links teacher collaboration and, a shared vision and values with the instruction in the classroom. This dimension accounts for the action required in a PLC to achieve increased achievement for students. In a PLC, teachers are described as professionals that are open and willing to explore how to implement best practices in the classroom. Creating a context where teachers are free to research, explore and try new instructional strategies can create a culture where teachers have the autonomy to experiment and make decisions about how to improve learning outcomes for all students. The implications of these findings suggest that when school leaders seek to implement a PLC, paying special attention to the importance of developing the intentional learning and application dimension can translate to improved school morale and, ultimately, to improved school climate.

Supportive conditions also was a significant predictor of morale. This relationship makes intuitive sense. When teachers feel supported and the efforts of a school community are focused on a common academic purpose, morale would be predicted to be high. The findings from this study support the important link between supportive conditions and improved school morale. The research provides guidance for school

leaders on the importance of tending to both structural components associated with a PLC (schedule time to meet, resources for instruction, etc.) but also making sure when the time is provided, that it is used in a way that supports the priorities established by the school community (Servage, 2008).

In summary, the findings from this study suggest that, when seeking to implement a PLC, it is critical to have a complete understanding of how each dimension of the PLC contributes to the overall success of the school community. Further, the relationship between the PLC construct and school climate provides a promising path for advancing authentic school reform. When schools are viewed as a community of learners committed to a common purpose (student learning), the likelihood that school climate will be improved is demonstrated by the findings of this research study. The findings support that each of the five dimensions of a PLC contribute significantly to at least one of the school climate variables. Understanding this relationship not only can provide guidance for school leaders seeking to implement the PLC model but can provide insight for school leaders struggling to realize the promised change of increased student achievement after this model has been adopted. Based on the findings from this study, the dimension of shared values and vision significantly predicted academic emphasis, the dimension of intentional learning and its application significantly predicted morale. The dimension of supportive and shared leadership significantly predicted initiating structure and consideration; the dimension supportive conditions significantly predict morale and the dimension of shared personal practice significantly predicted consideration. The

conceptual framework has been modified to reflect these findings and is represented by Figure 2.

