

An Investigation of Assistant Principals', Teachers', and Principals' Perceptions of
Their Schools as Professional Learning Communities

Stanley Bernard Jones

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Carol Cash, Chair
Theodore Creighton
N. Wayne Tripp
Travis Twiford

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Abstract

The purpose of this study was to investigate assistant principals', teachers', and principals' perceptions of their schools as professional learning communities. The researcher examined how assistant principals, teachers, and principals viewed their schools as characterized by each of the five dimensions of professional learning communities: (a) shared leadership, (b) a shared vision, (c) collective learning and its application, (d) shared personal practice, and (e) supportive conditions. Each of the schools selected for this study was in the 5th year of implementation of an intensive school improvement process aimed at enhancing, sustaining, and improving student learning.

A comparative case study design was employed to investigate differences in the perceptions of assistant principals, teachers, and principals in the schools. The units of analysis for this study included one high school and its feeder middle school in the Commonwealth of Virginia that served as demonstration sites for a federally funded grant addressing literacy improvement for all students.

The School Professional Staff as Learning Community Questionnaire (SPSLCQ) (Hord, 1996) was used to collect quantitative data; subsamples of administrators and teachers at each school were interviewed to add qualitative data to the study. A composite model gleaned from the literature on professional learning communities served as the conceptual framework for this study and consisted of five interrelated dimensions of professional learning communities: (a) shared and supportive leadership, (b) shared values and vision, (c) collective learning and its application, (d) shared personal practice, and (e) supportive conditions. Assistant principals,

teachers, and principals were asked to describe their world, their work, and their experiences in their schools to create a picture of the schools as professional learning communities.

Findings from the two sites are reported for each of the five dimensions of the professional learning community model. Findings for each of the five dimensions of the professional learning community model were analyzed and interpreted for each school as well as findings that compared the schools across each dimension. Conclusions are provided for each of the five dimensions of the professional learning community model. Recommendations for practice and future research are presented for each of the conclusions.

Acknowledgements

This body of work is dedicated to the loving memory of my parents, the late Mr. Herbert C. Jones, Sr. and Mrs. Maggie Perrin Jones, who were both born and reared in the segregated South. The challenges of my own life and that of my three siblings are not nearly as complex or difficult as the challenges faced by parents. It is both in spite of and because of these complexities that my parents embedded in me and my brothers, the desire, motivation, tenacity, and duty to embrace education as a personal, social, and moral responsibility. This study is also dedicated to my loving wife, Regenia, and my wonderful daughter, Kayla, whose love, support and encouragement have sustained me in the completion of this grueling effort. This study is also dedicated to my phenomenal brothers: Col. Herbert C, Jones, Jr., Mr. Michael P. Jones, and Mr. Stephen Niamke and their families, who have provided both fraternal and personal support

This dissertation represents a return on an investment as a fulfillment of the expectations set forth for me by my parents. In this sense, I had no choice but to spend hundreds of hours reading, writing, thinking, and researching the broad concepts and practices associated with learning. It was my moral duty to pursue this level of study not only on behalf of my parents but also on behalf of any human who has been denied the opportunity, privilege, right or responsibility of learning. It is my profound belief that, other than love and the gift of life itself, learning is indeed one of life's greatest gifts.

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Chapter One: Introduction to the Study

Introduction

It is quite possible that no other public institution has been scrutinized and pressured to change its practices more than public schools. The most recent legislative example of the immense political pressure exerted on public schools to reform its practice is the 2002 reauthorization of the Elementary and Secondary Act (ESEA), the No Child Left Behind Act of 2001 (NCLB, 2002). NCLB has placed an unparalleled level of accountability on schools, school leaders, and teachers to improve student achievement by mandating universal proficiency for all students by the year 2014.

In addition to its emphasis on stronger accountability for student performance results, NCLB legislation provides legal impetus to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging state academic achievement standards and state academic assessments. The NCLB purpose statement includes language that addresses the educational needs of low-achieving children in the nation's highest poverty schools, children with limited English proficiency, migratory children, children with disabilities, Native American children, neglected or delinquent children, and young children in need of reading assistance. NCLB language also promotes schoolwide reform and ensures the access of children to effective, scientifically based instructional strategies and challenging academic content. Among the educational programs and practices that have been proven effective through scientific research, the professional learning community model (DuFour, DuFour, & Eaker, 2008; Fullan, 2001; Hord, 2004; Schmoker, 2006; Stoll, Bolam, McMahon, Wallace, & Thomas, 2006; has gained considerable attention in the literature as an emerging school reform process designed to improve the overall effectiveness of

schools and student learning (DuFour et al., 2008; Fullan, 2001; Schmoker, 2006; Stoll et al., 2006).

Proponents have contended that there is abundant research suggesting that the successful implementation of professional learning community practices is the most promising path for sustained and substantive improvement of schools (DuFour et al., 2008). Senge (1990) conceptualized the idea of “learning organizations” by describing them as “organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together” (p. 3). Senge further suggested that the most successful corporation of the future would be a learning organization.

Although Senge’s (1990) theories originated in the private sector, his work and that of other researchers suggests that the outcomes for organizing schools into professional learning communities are significant for both staff and students (DuFour et al., 2008; Hord, 1997, 2004). Outcomes for staff include a reduction in the isolation and autonomy experienced by teachers in the traditional school setting, shared responsibility for the total development of students and collective responsibility for student success. Other aftereffects include powerful learning that defines good teaching and creates new knowledge and beliefs about teaching and learners and increased meaning and understanding of the content that teachers teach and the roles they play in helping all students learn (DuFour et al., 2008).

Problem Statement

The purpose of this comparative case study was to investigate the perceptions of assistant principals, teachers, and principals perceptions of their schools as professional learning communities. Each of the schools was selected based on purposeful and convenience sampling.

Each school had implemented an intensive school improvement process aimed at enhancing, sustaining, and improving student learning. The schools included in this study were in the fifth year of implementation.

Rationale

Professional learning communities have emerged as arguably the best, most agreed-upon means by which to continuously improve instruction and student performance (Schmoker, 2006, p. 106). In addition, Fullan (1998) and Hargreaves and Fink (2006) asserted that teaching is simply not what it used to be. Expectations for school leaders and teachers have changed dramatically, resulting in intensified demands, greater responsibility, and heightened accountability for performance. These changes, coupled with the typical isolation that has traditionally accompanied the profession, limit school leaders' and teachers' access to new ideas, better solutions, and professional growth (Fullan, 1998; Hargreaves & Fink, 2006).

This study examined the continuous improvement efforts in two schools that were selected as the subjects of this case study. According to Creswell (2007), case study research involves the study of an issue explored through one or more cases within a bounded system, setting, or context. Yin (2003) contended that "a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident" (p. 13). Yin also suggested that the case study method is appropriate when the contextual conditions in which the study is situated may be highly pertinent to the phenomenon being investigated. Using Yin's definition of case study research strategy as applied in this study, the contemporary phenomenon under investigation was the maturity of the professional learning community in the selected

schools. The learning community is embedded within the school context, thereby indicating the case study as an appropriate research strategy (Yin, 2003).

Conceptual Framework

The conceptual framework for this study was derived from the work of Senge (1990), Louis et al. (1996), DuFour et al. (1998), and Hord (2004). The model developed by Hord (2004) and the Southwest Educational Development Laboratory (SEDL) represents a composite of the key dimensions of professional learning communities described in the literature.

According to DuFour et al. (2008), positive student outcomes resulting from schools' organizing into professional learning communities include academic gains in math, science, history, and reading larger than gains in traditional schools; lower rates of absenteeism; and increased learning that is distributed more equitably in the smaller high schools. Hord (1997) suggested that another positive outcome for students is smaller achievement gaps between students from different backgrounds. According to Hord, the goal in professional learning communities is for teachers and administrators to collaborate intentionally, frequently, and constructively to enhance their effectiveness as professionals for the benefit of the students and their learning. Hord characterized this practice as the process used in communities of continuous inquiry and improvement, better known as professional learning communities.

Professional learning communities represent a shift from centrally mandated, standards-based reforms toward a more collaborative, site-based model of reform. The emphasis on greater collaboration among teachers and leaders and a less hierarchical problem-solving organization is a basic tenet of the professional learning community model (Hord, 2004). According to DuFour, DuFour, and Eaker (2002), traditional schools are characterized, to a great degree, by teacher isolation. DuFour et al. contended that traditional schools function as a collection of independent

contractors united by a common parking lot. On the contrary, professional learning communities strive to create a culture in which collaboration is embedded into every aspect of the school culture (DuFour et al., 2002).

Hord (2004) attributed the origins of professional learning communities to the period following the publication of the 1983 National Commission on Excellence in Education report, *A Nation at Risk*. Hord suggested that the report identified significant problems in the teaching profession, ranging from poorly qualified teachers to poor preparation programs for teachers and school leaders.

According to Hord (2004), at about the same time, research focusing on the work setting and work culture began to emerge in both the corporate and public sectors. Research conducted by Rosenholtz in 1989 found that teachers who felt supported in their ongoing learning and classroom practice were more committed and effective than those who did not. Rosenholtz characterized support as teacher networks, cooperation among colleagues, expanded professional roles, and greater teacher efficacy in meeting students' needs. Rosenholtz found that teachers with a strong sense of their own efficacy were more likely to adopt new teaching practices and behaviors and felt encouraged to stay in the teaching profession.

Coincidentally, in 1990, Senge's *The Fifth Discipline* quickly began to influence organizational culture within the corporate sector (Hord, 2004). Senge's paradigm of a "learning organization" was subsequently explored by educators and published in leading educational journals (Hord, 2004). Darling-Hammond (2009) characterized the transforming role of teachers as contributors to decisions about curriculum and other school practices as shared decision making.

Following the 1989 findings of Rosenholtz , the Southwest Educational Development Laboratory (SEDL) initiated Creating Communities of Continuous Inquiry and Improvement (CCCII), a project that sought to find at least one school that exhibited the five dimensions of professional learning communities (Hord, 2004). At the beginning of the CCCII project, SEDL staff, along with Hord (1997), organized the characteristics of professional learning communities into five themes or dimensions: supportive and shared leadership, shared values and vision, collective learning and its application, shared personal practice, and supportive conditions; the researchers set out to find schools that had become professional learning communities (Hord, 2004).

SEDL staff explored a five-state region, encompassing Arkansas, Louisiana, New Mexico, Oklahoma, and Texas, from 1995 through 1997, seeking to learn from principals, teachers, and others connected to schools how they went about creating an environment that supported the five dimensions. Researchers examined schools that had each of these dimensions in existence as a continuum bounded by exemplary practices on one end and antithetical practices on the other (Hord, 2004).

The shift to a more collaborative approach to school reform, as espoused by proponents of professional learning communities, has led to the emergence of professional learning communities as a viable model of school improvement. Despite emerging research on the viability of professional learning communities as an effective model of school reform and continuous school improvement, evidence supporting its effectiveness has continued to lack the veracity that is derived from sustained and longitudinal research (Hord, 2004). Hord suggested the need for additional research to elucidate the credibility of the professional learning community model as a proven research-based practice.

Through her work with SEDL, Hord (2004) discovered a school in the region that was vibrant with learning among both students and teachers. According to Hord, the school staff characterized themselves as a community of learners in which the entire school learned together as teachers, parents, and students. Hord found that there was a shared vision among all constituents regarding what the school should accomplish and the type of environment it should have. Hord also discovered that teachers were actively involved in shared decision making, were encouraged to be innovative and reflective in their practice, and participated openly to resolve conflicts when they occurred.

Hord (2004) and the SEDL invested 4 years in following the school's work to learn from it. In 1995, the researchers began to consider how to enable other schools to work as a community of learners as did its model school and initiated a project entitled Creating Communities of Continuous Inquiry and Improvement (CCCII). The first task included conducting a literature review to determine if there were other schools that were flourishing through democratic leadership and ongoing professional development. In doing so, Hord discovered that these schools were described in the literature as professional learning communities.

The nature of leadership in the professional learning community is significantly different from the autocratic structure that has long dominated traditional schools. DuFour and Eaker (1998) concluded that the "autocratic approach may be well suited to the factory model of schooling, with its assumptions that there is one best way to do things and that it is the leader's job to identify the one best method and make certain that everyone adheres to it" (p. 183). In professional learning communities leadership and decision making are shared throughout the organization (Hord, 2004).

Leithwood and Jantzi (1999) concluded that in this new era, authority and influence usually associated with leadership are not necessarily allocated to those occupying formal administrative positions. In contrast, power is shared and distributed by organization members to others who can inspire colleagues' commitment to collective aspirations as well as the personal and collective skills needed to accomplish such aspirations (Leithwood & Jantzi, 1999).

Emergent in the literature was the idea that professional learning communities result from the reculturing of schools toward a more supportive structure for knowledge creation and knowledge exchange through teaming and collaboration (DuFour et al., 2008; Fullan, 2001; Hord, 2004). The research investigations examined in this study showed that the comprehensive redesign of schools, including democratically shared leadership, shared decision making, shared vision for school improvement that focuses on student learning, shared personal practice and its application to learning, and supportive school conditions, can improve student learning.

In conclusion, researchers found that students who attend restructured schools score better on conventional tests of achievement than do students in more traditional schools (Coleman, 2005; Hord, 2004; Newmann & Wehlage, 1995; Sebring & Bryk, 2000). Researchers also contended that restructured high schools tend to have higher levels of authentic pedagogy and that this factor has a substantial effect on the differences in achievement gains between schools. Collectively, the elements and dimensions of professional learning communities are represented in the following composite model.

