THE EFFECT OF A PROFESSIONAL LEARNING COMMUNITY ON SCHOOL CLIMATE

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THE EFFECT OF A PROFESSIONAL LEARNING COMMUNITY ON SCHOOL CLIMATE

A Thesis

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Abstract

of

THE EFFECT OF A PROFESSIONAL LEARNING COMMUNITY ON SCHOOL CLIMATE

by

Scott Wesley Johnson

Brief Literature Review

School climate is becoming more prevalent in the literature. States such as California are starting to collect data on the health of a school’s climate. Leaders in education are starting to pose a positive school environment as essential for student success. Professional Learning Communities have been a professional development model that boasts of teacher collaboration and continuous improvement, which has been in use for over a decade. Studies on Professional Learning Communities suggest that is effective in increasing student success.

Statement of the Problem

The purpose of this study is to answer the question: Does the school’s use of a structured and facilitated Professional Leaning Community positively affect school climate?

Methodology

This posttest-only, quantitative design will study the difference of school climate between two schools that have officially adopted Professional Learning Community
practices and two schools that are the control group. The setting of the study is a rural county, using small middle schools that are similar.

Conclusions and Recommendations

The finding of this study suggests that schools using a Professional Learning Community have a markedly better school climate as measured by a survey of teachers. Interestingly, the two groups in the study reported having little difference in perceiving their school’s use of collaborative practices. This was contradictory to the conditions that this study assumed and was founded upon. The primary use of a Professional Learning Community in a school is to increase student achievement. The results of this thesis call for further study on the secondary outcome (making school climate more positive) of a Professional Learning Community for a school.

______________________, Committee Chair
Virginia L. Dixon, Ed.D.

______________________
Date
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Chapter 1
INTRODUCTION

Background

In many professional fields today the name of the game as far as improving the product that comes from these fields is professional collaboration. The medical profession and legal professions have been operating and arguing cases in teams for years. Surgeons meet regularly within a department to review and share best practice and current challenges that are posed by repairing a heart valve. Lawyers frequently try cases and represent clients in teams. Education, on the other hand has been a very solitary profession (DuFour, 1999). Educators often share northing more than a staff room, or perhaps a sidewalk to their own classroom where they close the door and serve students with a lone vision and practice that is solely shaped by their own experience.

There has been a movement in the past decade for educators to work and solve the problems of their schools collaboratively. The effort underway is to have teachers actually work together to solve the problems of education in their school or district, not just work side-by-side. This movement of collaboration has many incarnations that have seen popularity and practice in the field of education since the early 2000s. Certainly, this collaboration can have a transforming effect on the school’s test scores; this has been documented (Koth, Bradshaw & Leaf, 2008).

However, in this researcher’s experience in training and practicing a particular structure of collaboration known as Professional Learning Communities, another benefit
of teacher collaboration became a possibility to bear in mind. Upon reading literature on
teacher collaboration, namely those concerning Professional Learning Communities, it
seemed that school climate and culture can benefit from the act of teachers working
together collaboratively (Roney, Coleman & Schlichting, 2007). Notwithstanding, a
change in culture that can come about simply by the collaboration seems to be a possible
outcome as well, yielding higher student achievement along the way.

Intertwined with the issue of professional collaboration between educators, other
factors have been given considerable discussion recently in education. Increasingly,
school culture and climate have become a factor to which administrators need to pay
active attention. School climate is measured by the state of California to help in
determining the health of children (CHKS Download Center, 2008). School climate and
culture are the things that speak to the chemistry of those personalities working in the
school and which interact with the structure of the school. After a thorough review of the
literature concerning climate and culture, this researcher feels comfortable referring to
climate and culture as a school’s “it” factor. Some schools have it; some schools do not.
Does this mean the schools which do not have “it”, ever will? Of course not. Research
found in the literature review portion of this thesis suggests that school climate can be
affected by the very nature of the collaborative work which happens in the Professional
Leaning Community.

This researcher was selected by his district to train at the County Office of
Education to facilitate a Professional Learning Community in his district for math. The
training and support was over a two-year period. Most districts in the county participated.
In fact, all but a few districts in the county did not participate. The researcher wondered why a few districts did not participate in this method of staff development. Included in this study is an examination, via survey, of the attitudes and practices of two schools which participated in the Professional Learning Community project and facilitator training at the county office, and two schools which did not.

The ideal research condition would be to measure the school climate of the four schools before the Vicks County Office of Education’s PLC project, and to measure the four sites’ school climate after the PLC project facilitator training with additional time for the school’s PLC groups to begin their work. This would constitute an ideal pretest-posttest design. The two schools in the control group would be those which did not participate in the Vicks County Office of Education PLC facilitator project and the experimental group would be the two schools which did participate in the PLC facilitator project. The concept for this study did not come into existence until well after the two year Vicks County office of Education PLC project training and support. In fact, the study did not measure school climate of the four schools until five years later, after the initial training. So as a result, this researcher evaluated a posttest only design.

This researcher became keen in the work and benefits of the PLC to improve test scores. At the same time, having worked in two very different districts, regarding climate and achievement, the researcher observed the impact of culture and climate on a school and its students. Intrigued by the importance of school climate and culture and after further studying the intended outcomes of the PLC, the researcher wondered if the PLC itself could improve school climate. In researching literature separately on PLC and
school climate the researcher remarked that many of the necessary components of school climate seemed to be things that a PLC could offer a school. The researcher then wondered if a PLC, which is designed to improve teacher practice, could also improve school climate.

Statement of the Problem

The problem that is being studied in this thesis is: Does the school’s use of a Professional Leaning Community (structured teacher collaboration) positively affect school climate? A secondary question to this study is: Do schools that do not employ teacher collaboration in a structured way have teachers report a different school climate, than those which employ the PLC in their school? These two questions will be explored and answered. The hypothesis that is being posed with this problem statement is: If a PLC is present as a school’s professional development, then the school’s climate will be reportedly better than those schools which do not have a structured PLC in Vicks County, as measured by this study’s instrument.

Operating definitions need to be established for the hypothesis, problem statement and the experimental approach. First, much discussion can be spent on whether a school actually uses a PLC or not. There are varying degrees, and by the literature’s account, different versions of the PLC can be utilized as professional development. For the purpose of this study, schools using the PLC in Vicks County will be defined by the school or district as having had a trained facilitator present for the two years of the Vicks County Office of Education PLC Project. Those schools not having a trained facilitator
from the Vicks County Office of Education PLC project will be deemed not to have a PLC.

Secondly, the term structured, as in structured PLC was used in the hypothesis and subsequent discussions to denote that there might be a PLC- like practice in schools not adhering to the operating definition of schools using PLC in Vicks County. The term structured is to acknowledge that their might be collaborative practices being utilized in the schools deemed by this thesis to not have a PLC, but also to make the distinction between the trained and facilitated PLC and merely PLC-like practices.

Lastly, the scope of this study will be limited to Vicks County since four of the nine middle schools in Vicks County are a part of the study. The researcher does not intend the scope of this study to extend outside Vicks County, since no data was utilized from outside the county. These operating definitions for this thesis are posed to ensure the intent of the study and the use of certain terms.

Definition of Terms

California Healthy Kids Survey (CHKS): A survey given by California Department of Education developed by WestEd (2010a) and is administered every two years in Grades 5, 7, 9, and 11 in schools which receive Title IV Safe and Drug Free Schools, or (TUPE) Tobacco Use Prevention Education Monies or NCLB. There is a school climate portion of the survey titled California School Climate Survey (CSCS).
Data Driven Decision Making: A process in which decisions are based on a group of professionals examining data and action will be taken. This is part of a continual improvement process.

Heroic Leadership: Traditional “top-down” leadership in which an organization expects that all of an organization's problems will be solved by a single leader.

ISSLC Standards: Interstate School Leaders Licensure Consortium set of standards for administrators that are the most widely used in the United States.

No Child Left Behind (NCLB): Legislation enacted in 2001 by Congress mandates standards based educational reform. The legislation mandates that 100% of students will be proficient by 2014.

Nexus: Term used by the author to describe a point in which separate concepts in educational literature have unintended commonality in outcomes. These concepts and practices converge or come to a confluence.

Professional Learning Community (PLC): A term used to describe the concept of teachers working together to solve the problems of a school and to find best practices within the ranks of teachers. This term is often linked with the continuous improvement process of a school.

School Climate: This term is often described as a pliable spirit of a school. Considerable discussion on this term will appear in the literature review of this thesis.

School Culture: This term is often described as a set of agreements and social arrangements between the staff and students of the school. This is a result of how the
personalities of the people in the school congeal. Often the terms “school climate” and “school culture” are used interchangeably in the literature.

**Shared Leadership:** This leadership model is characterized as decentralized, and more egalitarian, than the traditional “top-down” or “chain-of-command” type of leadership.

**Limitations**

Surveys are always suspect to sampling and skewing. This study used surveys from four schools in four districts. When subjects of a survey select themselves into the survey, questions are always posed about these study subjects. The thought may be that these particular survey subjects select themselves into a survey having different perspectives and perceptions than those that did not select themselves into the study. Further limitations with the study include the low rate of return on surveys. This convenience sampling is a weakness of the study, however working with multiple schools from multiple districts within a semester contributed to this constraint.

The nature of this study has difficulty in the sense that it is challenging to quantify school climate. Likewise, it is difficult to know to what extent ad to what degree of fidelity PLC practices are actually being used. The best this study can achieve is to get a rough estimation of correlation or consequence between the use of a PLC and a positive school climate. Furthermore, it would be best to have had a longitudinal study over the period of time which test most schools in Vicks County who adopted PLC Practices and
compared them to those few schools which did not participate in the PLC project at the county office.

To further discuss operating definitions here in the discussion of limitations, more attention will be spent on specific terms used in this study and the intent of the researcher using these terms. When considering the hypothesis of this study and the problem statement the terms better and positively effect in regards to school climate have been used. This is a difficult thing to quantify; the change in the degree of better and positively effect in reference to school climate. After reviewing the literature of school climate and since there does not seem to be a quantitative system of rating school climate, the task of showing a quantitative difference between the control group and the experimental group is formidable. Thus, researcher settled on merely a “marked difference” between the control group and experimental group to be able to show that the hypothesis is supported or not. If there is not a “marked difference” then the hypothesis shall not be supported.

Significance of the Study

There is ample literature describing and studying the effect of PLC on student achievement (Eilers & Camacho, 2007; Stewart, 2008; Hollins, E.R., McIntyre, DeBose, Hollins, K. S. & Towner, 2004). There is a plethora if literature on the definition and effect of school climate. There seems to be little literature on specific delivery methods of improving school climate. The author believes he has found a nexus in the literature between the benefits of a PLC being consistent with theoretical and practical components posed by the literature to improve school climate. This study will explore the secondary
benefits of a PLC. The primary benefits and purpose of a PLC is to improve teacher practice and improve school programs and thereby improve student achievement. The secondary benefit of a PLC is hypothesized by this author to be a positive factor to school climate. The purpose of this study is to examine if that secondary benefit of a PLC exists. If a link between the use of a PLC and school climate is found or suggested, this might stimulate further research in one delivery method that can both improve student achievement and improve school climate. Both of these factors are components of successful schools.
Chapter 2

REVIEW OF THE RELATED LITERATURE

Introduction

Currently in the literature topics of school reform are prevalent. With NCLB in force for nearly a decade there has been much attention paid by researchers in the realm of school reform. Districts have needed to make improvements in achievement at a more rapid pace and of greater magnitude that ever before. General searches of the literature regarding school reform will yield articles containing a model of ‘continuous improvement’. When reviewing the literature the most prolific model written about is the Professional Learning Community.

Professional Learning Communities

Questions that were sought to be answered through this section of the literature review are: 1) What is a Professional Learning Community (PLC)? 2) Why is the PLC an important movement in Education? 3) What are the variations of the PLC that exist in the literature? 4) What does an effective PLC look like? 5) What evidence is there in the literature of a PLC improving a school’s climate? Discussion of the elements of the PLC and the slight variations of this will be discussed as a subtopic in the literature review.