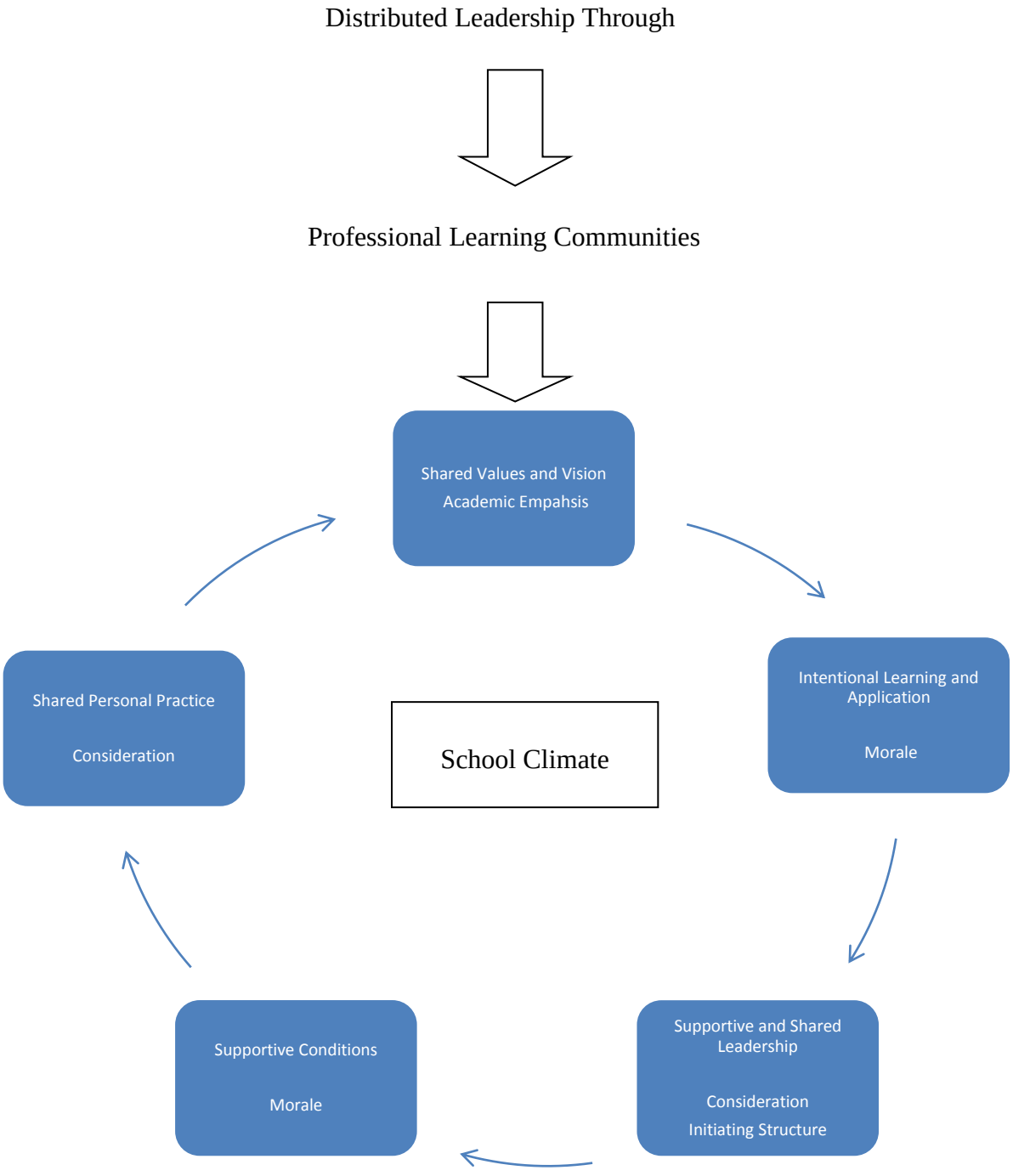
Distributed Leadership Through
Professional Learning Communities
Shared Values and Vision
Academic Empahsis
Intentional Learning and Application
Morale
Supportive and Shared Leadership
Consideration
Initiating Structure
Supportive Conditions
Morale
Shared Personal Practice
Consideration
School Climate

Figure 2

## Implications

Results from this study suggest that when looking to implement the PLC model or analyze the current health of an existing PLC, it is important to understand the relationship between each of the five dimensions and the overall climate in the school. As a school leader, starting with a clear set of shared values and a vision is critical to the overall success of the PLC. The result of focusing on developing and stewarding a clear set of shared values and vision can improve measures of academic emphasis. Establishing this relationship in a school is critical to realizing the overall benefits of the PLC model. As a leader, periodically assessing and measuring these components can provide feedback that could help drive continuous improvement.

In addition to having a shared set of values and vision it is also important to establish a supportive culture which fosters intentional learning and application. The result of tending to these dimensions can be improved morale. Research suggest that improved faculty morale can impact student achievement in a positive way (Zullig et al., 2011). For school leaders, being aware of this relationship when implementing a PLC may contribute to the attainment of academic goals. Finally, the essence of the PLC construct is supportive and shared leadership that can enhance teachers' willingness to share best practice. The result of focusing on these dimensions can translate into improved school climate as measured by initiating structure and consideration. For school leaders, periodically collecting survey data on each of these dimensions can expose priority focus areas that can help advance the overall goals of the school community.

## Limitations of the Study

This study was limited to five suburban school districts in Ohio that use the PLC model. Although the stakeholders that were surveyed in the sample represent a wide range of academic disciplines and years of experience, it would be hard to generalize the findings from the school districts in this study to the larger population. While the sample size requirements for this study were met, n=131, the proportion of responses from each school were not equally distributed. One other limitation to the study was geographic location; all the samples came from schools in the northeast portion of Ohio and Central Ohio. Attitudes in Ohio can vary dramatically from one section of the state to the next. In order to get a true snap shot, it would be important to include representation from Southern Ohio and Western Ohio.