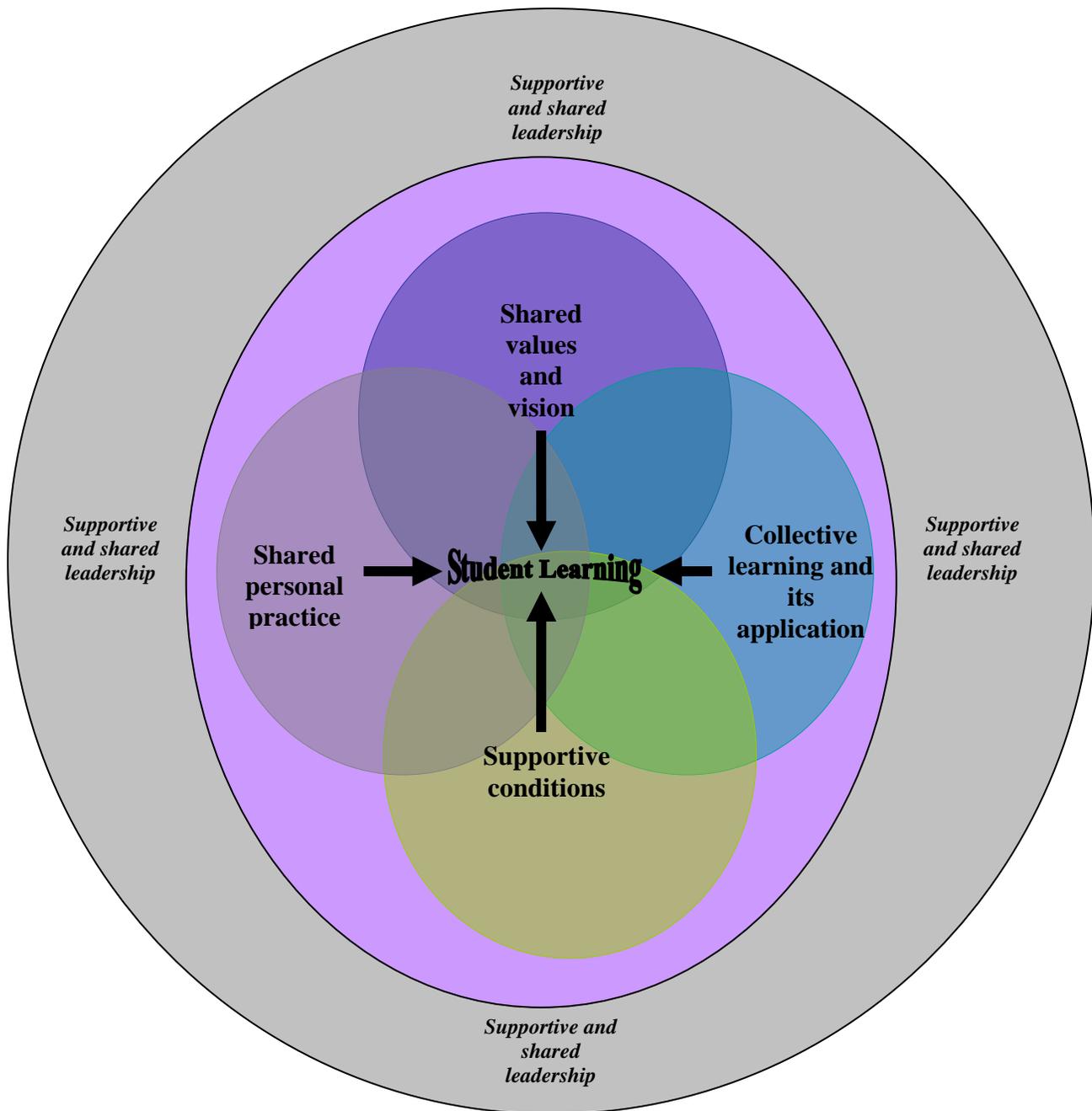


Figure 1. Composite model of professional learning communities (S. B. Jones, 2011)

The foundation of a professional learning community is built upon the extent which collaboration among school leaders and teachers is effective, continuous, and focused on student learning. There is also considerable overlap of the processes associated with each dimension such that the focus is always directed at examining and analyzing student achievement and

classroom room data for alignment, coherence, and decision making. Collectively, there appeared to be consensus in the literature that schools functioning as professional learning communities operate organizationally and culturally in the appropriate context for substantive improvements in instruction and student performance.

Hord (2004) and SEDL characterized professional learning communities according to five dimensions: (a) supportive and shared leadership, (b) shared values and vision, (c) collective learning and its application, (d) shared personal practice, and (e) supportive conditions. Each of these dimensions is described briefly in Table 1 and in greater detail in Chapter Two.

Table 1.

Dimensions of Professional Learning Communities (Hord, 2004)

Dimension	Description
Supportive and shared leadership	Requires the collegial and facilitative participation of the principal, who shares leadership, power, and authority by inviting staff input and action in decision making.
Shared values and vision	Involves an unwavering commitment to student learning that is consistently referenced in the staff's work.
Collective learning and its application	Requires the school staff at all levels to be engaged in processes that collectively seek new knowledge among staff and application of the learning to solutions that address students' needs.
Shared personal practice	Involves the review of teachers' behavior by colleagues and includes feedback and assistance activity to support individual and community improvement.
Supportive conditions	Includes physical condition and human capacities that encourage and sustain a collegial atmosphere and collective learning.

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Supportive and shared leadership. The structure of leadership in a professional learning community is one of continuous adult learning, strong collaboration, democratic participation, and consensus about the school environment and culture and how to attain it. Leaders work collaboratively and cooperatively with teachers and other staff instead of operating within the hierarchical, top-down approach found in the traditional school setting (Black, 2007). Leadership is characterized by accessible, visible principals who encourage teachers and others to assume such responsibilities as running meetings and planning agendas (Black, 2007).

By being both leaders and learners themselves, leaders in professional learning communities assume the responsibility for building the capacity for leadership in both individuals and teams throughout the organization (Hirsch & Killion, 2009). Within this context, leadership is separate from the person, role, and discrete individual behavior; instead, leadership operates through a community of leaders, all of whom share both accountability and responsibility for the success of the school (Hirsch & Killion, 2009).

In summation, supportive and shared leadership is transformative in nature (Leithwood & Jantzi, 1999). According to Leithwood and Jantzi, authority and influence with this form of leadership are not necessarily allocated to those occupying formal administrative positions. Instead, “power is attributed by organization members to whomever is able to inspire their commitments to collective aspirations, and the desire for personal and collective mastery over the capacities needed to accomplish such aspiration” (Leithwood & Jantzi, 1999, p. 453).

Shared values and vision. A basic attribute of professional learning communities is that the staff view shared values and vision as the goals that direct their common purpose (Hord et al., 2008). How individuals conceive the purpose of the school and how they describe their role in accomplishing its purpose frames how they construct their vision of what the school should

look like and how they work together to fulfill its purpose (Hord et al., 2008). According to DuFour et al. (2008), “the very essence of a *learning* community is a focus on and commitment to the learning of each student” (p. 15). When a school functions as a professional learning community, educators embrace high levels of learning for all students as both the reason the organization exists and the fundamental responsibility of those who work within it (DuFour et al., 2008).

The role of the principal is to work with others in creating the mission with staff (Hord, 2004). In addition, the principal continuously communicates the vision to all stakeholders (Hord, 2004). As evidence, reminders of high-quality student achievement and successful learning in the form of student work are displayed prominently throughout the school and the community (Hord, 2004). Ultimately, the focus is “*always* on students and learning, such that, each individual in the school community is responsible for his or her actions and the common good of the school and its students are considered on par with individuals’ personal ambitions” (Hord, 2004, p. 10). In a professional learning community, that image or goal is an undeviating focus on student learning (Louis & Kruse, 1996). In practice, the vision dictates the parameters of decision making about teaching and learning in the school (Hord, 2004). Vision also focuses school staff members on how they spend their time, what topics they discuss, and how resources are used and distributed (Hord et al., 2008).

Collective learning and its application. Barth (1990) contended that school leaders and teachers in a learning community engage in continuous inquiry about teaching and learning: “They are researchers, students of teaching, who observe each other teaching, have others observe them, talk about teaching, and help other teachers” (p. 46).

This context of learning by everyone for everyone is a major emphasis in professional learning communities. According to Hord, “such collaborative work is grounded in *reflective dialogue* or *inquiry*, where staff conduct conversations about students and teaching and learning, identifying related issues and problems” (p. 9). The purpose of such inquiry is collective learning: Individuals learn more collectively than if they are learning independently (Hord et al., 2008). The significance of such inquiry, according to Hord et al. (2008), is that the learning and reflection of the professionals are continuous, focus on students and their learning, and allow staff to develop in ways that can produce the kinds of changes necessary for increased student achievement.

Successful learning communities build shared knowledge bases, and this knowledge contributes to enhanced possibilities for the community’s vision (Hord et al., 2008). In summa, DuFour et al. (2008) suggested that educators in a professional learning community engage in collective inquiry into best practices about teaching and learning, candid clarification of their current practices, and honest assessment of their students’ current levels of learning. According to DuFour et al., “educators in a professional learning community have an acute sense of curiosity and openness to new possibilities” (p. 16).

Shared personal practice. Hord et al. (2008) proposed that review of a teacher’s practice and instructional behaviors by colleagues should be the norm. Commensurate with the importance of providing time for student learning is time provided for teacher learning (Hord, 2004). Hord (2004) contended that the process of “peers helping peers” is a learned skill among teachers that must be taught, nurtured, and supported.

According to Louis, Marks, and Kruse (1996), teachers’ work typically occurs within the confines of a single room with students and not with other teachers. To create the conditions that

enable teachers to learn from and with each other, Hord et al. (2008) suggested that a peers-helping-peers program could be initiated with the whole school's learning together some new strategy, such as questioning. This design would require all staff to learn questioning strategies, begin practicing the strategies in their classes, and then pair up and visit each other to give feedback (Hord et al., 2008). According to Louis et al (1996), feedback on instructional practices has been shown to positively impact teachers' sense of efficacy and personal commitment.

In summation, Hord et al. (2008) asserted that this process of shared personal practice is grounded in individual and community improvement that can be carried out meaningfully only if there is mutual respect among peers and members of the staff: "This dimension of the professional learning community is likely to be the last to be developed because of the history of isolation most teachers have experienced" (p. 15). According to Louis et al. (1996), when collegial relationships are fully developed and meaningfully nurtured, teachers and staff are professionally interdependent, and collegial relations represent strong cooperative bonds on matters central to teaching and learning.

Supportive conditions. Supportive conditions are those factors that constitute the infrastructure of professional learning communities. These factors include when, where, what, and how the staff come together routinely as one group to deliberately reflect, query, and problem solve issues related to student learning (Hord et al., 2008). Hord (2004) described supportive conditions as physical and structural conditions as well as relational and human capacity factors.

Physical and structural conditions include the following: time for staff to meet and discuss issues, the size of the school and physical proximity of staff to one another, teaching

roles that are interdependent, formal and informal communications structures, school autonomy, and teacher empowerment and efficacy (Louis et al, 1996). Similarly, Boyd (1992) suggested that physical factors conducive to collaboration and constructive school improvement include the following: availability of resources; schedules and structures that reduce teacher isolation; and policies that provide greater autonomy, foster collaboration, provide effective communication, and provide staff development (Hord and Sommers, 2008).

Of those factors, the most challenging is the use of time and space for building collegiality (Hord, 2004). According to Hord and Sommers (2008), “time has been cited as both a barrier (when it is not available) and a supportive factor (when it is present) by staffs engaging in school improvement” (p. 10).

Tschannen-Moran (2009) explained that leaders in schools with a professional orientation use their power and authority to engage in coaching and collaborating with underperforming staff to bring them into alignment with professional standards. These leaders also provide resources to continually extend the professional knowledge of all of their teachers and staff (Tschannen-Moran, 2009). According to Tschannen-Moran, the challenge for leaders is to enforce policies without abusing power or overutilizing coercive tactics and without abdicating their responsibilities for leadership.

To develop this level of trust, principals must nurture the human capacities required to build trust (Hord and Sommers 2008). They do this by creating both formal and informal activities so that staff may get to know each other and learn to relate to each other. Schools with high levels of trust share resources so that they can be allocated in ways that will have the greatest benefit for the survival of and support the flourishing of the organizations’ missions, visions, and goals (Tschannen-Moran, 2009).

This study was purposive in its intent to investigate the existence of professional learning communities within the context of the selected schools that served as the units of analysis for this study. This researcher sought to examine a contemporary phenomenon, professional learning communities, by investigating the degree to which assistant principals, teachers, and principals perceived their schools as such. It was posited that the existence of the intensive school improvement process in each school was a practice that had contributed to the existence of the dimensions of a professional learning community..

Research Questions

The purpose of this study was to investigate assistant principals', teachers', and principals' perceptions of their schools as professional learning communities.

The research questions that served as the basis of this study are as follows:

1. How do two schools' assistant principals, teachers, and principals reflect upon the core components of a professional learning community as described in the literature?

Subquestions

- 1.1 How do assistant principals, teachers, and principals perceive their respective schools as being characterized by shared leadership?
- 1.2 How do assistant principals, teachers, and principals perceive their respective schools as having a shared vision?
- 1.3 How do assistant principals, teachers, and principals perceive their respective schools as being characterized as schools in which collective learning occurs and the application of that learning is used to take action in addressing student needs?

- 1.4 How do assistant principals, teachers, and principals perceive their respective schools as being characterized as schools in which peers review and give feedback to one another to improve organization capacity?
- 1.5 How do assistant principals, teachers, and principals perceive their respective schools as being characterized as schools in which school conditions and capacities support the development of a professional learning community?
2. What is the relationship between the perceptions of assistant principals, teachers, and the principals of their schools as a professional learning community?
3. What, if any, are the differences between the levels of maturity of the professional learning communities between the two schools?

Definition of Terms

For the purposes of this study, the following definitions of key terms are underlying assumptions that are applicable to the investigation:

Application of learning – The application of knowledge to problems that impact student achievement (Hord, 2004). Teachers, faculty and staff use new learning to develop ways that produce the changes needed to increase student learning and school improvement.

Collective learning and its application – The engagement of staff at all levels in seeking the knowledge required to continuously improve student learning and student achievement (Hord, 2004).

Professional learning community (PLC) – The formal and informal organizational structures, practices, and conditions that enable teachers and staff to critically examine their current practices and make viable and substantive school improvements oriented toward learning

(Darling-Hammond & Richardson, 2009; DuFour et al., 2008; Hord, 2004; Louis et al., 1996; Schmoker, 2006; Senge, 1990).

Supportive and shared leadership – School leaders share power, authority and leadership democratically with teachers and staff (Hord, 2004). Teachers and staff are empowered to make decisions that reflect the shared vision, mission, and values of the school (DuFour et al., 2008; Hord, 2004).

Shared personal practice – The regular review by colleagues of a teacher’s behaviors and practice, which includes feedback, visits to each other’s classroom to observe instructional practices, and meaningful discussion about their observations with the teachers they have visited (Hord, 2004).

Shared values and vision – The staff’s consistent focus on students’ learning, which is strengthened by the staff’s own continuous learning (Hord, 2004).

Supportive conditions – The physical conditions, structures, and human capacities that encourage and sustain a collegial atmosphere and collective learning (Hord, 2004).

Significance of the Study

In an era of increasing accountability for student achievement currently measured by high-stakes testing, schools continue to struggle to improve the performance of many students, especially minority students and students with disabilities. Nonetheless, a number of researchers have asserted that professional learning communities have emerged as arguably the best, most agreed-upon means by which to continuously improve instruction and student performance (Schmoker, 2006).

Senge (1990) conceptualized the idea of “learning organizations” by describing them as “organizations where people continually expand their capacity to create the results they truly

desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together” (p. 3). Senge projected that those organizations that are able to discover how to tap people’s commitment and capacity to learn at all levels of the organization are truly likely to excel in the future.

Sebring and Bryk (1990) found that principals who created time and allocated resources that support meaningful professional development and made sure that there were regular opportunities for reflective dialogue among teachers about practice, pedagogy, and student learning experienced improved student achievement outcomes. These factors distinctly parallel the five dimensions of professional learning communities as defined by Hord (2004).

Newmann and Wehlage (1995) concluded that structural reforms, such as decentralization, shared decision making, flexible scheduling with longer classes, teacher teaming, common academic curriculum requirements for all students, reduction of tracking and ability grouping, external standards for school accountability, and new forms of assessment such as portfolios had some potential to advance student learning; none of them, either alone or in combination, however, offered a sure remedy. The researchers concluded that students who attend restructured high schools score better on conventional tests of achievement than do students in more traditional schools (Newmann & Wehlage, 1995).

Hord (2004) suggested that her work with the Southwest Educational Development Laboratory (SEDL) was just the beginning of what must be an intensive and well controlled pattern of research and measurement of professional learning communities. Hord also asserted that there was still considerable work to be done to fully understand and successfully implement professional learning communities.

Fellows (2005) recommended that schools wishing to use the expertise of their faculties for increased instructional performance should develop structures that encourage collegial conversation in formal settings and provide training to teachers to allow them to engage in productive conversations about teaching and learning. Fellows (2005) concluded that effective school improvement requires structures in schools that allow teachers to provide regular input into the school improvement process and to collaborate for improved instructional practice. Chan-Remka (2007) examined the perceptions of teachers and administrators in relation to the implementation of professional learning communities. Chan-Remka (2007) concluded that building a professional learning community is a difficult and lengthy task, as evidenced in the study. According to Chan-Remka, professional learning communities are more likely to occur in schools where staff are looking for opportunities to increase knowledge and improve skills and are provided with sufficient resources and time to develop professionally.