*What is a Professional Learning Community (PLC)?*

The term ‘Professional Learning Community’ has been woven in the literature of Educational Leadership and professional development since the late 1990s, starting with
Shirley Hord’s (1997) publication commissioned by the US Department of Education. In her sixty-one page document *Professional Learning Communities: Communities of Continuous Inquiry and Improvement*, she outlined a new construct for school improvement. This new construct drew heavily upon work from organizational theory and ideas from the business sector, in particular those ideas from Peter Senge (1990). According to Hord (1997), Senge’s (1990) ideas explicated about in *The Fifth Discipline* heralded a paradigm shift in the field of business and organizational theory. This shift yielded a new idea of ‘learning organizations’; where individuals can collaborate with their creativity to “collectively aspire” (Senge, 1990). As this idea of ‘learning organizations’ filtered through the educational field in journals, it became ‘learning communities’ (Hord, 1997). This new construct, The Professional Learning Community (PLC), describes how schools should institute change in practice and curriculum centered upon five principles: 1) shared leadership 2) collective creativity 3) shared values and vision 4) shared personal practice 5) supportive conditions (Hord, 1997). The key word in describing a PLC is collaboration. Buffum and Hinman (2006) stated, “In a PLC as one researcher suggests, teachers are no longer independent contractors loosely affiliated by a parking lot, but rather are collaborative teams who share lessons and best practices” (p. 17).

which is often cited in the literature of school reform, professional development, and increasing student achievement. Since then, DuFour has been a prolific proponent and thinker of the use of PLC and teacher collaboration to increase student achievement and reforming schools authoring or coauthoring 21 articles, and ten books from 1998 to 2009. Before 1997, it seems that DuFour was performing much work in the sector of educational research and thinking that dealt with school reform. DuFour seemed to have a final cog set in place for his work, after Hord produced her work in 1997 (DuFour & Eaker 1998). Although DuFour is not the originator of the idea, he is called “champion of the Professional Learning Community” (Buffum & Hinman, 2006, p. 16).

Although Hord (1997) does pose the PLC as a way of battling teacher isolation, DuFour and Eaker (1998) see it as a necessary system working to change the age-old tendency for teachers to close their classroom door and never work with other teachers to systematically perfect their craft. “While traditional teachers labor in isolation, the teachers of a professional learning community share ideas about practice” (DuFour & Eaker, 1998, p. 219). This idea of intervening to battle this teacher tendency of isolation with staff development and teacher collaboration has roots in the literature that reference work done by Szymanski and Eade (1978). Therefore, it is important to note that the idea of teacher collaboration is not new, rather the idea just found certain traction in the climate of school reform in the 1990s and NCLB of the 2000s.

In sifting through the current literature, there have been many perspectives on what a PLC is intended to be. For the purpose of this thesis and literature review, the researcher has chosen to adhere to the words and ideas described by the originator of the
movement, Shirley Hord. A dozen years later, Hord (2009) is still defining what a PLC is. This act of defining is not due to the PLC model being poorly defined a dozen years ago. This recent defining is necessary due to the popularity and enthusiasm of the idea of the PLC (Hord, 2009). There have been many researchers writing about it, and giving their own interpretation of what PLC is, or what it ought to be. Instances of what divergent paths PLC has become in the literature will be discussed later in this chapter.

Hord (2009) has recently identified six characteristics of a PLC in an attempt to center and homogenize the idea once again. These characteristics are research-based, although there are no citations attached to this claim.

- Shared beliefs, values, and a vision of what the school should be;
- Shared and supportive leadership where power, authority, and decision-making are distributed across the community;
- Supportive structural conditions, such as time, place, and resources;
- Supportive relational conditions that include respect and caring among the community, with truth as an imperative;
- Collective learning, intentionally determined, to address student needs and the increased effectiveness of the professionals; and
- Peers sharing their practice to gain feedback, and thus individual and organizational improvement. (Hord, 2009, p. 41)

*Why is PLC an important movement in Education?*

“Top-down, politically driven educational decisions have been replaced by a pedagogy based on a new paradigm; the professional learning community” (Buffum &
Hinman, 2006, p. 16). The literature has instances such as those that seem to usher PLC to the throne of a reform to end all reforms. This rhetoric is rather the norm of literature concerning innovations. Yet, it is notable that statements such as these are written nearly a decade after the idea of the PLC took shape with Hord (1997). This patience in waiting a decade to proclaim PLC to be “The Reform” transcends the novelty based reaction that ‘new’ reforms propagate. Novelty breeds instant enthusiasm that seems to precipitously wane after inception. Reforms in education often denigrate or malign past reforms or “movements” (DuFour & Eaker 1998). Buffum and Hinman (2006) seemed to malign not a reform itself, but the chain of reforms that education has endured. They called for an end to compelling teachers to take up the “reform du jour” (Buffum & Hinman, 2006). They see the PLC as a “back to basics” approach by citing DuFour’s (1998) now famous, three simple questions that need to be repeatedly asked by a PLC, and whose answers systematically sought. DuFour’s (1998) three questions that seem strangely “Tyleresque” in their back to basics approach (Tyler, 1949). The three questions are: 1) What is it we want students to learn? 2) How will we know if students have learned it? 3) What will we do if students have not learned it?

The PLC model gives structure to the collaboration that should be happening with every professional in the field. Just like groups of attorneys collaborate to mount the most effective defense, or medical doctors collaborating and examining best practices to formulate the best technique for transplanting a heart, educators should be examining the best way to deliver a certain lesson. The problem is that the teaching profession has been inherently non-collaborative (DuFour, 1999). Hord (1997) lamented this fact, “Many in
the public and the profession believe that the only legitimate use of a teacher’s time is standing in front of the class working directly with students” (p. 18). The PLC movement over the past decade represents a stark departure from these beliefs.

What Variations of a PLC Exist in the Literature?

The term and model for Professional Learning Community is alive and well in the literature today with nearly 300 direct citations in the *Wilson Education Full Text* educational research database. There are many more variations of the concept that have since emerged out of the original model posed by Hord (1997). For instance, there are some parts of the literature that refer to “Learning Communities” and “Professional Learning Communities” as an optional study group of computer literacy skills for teachers (Brooks-Young, 2007). Others like Duffy, Mattingly and Randolph (2006) pointed to PLC practices without actually mentioning PLC by name.

This notion of an optional interest-group-type-club being called a “Professional Learning Community” may be apt from a language and semantics point, but lacks the established norm of what is expected when discussing the literature on a PLC. Hord (2009) noticed this trend developing in the literature. Hord (2009) cites (Lambert, 2006) to illustrate that others see a “watering down” and misuse of the term PLC, "The term ‘community’ has almost come to mean any gathering of people in a social setting. But real communities ask more of us. They assume a focus on a shared purpose, mutual regard and caring, and an insistence on integrity and truthfulness” (Hord, 2009, p. 40). The PLC is not a book club or a Bunko group. The PLC is not intended to be an Oprah book club of similar interests.
Further variations and observations of PLC can be found. It is suggested by one researcher that “naturally occurring” formed groups of practice called “communities of practice” might be more effective than PLC’s that are designed for teachers (Printy, 2008). The implication is that PLC’s are created by design and purpose. It is also suggested that when teachers self-select their group and have strong affiliation with this group, they have a greater chance to have their professional practice changed by the interaction (Printy, 2008). It is further suggested that these communities can overlap and teachers can belong to multiple groups, creating a constellation of communities within the school all seeking to improve and expand knowledge and practice of their choosing (Printy, 2008). While teachers can develop self-selecting groups, or the idea of more organically formed groups of people being more cohesive, the suggestion is dramatically limiting. This “naturally occurring” PLC is formed without structure, or direct support provided by administration and leading shareholders. This entire notion presupposes that “designed” communities such as the Professional Learning Community model are not authentic because they are contrived.

Further implications of “communities of practice” deem models like a PLC as contrived and they do not readily change and improve teacher practice. This notion also assumes “authentic” communities to be more effective. This author would contend that this “communities of practice” model lacks focus, purpose and cohesion. Authenticity is a value judgment placed upon an item by another. An authentic, organic community would be wonderful, but it is not reproducible; and therefore, it is akin more to an art, rather than a science. The key is to find improvement to schools that can be replicated. Science
can be replicated, art cannot. To illustrate the difference posed by (Printy, 2008), between a PLC and a “community of practice”, a pearl that comes from the sea beds is no more a pearl than one which comes from a pearl farm. Just because pearls come from a process that involves a purposeful creation and fostering, does not mean that this pearl is less of a pearl than the ones that are found by chance and serendipity. Schools need successful processes, which can be studied, replicated, and have a shared vision of purpose.

*What does an Effective PLC Look Like?*

There have been effective PLC practices studied and identified in the literature. What makes a PLC particularly effective is that it will inform a teacher of their practice and lead the teacher to adopt best practices through dialogue with peers. The process starts with examining data to inform practice (DuFour & Eaker 1998). Teachers use data such as school-wide or state assessments and local common assessments to identify student failure and student needs (Buffum & Hinman 2006). This process of analyzing student data and examining the three questions that DuFour and Eaker (1998) repeatedly has the PLC ask is often referred to as *data driven decision-making* in the literature (Schmoker, 2008). In effective Professional Learning Communities, teachers have effectively answered the first question of a PLC “What do we want students to learn?” by organizing and deciding on the essential or “viable” curriculum (Marzano, 2003). Then, teachers examine data from common assessments to figure out if students are ‘getting it’, and who exactly is not getting the material (Graham & Ferriter, 2008).

There is much in the literature on effective PLCs that calls of the need for the district to support the collaboration of teachers with structures such as provided time to
operate the PLC as well as a solid leadership of the group and administrative support (DuFour & Eaker 1998). Frequently, effective PLC practices cannot be utilized until structures provided by administration are put into place to allow teachers to work in a PLC. Districts may use late start or minimum days, once a week in order to find “job embedded” time to examine student data and best practice as in a few case studies indicated (Buffum & Hinman 2006; DuFour & Eaker, 1998). This seems beneficial as the purported frequency of PLC meeting are to be at least twice a month, if not weekly (Nelson, 2008). A district building in weekly time with minimum days helps support the effective functioning of a PLC (Nelson, 2008). Leadership is also a valuable district provided structure to help foster an effective PLC (Printy, 2008).

In a study performed by Nelson (2008) entailing a five year long series of case studies of PLCs indicated that practices which promote trust among the group can best be facilitated by an external member of the group such as a lead teacher or an administrator. Nelson (2008) found that some PLC groups could naturally get to critical dialog regarding teacher practice because trust among the group was already in place. Other groups needed to be led and facilitated to embrace trusting practices which allow those uncomfortable discussions regarding ones own craft (Nelson, 2008). Nelson (2008) writes, “School leaders, including principals and trusted teachers, are essential to creating a context in which an inquiry stance is modeled, valued and supported” (p. 579).

One of the most important factors of a successful PLC after all of the structural requirements are met is trust (Protheroe, 2004). It is vitally important that ground rules are set for the group and that teachers achieve a dynamic to where they feel safe sharing
their practice with one another (Protheroe, 2004; Graham & Ferriter, 2008). Teachers need to feel that they will not be maligned or embarrassed if they may not be utilizing the very best practices. This, of course is providing that they are open to listening to teachers who are using a more effective strategy in a given realm.

Another hallmark of an effective PLC is the practice of the group of teachers, particularly those in similar content and grade areas, to examine student work collaboratively. In the five year study on PLC groups in different districts by Neslon (2008), it was found that when teachers analyze student work together in the context of a specific inquiry question, they are better able to have their beliefs about learners come to light. In doing so, teachers can reveal a more precise, shared vision for the whole group. It is important to keep in mind that a shared vision in a PLC is vitally important and it is one of the foundations upon which a PLC is built (Hord, 1997).