## Summary of Further Research Opportunities

Based on the findings from this research study, there are several opportunities for further research to advance this work. Given the relationship between the PLC dimensions and school climate variables, further analysis of these variable using different survey instruments would provide some unique data on each climate variable. For instance, school morale is a well understood construct. Most school leaders could tell you whether the morale in their building was positive or negative. Based on the results of this study, it would be interesting to follow up and look more closely at the construct of morale in the context of the PLC model. Using a different tool to measure morale coupled with some qualitative interview data, could provide more insight into this relationship.

The second potential area for further research would be more exploration of the relationship between shared values and vision and academic emphasis. The ultimate goal of any school is to improve student achievement for all subgroups. Collecting more data on the perceived importance of common values and vision as it relates to academic goals and the overarching moral purpose of a school community (Fullan, 1999) would provide further guidance on this important aspect of implementing and stewarding a PLC.

## Conclusion

The results from this study suggest that there is a relationship between the dimensions of a PLC and the construct of school climate. Specifically, when looking to implement and steward a PLC, the potential benefits to school climate should not be ignored. It remains to be determined if the relationship that was examined in this study can be generalized to any school that embraces the core tenants of a PLC. Further analysis of each dimension and the specific variables of school climate may shed more light on the potential impact of this relationship.

Previous research, both on the PLC construct and school climate has suggested that both constructs are effective ways to increase achievement and create vibrant school communities (Harris, 2011; Huffman, 2011; Hoy, 1990; Hoy & Woolfolk, 1993; Roach & Kratocwill, 2004; Stoll et al., 2006; Slepkov, 2008). The basic premise of this research study is rooted in the argument that in order to realize improved school climate, it is imperative to first work on creating a school culture that embraces the core beliefs of the

PLC construct. In other words, it is through studying, implementing and stewarding each of the dimensions of a PLC that school climate can be improved. Often, school climate is viewed as a separate construct and can be hard to measure if not clearly defined. As educators and school leaders seek to improve the climate within their schools, the PLC model offers an organic way to focus on and improve the fundamental elements that drive school climate, as viewed from the perspective presented in this study. Based on the results from this study, each of the dimensions of the PLC significantly predict school climate variables. Understanding this unique interplay between these variables can provide a road map for school leaders looking to improve the overall health of the school community and, ultimately, realize the promise of increased student achievement for all students.

Both the PLC construct and the measures of school climate (academic emphasis, initiating structure, consideration and morale) are consistent with the theoretical framework used for this study. The frameworks used for this study were Spillane's theory of distributed leadership and Fullan's change theory. At the very core of the PLC construct is improved student learning through empowering all stakeholders to engage in continuous improvement (Stoll et al., 2006). Spillane and Diamond (2007) noted that "a distributed perspective acknowledges that the work of leading and managing schools involves multiple individuals; leadership and management work involves more than what individuals do in formal leadership roles" (p. 7). One predominant theme that unites the PLC dimensions and school climate is the attention given to the important role that people play within a school. The interactions between teacher, student, principal and

parents all can impact the overall school environment. The PLC model establishes a paradigm, in which, the entire system is viewed as a community of stakeholders committed to embracing a mindset of continuous improvement (Servage, 2008). When leadership is distributed through the PLC structure and attention is paid to developing each of the dimensions, the result is improved school climate.

This study set out to find an answer to the question of whether or not the dimensions of a PLC predict measures of school climate. Although the results from the study cannot be generalized to the broader population, the information gained from this research provides direction for school leaders looking to develop meaningful professional development with the intent of not only improving the school community but also the school climate. The research presented in this study can provide guidance to school leaders seeking to promote positive social change. First, when seeking to implement a PLC it is important to realize how each dimension contributes to the overall climate in the school. Second, in schools that presently use the PLC model, an analysis of each dimension can provide valuable insight into the overall climate in the building. Ultimately, the results from data on teacher perceptions of the PLC dimensions can be helpful in promoting an enhanced climate and developing meaningful professional development. If the desired goal of any school is to promote high levels of achievement for all students and create vibrant school communities, a deep and comprehensive understanding of the PLC model is a promising starting place.