This study adds to the knowledge base necessary to edify the experience of professional learning communities in a greater variety of schools. The purpose of this study was to investigate assistant principals', teachers', and principals' perceptions of their schools as professional learning communities. A composite model of a professional learning community served as the foundational theoretical perspective that guided this investigation.

As proposed by Hord (2004), there is much work still to be done to fully understand and successfully implement professional learning communities in schools as a process for improving both teacher and student learning. It was the intent of this study to build, at least incrementally, on the knowledge base related to professional learning communities.

Organization of the Study

The purpose of this study was to investigate assistant principals', teachers', and principals' perceptions of their schools as professional learning communities. A composite model of a professional learning community served as the foundational theoretical perspective that guided this investigation. This study is organized into five chapters. Chapter One includes an introduction, a statement of the problem, rationale for the study, Hord's model of professional learning communities as the conceptual framework, research questions and subquestions, definition of terms, significance of the study, and the organization of the study.

Chapter Two includes a review of literature and background data related to professional learning communities, a section defining professional learning communities, an analysis of research findings on professional learning communities, and summary of the research.

Chapter Three includes the purpose of the study; the research design and methodology; research design justification; the research questions and subquestions; the sample selection and case descriptions; data collection procedures including instrumentation, data management, data analysis techniques; the timeline; limitations and delimitations of the study; and a summary.

Chapter Four presents the results of this study including demographic data, quantitative data for each research question, qualitative data, and a summary.

Chapter Five includes a summary of findings, implications for findings, implications for practice, and suggestions for further research.

Chapter Two: A Review of Literature

Background Data

The purpose of this literature review is to examine research studies related to professional learning communities. It also formally defines the professional learning community model used for this study through a thorough examination of the concepts, dimension, and core tenets of professional learning communities as found in the literature.

The researcher became interested in the topic of professional learning communities during his tenure as a school administrator. Using the EBSCO Host Database, Education Research Complete, the researcher reviewed other relevant studies based on the key words, professional learning community. This search yielded 486 results. The search was revised to include scholarly reviewed articles from January 1990 to December 2009. This revised search rendered 175 results. From these articles, those that dealt with professional learning communities specifically were considered. A total of 15 studies were considered as a result of the key word search and bibliographic information from other articles. Five of those studies were chosen due to their focus on school restructuring, including one study that comprised four complementary studies, are included in this review.

The researcher examined the following variables that describe the five dimensions of professional learning communities: (a) shared leadership, (b) a shared vision, (c) collective learning and its application, (d) shared personal practice, and (e) supportive conditions. The purpose of this chapter is to provide the foundation for this investigation through examination of (a) the conceptual framework of schools as learning organizations from which professional learning communities have evolved and exist; (b) the dimensions and characteristics of professional learning communities; (c) significant studies of professional learning communities;

- (d) analysis and synthesis of research findings related to professional learning communities; and
- (e) a summary of the research.

The history of improvements in the effectiveness of public schools in the United States is long and tumultuous (DuFour et al., 2008). The Elementary and Secondary Education was reauthorized as the No Child Left Behind Act of 2001 (NCLB, 2002). NCLB is a national policy initiative aimed at improving teaching and learning through educational reforms and heightened accountability measures. Specifically, NCLB includes mandates for schools to develop comprehensive school reforms, based upon scientifically validated and researched practices, so that all children can achieve academically. Among the myriad of mandated education reform efforts implemented in response to NCLB, professional learning communities appear to be emerging as a viable approach to improving the effectiveness of both teacher and student learning (DuFour et al., 2008; Fullan, 2001; Schmoker, 2006; Stoll et al., 2006). According to Schmoker, professional learning communities have emerged as the best, most agreed-upon means by which to improve instruction and student performance continuously.

A basic tenet of professional learning communities is that a learning organization is one where people continually expand their capacity to create the results they truly desire (Senge, 1990). Senge further defined a learning organization as one “where new and expansive patterns of thinking are nurtured, where collective wisdom is set free, and where people are continually learning how to learn together” (p. 3). Although Senge’s work was aimed primarily at businesses, its advocacy for a different approach to how organizations learn is applicable to schools (Hord, 2004). Senge espoused the idea that “learning organizations are possible because, deep down, we are all learners” (p. 4).

DuFour and Eaker (1998) asserted that the term *learning* implies ongoing action and perpetual curiosity and argued that most schools operate as if their personnel know everything they will ever need to know the day they enter the profession of teaching. The authors suggested that instead of creating conditions that promote collaboration and knowledge sharing among teachers and administrators, schools continue to operate around the factory model under which they were originally organized. DuFour and Eaker embraced Senge's (1990) idea of collective wisdom and asserted that the factory model is inadequate and outmoded within the current context of heightened accountability prescribed under NCLB.

DuFour and Eaker (1998) suggested that professional learning communities enable educators to create an environment that fosters mutual cooperation, emotional support, and personal growth. They asserted that professional learning communities empower teachers and school leaders to work together in accomplishing what they cannot possibly accomplish alone.

Although there is no universal definition of professional learning communities, there is broad consensus in the literature that such communities consist of people's sharing and critically interrogating their practice in an ongoing, reflective, collaborative, inclusive, learning-oriented, growth-promoting way (Mitchell & Sackney, 2002), thereby operating as a collective enterprise (Stoll et al., 2006). Concurrent in the literature was the idea that professional learning communities are the result of "reculturing" schools so that there is a more supportive structure for knowledge creation and knowledge exchange through teaming and collaboration (DuFour et al., 2008; Fullan, 2001; Hord, 2004). Fullan argued that although most organizations have invested heavily in acquiring technology for the purpose of managing large volumes of information, most continue to be woefully incompetent in knowledge sharing and creation.

Defining Professional Learning Communities

According to Stoll et al. (2006), “there is substantive international evidence that suggests that educational reform depends greatly on the teachers’ individual and collective capacity and its link to schoolwide capacity for promoting and improving student performance” (p. 221). Stoll et al. defined capacity as the complex blend of motivation, skill, positive climate, and organizational culture as well as the infrastructure supporting the culture. Implicit in their definition of capacity is the belief that organizational processes, procedures, and practices are those that embrace the conditions that enable the organization to be oriented toward learning. In concurrence with Stoll et al., a number of authors identified professional learning communities as organizations with a viable and promising strategy for sustained, substantive school improvement oriented toward learning (Darling-Hammond & Richardson, 2009; DuFour et al., 2008; Hord, 2004; Louis et al., 1996; Morrissey, 2000; Schmoker, 2006; Senge, 1990).

In the 1990s, the publication of Peter Senge’s (1990) *The Fifth Discipline* conceptualized the idea of “learning organizations” by describing them as

organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together. (p. 3).

Senge projected that those organizations that are able to discover how to tap people’s commitment and capacity to learn at all levels of the organization are truly likely to excel in the future.

The significance of Senge’s (1990) theory of learning organizations for schools is that it provided not only a framework through which schools could examine their own capacity to learn but also a process. Senge characterized the description of learning organizations as incorporating five disciplines: (a) personal mastery, (b) mental models, (c) shared vision, (d) team learning,

and (e) systems thinking. Senge's model transcended the hierarchical, top-down organizational structures typical of businesses and schools that were both profound and dominant in how these organizations functioned.

Louis et al. (1996) defined professional learning communities by identifying five elements of practice: (a) shared values, (b) focus on student learning, (c) collaboration, (d) deprivatized practice, and (e) reflective dialogue. Similar to Senge's (1990) suggestion that the structure of professional learning communities is not hierarchical, Louis et al. contended that the five dimensions defined in their model do not constitute a hierarchy; rather, they reflect the degree to which the presence of the elements are schoolwide in comparison to other forms of school culture.

A third model espoused in the literature by Hord (2004) of the Southwest Educational Development Laboratory (SEDL) characterizes professional learning communities in five dimensions: (a) supportive and shared leadership, (b) shared values and vision, (c) collective learning and its application, (d) shared personal practice, and (e) supportive conditions. Hord developed her model as part of the Creating Communities of Continuous Inquiry and Improvement (CCCII) project from 1995 through 1997, through which she worked with SEDL staff to explore a five-state region (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas), seeking to find at least one school in each state that exhibited the five dimensions.

DuFour et al. (2008) defined a professional learning community as being composed of "educators committed to working collaboratively in the ongoing process of collective inquiry and action research to achieve better results for the students they serve" (p. 14). The authors explained that professional learning communities operate under the assumption that the key to improved learning for students is continuous, job-embedded learning for educators. DuFour et

al. identified six characteristics of professional learning communities: (a) shared mission, vision, values, and goals—all focused on student learning; (b) a collaborative culture with a focus on learning; (c) collective inquiry into best practice and current reality; (d) action orientation—learning by doing; (e) a commitment to continuous improvement; and (f) results orientation.

Table 2.

Theorists Associated With Elements and Dimensions of Professional Learning Communities

Theorists	Elements and dimensions of professional learning communities				
Senge (1990)	Systems thinking	Shared vision	Team learning	Personal mastery	Mental models
Louis et al. (1996)	Collaboration	Shared values	Focus on student learning	Deprivatized practice	Reflective dialogue
Hord (2004)	Supportive and shared leadership	Shared values and vision	Collective learning and its application	Shared personal practice	Supportive conditions
DuFour et al. (2008)	Collaboration with a focus on learning	Shared mission, vision, values, and goals	Collective inquiry into best practice and current reality	Results orientation Action orientation – Learning by doing	A commitment to continuous improvement

Supportive and shared leadership. The structure and function of leadership in a professional learning community is fundamentally different from the structure typically found in traditional schools. Senge (1990) explained that a key role of leaders is the discipline of turning the mirror inward and learning to unearth their own internal pictures of the world and to analyze it with rigorous scrutiny. More importantly, Senge contended that once leaders have examined their own beliefs, “they must carry on learningful conversations that balance inquiry and advocacy, where people expose their own thinking effectively and make their thinking open to the influence of others” (p. 9). Senge characterized this process as mental models, which he

defined as deeply engrained assumptions of how we understand the world and how we take action.

Deal and Peterson (1998) characterized this aspect of leadership as school culture. Consistent with Senge's (1990) description of mental models, the authors asserted that school culture is the set of informal expectations and values that shape how people think, feel, and act in schools. They suggested that it is up to school leaders, teachers, and often parents to help identify, shape, and maintain positive school culture. Despite the sometimes overwhelming responsibilities principals face, setting the direction, vision, and focus of the school culture is perhaps one of the most important tasks.

Similarly, Hord (2004) asserted that there is clear evidence that principals are critical to the existence of a professional learning community in schools. Hord found that when school leaders sanction and actively nurture themselves and the entire staff as continuous learners, the school transforms into a learning organization. To increase staff capacities for continuous learning, principals should use strategies that include developing collegial relationships with staff, focusing staff on student success, making opportunities for teachers to learn, inviting teachers into decision making and implementation, and nurturing new ways of operating (Hord, 2004). Specifically, Hord found that when principals in her study interacted with subordinates as coprofessionals by working on the "task side," the issue or problem, and the "people side," collegiality, by critiquing problems and examining solutions collaboratively rather than apart from each other, there was a greater opportunity for continuous learning.

The process of continuous learning, according to Hord (2004), involves staffs being active in their own learning, being open to new ideas, and collectively seeking, gathering, and applying their new knowledge to their work. A critical role of the principal in these co-

professional interactions is to lead their teachers to work and learn with the common purpose and focus on how their collaboration and problem solving will impact student learning.

Hord (2004) found that school leaders in professional learning communities developed group learning practices that included research, synthesis of findings, and structured discussions related to school practices and instruction. These practices became common at staff meetings, faculty study groups, and committee deliberations and included changes in school schedules so that there was additional time for whole staff and small group planning and meetings (Hord, 2004).

Louis and Kruse (2000) argued that when school leaders develop a democratic form of leadership, teachers accept greater responsibility for student learning. Louis and Kruse suggested that effective leaders “emerge from the center of the school, rather than the top” (p. 4). Emerging from the center, according to the authors, requires leaders to give up the typical authoritarian behaviors, such as running meetings and imposing rules, and to adopt more democratic behaviors, such as creating networks of conversations that tie faculty together around the common issues of teaching and learning (Louis & Kruse, 2000). The authors suggested that effective leaders in professional learning communities manage conflicts that arise within their schools by (a) encouraging forums that are safe listening sessions for professionals to discuss differences of opinion, (b) constantly reinforcing community values and effectiveness, and (c) being willing to live with ambiguity.

DuFour et al. (2002) contended that one of the consistent cautions of those who have studied the improvement process, both inside and outside education is that significant and complex change requires dispersed leadership. Dispersed leadership involves how leaders and teachers are viewed. In comparing traditional schools to professional learning communities,

DuFour et al. suggested that in traditional schools, administrators are viewed as being in leadership positions whereas teachers are viewed as followers. The authors contended that in professional learning communities, administrators are viewed as leaders of leaders and teachers are viewed as transformational leaders.

As effective transformational leaders, principals, assistant principals, and teachers change the lives of those around them by motivating and inspiring them to accomplish things that seem impossible. Leithwood (1992) described this approach to leadership as being fundamentally aimed at fostering capacity development and higher levels of personal commitment to organizational goals on the part of the leaders' colleagues. According to Leithwood, "transformational" leaders help staff develop and maintain a collaborative, professional school culture and foster teacher development, hoping for teachers to develop internalized goals for professional development. In practice, Silins (1994) explained, transformational school leaders create the appropriate environment for substantive change by promoting educational restructuring and innovation, focusing on building vision, encouraging collaborative participation, and raising the role of follower to that of leader.

The nature of leadership in the professional learning community is significantly different from the autocratic structure that has long dominated traditional schools. DuFour and Eaker (1998) concluded that the autocratic approach may be well suited to the factory model of schooling, with its assumptions that there is one best way to do things and that it is the leader's job to identify the one best way and make certain that everyone adheres to it.

The role of the principal and school leader in this era of heightened accountability is transformational. Leithwood and Jantzi (1999) concluded that in this new era, authority and influence usually associated with leadership is not necessarily allocated to those occupying

formal administrative positions. In contrast, power is shared and distributed by organization members to those who are able to inspire commitment to collective aspirations as well as a desire for personal and collective mastery over the capacities needed to accomplish such aspirations (Leithwood & Jantzi, 1999). Ideally, the school leader should possess the qualities and skills to serve in transforming the organization to one that is learning enriched, that is, one in which both individual and group learning are promoted (Rosenholtz, 1989).

In summarizing the dimensions of transformative leadership, Leithwood and Jantzi (1999) concluded that effective school leaders must be able to lead in the development of the school's vision and goals, provide intellectual stimulation, offer individualized support, symbolize professional practices and values, demonstrate high performance expectations, and develop structures to foster participation in school decisions. Similarly, Sergiovanni (1990) advocated for what he termed "value-added leadership" for school improvement.

There are four stages in a transformative type of leadership: leadership by bartering (pushing), leadership by building (supporting), leadership by bonding (inspiring) and leadership by banking (monitoring). Sergiovanni (1990) argued that "principals must empower others, enable them to act on their educational and organizational beliefs, which enhances the role of all school personnel" (pp. 30-31).

Shared values and vision. There are compelling similarities among the four models of transformative leadership. All of the models are similar in the belief that shared values and a shared vision are critical components of professional learning communities. Senge (1990) contended that if there is any one idea about leadership that has inspired organizations for thousands of years, it is the capacity to hold a shared picture of the future it hopes to create.

Louis et al. (1996) characterized shared values and vision as the mission fundamental to any community in developing a sense of common expectations of and for all constituents. Hord (2004) characterized shared vision as an unwavering commitment to student learning that is persistently evident in the staff's work.