*What Evidence from the Literature Suggests that a PLC Improves School Climate?*

The quick and direct answer to this question would be: none. There is no definitive, direct evidence to say that the presence of a well functioning PLC will have any effect on school climate (as defined later in this thesis as a collection of attitudes or ethos). However, there is much attention paid in the literature to a positive culture (as defined later in this paper as beliefs and values) that has to be in place or actively cultivated in order for a PLC to be installed and function well (Hord, 1997). Then, there is attention paid to the further “re-culturing” that has to happen for the PLC to stay in place and to remain functioning (DuFour & Eaker 1998). The PLC seems to do well, according to the literature, in being able to articulate to an institution what its culture
actually is to the group, as this is one of the first steps in a PLC (DuFour & Eaker 1998). It seems that all of this collaborative discussion regarding values and professional collaboration will have a positive effect of attitudes or climate; that it would lift the spirit/ethos of the group. It seems that this could be readily measurable in the attitudes/climate of the teachers and, therefore, the students as well. Yet, there appears to be nothing in the literature presently, when one searches the phrases simultaneously “Professional Learning Community” and “improving school climate”. This is curious.

In the definitive work by DuFour and Eaker (1998), it is stated, “When teachers become more aware of their school’s culture, they will be better able to shape their culture” (p. 135). The same should be more readily true for climate/attitudes, given that climate changes more readily.

The central hypothesis of this study is that the very presence of a functioning PLC with its reflective dialog among its members will, by its very nature, improve school climate. Again, there are no direct studies, as such, regarding the improvement of school climate as a result of a PLC found by this researcher.

The indirect means in which a PLC will affect school climate related to the fact that the PLC is a shared leadership model. Shared leadership is a concept that can be exercised through the mechanism of a PLC. The PLC is a delivery system of shared leadership. Shared Leadership, or distributed leadership has been shown to improve school climate and eventually will affect school culture (Liethwood & Mascall, 2008). The details to which it does so will be explored in the next subsection of this literature review.
Shared Leadership

One of the interesting things about educational research is the phenomenon of having multiple labels for one idea. This topic of the literature review is a case in point. Shared leadership is the label which this researcher has chosen due the term “shared leadership” being the prevailing term in the literature, but there are more labels for the same idea. The idea/model of shared leadership, the model that has so many different labels, is simple.

Instead of one person making a decision and passing this decision down to the next level of management, and that decision passed down to yet another level of management, until finally disseminated to the organization’s producers in the form of marching orders, rather, the decisions are reached though a teams or consensus approach by the organization’s producers. This process is lead by management, the decision checked by upper-management then disseminated throughout the organization. The later method of leadership is “top-down leadership” and the former is “shared leadership”. Coming back to the point of multiple labels: Shared leadership, distributed leadership, teams-approach leadership, collaborative leadership, Leadership capacity (Lambert, 2006) are other labels in the literature for this more favored approach in the literature, opposite of the “top-down leadership” approach.

In this section of the literature review, shared leadership will be examined. Specific questions will be sought to be answered. 1) What is shared leadership, how is it different? 2) How does shared leadership relate to the Professional Learning Community? 3) How does shared leadership affect school climate?
What is Shared Leadership, how is it Different?

The shift that shared leadership brought to education is characterized by Bowman (2003) as management and leadership finally departing from what he calls “heroic leadership”. Heroic leadership is the desire for a great leader to come along. This desire leaves the organization saying, “If we, in our organization, can just find the right leader, all of our problems will be solved; we need one person to take responsibility and to solve all of our problems” (Bowman, 2003, p. 11). The notion that a single person’s great leadership will determine the success of an organization is argued by Bowman (2003) to abdicate responsibility from the body of the entire organization to this “great leader”. Bowman (2003) asked, “Is the focus of our search for heroic leadership essentially an escape from collective responsibility” (p. 11)? The concept of shared leadership is essentially about accountability for all in the organization. This is a sharp contrast to the “I just work here” or “I just follow orders” mentality. Bowman (2003) further stated, “Research suggests that larger-than-life accomplishments are not what makes organizations work. What does is the sum of small, yet consequential decisions by colleagues who choose responsible, behind-the-scenes action over public profile in resolving worrisome challenges” (p. 12).

When all in the organization see that they have a stake in the product or direction of the decisions and that they can have true input in the leadership of the organization, then the organization is practicing ‘shared leadership’.

Shared Leadership is so important that it was a guiding principle in the formation of the Interstate School Leaders Licensure Consortium (ISSLC) standards (Van Metter &
McMinn, 2001). The ISSLC Standards are posed as the most widely used set of standards in the United States, and the most recognized set of school leadership standards ever written (Van Metter & McMinn, 2001). One of the seven guiding principles that the consortium used to build the ISSLC standards upon in 1996, was, “Recognize the collaborative nature of school leadership” (Van Metter & McMinn, 2001, p. 34). It is actually expected for school leaders to operate in the model of ‘shared leadership’, rather than ‘top-down’ or ‘command and control’ leadership. Shared leadership is not meant to be just a concept that is merely a goal; it is supposed to be practice in schools according to ISSLC.

The literature has helpful illustrations of shared leadership through first-hand accounts of the practitioners of this model. McGuire (2008) is a good example of these first hand testimonials of shared leadership. As a principal, he explains in his article that he was able to make greater progress toward bettering the education of his students working with a team in the model of shared leadership. McGuire (2008) stated, “I have discovered as I give up that power and authority away as a shared responsibility with my team, my teachers, classified staff, parents and students the magnitude of energy focused on school wide improvement is multiplied exponentially” (p. 35). Testimonials are nice to illustrate the anecdotal evidence of the validity of the shared leadership model, but there are studies to bolster the claim that shared leadership is a beneficial model for schools.

In a study by Liethwood and Mascall (2008), it is suggested that there is a correlation between high performing schools and shared leadership within the study. In a
sample of 90 elementary and secondary schools, the results of the study stated, “Higher-achieving schools awarded leadership influence to all school members and stakeholders to a greater degree than that of lower-achieving schools” (Liethwood & Mascall, 2008, p. 529). This study is strong evidence that either shared leadership has an effect on student achievement, or that they are mutually beneficial factors of each other. In the implications portion of the study’s conclusion, Liethwood and Mascall (2008) observed, “Influence seems to be an infinite resource in schools. The more those informal leadership roles give it away, the more they acquire” (p. 529).

This study by Liethwood and Mascall (2008) also indirectly suggested the power of school culture effecting school performance. Shared leadership is known as a cultural change as well as a structural shift (Johnson & Donaldson, 2007). More will be discussed regarding school culture and climate coupled with shared leadership later in this literature review.

While there are many parts of the literature posing exemplars for what shared leadership is, it is important to note that the literature also offers some who are careful to caution what shared leadership is not supposed to be. For instance, shared leadership should be pared out from a sharing of administration (Lindahl, 2008). Along with citing others, Lindahl (2008) defied administration differently from leadership. Lindahl (2008) noted as administration as dealing with scheduling, accreditation, daily operations, bureaucratic tasks, and curriculum details— the minutia. “Teachers simply do not have the time to participate effectively, or participate with satisfaction in shared administrative roles” (Lindahl, 2008, p. 300). Lindahl (2008) has posited that schools have not clearly
differentiated between administration and leadership and this is the chief reason that schools have not embraced ‘shared leadership’ models as has the business world. In essence schools have been doing it wrong. Schools have mistakenly shared too many administrative tasks with teachers. Instead, Lindahl (2008) maintained that teachers need to be involved in leadership as this involves leading people, not managing things or systems. Finally, Lindahl (2008) cautioned that shared leadership ought not be merely “heroic” or “top-down’ leadership with more members either.

Lindahl (2008) examined several shared leadership or teacher leadership schemas and found many similarities within those schemas. Those similarities include examining and changing teacher practice, helping formulate the school vision, challenging and working to remedy unhealthy school culture, and providing peer mentoring and assistance (Lindahl, 2008). Teachers do not have to be merely the deliverers of instruction in a school. Teachers can help lead and better the people and culture of the school, as well.

There is an important congruence to point out between PLC models and shared leadership. Whether one is examining PLC or shared leadership models, they basically perform the same tasks as cited in this literature review: reduce teacher isolation, promote a collaborative culture, promote teacher buy-in, and foster a high-performing school.

How does Shared Leadership Relate to the Professional Learning Community?

The basic tenets of PLC are based in the shared leadership model. It can be stated by this author, through the discovery and examination of all of the literature for this thesis, that the PLC is a delivery model for the concept of shared leadership. Huffman and
Jacobson (2003) concurred with this idea by stating, “Thus, collaborative leadership is more important as successful learning communities develop the capacity to include all of the stakeholders: students, teachers, families and communities” (p. 240). Every element of the PC model that has been explored in the previous subtopic of this literature review, call loudly to affirm the goals and products of shared leadership.

The first main architect of the PLC as previously reviewed in this paper, is Shirley Hord (1997). According to Hord (2009) one of the five principles of the PLC model is “Shared and supportive leadership where power, authority, and decision-making are distributed across the community…” (p. 41). While this shared decision-making mentioned here is probably specific within the learning community, the act of a school having a PLC itself is shared leadership. Some models of PLC have an administrator acting as the group facilitator, and some a teacher leader. Either way the use of a PLC in a school is a departure from traditional “top-down” leadership. In a “top-down” approach, the principal would tell the teacher what practices are best and where the teacher is falling short on practice, instead of a collaborative “colleagues-to-colleagues” approach to sharing best practices such as that employed in the PLC.

As stated earlier in this literature review, Hord (1997), who is widely credited for the structure and concept of the PLC, cited Senge (1990) and his idea of “learning organizations” as a major influence in the elements of the PLC. Those in the literature regarding shared leadership also cited Senge (1990) as a foundational idea for shared leadership (Lindahl, 2008). The mutual citation of Senge’s (1990) work, the root of both
ideas coming from the same starting point, also serves as a nexus between these two educational movements: the PLC and shared leadership.

*How does Shared Leadership Affect School Climate and Culture?*

The term top-down leadership is the term that appears multiple times in the literature. This term usually characterizes “traditional” leadership. This model of leadership promotes dependence on the leaders and discourages individual growth and initiative. Huffman and Jacobson (2003) wrote, “Top-down coercive approach to leading a school has resulted in a lack of commitment by the faculty” (p. 239). Huffman and Jacobson (2003) contended that with the shift to shared leadership comes participant empowerment. With this empowerment the role of leadership along with the culture and climate will also restructure.

“Ownership is stronger than buy-in” (p. 22), is a powerful statement written by Wilhelm (2009). This statement juxtaposed shared leadership with “top-down” leadership. The idea of a principal “selling” their views, values or decision to the group, and the staff either buys it or they do not is what happens when there is no ownership. The lack of ownership of the staff happens when edicts are handed down, not formulated together. When the staff collaboratively forms these values, then they own that decision. It is suggested here with this quote and elsewhere previously cited in this literature review, that shared leadership promotes ownership.

It is further suggested in a study by Wahlstrom and Louis (2008), schools having professional community and shared leadership present need less trust invested in the principal, thus there is less dependency on the principal for success. It is further found
that teacher self-efficacy has an effect on the proficiency of direct instruction, the yield is that shared leadership builds teacher self efficacy (Wahlstrom & Louis, 2008). This is a clear link, and an emerging direct variation between shared leadership, climate and culture and quality instruction by teachers.

Gruenert (2005) stated, “Collaborative school cultures- schools where teacher development is facilitated through mutual support, joint work, and broad agreement on educational values- have been presented as the best setting for learning for both teachers and students” (p. 43). Gruenert (2005) continued to explain that school leaders, who actively work with the staff collectively, improve their school’s culture and climate. In Gruenert’s (2005) study of collaborative culture’s effect on student achievement, it was found that there was a correlation. Collaborative culture, that is- schools that exhibit shared leadership, are schools that are successful and out of that success breeds a positive school climate (Liethwood & Mascall, 2008). People like to be on a winning, or at least improving team. Thus, shared leadership in the form of PLC contribute to a positive school climate- and so to remind the reader of the purpose of this thesis is to directly examine this relationship.