## Positive Social Change and Policy Implications

The commitment to developing, creating and cultivating vibrant school communities for all children should be a top policy priority for any advanced nation. Recent attention to increased testing and accountability, school report card data and teacher evaluation has not yielded promising results for improving schools in Ohio. This study serves to highlight an important component of school reform that has not been addressed by recent educational policy discussions. The implementation of the PLC model is a direct way to improve, not only school climate, but also work towards creating school environments where all stakeholders remain committed to creating and maintaining schools worthy of our children. This study seeks to impact social change by highlighting a new perspective on reform that can guide school leaders during a time of dramatic change and increased pressures to innovate. Improved schools for all students and increased student achievement are at the heart of social change. When school leaders embrace a continuous improvement mindset, commit to embracing the PLC model and create conditions that empower educators to solve real problems in the school setting, the result can be improved student learning and a positive school climate.

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# Appendix A: Sample Letter Requesting Permission to Conduct Research

June 05, 2014
Dr.

Dear Dr.

My name is Patrick Ward and I am a doctoral student at Walden University and will be the High School Principal at Willoughby South in Northeast Ohio next school year. As part of my doctoral research regarding the relationship between Professional Learning Communities and School Climate, I would like to survey the teaching staff at the high school in your district. I am respectfully requesting permission to provide your teachers with an opportunity to participate in an important study.

I am aware of the demands placed upon busy teachers, and can assure you that the time required to complete this electronic survey is minimal, taking approximately 15 minutes. In order to collect data both efficiently and with minimal interruption, I would like to survey the teachers electronically. The survey can be accessed from any computer, including from each participant's home. I will provide each teacher with a pass code for online survey access.

My research includes procedural safeguards and confidentiality required by Walden University's Institutional Review Board. Responses will remain anonymous, with survey material destroyed upon completion of the study. Survey results will contain no connection or identifying information to your teachers or to your school.

It is my hope that the responses and participation by your teachers will help fill void in the research regarding the PLC construct and school climate.

Please indicate below your permission for your teachers to participate in this important research. I have provided an envelope with postage for your convenience and request your return of this letter to me by US mail service. I appreciate your time and consideration.

Best regards,
Patrick A. Ward
Doctoral Candidate
Walden University

____My Permission is granted to survey teachers
____My permission is not granted to survey teachers

_____ _____
(Superintendent or Designee Signature) (Date)

Appendix B: Explanation of Research (letter to participants)

Dear Educator,

I am a doctoral student at Walden University and Principal at Willoughby South High School. I am respectfully inviting and requesting your participation in an important research study I am conducting. *Please note that you have the option to decline participation in this survey or discontinue participation at any time.*
This research concerns the relationship between the dimensions of a professional learning community and school climate in suburban secondary schools in Ohio. This study will investigate the influences, if any, that the dimensions of a PLC might have on school climate.

**Explanation of Research**: Please read the attachment entitled **"Explanation of Research"**. This brief document clearly outlines the purpose of research and **assurance of anonymity**. Should you wish to see the final results of the study, please email me requesting the final report. All final reports will be sent by email after final manuscript completion. If you agree to participate, please read the directions for accessing the survey.

**Survey Instrument**: the survey instrument you are being asked to complete may be accessed electronically on a secure website. To complete the survey, you may click on the following link: **https://www.surveymonkey.com/s/FKJX566.**

**Timeline:** It is important to complete the survey at the above link **within two weeks** of receiving this e-mail to ensure your input is included in this important study. The survey should take approximately **15 minutes to complete**, and can be completed from any computer having internet access.

Your responses to this survey will contribute to the body of knowledge on PLCs and assist in filling the void in the existing research regarding the relationship between the dimensions of a PLC and school climate.

Should you have any questions regarding this study, please don't hesitate to contact me by email at Patrick.ward@waldenu.edu or by telephone at XXX-XXX-XXX. In addition my faculty advisor, Dr. Mecca Williams-Johnson is available to respond to inquiries at mecca.williams-johnson@waldenu.edu. Walden's IRB approval number for this study is 08-08-14-0022346.

Thank you in advance for your participation in completing this survey in the midst of your already demanding schedule. I deeply appreciate your support in my research efforts.