Similarly, DuFour et al. (2008) defined shared mission and vision as the very essence of a learning community. Louis et al. (1996) suggested that members of a school community affirm the expectations of and for each other through their language, actions, common beliefs, values, and underlying assumptions about children and learning as well as teaching and teachers' roles. The authors further suggested that these shared norms and values are fundamental to community beliefs toward the central importance of teaching and socializing children. Morrissey (2000) offered a comparable assertion, suggesting that a shared vision is a fundamental characteristic of professional learning communities. Morrissey contended that vision guides decisions about teaching and learning and supports the norms of behavior for school staff.

Collectively, each model clearly underscores the importance of an individual's ability to connect personal goals to the broader vision and mission of the organization. Senge (1990) concluded that it is nearly impossible to think of any organization that has sustained some measure of greatness in the absence of goals, values, and missions that become deeply shared throughout the organization.

In comparing the traditional school to a professional learning community, DuFour et al. (2002) asserted that the chief difference between the two is evident in the process through which organizational goals are developed. In traditional schools, the vision is developed by collecting the opinions of staff members and developing consensus on generic statements that articulate the vision that all staff members agree to accept. In professional learning communities, members

develop statements that clarify what students will learn, address how the staff will know what students have learned, and clarify how the school will respond when students do not learn.

Fullan (2001) defined vision in education as both means, striving to make a difference in lives of students, and ends, actually making a difference in the lives of students. In professional learning communities, the actions of teachers and administrators are both the means and ends and should be driven almost conclusively by the degree to which students learn or fail to learn. Newmann and Wehlage (1995) found that most successful schools function as professional learning communities and improve student learning when “teachers pursue a clear shared purpose of all students’ learning, engage in collaborative activity to achieve that purpose, and take collective responsibility for student learning” (p. 30).

Collective learning and its application. Senge (1990) defined collaboration as “team learning” and suggested that it is the capacity of members of a team to suspend their assumptions and enter into a genuine “thinking together” mode of operation. In elaborating on the concept, Senge suggested that team learning is more a process than a product, arguing that a learning organization is always in the process of practicing the discipline of learning and of becoming better or worse. Louis et al. (1996) argued that collaborative work increases teachers’ sense of affiliation with each other and with the school and their sense of mutual support and responsibility for efficacious instruction. Louis et al. further defined the importance of collaboration by describing it as the “reflective dialogue” between teachers that holds practice, pedagogy, and student learning under scrutiny. The authors contended that this type of collaboration results in growth and greater focus on student learning.

Similarly, Hord (2004) suggested that the professional learning community in a school is demonstrated by staff members, at all levels, collaboratively and continually learning through

reflective dialogue and inquiry. Hord asserted that when staffs conduct meaningful conversations about students, teaching, and learning, they are able to apply new ideas and information to problems and to identify solutions. The critical component to successful collaboration, implied by Hord, is that the inquiry, reflection, and dialogue must be continuous, ongoing, and purposely focused on student learning.

DuFour et al. (2008) theorized that the collaborative team is the fundamental building block of the professional learning community. In concurrence with Senge (1990), the authors suggested that “collaboration is a means to an end, not an end in itself” (p. 16). In describing the impact of collegial relationships, Little (2002) affirmed that when collegial relationships among staff members are at their strongest, teachers are professionally interdependent and conceive of their work as a joint enterprise. DuFour (2004), in summarizing the impact of teacher collaboration, contended that

when teachers work together to develop curriculum that delineates the essential knowledge and skills each student is to acquire, when they create frequent common assessments to monitor each student’s learning on a timely basis, when they collectively analyze results from those assessments to identify strengths and weaknesses, and when they help each other develop and implement strategies to improve current levels of student learning, they are engaged in the kind of professional development that builds teacher capacity and sustains school improvement. (p. 63)

The ultimate byproducts of collaboration are shared reflections, conversations, ideas, and information and their application to student learning. The result is collective learning and the application of that learning for the benefit of students. Hord (2004) contended that the key importance of this collaborative and reflective inquiry is that it is continuous, ongoing, and purposely designed to focus on benefiting learning. DuFour et al. (2008) concluded that professional learning community educators who engage in collective inquiry discover the best practices about teaching and learning, identify a candid clarification of their current practice, and

gain an honest assessment of their students' current levels of learning. The process of deliberate, continuous, and purposeful collaboration appears to be a prominent characteristic of professional learning communities.

Shared personal practice. Schmoker (2006) proposed that "teachers must meet regularly, at least twice per month for a minimum of 45 minutes, to help one another teach to the selected standards" (p. 106). According to Schmoker, the time must be very focused, with most of it spent talking in concrete terms about instruction. Schmoker also suggested that this time should include the unreserved examination of instructional practices and the impact of those practices (teaching) on student learning. Structuring time for teachers to discuss instructional practices, exchange ideas, and share strategies about effective teaching and its impact on learning is not necessarily a novel idea, but one that is common practice in schools that function as professional learning communities. Schmoker's proposal is consistent with that of other authors who have contended that a productive learning community purposely and intentionally provides opportunities for peers to help peers (DuFour & Eaker, 1998, Hord, 2004; Kruse, 2000).

Senge (1990) characterized shared practice as the discipline of personal mastery. According to Senge, personal mastery is the process of continually clarifying what is important and continually learning how to see current reality more clearly. A vivid example of shared practice that is consistent with Senge's model is the cultural shift that transforms schools that practice with a dominant focus on teaching to those that practice with a dominant focus on learning (DuFour et al., 2002). In this instance, seeing more clearly means focusing school improvement efforts on whether or not learning is occurring as expected. Just as most school reform efforts are likely to provide appropriate learning environments for students, school reform initiatives should also provide a comparable environment for teachers (Hord, 2004). The

transition to a dominant focus on learning requires schools and school leaders to create the structures and supportive conditions, both structural and human that enables opportunities for both teachers and administrators to expand their learning.

Hord (2004) alleged that a professional learning community's review of teachers' practices and behaviors by colleagues should be the norm. According to Hord, this practice should not be evaluative, but part of the "peers-helping-peers" process that includes teachers' visiting each other's classrooms regularly to observe, take notes, and discuss their observations with one another. Hord contended that the peers-helping-peers approach empowers teachers to act as change facilitators for each other, thus corroborating the enactment of new practices and behaviors through peer coaching and feedback. Louis et al. (1996) labeled this transition in which teachers move from behind their own classroom doors to share and trade the roles of mentor, advisor, and peer coach as deprivatized practice.

In contrast to the typical setting where teachers' work is often assumed to occur almost exclusively within the confines of a single room, deprivatized practice fosters the empowerment of teachers to improve practice through collaboration and shared personal practice (Louis et al, 1996). According to Louis et al. (1996), through collaboration teachers create shared understandings and meaning from complex and confusing data. In this instance, data may include how students are performing or not performing based on the standards identified by the school's governance. Louis et al. argued that collaborative work increases teachers' sense of affiliation with each other and with the school and their sense of mutual support and responsibility for effective instruction. Similarly, DuFour et al. (2002) asserted that traditional schools are characterized, to a great degree, by teacher isolation. According to DuFour et al., teachers in traditional schools are analogous to independent contractors united only by the

location of where they work.

In contrast, collaboration in a professional learning community is embedded into every aspect of the school culture (DuFour et al., 2002). DuFour et al. affirmed that, in practice, peer coaching relationships among teachers create opportunities for teamed teaching structures, structured classroom observations, and other methods of collaboration. Nevertheless, the development of shared personal practice that is embedded in routine practices is not likely to occur by happenstance or haphazardly. According to DuFour et al., collaboration by invitation does not work (p. 11).

DuFour et al. (2002) cautioned that for effective shared personal practice to occur, collaborative team members must work interdependently to achieve common goals. Specifically, DuFour et al. found that shared practice is effective in schools when time for shared personal practice is built into the school day and school calendar, products of shared personal practice are made explicit, team norms guide collaboration and shared practice, teams pursue specific and measurable performance goals, teams focus on key questions associated with learning, and teams have access to relevant information.

Likewise, Leithwood (1992) found that school productivity as it relates to learning for students is substantially enhanced when school staff members learn how to make the most of their collective capacities in solving school problems through shared practice. According to Leithwood, organizations that emphasize participative decision making as much as possible are radically different from traditional schools. The author contended that power in these organizations is “consensual” in nature and is manifested through other people, not necessarily over other people (Leithwood). Such power emerges when teachers are helped by their leaders

and peers to find greater meaning in their work, to meet higher level needs in their work, and to develop enhanced instructional capacities (Leithwood).

Shared personal practice has to do with the extent to which teachers and school leaders share common work values, purposefully and actively engage in specific conversations about their work, and help each other enlist in the work of the school (DuFour & Eaker, 1998; Fullan & Hargreaves, 2000; Hord, 2004; Louis et al., 1996; Newmann & Wehlage, 1995; Senge, 1990). Ultimately, the aim of collaboration is to enhance teaching and learning (Blankstein, 2004).

Similarly, Rosenholtz (1991) asserted that the ultimate goal of a professional learning community is to enhance learning outcomes for students so that the school becomes a “learning enriched” school, as opposed to a “learning impoverished” school. As Blankstein (2004) indicated, the goal is not to become a professional learning community, but to improve collegial collaboration such that it directly impacts the overall quality of learning for teachers and students. In addition, the goal of collaboration is to support the larger school vision; as a result, the school’s mission, vision, values, and goals provide context and direction for all members of the school community.

Supportive conditions. Hord (2004) described structural conditions as physical factors such as time for staff to meet and talk, the physical proximity of staff to one another, the degree to which teacher roles are interdependent, and the system of both formal and informal communication. According to Hord, physical factors are those variables that may impact the degree to which the school conditions support continuous learning. Hord differentiated physical factors from what she termed “human capacities.” Human capacities in this context include attributes such as respect, trust, collegiality, and attitudes.

Comparably, Boyd (1992) identified several human factors as variables closely related to school culture and conditions that are necessary for school change. Boyd contended that the following are factors that extensively impact school culture: (a) positive teachers' attitudes toward schooling, students, and change; (b) students' heightened interest in and engagement with learning; (c) norms of continuous inquiry and continuous improvement; (d) widely shared vision or sense of purpose; (e) the norm of involvement in decision making; (f) collegial relationships; and (g) a sense of community in the school. The extent to which these characteristics of school culture are nurtured, maintained, and present determines the extent to which supportive conditions exist within the school climate. In a like manner, Fellows (2005) suggested that the professional learning community can be neither developed nor maintained without structural conditions that support teachers' ability to participate in the development of a vision, to share in the decision-making process, to determine the necessary learning, to be able to apply the learning, and to share practices for continued school reform.

Senge (1990) defined this aspect of the culture of a learning organization as team learning. Senge contended that "team learning is vital because teams, not individuals, are the fundamental learning unit in modern organizations" (p. 10). In articulating the significance of team learning, Senge declared that the fundamental characteristic of the relatively unaligned team is wasted energy. As an example, Senge suggested that although individuals may work extraordinarily hard, their efforts do not efficiently translate to team effort. Conversely, "when a team becomes more aligned, a commonality of direction emerges, and individuals' energies harmonize" (Senge, 1990, p. 234).

Emergent in the literature was the core belief that professional learning communities have as their foundation a commonality of purpose, shared vision, and function such that individuals

do not sacrifice their personal interests to the larger team vision; rather, the shared vision becomes an extension of their personal visions (DuFour and Eaker, 1998; Hord, 2004; Louis et al., 1996; Schmoker, 2006; Senge, 1990). DuFour et al. (2002) contended that the existence of supportive conditions in schools is evident by what is celebrated.

DuFour et al. (2002) suggested that the degree to which schools can function as a team focused toward a particular goal or challenge and the way in which they respond to accomplishing that challenge may serve as indicators of the level of supportive conditions present in the school culture. Specifically, DuFour et al. argued that virtually “all schools have ceremonies and celebrations; however, professional learning communities develop ceremonies to recognize and celebrate improvement, in addition to recognizing students who have met a high arbitrary standard” (p. 26).

It is a common occurrence in most schools to recognize, both formally and informally, those students who have demonstrated the highest academic achievement (e.g., valedictorian, National Honor Society, or the Principal’s List). What distinguishes professional learning communities from traditional schools is the extent to which recognizing both the highest achievers while also celebrating the improvements that other students are making is valued (DuFour et al., 2002). DuFour et al. argued that celebrations should be explicitly linked to the vision and values of the school and improved student achievement. Similarly, “if schools truly value improvement in student achievement, then they should celebrate it when it occurs” (p. 27).

A final aspect of supportive conditions articulated by DuFour et al. (2002) is the concept of persistence. According to DuFour et al., persistence is a conscious effort to “stay the course” in attaining the school’s vision and mission and avoid shifting to the latest school reform initiative or program. Given the frequency with which school reform initiatives have come and

gone, it is easy to understand why teachers may resist what they perceive to be new programs or practices. DuFour et al. contended that in a professional learning community, teachers can take comfort in the fact that school administrators are committed to the school's becoming the kind of school described and published in the vision statement. In practical terms, an effective school leader differentiates between those practices or behaviors that are inconsistent with the mission and those that support the mission; he or she makes an effort to discontinue inconsistent efforts while persistently continuing those that are aligned with the school's vision and mission.

Fellows (2005) suggested that in a professional learning community, the ability to align practices with the vision and mission of the school enables the school to develop a process for substantive innovations. All innovations, however, are evaluated against the collaboratively determined vision of the school and remain in place until research provides evidence that another innovation will better serve students' learning (DuFour et al., 2002; Fellows, 2005).

This study was guided by the premise that professional learning communities empower teachers to work together with school leaders and others to provide high-quality pedagogy and improve student learning. According to Hord (2004), the following five dimensions define professional learning communities: (a) supportive and shared leadership, (b) shared values and vision, (c) collective learning and its application, (d) shared personal practice, and (e) supportive conditions. These five attributes change organizational structure and arrangement of schools. DuFour et al. (2002) differentiated between traditional schools and professional learning communities by providing a comparison table that shows structural and cultural differences between the two. The authors indicated that "professional learning communities are the best hope for reculturing schools" (p. 9). DuFour et al. insisted that changing the structure of the school is not enough; altering the belief system is also a requisite requirement for truly

transforming a school into a professional learning community. The cultural shift comparative chart developed by DuFour et al. is displayed in Table 3.

Table 3.

Comparison of Traditional Schools and Professional Learning Communities (DuFour et al., 2002)

Traditional schools	Professional learning communities
Collaboration	
Teacher isolation	Collaborative team
Developing a mission statement	
Statements are generic. Statements are brief, such as, "We believe all children can learn."	Statements clarify what students will learn. Statements address the question, "How will we know what students are learning?" Statements clarify how the school will respond when students do not learn.
Developing vision statements	
Statements are average opinions. Statements deteriorate into wish lists. Statements are often ignored. Statements are often dictated or developed by a few.	Statements are researched based. Statements are credible and focus on essentials. Statements are used as a blueprint for improvement. Statements are widely shared through broad collaboration.
Developing value statements	
Values are random. Statements are excessive in number. Values are articulated as beliefs. Statements focus on self. Statements are random. Goals are excessive in number. Goals focus on means rather than ends. Goals are impossible to assess or measure. Goals are not monitored.	Values are linked to vision. Statements are few in number. Statements are used as a blueprint for improvement. Values are articulated as behaviors and commitments. Statements are linked to the vision. Goals are few in number. Goals focus on desired outcomes. Goals are translated into measurable performance standards. Goals are continuously monitored. Goals are designed to produce short-term wins and also stretch aspirations.