School Climate

School climate is an important issue in contemporary research. For schools to function well, students need more than the best technology, the best books, and the best teachers. These things alone do not guarantee a successful outcome. Only when the institution functions in a way that gets the best from what schools have, will they be
successful. Only when the organizational health is strong and attitudes are conducive to
the best learning environment possible, will schools achieve their current NCLB mission.
The literature is awash with positive outcomes from a good school climate. The question
is, with unique demands and constraints at every school what is an efficient proven factor
to improve school climate?

There is much in the literature on the topic of school climate. School climate is
vital to a school’s health, but is sometimes overlooked by administrators (Freiberg, 1998).
Questions that are sought to be answered through this literature review regarding school
climate are:

1) What is school climate?
2) What factors affect school climate?
3) What effects does school climate have on its institution?
4) Why is school climate important to improve?
5) Is there a nexus in the literature between school climate and PLC?

*What is School Climate?*

First and foremost, there are many differing opinions in the literature over what
the nature of school climate actually is. Due to this, discussion will follow the prevailing
types of definitions of school climate. Some parts of the literature described school
climate as the over-arching idea that subsumes school organization, school culture and
school cohesion (Stewart, 2008). Other parts of the literature describe school climate as
being totally separate from school culture (Gruenert, 2008). Still, other parts of the
literature will use school climate and school culture interchangeably (Eilers & Camacho,
Allen (2003), as well as Schoen and Teddlie (2008), additionally imposed that the literature sometimes finds the two concepts of school climate and culture being lumped into one.

A new model of school culture and climate is posed by Schoen and Teddlie (2008), which has school climate as an element of the greater concept of school culture. There has been no found literature that agrees or disagrees with this new model by Schoen and Teddlie (2008), perhaps due to its recently becoming part of the literature. Gruenert (2008) concurred with this view held by Schoen and Teddlie (2008) regarding climate as a result of culture, in that Gruenert (2008) wrote, “An organization’s culture determines its climate” (p. 57).

It has been documented by Allen (2003), that school climate and culture is an extension of the work done by researchers to explain and define the elements of organizations in general. The study and the defining of organizational climate and organizational culture, as documented by Allen (2003), has been wrestled with by Gestalt psychologists, social psychologists, cognitive psychologists and anthropologists yielding many different models. These models have differences in describing the nature, structure and origin of organizational climate and culture (Allen, 2003).

In Stewart’s (2008) study of a school climates’ effect on student achievement it was said in the literature review, “School climate is the heart and soul of a school” (p. 184). Using terms in metaphors that are as nebulous as “soul” confounds the definition of school climate. Scholars cannot easily define what a soul is. The definition found in the literature which is a good starting point for a definition is one that can be empirically
measurable. Gruenert (2008) posited school climate as the ethos of a school, or the attitudes of a school or the collective mood and morale of a group of people in a school. Gruenert (2008) wrote, “An organization’s culture dictates its collective personality. Continuing this analogy, if culture is the personality of the organization, then climate represents that organization’s attitude” (p. 58). Gruenert (2008) is not alone in defining climate with attitudes. Allen (2003), too, also equated climate with attitudes.

To further draw the distinction between climate and culture, school culture is more values and beliefs based, and therefore more steadfast and unchanging than school climate which is characterized as based in attitudes (Allen, 2003). Distinctions between the two constructs are not only drawn by definitions of the concepts of school culture and climate. They are also drawn by the methodologies used to study a school’s culture and climate. Culture tends to be studied by researchers in the literature by qualitative means, whereas climate is studied by quantitative means. Although distinctions regarding school climate and culture have been made, both phenomena encompass how people in a group react to the structure and challenges of the organization (Allen, 2003).

Gruenert’s (2008) equating of school climate to attitudes helps clarify the issue at hand. School climate (attitudes) can change more readily than culture (personality). Describing climate in this fashion, as a changeable and fluid factor in schools that reflect attitudes is consistent with the California Department of Education’s use of the California Healthy Kids Survey (CHKS). The CHKS has been developed from 19 years of study and is used state-wide in California, to assess school climate and is administered to a population every two years (CHKS Resource Center, 2008). From this assessment, it
appears that the California Department of Education has determined that climate and culture are not the same thing, and that climate is quantifiable.

School climate is a people-centered factor which is dynamic within the systems of the institution. This factor is a massive part of the institution of schools. This is due to the fact that schools themselves are a people business. This dynamic people-centered factor of school climate is diverse within an institution, as individual attitudes are diverse. Yet somehow, the collection of these diverse attitudes coalesced to form a school climate or group attitude. Since school climate is people-centered, the term ‘school climate’ can then be further pruned to reveal that school climate is also emotions-driven. This is evident in the emotions laden questions that are asked in widely used school climate surveys in California (CHKS Resource Center, 2008).

School Climate and CHKS/ NCLB- Why it is Important?

In Chapter Three of this thesis, a justification of using the CHKS and California School Climate Survey (CSCS) as a basis of an instrument of study will be given. The CHKS and CSCS is given in Grades 5, 7, 9 and 11 in schools, which accept Title IV or Tobacco Use Prevention Education (TUPE) monies. The survey measures school climate along with student health issues (CHKS Resource Center, 2008). Questions asked on the CSCS, which is a subtest on the CHKS, ask questions which tend to lend well to Gruenert’s (2008) “attitude” description of school climate in 2008 (CHKS Resource Center, 2008). School climate is changeable phenomena associated with changing attitudes (Freiberg, 1998). Due to the dynamic nature of school climate the California Department of Education finds it necessary to survey school climate every other year.
School climate is notably more visible in the literature since serious school reform has become law with No Child Left Behind (Koth et al., 2008). It is stated that since the inception of NCLB, two factors of school climate, achievement and safety, have become paramount to school improvement (Koth et al., 2008). Each of these identified factors, safety and achievement, are also the whole sum of the 43 questions on the CSCS subtest of the CHKS (CHKS Download Center, 2008).

The importance in the literature of safety and achievement when considering school climate are noted richly in the literature. Urban schools especially tend to focus on safety (Kinney, 2009). The thought is that learning and achievement cannot begin to be focused upon by staff and students if a school climate has an attitude of feeling unsafe (Kinney, 2009). Some schools, as reported by Kinney (2009), focused on metal detectors and other safety measures yet the climate still felt unsafe to staff and students. The realization found in interviews on school safety conducted by Kinney (2009) is the importance of school officials and teachers working on the relationships with students and communities to fight the cause of the safety issues not focus on only perimeter security of the school.

*What Effects on a School does Climate Have?*

Freiberg (1998) summed up how the institutions of schools tend to treat the important role of school climate by stating, “Much like the air we breathe, school climate is ignored until it becomes foul” (p. 22). Freiberg’s metaphor is apt because it speaks to the vital life sustaining function which persons all must fulfill to survive, as is the importance of school climate to the health of a school, much like breathing, it is all but
forgotten. A poor school climate can be barrier to student achievement due the important role it plays in the health of a school (Freiberg, 1998).

School climate can inhibit positive or mandated change. The “No Child Left Behind” (NCLB) act is often cited in much of educational literature. Its influence is at the bedrock of education today. Mandated changes often encountered resistance (Goodson, Moore & Hargreaves, 2006). In their study, it was found that the root of the resistance is not exactly poor school climate, it was teacher nostalgia. The resistance to change is often cited in the literature as hallmarks of poor school climate, or the lack of organizational self reflection (Gunzelmann, 2008). Goodson et al. (2006) findings suggest that resistance is part of grieving a loss. This suggests that in the case of NCLB, teachers feel a loss of control and autonomy, feel nostalgic, and therefore are resistant.

The change process must include a reconciling of the real feeling of loss and the subsequent nostalgia; they need to be addressed (Goodson et al., 2006). It is notable here and relevant to the greater thesis to add that they posed shared decision-making as a way to deal with teacher resistance resulting from teacher nostalgia. The relevance here to school climate is to know when resistance to change is the result of poor school climate i.e., unprofessional behavior, professional isolation, and poor relationships, or when there is a perceived reason which involves response to professionally traumatic events that cause grief and nostalgia.

This study by Goodson et al. (2006) on the power of teacher nostalgia to slow school change demonstrates what not to do, and how climate can be damaged when seeking school reform. Goodson et al. (2006) stated, “Large scale educational reform, as
we have seen, often fails because of its anti-nostalgic dismissal or denigration of the past” (p. 56). Teachers, when faced with new paradigms, do not want to hear that they have been spending professional energy and have invested time into practices and missions that were harmful to students and schools. This practice of denigrating the old to usher in the new is harmful. Goodson et al. (2006) stated, “Antinostalgia is not only ethically contentious but it is also strategically problematic because it increases widespread resistance to change” (p. 56). As will be discussed later in this literature review, the Professional Learning Community (PLC) model of school reform tends to honor the efforts and expertise of teachers and their past, and attempts to draw on best practices from that past. This is important because PLC is a reform mode that, not only does not harm school climate, but improves it. The PLC model will also be discussed at length in this literature review.

This portion of the literature can serve as an illustration in which school climate may transcend descriptors which label climate as good, poor, and indifferent; descriptors which one often uses to characterize one’s “being in” the school setting (Goodson et al., 2006). School climate often just is; and one can work to improve make climate more compatible to improve student achievement. The commitment to student achievement has been well established as an indispensable element of a “positive” school climate (Eilers & Camacho, 2007; Stewart, 2008).

If poor school climate can be a barrier to student achievement (Freiberg, 1998), then school climate can also be a catalyst for student achievement (Gruenert, 2005). In a correlation study by Gruenert (2005), it was found that school cultures (climate) that have
collaborative teacher practices, especially with staff development, have measurably higher student achievement. Gruenert (2005) contended that the studies on climate and culture are relatively new to the field of education. The aura of a school climate and culture that is collaborative is beginning to be quantified in a way that shows that school leaders, in order to improve student achievement, must consider their school climate (Gruenert, 2005).

It is interesting to add as a side note to the discussion at hand that this literature review builds the distinction between school culture and school climate on Gruenert’s work in 2008; however, Gruenert’s work in 2005 referenced above made a less defined distinction between the two school factors. This is why school culture is referred to in the latter paragraph synonymously with school climate, as Gruenert did in 2005. The progression of definition and distinction over three years between 2005 and 2008 through one researcher’s work (Gruenert) showed how new the importance and prevalence of school culture and climate is in the literature.

*What Factors Affect School Climate?*

In the study by Koth et al. (2008), school climate is examined by school-level factors and classroom-level factors, which predict school climate. Classroom-level factors are defined by the student-teacher relationship, the teacher’s classroom management and exposure to in-class deviant and aggressive behavior. It has been determined that classroom-level factors have a greater impact on student perceptions of school climate than do school-level factors (Koth et al., 2008). To clarify this study, students who felt success in their own classroom report the school as a whole as being a
successful institution. Those students, who experienced repeated classroom disruptions, reported that the school as a whole had discipline or school climate problems. Students tend to view the school climate as a whole through the narrow prism of their own classroom. The results of this study are a clear reminder to school leaders that students are served in the classroom. Macro, school-level efforts at improving school climate such as reducing school size or staff turnover do not have the impact that classroom experiences have on perception of school climate (Koth et al., 2008). Therefore, a school leader’s time should be spent influencing and improving practices in the classroom in order to affect school climate.

Regarding the study by Koth et al. (2008), it is critically important to note that individual-level factors also play a role on a student’s perception of school climate, though to a lesser degree than classroom-level factors. These are factors that cannot go unmentioned when discussing the literature of school climate. The factor of student’s particular gender and ethnicity when perceiving school climate is well documented in the literature (Koth et al., 2008). They, as well as other work by Griffith (2000) and Welsh, Stokes and Greene (2000), documented the unfavorable perceptions of school climate in general of ethnic minority students and in particular, those minority students who are male. Considerable focus needs to be given to these groups of student populations when attempting to intervene and improve school climate (Koth et al., 2008).

When considering strengthening school climate perceptions with students from minority backgrounds special attention needs to be given to the teacher-student interaction and relationships (Greene, 2005). Greene (2005) concurred with building a
positive school climate with strong interpersonal relationships, while nearly always viewing student achievement as a secondary effect of the relationship. Contrary to the findings of the study by Koth et al. (2008) and Greene (2005) also added that school-level factors such as small school size and small class size are especially important for success of urban and minority youth.