Wishing you a successful remainder of the year!
Respectfully,
Patrick A. Ward
Doctoral Student- Walden University

Appendix C: Letter Requesting Permission to Use Survey Instrument (OHI-S)

The Richard W. Riley College of Education and Leadership
Walden University
100 Washington Avenue South, Suite 900
Minneapolis, MN 55401

April 14, 2014

Dear Dr. Hoy,

My Name is Patrick Ward and I am a doctoral candidate in K-12 Educational Leadership Program at Walden University. I am working to complete my dissertation titled "Measuring Dimensions of Professional Learning Communities to Predict School Climate". I am respectfully requesting your permission to use The Organizational Health Inventory (OHI-S) as part of my research process.

In my research, I am looking to investigate if there is a relationship between the dimensions of a professional learning community and the health of a school community. The focus of my research is the secondary level. I have cited references to your work in my study and am fascinated by the construct of organizational health. As a school leader, interested in improving student achievement, I want to know more about the possible overlap between the PLC concept and organizational health. I would like to use your survey for its reliability and validity. The dimensions of organizational health align nicely with the dimensions of a PLC identified by Shirley Hord.

I will be adding demographic questions (gender, education level, number of years teaching, and content area). These questions will not alter the content or intended purpose of the OHI-S. You will be acknowledged as the author and copyright owner and that the work was used with your permission. I will gladly share my research results with you if you are in interested.

Thank you for your consideration. I appreciate your support in my research efforts.

Best regards,

Patrick Ward

Appendix D: Letter Requesting Permission to Use PLC Survey

The Richard W. Riley College of Education and Leadership
Walden University
100 Washington Avenue South, Suite 900
Minneapolis, MN 55401

April 14, 2014

Dear Dr. Olivier,

My Name is Patrick Ward and I am a doctoral candidate in K-12 Educational Leadership Program at Walden University. I am working to complete my dissertation titled "Measuring Dimensions of Professional Learning Communities to Predict School Climate". I am respectfully requesting your permission to use The Professional Learning Community Assessment Revised as part of my research process.

In my research, I am looking to investigate if there is a relationship between the dimensions of a professional learning community and the health of a school community. The focus of my research is the secondary level. I have cited references to your work in my study and am fascinated by the PLC construct and school improvement. As a school leader, interested in improving student achievement, I want to know more about the possible overlap between the PLC concept and school climate. I would like to use your survey for its reliability and validity.

I will be adding demographic questions (gender, education level, number of years teaching, and content area). These questions will not alter the content or intended purpose of the PLC-R. You will be acknowledged as the author and copyright owner and that the work was used with your permission. I will gladly share my research results with you if you are in interested.

Thank you for your consideration. I appreciate your support in my research efforts.

Best regards,

Patrick Ward

Appendix E: Approval to Use Survey in Research Study

**From: Wayne Hoy [mailto:whoy@mac.com]**

**Sent: Thursday, April 17, 2014 10:38 AM**

**To: Ward, Patrick**

**Subject: Re: Request to Use OHI-S Survey**

**HI Patrick—**

**You have my permission to use the Organizational Health Inventory (OHI-S) for your research. Just go to my web page [www.waynekhoy.com], download it, copy it, and use it.**

**Good luck.**

***Wayne***

**Wayne K. Hoy**

**Fawcett Professor Emeritus in**

**Education Administration**

**The Ohio State University**
**www.waynekhoy.com**
**7687 Pebble Creek circle, #102**
**Naples, FL 34108**
**Email: whoy@mac.com**

# Appendix F: Permission to Use PLCA-Survey

UNIVERSITY OF LOUISIANA Lafayette

*Department of Educational Foundations and Leadership*
*P.O. Box 43091*
*Lafayette, LA 70504-3091*

April 23, 2014

Patrick Ward
Mayfield High School
Mayfield Village, OH 44143

Dear Mr. Ward:

This correspondence is to grant permission to utilize the *Professional Learning Community Assessment-Revised* (PLCA-R) as your instrument for data collection for your doctoral study through Walden University. I believe your research *investigating the possible relationships between professional learning community dimensions and the health of a school community* will contribute to the PLC literature and provide valuable information related to overall school improvement. I am pleased that you are interested in using the PLCA-R measure in your research.