(continued)

Table 3 (continued)

Traditional schools	Professional learning communities
Focus on learning	
Primary focus on teaching.	Primary focus on learning.
Curriculum	
Each teacher independently decides what to teach. Curriculum overload is common.	Collaboratively agreed upon curriculum focuses on what students are expected to learn. Reduced content means meaningful content is taught at greater depth. Assessment is developed through collaboration. A plan for responding to students who are not learning is developed through collaboration.
Collective inquiry	
Decisions about improvement strategies are made by “averaging opinions.”	Decisions are research based, with collaborative terms of teachers seeking out “best practices.”
Research and results	
Effectiveness of improvement strategies is externally validated. Teachers rely on others outside the school to identify what works. Emphasis is placed on how teachers like various approaches.	Approaches are internally validated. Teams of teacher try various approaches and collaborate on how the approaches affect student learning. The effect on student learning is the primary basis for assessing various improvement strategies.
Leadership	
Administrators are viewed as being in leadership positions whereas teachers are viewed as “implementers” or followers.	Administrators are viewed as leaders of leaders. Teachers are viewed as transformational leaders.
School improvement plans	
School improvement plans focus on a wide variety of things.	School improvement plans focus on a few important goals that will affect student learning.
The goal is often to “get the plan turned in”; then the plan is ignored.	The school improvement plan is a vehicle for organized, sustained school improvement.

(continued)

Table 3 (continued)

Traditional schools	Professional learning communities
Celebration	
<p>Collaboration is infrequent. When teachers are recognized, the celebration almost always focuses on groups.</p> <p>Celebration and recognition occur when students reach an arbitrary standard.</p> <p>Recognition is limited to a few individuals.</p>	<p>In addition to celebration and recognition when a standard is met, celebrations recognize improvement.</p> <p>The school works hard to “create” winners and celebrate their successes.</p> <p>Celebrations are linked to the vision and values of the school and improved student achievement.</p>
Persistence	
<p>Improvement efforts frequently shift as new fads and trends come along.</p>	<p>The school is committed to “staying the course” in the attainment of the school vision. A new initiative is implemented only if it is determined that the change will help the school achieve its vision of the future.</p> <p>The leader’s role is to promote, protect, and defend the school’s vision and values and to confront behavior that is incongruent with the school’s vision and values.</p>

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Analysis of Research Findings on Professional Learning Communities

The purpose of this literature review was to investigate research studies that explored the key factors contributing to the creation, implementation, and sustainability of professional learning communities. The development of professional learning communities has emerged in the literature as a crucial topic related to school restructuring and its impact on student learning. The research investigations examined in this study focused primarily on teachers’ and school leaders’ perceptions of their schools as professional learning communities.

There are several methods for examining teachers' and school leaders' perceptions of their schools as professional learning communities. Most researchers in this area of study have used case study approaches as well as survey methods in an attempt to assess the degree to which the schools function as professional learning communities and the resultant impact on student learning. The instruments usually have contained items related to the various characteristics that constitute professional learning communities as defined in the literature. These studies have showed that the following elements can improve student learning: (a) comprehensive redesign of schools, including democratically shared leadership; (b) shared decision making; (c) shared vision for school improvement that focuses on student learning; (d) shared personal practice and its application to learning; and (e) supportive school conditions.

A study conducted by Newmann and Wehlage (1995) of the Center on Organizational and Restructuring of Schools (CORS) examined restructured schools that were characterized as professional learning communities. The researchers investigated schools that were restructured for the purpose of addressing and elevating the quality of student learning. In this study, the degree to which teachers practiced authentic pedagogy, the extent to which the school functioned as a professional learning community, and supportive conditions were factors that had direct impact on the quality of student learning (Newmann & Wehlage). Shared governance, independent work structures, professional development, and deregulation were the considered factors related to supportive conditions (Newmann & Wehlage).

A challenge for the researchers was to determine which kinds of structural changes work best for students (Newmann & Wehlage, 1995). The researchers concluded that structural reforms included the following: decentralization, shared decision making, flexible scheduling with longer classes, teacher teaming, common academic curriculum requirement for all students,

reduction of tracking and ability grouping, external standards for school accountability, and new forms of assessment such as portfolios. According to Newmann and Wehlage, “[although] each of these reforms has some potential to advance student learning, none of them, either alone or in combination, offers a sure remedy” (p. 8, 1995). The success of each of these educational reforms alone or in combination is ultimately dependent upon how well it is aligned with the values, beliefs, and implementation skills of the educators who put the reforms into practice (Newmann & Wehlage, 1995).

Given this challenge, Newmann and Wehlage (1995) focused their study on how restructuring tools could be used to elevate learning for all students. The researchers examined the interrelationships of the quality of student learning, authentic pedagogy, organizational capacity, and external support as factors leading to improved student outcomes. Student learning was characterized as high-quality intellectual work for students, including challenging learning tasks and clear goals for high-quality learning (Newmann & Wehlage). The researchers emphasized that teachers must agree on a vision for authentic high-quality intellectual work and communicate the vision to students and parents.

Authentic pedagogy was defined by researchers as instructional and assessment practices that teachers must use according to the school’s vision (Newmann & Wehlage). To address this question, the Center on Organizational and Restructuring of Schools (CORS) developed teaching standards to gauge the intellectual quality of the pedagogy that was observed in the study (Newmann & Wehlage, 1995). According to Newmann and Wehlage, the CORS standards underscore teaching that requires students “to think, to develop in-depth understanding, and to apply academic learning to important, realistic problems” (p. 10, 1995). The researchers found

that authentic pedagogy improved student achievement equitably for all students, regardless of race, gender, or socioeconomic status.

According to Newmann and Wehlage (1993), the term *authentic* is used to distinguish between achievement that is significant and meaningful and that which is trivial and useless. Newmann and Wehlage (1995), in alignment with CORS, defined authentic pedagogy as achievement based on three criteria consistent with major proposals in the restructuring movement: (a) students construct meaning and produce knowledge; (b) students use disciplined inquiry to construct meaning; and (c) students aim their work toward production of discourse, products, and performances that have value or meaning beyond success in school.

To further clarify CORS standards, the researchers articulated standards for instruction representing the quality of intellectual work that were not tied to any specific learning activity such as lecture or small-group discussion (Newmann & Wehlage). Instead, Newmann and Wehlage asserted that the standards were intended to assess the extent to which any instructional activity, be it traditional or innovative, engages students to use their minds well. The first three standards, higher order thinking, deep knowledge, and substantive conversation, place special emphasis on cognitive complexity or what has been described as “teaching for conceptual understanding” (Newmann & Wehlage, 1995, p. 23). The fourth standard, connections to the world beyond the classroom, emphasized teaching that helps students apply such understanding in contexts beyond school that are often considered more authentic (Newmann & Wehlage).

According to Newmann and Wehlage (1995), teachers communicate what is important to learn through two main activities: “the tests or other tasks they use to assess mastery; and the instruction they conduct to help prepare students for assessment” (p. 20). Together, these activities make up pedagogy. The ability of a school to collectively offer authentic pedagogy as

defined by Newmann and Wehlage is dependent greatly upon the types of professional interactions that occur among teachers. The quality of these interactions is due in large part to the extent to which restructuring enables teachers to collaborate deliberately, with the context of the collaboration being solely to focus on student learning. Newmann and Wehlage found that the most successful schools were those that used restructuring to influence the quality of interactions among teachers in a manner that helped them function as professional communities.

According to the researchers, high-quality learning and authentic pedagogy does not occur without highly trained and competent staff that work collectively and collaboratively as a unit and strive for continuous improvement (Newmann & Wehlage,). Newmann and Wehlage noted that the studied schools that found a way to channel staff and student efforts toward a clear, commonly shared purpose for student learning exhibited greater organizational capacity for impacting student learning. Similarly, the researchers found that schools that created opportunities for teachers to collaborate and help one another achieve a shared purpose were more successful in offering authentic pedagogy and more effective in promoting student achievement.

The study conducted by Newmann and Wehlage (1995) comprised four complementary studies and synthesized 5 years of research conducted by the Center on Organization and Restructuring of Schools. The four studies included the School Restructuring Study (SRS), an examination of 24 significantly restructured schools; the National Educational Longitudinal Study of 1988 (NELS), involving a nationally representative sample of 10,000 students from grades eight through twelve; and the Study of Chicago School Reform, an analysis of survey data from 8,000 teachers and principals in 400 elementary and 40 high schools from 1990 to 1994.; and the Longitudinal Study of School Restructuring, a 4-year case study of eight schools.

Collectively, the four studies included rigorous 3- and 4-year longitudinal case study investigations as well as survey methods and collection of student test data (Newmann & Wehlage, 1995). In summation, the data represented 1,500 elementary, middle, and high schools throughout the United States and field research in 44 schools in 16 states (Newmann & Wehlage, 1995).

The School Restructuring Study included data collected through narrative reports and supplemented by surveys of students and staff, conventional tests of student achievement, and the scoring of authentic performance (Newmann & Wehlage). Researchers also conducted intensive studies of mathematics and social studies instruction in 130 classrooms, with complete data on 2000 students (Newmann & Wehlage, 1995). The study consisted of intensive examination of authentic pedagogy and student performance in a carefully selected group of schools that had made significant progress in restructuring.

In analyzing the School Restructuring Study results, Newmann and Wehlage (1995) found a positive relationship between the levels of authentic pedagogy and student learning. The researchers found a difference of 30 to 60 percentile points between the combined scores of students on the National Assessment of Educational Progress (NEAP) for mathematics and social studies as a result of experiencing high versus low authentic pedagogy (Newmann & Wehlage, 1995). The researchers found that these results were consistent regardless of the student's social background.

Levels of authentic pedagogy were defined as follows: low authentic pedagogy equaled one standard deviation (*SD*) below the mean for all School Restructuring Study (SRS) classes; average authentic pedagogy equaled the mean for all SRS classes; high authentic pedagogy equaled one standard deviation above the mean for all SRS classes (Newmann & Wehlage). An

average student was defined as one who scored at the mean on self-reported socioeconomic status and on the NAEP test items (Newmann & Wehlage).

All schools in the School Restructuring Study (SRS) demonstrated clear progress in organizational restructuring, but they varied considerably in their success on the standards for authentic pedagogy (Newmann & Wehlage). The researchers found many examples of high-quality authentic practice in both mathematics and social studies (Newmann & Wehlage). The researchers concluded that the variability in levels of authentic pedagogy is evidence that authentic pedagogy affects student learning (Newmann & Wehlage). According to Newmann and Wehlage, combining the results for students in mathematics and social studies yielded improved academic performance for students at all grade levels in both mathematics and social studies.

The National Educational Longitudinal Study of 1988 (NELS) also examined the impact of restructuring practices on student achievement. This study included a representative sample of over 10,000 students, followed from Grade 8 (1998) through Grade 12 (1992) in approximately 800 high schools nationwide (Newmann & Wehlage).

Researchers analyzed data drawn from surveys of teachers and students as well as school principals' reports on curriculum, instruction, and school climate (Newmann & Wehlage). Student achievement data were drawn from National Assessment of Education Progress (NAEP) tests in mathematics and science for Grades 8, 10, and 12 (Newmann & Wehlage). According to Newmann and Wehlage, this study complemented the SRS, a more intensive study of school restructuring, by examining the factors that influence student learning on conventional tests over 4 years of high school in a large representative sample of secondary school students.

The study was based on a sample of 9,631 seniors in 789 high schools (Newmann & Wehlage, 1995). An average student was defined as one who scored at the mean of eighth-grade achievement (Newmann & Wehlage). Levels of authentic pedagogy were defined as follows: low equaled a school that scored one standard deviation (*SD*) below the mean on authentic pedagogy; average equaled a school that scored at the mean on authentic pedagogy for all schools; and high equaled a school that scored one standard deviation above the mean on authentic pedagogy (Newmann & Wehlage).

When comparing schools that had at least three significant restructuring practices in place to those with traditional reform practices and those with no reform practices, researchers found that schools with significant restructuring practices showed more impressive achievement gains in mathematics, reading, history, and science (Newmann & Wehlage). Researchers sought to determine the effects of restructuring on the growth of achievement in mathematics and science (Lee, Smith, & Croninger, 1997). Researchers selected these outcome measures for three reasons: (a) using these measures simplified the complexity of results, (b) data on classroom instruction collected by NELS were limited to subjects of mathematics and science, and (c) information from both self-reports and transcripts regarding the courses students took in mathematics and science was more precise than information for other subjects (Newmann & Wehlage).

Because researchers were investigating how students' learning in mathematics and science is influenced by the organization of the schools they attend, a hierarchical linear modeling design method was used to measure student performance differences in scores at different points in time (Lee et al., 1997). This study explored two parameters of growth—8th-10th grade (early) and 11th-12th grade (late)—as growth or gains in student achievement in

mathematics and science (Lee et al., 1997). According to Lee et al., using growth-curve analysis, researchers investigated outcomes for each subject: early and late gains in achievement and the social distribution of these gains according to the students' socioeconomic status.

Group means on many school characteristics were tested using one-way analysis of variance (ANOVA) with two contrasts: (a) schools with significant restructuring practices compared to traditional schools and (b) schools with no restructuring practices compared to traditional schools (Lee et al., 1997). Of the schools that had been the subjects of the 1988 NELS, 46% were classified as having at least three significant restructuring practices in place in 1990. Another 43% had several traditional reform practices in place, and 11% had no reform practices in place (Newmann & Wehlage, 1995). Restructuring practices included such processes as students' keeping the same homeroom throughout high school, interdisciplinary teaching teams, mixed-ability classes in mathematics and science, school-within-a-school programs, and parent volunteers in schools (Newmann & Wehlage). Traditional practices included school departmentalization with chairs, common classes for the same curricular track, increased graduation requirements, parent-teacher conferences each semester, and student evaluation of course content (Newmann & Wehlage).

Researchers found that restructured high schools, compared to those with only traditional practices or no reforms, showed greater achievement gains in mathematics, reading, history, and science for Grades 8 to 10 and also for Grades 11 to 12. In concurrence with findings of the SRS, the 1988 NELS researchers also found that restructured high schools had higher levels of authentic instruction in mathematics and science than did either traditionally reformed or non-reformed high schools (Newmann & Wehlage).

Students receiving higher levels of authentic instruction reflected higher achievement gains (Newmann & Wehlage). In mathematics and science, both early and late in high school, achievement gains were substantially greater in schools with higher levels of authentic instruction (Newmann & Wehlage). The increment in gain points between low- and high-instruction schools ranged from 50% to 100% (Newmann & Wehlage).

Researchers interpreted these findings in practical terms; they concluded that the difference in percentage gains might be construed in the following manner: for example, an average student who attended a high-authentic-instruction school would learn about 78% more in mathematics between Grades 8 and 10 than a comparable student in a low-authentic-instruction school (Newmann & Wehlage). In summation, researchers asserted that the NELS findings indicate that students who attend restructured high schools score higher on conventional tests of achievement than those in more traditional schools (Newmann & Wehlage). Researchers also contended that restructured high schools tend to have higher levels of authentic pedagogy and that this factor has substantive effect on the differences in achievement gains between schools.

The Study of Chicago School Reform included survey data from 8000 teachers and principals in 400 elementary and 40 high schools from 1990 to 1994 (Newmann & Wehlage). In addition to data collected from surveys, this study included 3-year case studies of 12 elementary schools, including six schools actively involved in restructuring (Newmann & Wehlage).

During the 1990s, Chicago schools witnessed gradual but consistent improvement in student test scores (Sebring & Bryk, 2000). According to Sebring and Bryk, in 1990, about a quarter of the students in Grades 3 through 8 performed at levels consistent with national norms in reading and mathematics. By 1999, this proportion had grown to 35% in reading and 43% in mathematics (Sebring & Bryk, 2000). One third of the elementary schools raised the percentage

of students reaching national norms in reading by at least 15% (Sebring & Bryk, 2000). Sebring and Bryk reported that nearly half of the schools showed an increase ranging from 5% to 14%.