There are other factors cited in the literature that may seem more distal to student achievement. Teacher-to-teacher interactions play a role as well; the relationships between teachers in the staff room can affect school climate (Freiberg, 1998). There are also seemingly mundane factors that Freiberg (1998) posed: If the classroom temperature is constantly too hot or cold, the noise in the cafeteria, the physical structure of the facilities can add or detract the quality of school climate. Some in the literature suggested that schools are often uninviting places, intentionally or not intentionally. Simply encouraging, reminding or training staff to have inviting interactions with students will pay large dividends in the realm of school climate (Garrett, 2008).

School Climate and PLC Nexus

This study by Koth et al. (2008) strengthened the hypothesis that is posed in this thesis. A PLC focuses on best practices in the classroom. The central hypothesis of this study is that a PLC will change and continuously improve school climate.

In a case study, the use of a PLC has been shown to influence and improve classroom practice and student achievement (Buffum & Hinman, 2006). Given that student’s perceptions of school climate are greatly affected by classroom-level factors (Koth et al., 2008), and given that a PLC can improve a teacher’s classroom practice
(DuFour & Eaker, 1998), then this current study should find causation or at least correlation between the two variables. The particular factor of school climate likely to be affected is student achievement and willingness to learn (Koth et al., 2008).

There are theoretical systems in the literature that pose a PLC for transforming school climate (Ferrara, 2007). This aspect of school climate in the literature will be discussed in a later subsection, but it is important to highlight here that when one considers improving school climate it often accompanies some variation of a PLC. The noted reason for this is the benefit of promoting dialogue and inquiry, which is presented to improve school climate (Ferrara, 2007).

Distributed or shared leadership is another noted benefit of implementing a PLC to improve school culture as posed by Ferrara’s (2007) School Improvement and Transformational System. Studies have suggested that distributed leadership has positive outcomes with micro-politics and commitment to student achievement (Maxcy & Nguyen, 2006).

The study, which occurred in this thesis, does not have student achievement as a variable to be measured. The two variables of this study are the use of a PLC and school climate. However, both PLC and school climate each have strong and pervasive evidence in the literature of increasing student achievement (Eilers & Camacho, 2007; Stewart, 2008; Hollins et al., 2004). In the literature, and on widely-used climate surveys such as CHKS, school climate and student achievement are nearly inseparable, as noted by (Gruenert, 2005). For this reason, student achievement along with teacher achievement
will be briefly discussed in relation to school climate as it is a large part of the literature of school climate.

Many studies have determined a positive correlation between school climate and various measures of student achievement (Eilers & Camacho, 2007; Roney et al., 2007; Stewart, 2008). In short, a positive school climate yields positive achievement outcomes. Specifically, reading scores in North Carolina middle schools showed a moderate positive correlation relationship with a school climate indicator (Roney et al., 2007).

In addition to positive student achievement outcomes, the qualitative portion of Roney et al. (2007) demonstrated the importance of the teacher cohesion facet of school climate. Moreover, the factor of good teacher cohesion creates a better climate for teachers to work in. In relation to this, it should also be noted that teachers who like coming to their place of work report better performance. The positive performance of teachers should be noted along with student performance as contributing to school climate. Furthermore, there is a strong correlation shown with teacher efficacy and student achievement (Roney et al., 2007). The more empowered and confident a teacher feels the higher they will perform.

Summary

In the previous sub-section of the literature review, teacher collaboration and the structure of a PLC has been posed as improving school climate. The purpose of this study was to determine if the use of a PLC improves school climate in Vicks County. This is central to the purpose of this thesis. This literature review has explored and discussed the
opinions and findings of the current thinkers and researchers in the sub-fields of Professional Learning Communities, Shared Leadership, and School Climate.

In the discussion of Professional Learning Communities, a few innovators and standard-bearers are most often referenced when reading about PLCs. Hord (1997) was the first to articulate the model of the PLC, much of which has stood the test of time and remains unchanged in the literature though the past 13 years. Hord (1997) applied the idea of a “learning organization” from Senge’s (1990) work. DuFour and Eaker (1998) wrote a guide as well which was more of a practical guide as a companion with Hord’s initial research. The driving concept of the PLC stems from teacher collaboration. In the PLC, teachers work together to examine student assessment, progress and best practices.

In the discussion from the literature review regarding the section on shared leadership, education borrows from principles that have long been held in the business world. The notable figure who first posed this in business was Drucker (1955). However, there are proponents and theorists such as Bowman (2003) who see “top down” or “heroic leadership” as a thing of the past. According to Bowman (2003) rightly so; because the claim is that when persons in an organization abdicate all of their authority to the top, they also abdicate their responsibility for improvement. Liethwood and Mascall’s (2008) study suggested that schools that employ shared leadership are higher achieving. Additionally, in a study by Wahlstrom and Louis (2008), it was shown that sheared leadership leads to enormous teacher ownership over their school’s success and challenges.
Finally, the section of school climate went into detail, defining school climate, and contrasting this with school culture (Gruenert, 2008; Schoen & Teddlie 2008). Climate has been elusive to study and define as discussed in the literature, but many theorists and researchers agreed that it is vital to a school’s health. It is suggested by studies that climate is vital to student success itself (Eilers & Camacho, 2007; Stewart, 2008; Hollins et al., 2004). By contrast, school climate which is poor can also impact a student’s success, namely for those in ethnic minority populations (Koth et al., 2008). Furthermore, by piecing together key studies and their individual outcomes; it can be inferred that the structures of the PLC functions with having the intended outcome of increasing student achievement, may also improve school climate (Buffum & Hinman, 2006; Ferrara, 2007; DuFour & Eaker, 1998). The previous sentence once again, delivered one full-circle through the literature review summary, to the purpose and hypothesis of this study. The hypothesis of this study is: If a PLC is present as a school’s professional development, then the school’s climate will be reportedly better than those schools which do not have a PLC in Vicks County, as measured by this study’s instrument.
Chapter 3

METHODOLOGY

Setting of the Project

Population and Sample

The population of this study is comprised of teachers from four middle schools in Vicks County in the Sierra Foothills of California. The county itself is primarily rural. The overall ethnic makeup of students and teachers in this county are far more ethnically monochromatic than the state. However, this feature of these schools helps to provide further control in the experiment. With the exception of a slight variation in student population, these schools are quite similar.

Since this study is to measure school climate in relation to the use of a Professional Learning Community, the population sought to be surveyed is the teachers. To better understand the schools that these teachers are serving, student population data is provided as well.

River Forks Middle School is a small rural school. The student enrollment was 167 in 2009 (Education Data Partnership, 2010a). The school serves students from sixth to eighth grade and has six teachers, one of which serves special education. As a note, and for disclosure, the researcher of this study currently teaches at this school, and has taught there for nearly a decade. The racial and ethnic composition of River Forks Middle School is not as diverse as the State of California or Vicks County. River Fork Middle School’s main ethnic population is White with a percentage of 85% of the school’s
student population (Wheeler, 2009). The school’s second highest ethnic population is Latino with nine percent. The third highest population is American Indian with two percent. Asian and African American populations are represented at percentages below two percent (Wheeler, 2009). The teaching staff is 85% White, and 15% Latino (Education Data Partnership, 2010a).

Students in the River Forks Middle are of a lower socioeconomic status on a whole, than the rest of Vicks County. The county has an economically disadvantaged student rate of 25%, where River Forks Middle has a rate of 29% (Education Data Partnership, 2010b). River Forks Middle has a small EL population. Roughly half of the total Latino population is designated as EL students. According to the District’s School Accountability Report Card (Wheeler, 2009), 2.9% of the school’s student population is EL.

The second school in this study, Glenn Middle School is located between two small towns near the county seat, each having 4000 people. The student enrollment was 446 in 2009 (Education Data Partnership, 2010c). The school serves students from sixth to eighth grade and has 23 teachers, one of which serves special education. The racial and ethnic composition of Glenn Middle School is not as diverse as the State of California, but does closely match the ethnic make-up of Vicks County (Education Data Partnership, 2010b). Glenn Middle School’s main ethnic population is White with a percentage of 77% of the school’s student population (Harm, 2009). The school’s second highest ethnic population is Latino with 16%. The third highest population is American Indian with three percent. Asian and African American populations are represented at percentages
below two percent. The teaching staff is 91% White and four percent Latino and four percent American Indian (Education Data Partnership, 2010c). Glenn Middle school has an economically disadvantaged rate of 27%. Glenn Middle like River Fork Middle has a small EL population. According to the Education Data Partnership (2010c), two percent of the school’s student population is EL.

The third school in this study, Silver Slope Middle School, is located in a small town 14 miles from the county seat of the rural Vicks County. The student enrollment was 339 in 2009 (Education Data Partnership, 2010d). The school serves students from fifth to eighth grade and has 15 teachers. The racial and ethnic composition of Silver Slope Middle School, like many in the county, is not as diverse as the State of California (Education Data Partnership, 2010b). Silver Slope Middle School’s main ethnic population is White with a percentage of 84% of the school’s student population (Callaghan, 2009). The school’s second highest ethnic population is Latino with nine percent. The third highest population is American Indian with four percent. Asian and African American populations are represented at percentages below one percent (Callaghan, 2009). The teaching staff is 100% White (Education Data Partnership, 2010d). Silver Slope Middle School has an economically disadvantaged rate of 41%. Silver Slope, like Glenn Middle and River Fork Middle has a small EL population. Two percent of the school’s student population is EL (According to the Education Data Partnership (2010d).

The fourth school in this study, Morrison Middle School is located in the county seat of the rural Vicks County. The student enrollment was 338 in 2009 (Education Data
Partnership, 2010e). The school serves students from sixth to eighth grade and has 17 teachers with 16 Full-Time Equivalent (Education Data Partnership 2010e). The racial and ethnic composition of Morrison Middle School, like many in the county, and all schools in this study are not as diverse as the State of California (Education Data Partnership, 2010e). Morrison Middle School’s main ethnic population is White with a percentage of 72% of the school’s student population (Smith, 2009). The school’s second highest ethnic population is Latino with 13% (Smith, 2009). The third highest population appears to not really be an answer with twelve percent having multiple or no response (Smith, 2009). Asian and African American populations are represented at percentages below two percent (Smith, 2009). The teaching staff is 94% White and six percent Latino (Education Data Partnership 2010e). Morrison Middle School has an economically disadvantaged rate of 51% (Education Data Partnership, 2010e). Morrison Middle, like the rest of the schools in the study, has a small EL population relative to the rest of California. However, comparatively, Morrison Middle’s EL population is roughly double that of the other schools in the study. Morrison Middle School’s EL population is actually consistent with the EL rate for Vicks County’s 29,000 students at five percent EL (Education Data Partnership, 2010b).

Design of the Study

The design of this study is a post-test only approach. The instrument of the study is a survey. This study is primarily a quantitative study with a small option in the survey for respondents to offer a qualitative response. Again, the researcher was a part of a long-
term training to facilitate a PLC for his district for over two years. The concept of this study followed the training and the first few years of PLC activity in the county. For this reason, this study in order to examine and test the effect of a PLC on school climate had to use a post-test only design. There are limitations with the approach to this study, those of which will be discussed later.

The independent variable of this study is the school staff participating in a structured PLC which has a trained facilitator. The dependent variable will be perceived and reported school climate by teachers as measured by a survey. The four schools were chosen due to their geographic and demographic similarities to attempt to control those particular variables. The four schools in this study really are remarkably similar in just nearly every way other than small variations in student populations as noted in the populations section of this chapter.