This permission letter allows use of the PLCA-R through paper/pencil administration, as well as permission for the PLCA-R online version. For administration of the PLCA-R online version, services must be secured through our online host, SEDL in Austin, TX. Additional information for online administration can be found at www.sedl.org. While this letter provides permission to use the measure in your study, authorship of the measure will remain as Olivier, Hipp, and Huffman (exact citation on the following page). This permission does not allow renaming the measure or claiming authorship.

Upon completion of your study, I would be interested in learning about your entire study and would welcome the opportunity to receive an electronic version of your completed dissertation research.

Thank you for your interest in our research and measure for assessing professional learning community attributes within schools. Should you require any additional information, please feel free to contact me.

Sincerely,

*Dianne F. Olivier*

Dianne F. Olivier, Ph. D.
Assistant Professor
Joan D. and Alexander S. Haig/BORSF Professor
Department of Educational Foundations and Leadership
College of Education
University of Louisiana at Lafayette
P.O. Box 43091
Lafayette, LA 70504-3091
(337) 482-6408 (Office) dolivier@louisiana.edu

Appendix G: OHI-S Survey Questions

## OHI-S

**Directions:** The following are statements about your school, Please indicate the extent to which each statement characterizes your school from **rarely occurs** to **very frequently occurs**.

| | Rarely Occurs | Sometimes Occurs | Often Occurs | Very Frequently Occurs |
|---|---|---|---|---|
| 1. Teachers are protected from unreasonable community and parental demands. | 1 | 2 | 3 | 4 |
| 2. The principal gets what he or she asks for from superiors. | 1 | 2 | 3 | 4 |
| 3. The principal is friendly and approachable. | 1 | 2 | 3 | 4 |
| 4. The principal asks that faculty members follow standard rules and regulations. | 1 | 2 | 3 | 4 |
| 5. Extra materials are available if requested. | 1 | 2 | 3 | 4 |
| 6. Teachers do favors for each other. | 1 | 2 | 3 | 4 |
| 7. The students in this school can achieve the goals that have been set for them. | 1 | 2 | 3 | 4 |
| 8. The school is vulnerable to outside pressures. | 1 | 2 | 3 | 4 |
| 9. The principal is able to influence the actions of his or her superiors. | 1 | 2 | 3 | 4 |
| 10. The principal treats all faculty members as his or her equal. | 1 | 2 | 3 | 4 |
| 11. The principal makes his or her attitudes clear to the school. | 1 | 2 | 3 | 4 |
| 12. Teachers are provided with adequate materials for their classrooms. | 1 | 2 | 3 | 4 |
| 13. Teachers in this school like each other. | 1 | 2 | 3 | 4 |
| 14. The school sets high standards for academic performance. | 1 | 2 | 3 | 4 |
| 15. Community demands are accepted even when they are not consistent with the educational program. | 1 | 2 | 3 | 4 |
| 16. The principal is able to work well with the superintendent. | 1 | 2 | 3 | 4 |
| 17. The principal puts suggestions made by the faculty into operation. | 1 | 2 | 3 | 4 |
| 18. The principal lets faculty know what is expected of them. | 1 | 2 | 3 | 4 |
| 19. Teachers receive necessary classroom supplies. | 1 | 2 | 3 | 4 |
| 20. Teachers are indifferent to each other. | 1 | 2 | 3 | 4 |
| 21. Students respect others who get good grades. | 1 | 2 | 3 | 4 |
| 22. Teachers feel pressure from the community. | 1 | 2 | 3 | 4 |
| 23. The principal's recommendations are given serious consideration by his or her superiors. | 1 | 2 | 3 | 4 |
| 24. The principal is willing to make changes. | 1 | 2 | 3 | 4 |
| 25. The principal maintains definite standards of performance. | 1 | 2 | 3 | 4 |
| 26. Supplementary materials are available for classroom use. | 1 | 2 | 3 | 4 |
| 27. Teachers exhibit friendliness to each other. | 1 | 2 | 3 | 4 |
| 28. Students seek extra work so they can get good grades. | 1 | 2 | 3 | 4 |
| 29. Select citizen groups are influential with the board. | 1 | 2 | 3 | 4 |
| 30. The principal is impeded by the superiors. | 1 | 2 | 3 | 4 |
| 31. The principal looks out for the personal welfare of faculty members. | 1 | 2 | 3 | 4 |
| 32. The principal schedules the work to be done. | 1 | 2 | 3 | 4 |
| 33. Teachers have access to needed instructional materials. | 1 | 2 | 3 | 4 |
| 34. Teachers in this school are cool and aloof to each other. | 1 | 2 | 3 | 4 |
| 35. Teachers in this school believe that their students have the ability to achieve academically. | 1 | 2 | 3 | 4 |
| 36. The school is open to the whims of the public. | 1 | 2 | 3 | 4 |
| 37. The morale of the teachers is high. | 1 | 2 | 3 | 4 |
| 38. Academic achievement is recognized and acknowledged by the school. | 1 | 2 | 3 | 4 |
| 39. A few vocal parents can change school policy. | 1 | 2 | 3 | 4 |
| 40. There is a feeling of trust and confidence among the staff. | 1 | 2 | 3 | 4 |
| 41. Students try hard to improve on previous work. | 1 | 2 | 3 | 4 |
| 42. Teachers accomplish their jobs with enthusiasm. | 1 | 2 | 3 | 4 |
| 43. The learning environment is orderly and serious. | 1 | 2 | 3 | 4 |
| 44. Teachers identify with the school. | 1 | 2 | 3 | 4 |