According to Sebring and Bryk (2000), the period of significant improvement in student achievement was related to changes in school governance that resulted in radical restructuring. The establishment of the 1988 Chicago School Reform Act resulted in a parent-dominated Local School Council (LSC) for each school (Sebring & Bryk). The LSCs were given the power to hire and fire principals (Sebring & Bryk). As a result of this dramatic restructuring, principals gained greater autonomy in selecting their staff and received additional financial resources relative to the proportion of low-income students their schools served (Sebring & Bryk, 2000). According to Sebring and Bryk, elementary schools eventually received an average of \$500,000 a year for use in financing improvements.

The radical shift in governance structure coupled with greater autonomy, as indicated by Sebring and Bryk (2000), created an opportunity for each school community to tailor its instructional focus to the specific needs of the community it served. In their study of the Chicago School Reform, Sebring and Bryk found that three common elements emerged among principals of productive schools: their leadership, their strategies, and the issues on which they chose to focus.

Sebring and Bryk (2000) found that principals of improving elementary schools were masterful in using a combination of support and pressure to motivate teachers to become personally accountable for student learning. The authors found that principals of productive schools were characterized as inclusive and used a facilitative orientation, employed an institutional focus on student learning, were efficient managers, and relied on both pressure and support to motivate others (Sebring & Bryk, 2000).

According to Sebring and Bryk (2000), principals of productive schools sought opportunities to bring parents, teachers, and other staff members into leadership positions because they believed that change requires the commitment, talent, and energy of many individuals. The authors found that principals of productive schools set high standards for teaching, understood how children learn, and encouraged teachers to take risks and try new methods of teaching to engage students.

Sebring and Bryk (2000) also found that principals of productive schools ensured that teachers had what they needed to perform their instructional tasks and were committed to minimizing classroom disruptions while maximizing academic and support services for student in need. Pressure on teachers, as well as support for teachers, was accomplished by persuading teachers to adopt new approaches while ensuring that time be set aside for teachers to learn the new strategies. The authors found that principals in productive schools provided the appropriate level of professional development or coaching and provided the appropriate materials teachers needed to teach effectively (Sebring & Bryk, 2000).

The idea that skillful school leaders use a combination of pressure and support is consistent with what Sergiovanni (1990) described as “value added leadership.” Sergiovanni contended that there are four stages in this type of leadership: leadership by bartering (pushing), leadership by building (supporting), leadership by bonding (inspiring), and leadership by banking (monitoring). The model of leadership described by Sebring and Bryk (2000) is similar to Sergiovanni’s contention that principals must empower others and enable them to act and lead based on their educational and organizations beliefs.

As indicated by Sebring and Bryk (2000), principals of productive schools use strategies that include dealing with problems that can be resolved quickly, while maintaining a focus on

their long-term goals of improving student achievement, and utilizing the school improvement plan (SIP) as a process for coherently addressing long-term processes. As an example, one school addressed the issue of overcrowding by finding additional instructional space in the community for extra classrooms (Sebring & Bryk, 2000, p. 441). According to Sebring and Bryk, by addressing highly visible issues quickly, school leaders provide their staff with concrete examples of change and develop a sense of organization responsiveness and accountability with their staffs.

Similarly, Sebring and Bryk (2000) contended that principals who are aware their schools need to make significant improvements in student achievement that require difficult pedagogical changes concentrate their efforts on strengthening the quality of the faculty. School leaders in their study maintained a long-term focus on the instructional core by recruiting talented new teachers and targeting professional development that would enable the organization to promote best practices (Sebring & Bryk, 2000).

Sebring and Bryk (2000) found that principals in the Chicago School Reform study used the SIP as a tool for bringing together parents, community members, and teachers to work on a coherent approach for school improvement. The authors found that the SIP articulated specific goals and strategies for improving school leadership, parental involvement, professional development and collaboration, a student-centered learning environment, and classroom instruction (Sebring & Bryk, 2000). This process, according to Sebring and Bryk, helps schools ensure that the planning and implementation of strategies are coherently developed, strategically implemented, and routinely monitored so that teaching strategies are used to strengthen instruction and improve learning.

A final element of the findings by Sebring and Bryk (2000) included the key issues on which principals of productive schools focused their energy. Sebring and Bryk found that principals of these schools exploited opportunities to promote stronger ties among the school, parents, and other community members; developed teachers' knowledge and skills through professional development and collaboration; and created a professional community within the school.

The findings of Sebring and Bryk (2000) revealed that productive schools in the Chicago Reform Study had active LSCs that carried out duties such as approving the SIP and the budget, reaching out to parents to encourage participation in school activities and events, and encouraging interactions among parents, teachers, community members, and school leaders. The role of the principal in working with the LSCs was to ensure that they were well informed and prepared to make decisions by sharing school performance data and using facilitative, collaborative, and shared decision-making processes and structures.

The authors found that principals in these schools were particularly visible in the community (Sebring & Bryk, 2000). In case study schools, Sebring and Bryk found that principals' actions ranged from helping to close down a drug house, to giving talks in the community to counter negative perceptions of the school, to stopping a neighborhood liquor store from selling products to students. In another case, one of the school leaders worked with local physicians to provide immunizations to students before the start of school (Sebring & Bryk, 2000). In both cases, the role of school leaders was truly nontraditional and facilitative.

According to Senge (1990), Hord (2004), and DuFour et al. (2008), the fundamental difference between a traditional leader and a leader in a PLC lies in the way in which the

administrator is viewed. In a traditional school, the principal is a leader of teachers; in a PLC, the principal is a leader of leaders (Senge, 1990).

Sebring and Bryk (2000) asserted that leaders of leaders strive to build internal capacity by developing their own knowledge as learners as well as developing teachers' knowledge and skills. In their study, Sebring and Bryk found that principals of productive schools created time and allocated resources that supported meaningful professional development. Principals made sure there were regular opportunities for reflective dialogue among teachers about practice, pedagogy, and student learning (Sebring & Bryk, 2000). In some cases, principals used their discretionary funds to pay teachers for at least part of the time they devoted to collaborative activities (Sebring & Bryk, 2000). In other instances, the principals worked with faculty leaders to create structures in the form of design committees; leadership teams involving parents, teachers, and counselors; and grade-level committees that worked collaboratively to carry out the work of change (Sebring & Bryk, 2000).

The Longitudinal Study of School Restructuring included a 4-year case study of eight schools that had employed different forms of restructuring in four school communities. The schools in this study included two urban elementary school, two urban middle school, two urban highs, and a rural middle school and high school (Newmann & Wehlage, 1995). From 1991 through 1994, researchers conducted observations and interviews at each school, studying teachers' work, interactions in groups, participation in decision-making and organizational learning (Newmann & Wehlage, 1995).

Researchers found that school restructuring could improve student learning but that there was no simple recipe for improving successful school restructuring (Newmann, 1996).

According to Newmann and Wehlage (1995), Louis et al. (1996), and Newmann (1996), for a

restructuring effort to work, the effort must be clearly focused on four key factors: student learning, authentic pedagogy, school organizational capacity, and external support. Researchers concluded that when students and teachers have clear and consistent messages about the vision, objectives, and methods of learning, and these messages are clearly communicated to all members of the school community, the planning, evaluation and implementation of new approaches that focus on student learning are more likely to be successful (Newmann & Wehlage, 1995).

Researchers also concluded that the vision for high-quality student learning must be “authentic” in its focus on student achievement (Newmann & Wehlage, 1995). Authentic student achievement was described as the construction of knowledge – students learn to organize, interpret, and analyze information, instead of merely reproducing bits of knowledge from a classroom lecture or textbook; disciplined inquiry – students use established knowledge in science, mathematics, history or literature to express in-depth understanding in elaborate ways such as writing an essay or engaging in a substantial discussion about the topic, instead of checking boxes or filling in the blanks on a test; and , value beyond school – students produce work or solve problems that can be applied in the real world (Newmann, 1996). Researchers concluded that when schools are restructured and work around this kind of vision, students learn more (Newmann & Wehlage, 1995).

Researchers found that the most successful schools are those that use restructuring to help them function as a “professional community” (Newmann, 1996). A professional community is defined as one in which restructuring efforts channel staff and students toward a clear and commonly shared purpose for student learning and build capacity for its staff to support high intellectual quality for students (Newmann & Wehlage, 1995). Researchers concluded that the

level of professional community in a school had significant effects on student achievement whether achievement was measured as authentic performance or in more conventional methods such as standardized tests. According to Newmann and Wehlage, building organizational capacity was dependent upon the extent to which school leaders and schools create opportunities for teachers to collaborate and help one another. Researchers found that when teachers in these schools took collective, not just individual, responsibility for student learning, that this collective sense of responsibility lead to them to constantly seek to improve their teaching practices (Newmann & Wehlage, 1995).

Based on these findings, Newmann (1996) asserted that certain structural changes, when combined with the professional skills, leadership, and trust, can substantially strengthen the professional community within a school and improve student learning. Researchers concluded that the following conditions enable schools to develop the type of professional community needed to promote learning of high intellectual quality: shared governance over school policies and practices; independent work structures, such as team teaching, that foster collaboration; professional development that enhances technical skills; deregulation that enables schools to pursue a vision for high intellectual standards; and parent and community involvement in a broad range of school affairs (Newmann & Wehlage, 1995). Researchers also argued that external agencies can help schools focus on student learning and enhance organizational capacity by: setting standards for high intellectual learning; providing sustained professional development support; and improving deregulation as a tool for increasing school autonomy (Newmann & Wehlage, 1995).

Collectively, the studies involved in the research conducted by Newmann and Wehlage (1995) provided practical insight on best practices for school restructuring to impact student

learning. Specifically, the work by Newmann and Wehlage supported the premise that a school's organizational structure, its culture, and the degree to which the culture supports a focus on student learning are variables that affect the quality of learning. More importantly, the research by Newmann and Wehlage identified four factors that contribute to improved student achievement outcomes: the quality of student learning, the degree of authentic pedagogy, organizational capacity, and external support. Each of these factors is distinctly parallel with the five dimensions of professional learning communities as defined by Hord (2004).

An initial research project conducted by the Southwest Educational Development Laboratory (SEDL) entitled *Creating Communities of Continuous Inquiry and Improvement (CCCII)* involved studying schools that were already professional learning communities (Hord, 2004). To identify schools that had become professional learning communities, researchers used the five dimensions of professional learning communities: supportive and shared leadership, shared values and vision, collective learning and its application, shared personal practice, and supportive conditions (Hord, 2004). Researchers examined schools with each of these dimensions in existence as a continuum bounded by exemplary practices on one end and antithetical practices on the other (Hord, 2004).

Researchers were especially interested in schools that appeared to be much closer to exemplary and chose schools that varied significantly from one another regarding their demographic, ethnic, and socioeconomic makeup (Hord, 2004). Using a network of key educators in the SEDL region, five schools were selected for the study (Hord, 2004).

Data collection for this study consisted of a paper-and-pencil survey instrument and one-to-one interviews. The survey instrument, the *School Professional Staff as Learning Community Questionnaire*, developed by Hord in 1996, consisted of 17 descriptors grouped into five major

dimensions of professional learning communities as identified in the literature. Each descriptor was grouped along a 5-point continuum that enabled the respondent to rate the degree to which a staff collectively reflected the dimensions and attributes of a professional learning community (Hord, 2004).

To further delineate the degree to which a school was or was not reflective of a professional learning community, for each item the researchers developed three statements to describe a continuum representing exemplary practice, midpoint practice, and antithetical practice. Exemplary practice was described as practice in which the entire staff discussed visions for improvement, thereby resulting in consensus on a shared vision among staff (Hord, 2004). Midpoint practice was described as visions for improvement not being thoroughly explored, with some members agreeing and others not (Hord, 2004). Staffs' holding widely divergent visions for improvement were considered antithetical practice (Hord, 2004). Copies of the questionnaire were mailed to the professional staff members of each school with instructions for completing the survey (Hord, 2004). According to Hord, nearly 100% of those instruments were returned.

As indicated by Hord (2004), a second method of collecting data consisted of interviews of teachers, counselors, librarians, and principals. Researchers also interviewed assistant principals, central office staff, paraprofessionals, and parents based on presite visit information (Hord, 2004). Researchers requested that the principal at each of the five sites select staff members to participate in the interviews based on length of time at the school (Hord, 2004). According to Hord, selection included most staff members who had been at the school at least 3 to 5 years prior to the study. Researchers stipulated this condition to ensure that feedback included those individuals who had participated in the effort to change the schools structurally

and operationally (Hord, 2004). The number of interviews at each school ranged from 23 to 33, resulting in a total of 139 interviews for the five schools combined (Hord, 2004).

According to Hord (2004), more than 100 hours of dialogue between interviewers and professional staff were recorded and transcribed. Researchers employed a constant comparative method to sort data according to the five dimensions of professional learning community practices (Hord, 2004). Researchers triangulated responses by purposely seeking instances of similar input from more than one interviewee (Hord, 2004).

Researchers analyzed data and findings in narrative format and prepared briefing papers that were submitted in drafts to principals and assistant principals as a strategy for confirming discussion points and conclusions (Hord, 2004, p. 18). As indicated by Hord, this review of briefings enabled school personnel to add missing pieces of data and to clarify misunderstandings. Once data were reconfigured and organized according to the five dimensions, researchers synthesized the data for relevance to gain insight into how professional learning communities are developed, supported, and built (Hord, 2004).

Hord (2004) found clear evidence that the administrator is the key to the existence of a professional learning community. Hord examined how principals operate in their roles to develop settings where all professional staff members assume full responsibility for the highest quality learning in the school.

Hord (2004) also found that these principals used specific strategies to increase their staffs' capacity for continuous learning: developing collegial relationships with staff, focusing staff on student success, creating opportunities for teachers to learn, involving teachers in decision making and the implementation of new practices, and finding ways to nurture new approaches of operating. According to Hord, each of these strategies required both patience and

diligence on the part of the principal, while teachers adjusted to the new expectations and learned to accept their new role in helping students learn. Hord found that these principals provided the infrastructure to support the adoption of new behaviors by allowing teacher's time and space to learn, understand, and discuss the value of these changes in increasing staff capacities for continuous learning.

As indicated by Hord (2004), the relationship between the teacher and principal in the traditional school is hierarchical. In the traditional setting, teachers are expected to carry out decisions made above them in the organizational structure rather than to be a part of making those decisions (Hord, 2004). In contrast, teachers in a professional learning community develop collegial relationships with the principal. Hord found that principals involved in the study knew that the best way to establish collegiality was to work along with teachers, without "pulling rank" for their individual perspectives to prevail. Hord noted that the strongest supporters for principals during this study included those teachers who vehemently resisted and criticized principals during the initial phase in the formation of the professional learning community. Teachers in this study reported that their principals' willingness to be supportive and help them correct any mistakes they may have made led them to believe their principal trusted and respected them as professionals (Hord, 2004).

Hord (2004) maintained that for teachers "to enter into a mutual relationship with the principal, they must let go of such former habits as criticizing the principal along with other teachers and instead learn to openly discuss questions and concerns in the presence of the principal" (p. 24). According to Hord, interviews with teachers in this study revealed that each teacher characterized his or her principal as personally interacting with the teacher to learn about his or her beliefs, philosophy, concerns, and interests related to teaching and learning. A key

component in the development of collegiality is significant investment in building meaningful and trustful relationships among teachers, administrators, and others.