Two of the schools participated in the PLC facilitator training and PLC project at the Vicks County Office of Education, two did not. The intent was to show comparison through the experimental treatment between the two groups: those two schools that participate in a structured PLC, and those two schools that did not. The experimental treatment is the two year training and on-going support which individuals received from Vicks County Office of Education that led to district and school wide PLC’s in math. Each school which participated in the PLC project had on-going support of their school/district administrators for the purpose of having the PLC being the prime delivery method for professional development in math. The focus of the study is to compare the difference of the school climate between the two groups at the four schools.
Data Collection

The data was collected via survey and comprehensive sampling was attempted. From the four middle schools of four different districts there were a possible 56 teachers who were eligible and invited to participate in the study. A contact person at each site was asked by the researcher to be the liaison to their school’s staff. The school sites were: River Forks Middle School, Glenn Middle School, Silver Slope Middle School and Morrison Middle School since he was among the faculty. The contact people or study liaisons all had a relationship with the researcher except the contact at Morrison Middle School. The researcher himself conducted the survey invitation at River Forks Middle School. The researcher selecting a single contact at each site who has personal and professional relationships at the school was an attempt by the researcher to elicit a better rate of return from teachers at the four sites rather than having a stranger contacting each teacher individually and asking them to participate in this study. Each contact person obtained clearance from each site’s administration to conduct the study. The exception to this was at Morrison Middle School where the principal was the contact person.

Morrison Middle School was also the only school in which the researcher had no natural contacts or acquaintances. In this case, the researcher contacted the principal and he exhibited professional interest and sent the invitation of the survey to the staff, and reminded them to complete it as well.

Out of a possible 56 teachers at the four sites, 22 responded, giving a 39% rate of return for the survey. The sampling is subject to a convenience sampling weakness. Those who wanted to, and/or remembered to participate, did. As a side note, the
researcher refrained from taking part in the survey as to not bias, or affect the outcome of the results. A lengthy discussion about this sort of sampling can follow with the argument that certain type of people, with a certain leaning would be the ones who actually selected into the study. More attention will be paid to this in the summary and conclusion section of this thesis.

The data was collected electronically via Surveymonkey.com. The respondents were given a two-week window to complete the study. The school contact or liaison sent a link via email that the researcher provided to each staff member with the researchers personal invitation and explanation. Each of the four schools had unique data collection identification so that the data could be disaggregated. The researcher made a standard request and gave specific directions to each of the school contacts or liaisons and asked that they forward this invitation to all of the teaching staff at their school. The following is the survey invitation. The survey invitation can be found in the appendix of this thesis.

Instrumentation

The instrument of the study was developed in large part from the California School Climate Survey (CSCS) that is given as a part of California Healthy Kids Survey (CHKS). The researcher had intended to use data from CHKS and CSCS from 2006 for the four sites as a pre-test of the condition of school climate in each of the four sites; however, due to incomplete data this pretest condition could not be used with any internal validity. One of the four schools did not have 2006 data from California School Climate Survey (CSCS). None of the schools in this study had data from the 2004 (CSCS), which would have been ideal, since this would have best fit pretest conditions for the timeline of
the Vicks County Office of Education PLC Project which started in 2005 (WestEd, 2010a).

The CHKS has been used for many years, and specifically, the CSCS has been used and required since 2004 (WestEd, 2010b). As the WestEd (2010b) nonprofit research group is well respected and employed by the California Department of Education to develop the CSCS; much of the instrument of this study was taken from the CSCS or inspired by the CSCS. This was done in order to get the very best instrument possible, as well as use questions and a format which would be familiar with the test subjects.

The survey that is the instrument for this study was comprised of fifteen items. Questions One through Eight asked the respondent to agree or disagree to specific statements about his/ her school as a whole, with varying degrees of agreeability or disagreeability. The choices were: Strongly Agree, Agree, Disagree, Strongly Disagree and Not Applicable. Careful attention was paid to not change the order or format too much from the CSCS style of WestEd, so that the model would remain the same.

Questions Nine through Fifteen included specific questions about the adults at the school. The respondents had the choices of having these statements apply to a varying amount of staff which seems to make the statement true. The questionnaire starts with Questions Nine through Fifteen, stating, “How many adults at this school…” These statements complete with a statement of staff attitudes and attributes. The choices that the respondent had are in order of descending amount of staff having these positive climate
attributes and attitudes. The choices were: Nearly All, Most Adults, Some Adults, Few Adults, and Almost None.

For the Questions One through Fifteen, a sixth option was given for respondents to pose an answer that was not provided by the choices. This choice was labeled as “Other (please specify)”. Respondents had the option of typing a response in for this selection. This is considered by the researcher to be a slight qualitative dimension to this instrument. The qualitative responses will be reported in this study. However, the researcher does not consider this a significantly qualitative dimension to deem this study a mixed methods approach.

Data Analysis

Analysis of the Data

The data analysis in this study will focus on the two groups in the post-test design. The experimental group is the group participating in the Vicks County Office of Education PLC project, which had facilitators trained and supported over a two year period. This group still uses the PLC model for much of their staff developments in math, and eventually language arts, for the past five years. This group will be referred to in this study as the “PLC Group”.

Again, the control group is comprised of two schools which did not participate in the PLC project at the Vicks County office of Education and does not indicate ever adopting the PLC model or practices. It needs to be noted that this does not mean, that these faculties do not necessarily collaborate or that their professional development is
lacking in any way. The intent of this study is to determine the effect that a specific model of staff development, the PLC has on school climate. This group of two schools will be referred to as the “Non-PLC Group” in this study.

The data will be compared for each question between the two groups in the study. A comparative analysis will be the method of data analysis. “The PLC Group” had 13 respondents out of a possible 25, giving a response rate to the survey of 52%. The “Non-PLC Group” had nine out of 31 teachers possible respond to the survey giving this group a 29% response rate.

The posttest-only design of this study only allows comparison between the two groups. Therefore, no claims as to the growth of an individual school’s positive school climate can be determined. The data will be analyzed; keeping in mind the purpose of the study is to determine if the data suggest the presence of a structured and facilitated PLC with its collaborative practices yields a better reported school climate by its teachers. The operating definition, as discussed in Chapter 1, which will be used to determine if a variation exists between the two groups’ is based on a “marked difference” between the two groups climate. Once again, the hypothesis of this researcher is: If a PLC is present as a school’s professional development, then the school’s climate will be reportedly better than those schools which do not have a PLC in Vicks County, as measured by this study’s instrument.
Chapter 4
DATA ANALYSIS AND FINDINGS

Presentation of the Data

Research Item 1

Item 1 of the instrument for both the PLC Group and the Non-PLC Group have the subjects respond to a statement of how inviting and supportive is their school as a whole. This question is intended to measure the staff’s perception of the learning environment.

Figure 1 Supporting and Inviting Place for Student to Learn: Item 1, Non PLC Group
Figure 2 Supporting and Inviting Place for Student to Learn: Item 1, The PLC Group

The results of the first item for each group reveal that although both groups positively see their school, as a supportive and inviting place to learn, The PLC Group feels much more positive with 54% Strongly Agree where the Non-PLC Group has 11.1% Strongly Agree to the statement. There are no selections from either group for choices: Disagree, Strongly Disagree, Not Applicable, or Other (please specify).

Item 2 of the instrument for both the PLC Group and the Non-PLC Group have subjects respond to a statement that their schools are setting high academic standards for all students. This item speaks to the goal setting and expectations of the staff.
Research Item 2

Figure 3 Setting High Academic Standards for all Students: Item 2, Non-PLC Group

![Pie chart showing responses for Non-PLC Group]

Non-PLC Group
This school sets high standards for academic performance for all students.

- Strongly Agree: 22%
- Agree: 56%
- Disagree: 22%

Figure 4 Setting High Academic Standards for all Students: Item 2, The PLC Group

![Pie chart showing responses for The PLC Group]

The PLC Group
This school sets high standards for academic performance for all students.

- Strongly Agree: 61%
- Agree: 31%
- Disagree: 8%

The results of the second item of the survey for both groups reveal that the PLC Group has 61% feeling that they Strongly Agree, where The Non-PLC Group has 22% Strongly Agree. Furthermore the unfavorable response for each group, Disagree, is higher with the Non-PLC Group at 22%, whereas the PLC Group displays 8% disagreeing with the statement. There are no selections from either group for choices: Strongly Disagree, Not Applicable, or Other (please specify).
Research Item 3

Item 3 of the instrument for both the PLC Group and the Non-PLC Group have subjects respond to a statement of the school promoting academic success for all students. This item speaks to the inclusive nature of the school’s climate.

Figure 5   Promotes Academic Success for all Students: Item 3, Non-PLC Group

Figure 6   Promotes Academic Success for all Students: Item 3, The PLC Group
The results of the third item of the survey for both groups reveal that the PLC Group have 46% Strongly Agree, whereas the Non-PLC Group has eleven percent Strongly Agree. Additionally, eight percent of the PLC Group disagree, whereas the Non-PLC Group is almost triple that at 22%. There are no selections from either group for choices: Strongly Disagree, Not Applicable, or Other (please specify).

*Research Item 4*

Item 4 of the instrument for both the PLC Group and the Non-PLC Group have subjects responding to a statement that the school emphasizes helping students academically when they need it. This item speaks to the supportive environment of the school for struggling students, and doing what is necessary to ensure success for students.

*Figure 7 School Emphasizes Helping Academically Needy Students: Item 4, Non-PLC Group*
The results of the fourth item of the survey for both groups are very close. The PLC Group has a larger response of Strongly Agree at 31% than the Non-PLC Group that posts a 22%, Strongly Agree. There are no selections from either group for choices: Disagree, Strongly Disagree, Not Applicable, or Other (please specify).

**Research Item 5**

Item 5 of the instrument for both the PLC Group and the Non-PLC Group have subjects respond to a statement that the school is a supportive and inviting place for staff to work. This item speaks to the work quality of the working climate for staff.
Figure 9  School is a Supportive and Inviting Place for Staff to Work: Item 5, Non-PLC Group

![Non-PLC Group chart]

Figure 10  School is a Supportive and Inviting Place for Staff to Work: Item 5, The PLC Group

![PLC Group chart]

The results of the fifth item of the survey for both groups reveal that the PLC Group feel more strongly about this statement with 31%, where the Non-PLC Group posts eleven percent. However, the Non-PLC Group has a slightly smaller amount selecting Disagree with eleven percent, whereas the PLC Group has 15% disagreeing...
with the statement. When you take Strongly Agree and Agree statements together in aggregate, the Non-PLC Group has a slight margin over the PLC Group with the Non-PLC Group reporting 89% of respondents agreeing or strongly agreeing with the statement. When examining the PLC Group in the same way, that group has 85% responding Agree or Strongly Agree. There are no selections from either group for choices: Strongly Disagree, Not Applicable, or Other (please specify).

Research Item 6

Item 6 of the instrument for both the PLC Group and the Non-PLC Group have subjects respond to a statement that their school promotes trust and collegiality among staff. This item measures the staff perception their campus as a trusting and close-knit staff.

Figure 11 School Promotes Trust and Collegiality among Staff: Item 6, Non-PLC Group
The results of the sixth item of the survey for both groups reveal that the Non-PLC Group reports a more favorable view to this item having no staff disagree with this statement. On the other hand, the PLC Group has 23% of respondents for that group disagreeing with the statement. The PLC Group did report a higher percentage that Strongly Agree with 31%, than the Non-PLC Group that reported 22% strongly agreeing with the statement. There are no selections from either group for choices: Strongly Disagree, Not Applicable, or Other (please specify).

*Research Item 7*

Item 7 of the instrument for both the PLC Group and the Non-PLC Group have subjects respond to a statement that the school provides time for staff to collaborate professionally. The purpose of this statement is to establish if administration provides for professional collaboration, as perceived by staff.
The results of the seventh item of the survey for both groups display some similar results. Both the PLC Group and the Non-PLC Group have 50% selecting Agree. There
are differences between the two groups with the Strongly Agree selection. The PLC Group reports 33% strongly agreeing and the Non-PLC Group reports 25% strongly agreeing. Less of the PLC Group disagrees with the statement with, 17%, than the Non-PLC Group, who report 25% disagreeing. There are no selections from either group for choices: Strongly Disagree, Not Applicable, or Other (please specify).