# Appendix H: PLCA-R

## Professional Learning Communities Assessment - Revised

**Directions:**
This questionnaire assesses your perceptions about your principal, staff, and stakeholders based on the dimensions of a professional learning community (PLC) and related attributes. This questionnaire contains a number of statements about practices which occur in some schools. Read each statement and then use the scale below to select the scale point that best reflects your personal degree of agreement with the statement. Shade the appropriate oval provided to the right of each statement. Be certain to select only one response for each statement. Comments after each dimension section are optional.

**Key Terms:**
- # Principal = Principal, not Associate or Assistant Principal
- # Staff/Staff Members = All adult staff directly associated with curriculum, instruction, and assessment of students
- # Stakeholders = Parents and community members

**Scale:** 1 = Strongly Disagree (SD)
2 = Disagree (D)
3 = Agree (A)
4 = Strongly Agree (SA)

| | STATEMENTS | SCALE | | | |
|---|---|---|---|---|---|
| | **Shared and Supportive Leadership** | **SD** | **D** | **A** | **SA** |
| 1. | Staff members are consistently involved in discussing and making decisions about most school issues. | 0 | 0 | 0 | 0 |
| 2. | The principal incorporates advice from staff members to make decisions. | 0 | 0 | 0 | 0 |
| 3. | Staff members have accessibility to key information. | 0 | 0 | 0 | 0 |
| 4. | The principal is proactive and addresses areas where support is needed. | 0 | 0 | 0 | 0 |
| 5. | Opportunities are provided for staff members to initiate change. | 0 | 0 | 0 | 0 |
| 6. | The principal shares responsibility and rewards for innovative actions. | 0 | 0 | 0 | 0 |
| 7. | The principal participates democratically with staff sharing power and authority. | 0 | 0 | 0 | 0 |
| 8. | Leadership is promoted and nurtured among staff members. | 0 | 0 | 0 | 0 |
| 9. | Decision-making takes place through committees and communication across grade and subject areas. | 0 | 0 | 0 | 0 |
| 10. | Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority. | 0 | 0 | 0 | 0 |
| 11. | Staff members use multiple sources of data to make decisions about teaching and learning. | 0 | 0 | 0 | 0 |