Hord (2004) suggested that the investment in meaningful relationships enables principals to lead their teachers to work and learn with a common focus on student success. Hord asserted that in the traditional view of organizational hierarchy, teachers feel an obligation and responsibility to answer to those above them in the organization. Hord found that principals in professional learning communities focus on student success, so that the staff learns to become advocates for what they believe children need most in their schools. According to Hord, teachers learned this advocacy role by following the principal's lead in adopting what is referred to as the "first filter": "If it's good for kids it's possible; if it's not good for kids, we don't need to do it" (p. 24). Developing the first filter required that every member of the staff work collaboratively to develop and identify the vision for students and the school (Hord, 2004).

Hord's (2004) study found that principals set aside time for whole-group learning that involved the entire staff. Teachers in these schools developed learning practices that included routine opportunities to research, synthesize, and deliberate on topics related to instruction and school operations (Hord, 2004). According to Hord, these practices were common at faculty meetings, during study groups, and in committee deliberations. Hord also indicated that teachers in these schools knew that their participation in seminars and professional development outside the school included the responsibility of bringing back information and sharing it with their colleagues. This culture of sharing, collaborating, and learning was supported, nurtured, and encouraged by school leaders (Hord, 2004). Ultimately, Hord found that principals nurtured a school culture that embraced learning by modeling their own willingness to learn and providing opportunities for all staff to learn.

According to Hord (2004), each principal in this study developed an organizational infrastructure for involving staff in making decisions about the school. One principal met with teachers individually or in small groups to discuss decisions pertinent to them such as schedules or departmentalization of the school (Hord, 2004). Another principal designed a tiered approach for involving teachers in decision making (Hord, 2004).

Hord (2004) found that principals sometimes agreed to accept a staff or committee decision that differed from what he or she would have chosen. Hord asserted that this practice manifested itself in the development of a school culture that increased its collective capacity and commitment for taking responsibility for learning.

Hord (2004) found that to support shifts in the organizational structure that enabled staff to adjust to changes, principals altered school schedules and arranged time for the entire staff to plan and meet. Hord noted that in one school the principal relocated the special education department in her school from an isolated area of the campus into the main building. In another school, the principal reconfigured the school by placing same-grade-level classes on the same hallway to enhance teacher collegiality and support between classes (Hord, 2004).

Hord (2004) found that when teachers displayed initial resistance and concern for these changes, principals responded by using patience to support teachers as they adapted to the changes. According to Hord, principals guided the behaviors of the teachers and helped them to understand the value of proximity to their peers. Hord also found that the building of relationships was continuously reinforced by principals who modeled with all teachers individually what it meant to trust, support, and encourage others in relationship building.

Hord (2004) asserted that as an organizational arrangement, the professional learning community is a powerful staff development approach and a viable strategy for school change and

improvement. Hord contended that principals must be willing to create the context and conditions that nurture the development of a professional learning community.

In summation, Hord (2004) found that schools were able to create professional learning communities because principals were able to move beyond traditional roles to a role that included actively sharing leadership and encouraging collective learning among teachers (Clark & Astuto, 1994; Leithwood et al., 1997; Sergiovanni, 1990). According to Hord, substantive school improvement becomes an ongoing focus in which all staff members take full and collective responsibility. Hord concluded that when principals build trust with staff and staff builds trust with each other, a culture is created where teachers take collective responsibility for ensuring every student's success. Establishing trust and building collegial relationships empower all members of the staff to interact as professionals. Hord found that when staff members in the five schools in this study evolved over time into less traditional roles and developed trusting relationships, there was greater collective responsibility, commitment, and capacity to make their schools better.

A study conducted by Coleman (2005) examined teachers' perceptions of administrative leadership styles and schools as professional learning communities. Coleman's study was built on the premise that professional learning communities are important to restructuring educational organizations. Coleman also asserted that leadership is proven to be important to both restructuring and professional learning communities.

According to Coleman (2005), evidence suggests that when the principal develops conditions and processes that provide opportunities for teachers to improve their practice, there is a positive impact on student learning. Coleman's study was grounded in social capital theory, which suggests that individuals are conditioned by their interactions and that productive use of

this social control can produce greater effectiveness (Coleman, Hoffer, & Kilgore, 1982; Coleman & Schneider, 1993). Professional learning communities rely on social capital for their success (Coleman, 2005; Hord, 1997; Sergiovanni, 1990).

Coleman (1990) asserted that the concept of social capital theory demands that “we come to grips with the notion that modern society consists of a set of independent individuals who are each asked to achieve goals that are independently determined and that the purpose of the social system consists of a combination of these actions of independent individuals” (p. 300). Coleman defined social capital as follows:

Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of a social structure, and they facilitate certain actions of individuals who are within the structure.

Like other forms of capital, social capital is productive, making possible the achievement of certain ends that would not be attainable in its absence. (Coleman, 1990, p. 300).

At the foundation of Coleman’s (1990) theory of social capital is the concept that relationships are built on trust. As an example, Coleman argued that “a singular group characterized by distrust will achieve less than a group with high levels of trust” (p. 304). In a professional learning community, it is critical that administrators provide significant support to ensure that trust, knowledge, and authority order the stability of relationships within the school (Coleman, 1990).

According to Coleman (1990), high levels of social capital result in a high quality of leadership and the impact of that leadership among those who are members of the organization. In conclusion, Coleman contended that social capital theory creates the infrastructure in which the implementation of professional learning communities can be developed.

In addition to social capital theory, Coleman's (2005) study was grounded in transformational leadership theory. According to Coleman, transformational leadership theory is developed from the conceptual foundation of the distributed leadership theory, including cognition and activity theories used to understand human activity in complex environments (Bass & Riggio, 2006). Coleman (2005) asserted that distributed leadership theory, as applied to his study, is based on three assumptions: School leadership is best understood through considering all formal and informal leaders, leadership is distributed over the practice of all members within the organization, and leadership is distributed in and through an organizational situation or context.

Coleman (2005) characterized school leadership in this study as the acquisition, identification, allocation, coordination, and use of social, material, and cultural resources necessary to establish the conditions for teachers to perform to the best of their ability (Bass, 1985; Bass & Avolio, 1994; Leithwood & Jantzi, 1997). Coleman asserted that this definition supports a transformational perspective on leadership as defined by Burns in 1978. Coleman (2005) further defined leadership as the ability to empower others with the purpose of bringing about a major change in the form, nature, and function of some phenomenon.

Coleman (2005) also used the theoretical model of transformational leadership developed by Jantzi and Leithwood (1996) as a premise for this study. According to Coleman, Jantzi and Leithwood used two constructs—transformational and transactional leadership—to define transformational leadership. Coleman asserted that a transformational leader is referred to as a visionary change agent. Jantzi and Leithwood used six dimensions to describe transformational leaders: symbolizing good professional practice, developing a collaborative decision-making structure, providing individual support, providing intellectual stimulation, holding high

performance expectations, and fostering development of vision and goals. Transactional leaders are described using four dimensions: establishing good staffing practices, providing instructional support, monitoring school activities, and providing a community focus (Jantzi & Leithwood, 1996).

As a theoretical basis for his study, Coleman (2005) also used the five dimensions of a professional learning community as defined by Hord (2004): (a) supportive and shared leadership, (b) shared values and vision, (c) collective learning and its application, (d) shared personal practice, and (e) supportive conditions. Coleman found that research conducted by Hord (1997) provided evidence of a correlation between the five dimensions of professional learning communities as identified in Hord's research and the 10 dimensions of transformational and transactional leadership identified by Jantzi and Leithwood (1996). The conceptual and theoretical framework for Coleman's study connected the theories of transformational leadership (Jantzi and Leithwood, 1996) within the leadership framework of professional learning communities (Hord, 1996). Coleman's conceptual framework is displayed in Table 4.

Table 4.

Dimensions of Professional Learning Community and Transformational and Transactional Leadership (Hord, 1996; Leithwood & Jantzi, 1997)

Professional learning community dimension	Transformational leadership dimension	Category of transformational leadership
Collective learning and application	Symbolizing good professional practice	Transformational (TF)
Supportive and shared leadership	Developing a collaborative decision-making structure	Transformational (TF)
Shared personal practice	Providing individualized support	Transformational (TF)
Shared values and vision	Providing intellectual stimulation	Transformational (TF)
Supportive conditions	Holding high performance expectations	Transformational (TF)
	Fostering development of vision and goals	Transformational (TF)
	Establishing effective staffing practices	School Management Transactional (TA)
	Providing instructional support	School Management Transactional (TA)
	Monitoring school activities	School Management Transactional (TA)
	Providing a community focus	School Management Transactional (TA)

Note. From: *Teachers' Perceptions of Administrative Leadership Styles and Schools as Professional Learning Communities*. Coleman, C. H. (2005) (Doctoral Dissertation). Reprinted with permission from <http://louisdl.louislibraries.org/u/?NOD.231>

The purpose of Coleman's (2005) study was to analyze the relationship between principals' and assistant principals' leadership styles and teachers' perceptions of their respective schools as professional learning communities. Coleman proposed that the traditional distinctions between classic modes of leadership, namely, transactional and transformational leadership, are difficult to understand within the context of professional learning communities without considering the interaction of the principal and assistant principal leadership styles.

According to Coleman (2005), the impact of transformational and transactional leadership on the school is contingent on not only the principal's leadership but also the assistant principal's leadership. Coleman contended that formal school leadership of the principal and assistant principal is traditionally hierarchical and asserted that because the principal's responsibilities are increasingly complex and varied, assistant principals must be included productively in the major components of school leadership structure in providing services and resources for teachers and students.

Using the theoretical models of transformational and transactional leadership (Jantzi & Leithwood, 1996) and Hord's (1997) dimensions of professional learning communities, Coleman (2005) examined how teachers and assistant principals rated principals in terms of transformational leadership and management. Using the premise that there was limited research associated with the assistant principal's impact on professional learning communities, Coleman's study also examined how teachers and principals rated assistant principals in terms of transformational leadership and management. Coleman also examined the relationship of teachers' perceptions of principals' and assistant principals' degree of transformational leadership to teacher perceptions of their respective schools as professional learning communities. Coleman's final research question examined the compatibility of principals' and assistant principals' degrees of transformational leadership and management effect on teachers' perceptions of their schools as professional learning communities.

The population for this study included public school principals, assistant principals, and teachers from high, middle, and elementary schools in two states. Four public school districts were selected based on purposeful and convenience sampling. A sample of 80 principals and assistant principals and 480 teachers from elementary, middle, and high schools was targeted.

Approximately 80 principals and assistant principals and 480 teachers were needed to achieve statistical power to conduct the analyses. The researcher arrived at this minimum based on the criterion of approximately 20 participants per predictor variable.

Each school selected for the study had to have an assistant principal as a current member of the administrative staff. For schools with more than one assistant principal, the assistant principal participant was selected based on his or her responsibility with the school improvement team or role as the “acting” principal in the absence the principal. Teacher participants were selected from those who were current members of their respective school improvement teams.

Coleman’s (2005) study utilized correlational and quasi-experimental comparative research designs, employing multivariate analysis of variance (MANOVA) to examine the relationship between transformational leadership and professional learning communities. The predictor or independent variables for this study were principal and assistant principal leadership styles. The criterion or dependent variable was professional learning community.

The data collected in this study were obtained from teachers, principals, and assistant principals using two instruments (Coleman, 2005). All teachers completed the School as Professional Staff as Learning Community questionnaire developed by Hord (1997), and both the principal and assistant principal completed the Leadership and Management of Schools Survey developed in 1997 by Leithwood and Jantzi (Coleman, 2005). Assistant principals completed the School Professional Staff as Learning Community Questionnaire (Hord, 1997) and the Leadership and Management of Schools questionnaire (Leithwood & Jantzi, as cited in Coleman, 2005) regarding the principal. A demographic survey was used to collect data about all participants to provide information on possible mediating variables for the study such as years of experience, school type, and length of service at present school.

Coleman (2005) used descriptive statistics as well as multiple regression, Pearson r correlation, and multivariate analyses to determine the effects of teachers' perceptions of their respective principals' and assistant principals' use of transformational leadership and management on the professional learning community. Information obtained from the demographic survey was used to analyze mitigating variables such as the type and size of school, years of experience of the participants, and the length of service at present school.

The instruments for this relationship study were standardized and widely used scales designed to measure transformational leadership and professional learning communities (Coleman, 2005). Coleman used the Leadership and Management of Schools Survey developed by Leithwood and Jantzi (1997) to assess and describe the leadership practices of school administrators. The School Professional Staff as Learning Community Questionnaire developed by Hord (1997) was used to assess the degree to which the staff functioned as a professional learning community. In extensive reviews of current literature, both instruments demonstrated statistical robustness in prior measurements with acceptable reliability and validity characteristics (Coleman).

Coleman (2005) used descriptive statistics to determine (a) how teachers and assistant principals rated principals in terms of transformational leadership; (b) how teacher and principals rated assistant principals in terms of transformational leadership; and (c) how teachers, principals, and assistant principals rated their respective schools as professional learning communities. Using averages of scores of teachers within the same school to assign a leadership and management score to each principal and assistant principal, the researcher reported ranges and means for assistant principals and principals (Coleman, 2005).

Statistical analysis using Pearson r correlations with an expected probability of less than .05 was employed to determine the relationship between teachers' average rating of the principal and assistant principal and the assistant principal's and the principal's rating of each other to determine the congruence between teacher and administrator ratings (Coleman, 2005). The researcher averaged the teacher scores, principal scores, and assistant principal scores within the same school to obtain a rating of the extent to which the school resembled a professional learning community (Coleman, 2005). Ranges and means for each dimension of professional learning communities were reported (Coleman, 2005). A Pearson r correlation was used to test the relationship among teacher, principal, and assistant principal perceptions of the school as a professional learning community.

The researcher used multiple regression analysis to determine the significance of teachers' perceptions of the leadership of their respective principals and assistant principals to predict their perceptions of the school as a professional learning community (Coleman, 2005). Coleman hypothesized that schools with *ideal leadership* would have statistically higher ($p > .05$) teacher perceptions of the school as a professional learning community than schools with *complementary* or *incompatible leadership*. Schools with *complementary leadership* were hypothesized to have statistically higher ($p > .05$) teacher perceptions of the school as a professional learning community than schools with *incompatible leadership* (Coleman, 2005). A factorial ANOVA was used to determine the congruence between principal and assistant principal leadership as it affected teacher perceptions of the school as a professional learning community (Coleman, 2005). The two independent variables were level of transformational leadership and level of management (Coleman, 2005); the dependent variable was professional learning community score.

Coleman (2005) reported that a total of 116 schools identified for this study received survey packets. From the 116 schools survey, 86 schools returned the surveys (74.1%); 81 schools (70%) were used in the study (Coleman, 2005). Schools participating in the study represented elementary, middle, and high levels, with the largest representation from high schools (Coleman, 2005). A total of 1,856 surveys were mailed to teachers, assistant principals, and principals of participating schools; 1,127 (61%) surveys were returned (Coleman, 2005).

The key variables were measured on the Leadership and Management of Schools Survey (LMSS) and the School Professional Staff as Learning Community Questionnaire (SPSLCQ). All information was presented using the school as a unit of analysis. Items measuring transformational leadership and management ranged from 1 to 5 on a Likert scale with 1 representing *strongly disagree*, 3 *agree*, and 5 *strongly agree*. The SPSLCQ was designed to simulate a Likert scale. Respondents were provided a range of response choices on the survey that were related to the range of responses on a Likert-type scale. An example is the following: “School administrators participate democratically with teachers sharing power, authority and decision-making” (Coleman, 2005, p. 76). The response ranges were as follows: 5 = *administrators involve the entire staff*; 3 = *administrators involve a small committee, council, or team of staff*, or 1 = *administrators do not involve staff* (Coleman, 2005).