Research Item 8

Item 8 of the instrument for both the PLC Group and the Non-PLC Group have subjects respond to a statement that their school uses staff collaboration and professional dialogue as the centerpiece for professional development. Again, this statement help establish if a PLC and its collaborative practices are being used as staff development, as perceived by staff.

Figure 15 School Uses Staff Collaboration as the Centerpiece for Professional Development: Item 8, Non-PLC Group

![Pie chart showing responses to Item 8 for the Non-PLC Group]
The results of the eighth question of the survey for both groups show that 62% of the Non-PLC Group reported agreeing with this statement, and 46% of the PLC Group respondents agree with the statement. When you take Strongly Agree and Agree statements together in aggregate, 73% of the Non-PLC Group responded favorably, whereas 61% of the PLC Group responded favorably to the statement. The Disagree response was only registered by the PLC Group, showing 31% of the respondents feeling this way. Strongly Agree between the two groups were very similar with 13% and 15%. The PLC Group reports them having eight percent, Strongly Disagree with the statements, where The Non-PLC Group responds with 25% strongly disagreeing with the statement. There are no selections from either group for choices, Not Applicable or Other (please specify).
Research Item 9

Question 9 of the instrument for both the PLC Group and the Non-PLC Group, have subjects answer, in general terms, the question: How many adults at this school acknowledge and pay attention to students? This question is intended to reveal the perception of a staff which sees students at the center of what they do.

Figure 17 How Many Adults at this School Acknowledge and Pay Attention to Students: Question 9, Non-PLC Group

![Pie chart for Non-PLC Group showing nearly all (56%) and most adults (44%) acknowledge and pay attention to students.]

Figure 18 How Many Adults at this School Acknowledge and Pay Attention to Students: Question 9, The PLC Group

![Pie chart for The PLC Group showing nearly all (61%) and most adults (39%) acknowledge and pay attention to students.]

The results of the ninth item of the survey for both groups show similar results. The PLC Group reports 61% of respondents think that nearly all staff satisfies the question, whereas the Non-PLC Group displays that 56% report that nearly all staff acknowledge and pay attention to students. The PLC Group reports that 39% of the respondents think that most adults satisfy the question, and 44% of the Non-PLC Group thinks that most adults satisfy the question. There are no selections from either group for choices in response to the question for: Some Adults, Few Adults, Almost None, or Other (please specify).

Research Item 10

Question 10 of the instrument for both the PLC Group and the Non-PLC Group, have subjects answer in general terms. The question: How many adults at this school want every student to do their best? This question is intended to reveal how the staff perceives themselves helping students reach their potential.

Figure 19  How Many Adults at this School want Every Student to do their Best: Question 10, Non-PLC Group
The results of the tenth item of the survey for both groups reveal that 75% of the PLC Group thinks that nearly all of the adults in their school want every student to do their best, whereas 56% of the Non-PLC Group believes that adults in their school satisfy the same question. The response Most Adults represented 33% of the responses for the Non-PLC group, and 25% of the PLC Group’s respondents. The PLC Group did not have any members select Some Adults, but the Non-PLC Group had eleven percent of its members select Some Adults in response to the question. There are no selections from either group for choices in response to the question for: Few Adults, Almost None, or Other (please specify).

Research Item 11

Question 11 of the instrument for both the PLC Group and the Non-PLC Group, have subjects answer in general terms. The question: How many adults at this school want every student to do their best?
believe that every student can be a success? Again, Question 11 probes the general climate of having students be successful.

Figure 21 How Many Adults at this School Believe that Every Student can be a Success: Question 11, Non-PLC Group

Figure 22 How Many Adults at this School Believe that Every Student can be a Success: Question 11, The PLC Group
The results of the eleventh item of the survey for both groups show that 39% of members in the PLC Group think that nearly all adults in their school believe that every student can be a success, whereas the Non-PLC Group had eleven percent answer Nearly All of adults in their school in regard to the same question. Seventy-eight percent of The Non-PLC Group believe that most adults satisfy the question, whereas 61% of the PLC Group selected Most Adults in response to the question. The PLC Group had no one select Some Adults in response to the question, but The Non-PLC Group has eleven percent of the group select Some Adults in response to the question. There are no selections from either group for choices in response to the question for: Few Adults, Almost None, or Other (please specify).

Research Item 12

Question 12 of the instrument for both the PLC Group and the Non-PLC Group, have subjects answer, in general terms, the question: How many adults at this school have close personal relationships with one another? Again, this question probes the closeness and regard that the staff has developed through positive climate.
Figure 23  How Many Adults at this School have Close Personal Relationships with One Another: Question 12, Non-PLC Group

The results of the twelfth item of the survey for both groups display the PLC Group having 39% of respondents believing that nearly all of the adults at their school
have close personal relationships with one another, while the Non-PLC Group shows that no one believes that nearly all adults in their schools have close personal relationships with one another. Fifty-six percent of The Non-PLC Group members report that most adults satisfy the question, and 38% of The PLC group report Most Adults in response to the question. The Some Adults selection accounted for 33% of the Non-PLC Group, and 23% of the PLC Group, in response to the question. The Non-PLC Group has eleven percent of its members report that few adults have close personal relationships with one another; the PLC Group did not select this as a choice. There are no selections from either group for choices in response to the question for, Almost None, or Other (please specify).

Research Item 13

Question 13 of the instrument for both the PLC Group and the Non-PLC Group, have subjects answer, in general terms, the question: How many adults at this school support and treat each other with respect? This question speaks to the congenial working environment that teachers and staff perceive at their school.
Figure 25  How Many Adults at this School Support and Treat Each Other with Respect: Question 13, Non-PLC Group

![Chart for Non-PLC Group]

Figure 26  How Many Adults at this School Support and Treat Each Other with Respect: Question 13, The PLC Group

![Chart for The PLC Group]

The results of the thirteenth item of the survey for both groups show the study’s most congruent responses between the two groups. In response to the question by the
PLC Group and the Non-PLC Group the selection of Nearly All accounted for 46% and 45%, respectively. The response Most Adults accounted for 46% of the PLC Group’s responses and 44% of the Non-PLC Group’s responses. Each group had one member report that Some Adults support and treat each other with respect. There are no selections from either group for choices in response to the question for: Few Adults, Almost None, or Other (please specify).

Research Item 14

Question 14 of the instrument for both the PLC Group and the Non-PLC Group, have subjects answer, in general terms, the question: How many adults at this school feel a responsibility to improve this school? This question probes is a major concept of school climate discussed in the literature review; one of teacher ownership.

Figure 27 How Many Adults at this School feel a Responsibility to Improve this School: Question 14, Non-PLC Group
The results of the fourteenth item of the survey for both groups reveal that the PLC Group has 61% of its members report that nearly all adults at their school feel a responsibility to improve their school, whereas the Non-PLC group reported 34%, as a Nearly all response to this question.

The Most Adults response to this question between to two groups were very similar with 33% and 31%. When taken in aggregate the responses, Nearly all and Most Adults the results are stark. The PLC group, in aggregate reports 92% of the top two favorable responses, and the Non-PLC Group reports in aggregate 69% of the top two favorable responses. In contrast, with the Some Adults response, the Non-PLC Group selected this response at a rate of 33%, where the PLC Group reported this response at a rate of eight percent, almost one fourth that of the Non-PLC group. There are no
selections from either group for choices in response to the question for: Few Adults, Almost None, or Other (please specify).

*Research Item 15*

Question 15 of the instrument for both the PLC Group and the Non-PLC Group, have subjects answer, in general terms, the question: How many adults at this school desire a positive school climate? This question reveals the staff perception of a functional working environment, one that has staff perceiving others and estimating others motives being in line with a positive school climate.

Figure 29 How Many Adults at this School Desire a Positive School Climate:

Question 15, Non-PLC Group
Figure 30  How Many Adults at this School Desire a Positive School Climate:

Question 15, The PLC Group

The PLC Group reporting that 85 percent of respondents think that nearly all adults in their school desire a positive school climate, whereas in the Non-PLC group, 78% report this. For the Most Adults selection, the PLC Group selected this choice at a rate of 15%, whereas the Non-PLC Group selected this answer at a rate of eleven percent. The Non-PLC Group had a Some Adults response constituting eleven percent of the group. The PLC Group did not have a response for the choice of Some Adults for this question. There are no selections from either group for choices in response to the question for: Few Adults, Almost None, or Other (please specify).

Data in Aggregate

The previous presentation of the data was taken question-by-question, comparing the two groups each time. To further show the results of the study the next two tables will
show the entire survey data taken in aggregate by group. This is meant to give an overall picture of the entire survey data. Like the figures above, these tables are presented together for comparative analysis purposes.

Included in Tables 1 and 2 are the responses by item number in each group. The top half of each table represents the portion of the survey which asked about various climate conditions of the school as a whole. The bottom half of each table represents the Survey Questions 9 through 15, which asked about various climate conditions regarding the staff and its relation to students and other staff. The percentages posed in the table are, first a total of each distinct half of the survey for the given group; next is the percent of the responses by selection over the whole survey for the group. The answer choice Other (please specify) was left off of the tables due to ease of reading, and they were non-existent as responses from either group.

Table 1
Scatter Gram and Percentages of Responses: Non-PLC Group

<table>
<thead>
<tr>
<th>Item number</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>5</td>
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<td>0</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>0</td>
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</tr>
<tr>
<td>4</td>
<td>2</td>
<td>7</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>0</td>
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</tr>
<tr>
<td>6</td>
<td>2</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
<td><strong>49</strong></td>
<td><strong>7</strong></td>
<td><strong>2</strong></td>
<td><strong>0</strong></td>
</tr>
<tr>
<td><strong>Percent of response</strong></td>
<td>17%</td>
<td>70%</td>
<td>10%</td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>Item number</td>
<td>Nearly All</td>
<td>Most</td>
<td>Some</td>
<td>Few</td>
<td>Almost None</td>
</tr>
<tr>
<td>-------------</td>
<td>------------</td>
<td>------</td>
<td>------</td>
<td>-----</td>
<td>-------------</td>
</tr>
<tr>
<td>9</td>
<td>5</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>0</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>4</td>
<td>4</td>
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<tr>
<td>14</td>
<td>3</td>
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</tr>
<tr>
<td>15</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>25</td>
<td>27</td>
<td>10</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Percent of response</strong></td>
<td>40%</td>
<td>43%</td>
<td>16%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Grand total</strong></td>
<td>37</td>
<td>76</td>
<td>17</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

| Overall Response Percent | 28% | 39% | 13% | 2% | 0% |

Table 2

Scatter Gram and Percentages of Responses: The PLC Group

**Scatter gram and percentages of responses: The PLC Group**

<table>
<thead>
<tr>
<th>Item number</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>4</td>
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<td>0</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
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<tr>
<td>4</td>
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</tr>
<tr>
<td>8</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>39</td>
<td>50</td>
<td>13</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Percent of response</strong></td>
<td>38%</td>
<td>49%</td>
<td>13%</td>
<td>1%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item number</th>
<th>Nearly All</th>
<th>Most</th>
<th>Some</th>
<th>Few</th>
<th>Almost None</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>8</td>
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<td>10</td>
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<tr>
<td>12</td>
<td>5</td>
<td>5</td>
<td>3</td>
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<td>0</td>
</tr>
</tbody>
</table>
Tables 1 and 2 show the overall response to Strongly Agree, and Nearly All, which represent the most positive/favorable possible, in each group for all survey items to be 47% of the total number of responses possible for the PLC Group, and 28% of the total number of responses possible for the Non-PLC Group. Since the most unfavorable answers, by contrast would be Strongly Disagree and Almost None or Few Adults, the researcher wanted to examine those answers as well. However, the responses in those categories are so small in each of the two groups, the results seem inconclusive. To further examine the data, when one looks as the next-most unfavorable answer, one is left with the survey statistically most significant answers Disagree and Some Adults. In this light, taken in aggregate, the overall responses for the Non-PLC group for Disagree and Some Adults are higher with 13% of the total number of responses possible for the Non-PLC Group. By comparison, the PLC Group yields 9% of the total number of responses having the selections of Disagree and Some Adults of the total possible for the PLC Group.
To continue to examine the different sections of the tables, Items 1 through 8 centers on the school and Questions 9 through 15 queries about the adults/staff. For the PLC Group Items 1 through 8, 38% of respondents selected Strongly Agree of the total number of responses possible when answering questions about the school as a whole; while the Non-PLC group answered Strongly Agree and at a rate of 17% for question 1-8. Based on these responses, twice as many in the PLC Group feel strongly positive about their school’s climate as a whole, than does the Non-PLC group.