| COMMENTS: | | | | | |
|---|---|---|---|---|---|
| | **STATEMENTS** | **SCALE** | | | |
| | **Shared Values and Vision** | **SD** | **D** | **A** | **SA** |
| 12. | A collaborative process exists for developing a shared sense of values among staff. | 0 | 0 | 0 | 0 |
| 13. | Shared values support norms of behavior that guide decisions about teaching and learning. | 0 | 0 | 0 | 0 |
| 14. | Staff members share visions for school improvement that have undeviating focus on student learning. | 0 | 0 | 0 | 0 |
| 15. | Decisions are made in alignment with the school=s values and vision. | 0 | 0 | 0 | 0 |
| 16. | A collaborative process exists for developing a shared vision among staff. | 0 | 0 | 0 | 0 |
| 17. | School goals focus on student learning beyond test scores and grades. | 0 | 0 | 0 | 0 |
| 18. | Policies and programs are aligned to the school=s vision. | 0 | 0 | 0 | 0 |
| 19. | Stakeholders are actively involved in creating high expectations that serve to increase student achievement. | 0 | 0 | 0 | 0 |
| 20. | Data are used to prioritize actions to reach a shared vision. | 0 | 0 | 0 | 0 |
| COMMENTS: | | | | | |
| | **Collective Learning and Application** | **SD** | **D** | **A** | **SA** |
| 21. | Staff members work together to seek knowledge, skills and strategies and apply this new learning to their work. | 0 | 0 | 0 | 0 |
| 22. | Collegial relationships exist among staff members that reflect commitment to school improvement efforts. | 0 | 0 | 0 | 0 |
| 23. | Staff members plan and work together to search for solutions to address diverse student needs. | 0 | 0 | 0 | 0 |
| 24. | A variety of opportunities and structures exist for collective learning through open dialogue. | 0 | 0 | 0 | 0 |
| 25. | Staff members engage in dialogue that reflects a respect for diverse ideas that lead to continued inquiry. | 0 | 0 | 0 | 0 |
| 26. | Professional development focuses on teaching and learning. | 0 | 0 | 0 | 0 |
| 27. | School staff members and stakeholders learn together and apply new knowledge to solve problems. | 0 | 0 | 0 | 0 |

| | | | | | |
|---|---|---|---|---|---|
| 28. | School staff members are committed to programs that enhance learning. | 0 | 0 | 0 | 0 |
| 29. | Staff members collaboratively analyze multiple sources of data to assess the effectiveness of instructional practices. | 0 | 0 | 0 | 0 |
| 30. | Staff members collaboratively analyze student work to improve teaching and learning. | 0 | 0 | 0 | 0 |
| COMMENTS: | | | | | |

| | STATEMENTS | SCALE | | | |
|---|---|---|---|---|---|
| | **Shared Personal Practice** | **SD** | **D** | **A** | **SA** |
| 31. | Opportunities exist for staff members to observe peers and offer encouragement. | 0 | 0 | 0 | 0 |
| 32. | Staff members provide feedback to peers related to instructional practices. | 0 | 0 | 0 | 0 |
| 33. | Staff members informally share ideas and suggestions for improving student learning. | 0 | 0 | 0 | 0 |
| 34. | Staff members collaboratively review student work to share and improve instructional practices. | 0 | 0 | 0 | 0 |
| 35. | Opportunities exist for coaching and mentoring. | 0 | 0 | 0 | 0 |
| 36. | Individuals and teams have the opportunity to apply learning and share the results of their practices. | 0 | 0 | 0 | 0 |
| 37. | Staff members regularly share student work to guide overall school improvement. | 0 | 0 | 0 | 0 |
| COMMENTS: | | | | | |

| | **Supportive Conditions – Relationships** | **SD** | **D** | **A** | **SA** |
|---|---|---|---|---|---|
| 38. | Caring relationships exist among staff and students that are built on trust and respect. | 0 | 0 | 0 | 0 |
| 39. | A culture of trust and respect exists for taking risks. | 0 | 0 | 0 | 0 |
| 40. | Outstanding achievement is recognized and celebrated regularly in our school. | 0 | 0 | 0 | 0 |
| 41. | School staff and stakeholders exhibit a sustained and unified effort to embed change into the culture of the school. | 0 | 0 | 0 | 0 |
| 42. | Relationships among staff members support honest and respectful examination of data to enhance teaching and learning. | 0 | 0 | 0 | 0 |
| COMMENTS: | | | | | |