When examining Questions 9 through 15 asking specifically about the staff and the relationships among adults and between students and adults, in the context of a positive school climate, the PLC Group answered Nearly All (adults) at a rate of 58% over that portion of the survey, of the total number of responses possible for that group. The Non-PLC Group answered Nearly All (adults) at a rate of 40% over that portion of the survey, of the total number of responses possible for that group. Based on these responses, the PLC Group felt strongly about the staff and the relationships among adults and between students and adults (in the context of a positive school climate) over the Non-PLC Group at a ratio of 3:2.
Chapter 5
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In this final chapter of the thesis, the researcher will discuss the outcomes of the study, make conclusions and recommendations. As a reminder of the purpose of this thesis and the study, the hypothesis is provided: If a PLC is present as a school’s professional development, then the school’s climate will be reportedly better than those schools which do not have a PLC in Vicks County, as measured by this study’s instrument.

Summary

The purpose of this thesis and study was to explore whether the PLC and its collaborative practices have an effect on the climate of a school in a positive way. It has been strongly suggested by the literature that a school climate is an integral element of the success of a school (Eilers & Camacho, 2007; Stewart, 2008; Hollins et al., 2004). The review of the literature has suggested a link between the use of the PLC model for staff collaboration, including its intention for continuous improvement and increased student performance (DuFour & Eaker 1998). Furthermore, the literature has suggested that a positive school climate promotes teacher success and in turn greater student success.

The researcher sought and found a nexus in the literature between the school’s use of a PLC and bettering school climate (Eilers & Camacho, 2007; Stewart, 2008; Hollins
et al., 2004; DuFour & Eaker 1998; Hord, 1997). The researcher then wondered if the use of the PLC itself could better school climate. These questions and notions are alone interesting questions, but they are not the ultimate end-game. All of these intentions and outcomes for the use of the PLC and the betterment of school climate are all subservient elements to the greater goal: to improve education and student success.

The researcher set out to survey four schools, and to measure their climates after many schools took part in a two-year PLC project at the Vicks County Office of Education. Two of the schools in this study took part in the project and two did not. This posttest-only design tested the schools five years after the PLC project started. The intent was to compare the two groups with respect to difference in the quality of their individual school climates.

Conclusions

The result of this investigation has six key outcomes. Attention will be spent on between the two groups in relation to the experimental treatment of having structures PLC as expressed previously in the limitations discussion in Chapter 1 of this thesis. First, the most interesting difference is really not much difference at all. The researcher expected to have the two items from the survey which measured staff perception of their school using staff collaboration and elements of the PLC, Items 7 and 8, to be markedly different (Figures 13, 14, 15, &16). The expectation was certainly, that the PLC group would display high amounts of Strongly Agree when compared to the Non-PLC group. The differences gave the PLC Group only a minor favorability over the Non-PLC Group
when answering these items (Figures 13, 14, 15, & 16). This can be considered a confounding outcome that is deterrent to the basis of the study itself. The only plausible explanation, aside from no actual difference in the school’s professional development practice, would be that one group’s strong collaborative culture might be another’s weak one when taken in the context of each group’s distinct set of experiences. Collaboration is in the eye of the beholder?

The second outcome is that the PLC Group feels strongly by a wider margin than that of the Non-PLC Group in terms of their school promoting a supportive and inviting place to learn (Figures 1 & 2). The margin here is clear, almost 5:1 feeling strongly in agreeing with the statement of item 1 (Figures 1 & 2). The inference here is that the staff speaks about the goals of the school and of their work more often in the PLC Group; this can be a function of professionals working and discussing such things in the PLC.

The third outcome is that the PLC Group perceives itself as setting high academic standards for performance for all students and promotes academic success for all students more strongly that the Non-PLC Group (Figure 3 & 4; Figures 5 & 6). For Figures 3 and 4, the margin of strongly agreeing with the statements is 3:1. With the Figures 5 and 6, the margin exceeds 4:1 over the Non-PLC Group. This can be connected to the work of the PLC, having teachers collaborate on what should be taught and measuring student learning with a common assessment, as discussed in the literature review (Hord, 1997; DuFour & Eaker, 1998).

The fourth outcome of the study concerns the closeness of the professional relationships among the staff. The PLC Group reported that 39 percent think nearly all
staff has a close professional relationship, and 78 percent of the group selected favorable statements such as Nearly all and Most Adults having these relationships (Figures 23 & 24). The Non-PLC group had no Strongly Agree response to this statement and selected Agree at a rate of 56 percent (Figures 23 & 24). The relationship between staff is a well documented element of a positive school environment (Roney et al., 2007).

The fifth outcome is one of the ownership and desire of having a well-functioning school site: one that has a good climate. The statement from Item 14 is one of willingness and responsibility. It also speaks to the ambivalence and apathetic level of the staff. Proportionally, twice the amount of The PLC group felt that Nearly All felt responsible to improve their school climate than the Non-PLC Group (Figures 27 & 28). The data suggests that The PLC group has more sense of ownership over their schools climate by a margin of 3:2 when taking all favorable responses into account (Figures 27 & 28). This factor of the PLC Group perceiving more ownership is directly related to the shared leadership basis from which the PLC. Drawing an inference, The PLC group professionals have more likely had more say over the decisions at their school than the professionals in the Non-PLC Group due to the very nature of the PLC Group operating in a PLC. This of course, is an inference based on the literature and the data from this study’s survey.

The sixth and final outcome is in reference to the totality of the survey as evidenced by Tables 1 and 2. Every statement/question in the survey poses as a model or an ideal of the best elements of school climate. To disagree with the statements in the
survey, or say that few adults act or believe in the manner that the survey question ask, would be an admission of a negative school climate. This was the survey’s design.

If one looks at the most agreeable, most favorable answers which can be given to the items in the survey, one can conclude that these answers are Strongly Agree and Nearly All. Looking at the survey in its totality, 47 percent of the total responses from the PLC Group were in the most favorable answer for the entire survey, whereas the Non-PLC Group had nearly half of that percentage with 28 percent answering in the most favorable answer for the entire survey (Tables 1 & 2). The inference from this outcome is that a school or groups of professionals who work in a PLC perceive their school as coming closer to reaching the ideal school climate than those who do not.

The conclusion of this thesis will address the experimental hypothesis of this study. This study’s hypothesis is: If a PLC is present as a school’s professional development, then the school’s climate will be reportedly better than those schools which do not have a PLC in Vicks County, as measured by this study’s instrument. Due to the six outcomes of this study stated in the conclusion, the researcher holds the hypothesis as being supported.

There are ambiguities in the hypothesis and by nature of the study’s design which question the causation of the independent variable (the school’s use of the PLC) and the dependant variable (quality of school climate). The causation between the variables is undetermined, but the outcome has mild implications of such causation.

The hypothesis is deemed by the researcher to be supported due to the correlation between the independent variable and the dependant variable. This correlation is posed as
being present in the outcomes of this study. The evidence of this is a marked difference in the PLC Group and the Non-PLC Group with respect to factors of school climate which are consistent with the CSCS survey factors for measuring school climate. Those specific factors from the outcomes of this study suggesting strong correlation and acceptance of the hypothesis are: 1) school promoting a supportive and inviting place to learn 2) setting high academic standards for performance for all students and promotes academic success for all students 3) closeness of the professional relationships between the staff, 4) and teacher ownership. Furthermore, 5) the overall outcome of the survey when taken in aggregate poses that the PLC Group perceives their school as coming closer, by a ratio nearing 2:1, to reaching the ideal school climate than those in the Non-PLC Group.

Also, as a note to finalize the discussion on the overall difference between the two groups, there is a stark difference in the response rate to the survey of each group. The PLC Group had a response rate of 52%, while the Non-PLC Group had a response rate of 29%. There may be an inference made here regarding the “engaged”, or “ownership” nature of each group when considering this response rate data.

Recommendations

Further research on the subject of this thesis’ study could include a few key things. First, finding a real educational situation where causation can be measured between a school’s use of a PLC and school climate would be beneficial furthering the research in this field of education. Second, a larger sample that is truly random and is more socioeconomically and ethnically diverse would lend to more robust results on this topic.
Thirdly, it is exceedingly difficult to avoid convenience sampling weakness when examining the practices of professionals from different school and districts.

Future studies may be conducted in close concert with school district administration or actually be conducted by administration so that sampling can be more controlled. Certainly this study can be replicated. It seems very plausible that districts and county offices of education around the country which are training facilitators for PLC groups and are implementing school-wide and district wide PLC’s, others can run posttest-only studies in these instances also. Possibly, then more significant cause and effect conclusions would be drawn from pretest- posttest designs; thereby having all of the groups be PLC Groups and compare the degree to which their climate changes a few years later.

More research needs to occur in the realm of school climate and culture. Specifically, what factors lead to a negative climate for students and teachers, and what leads to a positive climate. In the findings of this researcher, school climate is critical to the health and performance of a school and its students. School climate should be every bit on an administrator’s “radar” as much as standardized test results because it can create conditions which foster teacher engagement and galvanize student engagement.

Potential applications of the research posed in this thesis would include a suggested alternative outcome for the use of a PLC. While the outcome of a PLC as improving teaching effectiveness is continuing to develop in the literature, this study suggests there to be a different, yet symbiotically beneficial outcome of improving school climate. Additionally, if a school is in need of a professional development structure for
continuous improvement, and also is in need of bettering their school climate this study might pose a reason for the school to adopt the PLC model to address both issues.

To finalize this recommendation, the author poses one more thought. The exploration of the literature and experimentation leaves one with a variable *chicken and the egg* conundrum. Did an existing favorable school climate lead these schools to adopt and develop collaborative and shared leadership practices of the PLC? Or, did the collaborative and shared leadership practices of the PLC lead to a better climate?
APPENDICES
APPENDIX A

Consent to Participate in Research
“Hello, my name is Connor West, I teach at River Forks Middle School. I am currently working on my thesis for a MA in Educational Leadership and Policy Studies. I am conducting a study on school climate. I would be most appreciative if you could take about ten minutes and fill out a survey that will come to you in an e-mail in the form of a surveymonkey.com invitation. It would be helpful if I received the survey by 5-7-10. No personal information will be gathered. No district, school, or staff name will be published; pseudonyms will be used per CSUS policies. No unpublished data will be shared with anyone. Please consider taking part in this short survey.

Thank you for your time, Connor West"
APPENDIX B

Instrument of the Study: School Climate Survey
Instrument of the study: School Climate Survey

Please indicate how much you agree or disagree with the following statements about this school. If the question is not applicable to your job, and you could not know enough to answer it, mark “Not Applicable.”

**This school...**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. is a supportive and inviting place for students to learn.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>2. sets high standards for academic performance for all students.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>3. promotes academic success for all students.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>4. emphasizes helping students academically when they need it.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>5. is a supportive and inviting place for staff to work.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>6. promotes trust and collegiality among staff.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>7. provides time for staff to collaborate professionally.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>8. uses staff collaboration and professional dialogue as the centerpiece for professional development.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
</tbody>
</table>

**How many adults at this school...**

<table>
<thead>
<tr>
<th></th>
<th>Nearly all</th>
<th>Most Adults</th>
<th>Some Adults</th>
<th>Few Adults</th>
<th>Almost None</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. acknowledge and pay attention to students?</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>10. want every student to do their best?</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>11. believe that every student can be a success?</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>12. have close professional relationships with one another?</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>13. support and treat each other with respect?</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>14. feel a responsibility to improve this school?</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>15. desire a positive school climate?</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
</tbody>
</table>
REFERENCES


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*Education Horizon, 86*(2), 85-97.