Coleman (2005) found mean scores of approximately 4, on a range of 1 to 5, regarding how teachers and assistant principals rated principals in terms of transformational leadership and how teachers and principals rated assistant principals in terms of transformational leadership. Correlations between teachers’ and assistant principals’ ratings of principals’ transformational leadership and management were significant at the .01 level (2-tailed).

Administrators rated their transformational leadership and management styles very favorably (Coleman, 2005). Teachers also provided high ratings for administrators' transformational leadership and management styles. The leadership and management subscale rated highest by all respondents was *high performance expectations*. The leadership subscales *collaborative decision-making structure* and *providing intellectual stimulation* had the lowest teacher ratings for both types of administrators.

Teachers rated principals and assistant principals on all subscales for transformational leadership and management. Teachers rated principals slightly higher ($M = 4.42, SD = .93$) than assistant principals ($M = 4.29, SD = .65$). Principals' ratings of assistant principals were slightly higher than teachers' ratings. The relationship between teacher and assistant principal ratings of principals was small to moderate in a positive direction. The results suggest that as teachers perceived principals more positively, so did assistant principals. The relationships between principal and teacher ratings of assistant principals were slightly lower, but all correlations were significant and positive.

Overall, the respondents perceived their schools to operate as professional learning communities. The high means and standard deviations for all subcategories of the school professional learning community also confirm these findings. The highest subscale rating for all respondents was *collective learning* and the lowest was *shared personal practice*. Stronger positive correlations were found for the school as a professional learning community between teacher and principal ratings than between teacher and assistant principal ratings. The relationships between teacher and assistant principal ratings were lower, with one non significant correlation, the rating of *shared personal practice*. Results from a multiple regression analysis

indicated that only principal management was a significant predictor of teacher perceptions of the school as a learning community.

Principals' and assistant principals' transformational leadership and management were perceived by teachers as either *high* or *low* based on empirical results. The principal's leadership and management were more strongly associated with teachers' perceptions of the school as a professional learning community than were the assistant principal's leadership and management. Results of the multiple regression indicated that only principal's management was a significant predictor of teachers' perceptions of the school as a professional learning community, accounting for 82.8% of the variance in teachers' perceptions of the school in that regard.

A factorial ANOVA was used to analyze the impact of the congruence between principal and assistant principal leadership and management as a team on teachers' perceptions of the school as a professional learning community. It was hypothesized that the best school leadership is established when the principal and assistant principal have complementary styles of leadership and management. Principal and assistant principal transformational leadership and management were classified *low* or *high* based on median splits in empirical results. How well the two administrators represented leadership and management as a team was then classified as *ideal*, *complementary*, or *incompatible*. If both administrators were high on both leadership and management, the team was deemed *ideal*. If at least one administrator was high on leadership and at least one was high on management, the team was deemed *complementary*. Other teams were deemed *incompatible*. Teachers who perceived the leadership team as *ideal* were more likely to perceive their respective schools as professional learning communities. Similarly, *complementary* teams were perceived as having stronger learning communities than *incompatible* teams.

As hypothesized, the results showed that the *ideal* category had the highest mean ($M = 4.123$), significantly higher than either of the other two. The *complementary* category had a significantly higher mean ($M = 3.870$) than the *incompatible* category ($M = 3.423$).

In conclusion, Coleman (2005) found that administrator leadership and management ability was a strong predictor of teacher perceptions of the school as a professional learning community. Coleman's study was developed on the premise that when the principal develops conditions and processes that provide opportunities for teachers to improve their practice, there is a positive impact on student learning (Hallinger & Heck, 1996). These findings are consistent with research conducted by Darling-Hammond and Richardson (2009), DuFour and Eaker (1998), Hord (1997), and Jantzi and Leithwood (1996).

A significant contribution of Coleman's (2005) study to the body of research related to professional learning communities and the effects of school leadership as a predictor of teachers' perceptions of the school as a professional learning community is its focus on the role of the assistant principal as a school leader as well as the combined leadership of the principal and assistant principal. Coleman's findings suggest that the assistant principal role can be viewed from a school change perspective. According to Coleman, this conclusion contradicts earlier research suggesting that the role of assistant principal is relegated to more mundane tasks of managing discipline and other management responsibilities.

A particular finding of the data analysis in this study emerged from a comparison of means of the ratings of principals and assistant principals as transformational or transactional leaders (Coleman, 2005). In each instance, the means were predictable in one direction. The variable associated with ideal leadership had the highest mean. All variables, except the one associated with complementary leadership and incompatible leadership, had higher means. The

one variable that was considered complementary but determined to be incompatible leadership was the variable in which the principal was perceived as low in both transformation and transactional leadership and the assistant principal was perceived as high in both areas. According to Coleman, this finding can be interpreted as teachers' being willing to accept a shared leadership model but unwilling to accept abdication of leadership by the designated leader, the principal. Coleman depicted this model of shared leadership as follows (Figure 1):

		TRANSFORMATIONAL LEADERSHIP		
		Both	One	Neither
TRANSACTIONAL LEADERSHIP	Both	IDEAL	COMPLEMENTARY*	INCOMPATIBLE
	One			
	Neither			

*If the principal is low in both, the team is incompatible.

Figure 2. Coleman's school leadership model.

Note. From *Teachers' Perceptions of Administrative Leadership Styles and Schools as Professional Learning Communities*. Coleman, C. H. (2005) (Doctoral Dissertation). Reprinted with permission from <http://louisdl.louislibraries.org/u/?NOD,231>

Based on the findings of this study, Coleman (2005) suggested that three propositions are considered for school leadership teams: ideal, both the principal and assistant principal are high on both leadership and management dimensions; complementary, at least one of the two school leaders is high on each of the two dimensions; or incompatible, neither administrator is high on one or both of the two dimensions.

The practical implications for Coleman's (2005) study suggest that principals should nurture and utilize the abilities of the assistant principal to form the most effective leadership and management team to serve the interests of teachers and students. By doing so, principals may be

able to optimize the impact on both student and staff learning, while creating opportunities for succession as they help to develop assistant principals who aspire to be principals. In this era of heightened accountability, school-level administrators confront formidable challenges that require the most effective utilization of leadership resources available. In many instances, the assistant principal is not considered as an essential contributor to how well leadership functions in the school. Research has focused attention on school leadership involving the principal, teacher leaders, and the school community as units of analysis. Schoolwide reform efforts, such as converting schools into professional learning communities, will benefit from the leadership model presented in this study.

Coleman (2005) suggested that teachers' indication of the subscale *shared personal practice* as the weakest characteristic in assessing schools as professional learning communities underscores the importance for school administrators to provide teachers with the opportunity to meet and discuss instructional issues. Coleman concluded that administrators' use of time to improve the opportunity for teachers to share personal practice is a predictor of leadership and management effectiveness for both the principal and assistant principal.

Finally, Coleman (2005) found that teachers' ratings of the principal and assistant principal with regard to having high expectations represented the highest rated subscale component. Coleman concluded that this component is also considered an important predictor for leadership and management effectiveness for both the principal and assistant principal. Coleman's findings suggest that both principals and assistant principals exhibit behaviors of both leadership and management and that the shared leadership roles influence perceptions of a professional culture. Coleman proposed a model for school leadership that takes into account both principal and assistant principal leadership and management styles. The strongest learning

community results when these styles complement one another so that transformational and transactional needs are met. Unlike previous studies of transformational leaders, this study acknowledges that leadership is a shared relationship (Coleman, 2005).

Fellows (2005) investigated teachers' perceptions of their schools as professional learning communities in two schools, one characterized as high achieving and one characterized as low achieving, as measured by the percentage of students meeting the state-determined standard on each component of the Connecticut Academic Performance Test (CAPT). Fellows utilized a comparative case study analysis to investigate the differences in the perceptions of teachers at the two schools.

Fellows (2005) compared the differences in perceptions of teachers in two schools, utilizing Hord's (1996) definition of the professional learning community as the conceptual framework for the study. Hord (1997) described a professional learning community as being characterized by five interrelated dimensions: (a) shared and supportive leadership, (b) shared values and vision, (c) collective learning and its application, (d) shared personal practice, and (e) supportive conditions. Fellows used Hord's (1996) School Professional Staff as Learning Community Questionnaire (SPSLCQ) to collect quantitative data and interviewed subsamples of teachers at each school to add qualitative data to the study.

Fellows (2005) contended that this study would add to the research on professional learning communities in general and on Connecticut high school teachers' views in particular by examining the context of their work and the lived experiences. According to Fellows, a comparative case analysis would enable the researcher to investigate any differences that might exist among the perceptions of teachers from a high-achieving and those from a low-achieving school.

Fellows (2005), citing the 2003 research of Meehan and Cowley, asserted that researchers found differences in teachers' self-reported commitment between high-performing and low-performing schools in two states. Meehan and Cowley had defined a school staff's commitment to continuous learning and improvement as the extent to which the school scored highly on a measure of schools as professional learning communities based on Hord's (2004) professional learning community model (as cited in Fellows). According to Meehan and Cowley, the conceptual framework for continuous learning and improvement includes the following six key concepts: (a) shared leadership; (b) effective teaching; (c) school, family, and community connections; (d) purposeful student assessment; (e) shared goals for learning; and (f) learning culture.

According to Fellows (2005), the research conducted by Meehan and Cowley in 2003 examined differences in teachers' commitment to continuous learning and improvement in high-performing schools in Kentucky that were differentiated by the gap in achievement among various subgroups. Meehan and Cowley had recommended that a similar study be conducted with low-performing and high-performing schools from the same state with common measures used to identify the schools. The Fellows study followed the recommendations of Meehan and Cowley by investigating two Connecticut high schools whose performance was identified using the percentage of students who met the state standards on the Connecticut Academic Performance Test (CAPT).

Fellows (2005) reasoned that professional learning communities, as described by DuFour et al. (2002) are "our best hope for reculturing schools" (p. 5). Fellows established that a number of researchers (DuFour et al., 2002; Kruse, 2001; Strahan, 2003; Talbert & McLaughlin, 2002) had conducted studies indicating that the professional learning community model positively

impacts student achievement and teacher and staff morale. Fellows also contended that studies of teacher isolation had suggested that teachers who do not collaborate regularly with their colleagues, one dimension of Hord's (2004) professional learning community, lose the ability to be continual learners (Leonard & Leonard, as cited in Fellows).

Using these previous studies as the background and context for inquiry, Fellows (2005) conceptualized this study from the work of Hord (2004), who had been studying professional learning communities in schools for a decade. Fellows selected Hord's model of professional learning communities as the conceptual framework for the study because it included all of the characteristics described in the literature by DuFour et al. (2002) and Senge (1990). According to Fellows, there was considerable overlap among these three models of the learning organization. Fellows also concluded that Hord's model was a more complete description of the professional learning community because of its explicit need for shared personal practice as a strategy designed to promote collaboration and eliminate teacher isolation.

Fellows (2005) examined the way that teachers in school one, a high-performing high school described their school as a professional learning community through each of the following dimensions, as described in Hord's (2004) model: (a) shared and supportive leadership, (b) shared values and vision, (c) collective learning and its application, (d) shared personal practice, and (e) supportive conditions. Fellows also examined the way teachers in school two, a low-performing school described their school as a professional learning community using each dimension of Hord's model. Fellows's final research question examined the extent to which teachers' descriptions of their schools as professional learning communities differed, if at all, in a high school that was high performing as compared to a high school that was low performing.

Fellows (2005) employed a comparative case study design by selecting two individual high schools in Connecticut. Citing Yin's (2003) rationale that a case study design is appropriate when the researcher believes that the context in which the study is situated may be pertinent to the phenomenon of consideration, Fellows suggested that the phenomenon under investigation was the professional learning community in each of the two Connecticut high schools. As had been noted by Yin, Fellows contended that the case study research design is appropriate when the researcher is interested in investigating how-and-why-type questions. The questions posed to participants in this study were questions of how they viewed their school's organization, how they participated in decision making at the school, and how they worked with their colleagues toward increased student achievement, thereby making the case study an appropriate design (Fellows, 2005).

According to Yin (2003), researchers can increase construct validity in case studies by (a) using multiple data sources, (b) establishing a chain of evidence, and (c) having key informants review the draft case study report. Fellows (2005) used multiple sources of evidence by surveying faculty in the selected high schools, interviewing selected faculty, and interviewing the building principal in each school. Fellows contended that the chain of evidence for this study began with the conceptual framework that provided the underlying foundation for the analysis of data and served to link the study with the existing literature related to professional learning communities. According to Fellows, direct connections between the conceptual framework, the research questions, and the instruments established the chain of evidence to increase construct validity (Yin, 2003). As a triangulation strategy, Fellows also employed a mixed method of collecting qualitative and quantitative data to confirm, cross-validate, and corroborate findings (Creswell, 2003).

To address the problems related to the generalizability of the study findings, Fellows (2005) deliberately selected two sites because of their potential to be maximally different. Fellows contended that schools differing in achievement would also differ in staff perceptions of professional learning communities. Fellows asserted that rich descriptions of the sites used in this study, as described by participants in the study, would allow the readers to consider the generalizability of findings.

The units of analysis for Fellows's (2005) study were two high schools in the State of Connecticut, one characterized as high achieving and one characterized as low achieving, as measured by the percentage of students meeting the state-determined standard on each component of the CAPT. Fellows employed purposeful sampling to provide the most information about the phenomenon of interest: teachers' perceptions of their schools as professional learning communities.

Utilizing results from the 2003-2004 school-year CAPT, the researcher selected a school that was above the median Educational Reference Group (ERG) in CAPT performance and a second school that was below the ERG in median performance. The researcher identified Adams High School as the school with the higher achievement and Bryant High School as the school with lower achievement.

Fellows (2005) used three instruments to collect data for this study. First, the SPSLCQ (Hord, 1996), an existing instrument used with permission of the Southwest Educational Development Laboratory (SEDL), was administered to all teachers and administrators at each selected school. Second, school leaders at each school were interviewed to elicit information about the structural conditions that promoted the learning community at their school (Fellows,

2005). Third, selected faculty from each site were interviewed to provide qualitative data for the study (Fellows, 2005).

The SPSLCQ (Hord, 1996) provided quantitative data regarding the extent to which teachers and administrators perceived their school to be a professional learning community. The instrument developed by Hord and utilized by Fellows (2005) consisted of 16 items unequally distributed across the five major dimensions of professional learning communities as identified in the literature. Each descriptor was grouped along a 5-point continuum that enabled the respondent to rate the degree to which a staff collectively reflected the dimensions and attributes of a professional learning community (Hord, 2004).

The five dimensions of the instrument were the following: (a) the collegial and facilitative participation of the principal and decision making with staff, (b) shared vision that is developed from the staff's unwavering commitment to students' learning and that is consistently articulated and referenced for the staff's work, (c) learning that is done collectively to create solutions that address students' needs and the application of that learning throughout the school, (d) the visitation and review of each teacher's classroom practices by peers as a feedback and assistance activity to support individual and community improvement, and (e) physical conditions and human capacities that support the operation of the school as a learning community.

According to Fellows (2005), the five dimensions directly corresponded to the five dimensions of the professional learning community model developed by Hord (2004) and formed the conceptual framework for this study. Each item consisted of three descriptors distributed along a 5-point continuum from the *least desirable* (antithetical practice) to the *most desirable* (exemplary practice) implementation of each aspect of the professional learning community

model (Fellows, 2005). Participants read through all three indicators for each item and determined the point on the continuum that reflected each of the dimensions at their school (Fellows, 2005). Table 5 displays the items on the instrument as related to the descriptors of a professional learning community.

Table 5.

School Professional Staff as Learning Community: Relationship to the Conceptual Framework

Dimension of professional learning community	Survey items
Shared and supportive leadership	1a, 1b: School administrators participate democratically with teachers, sharing power, authority, and decision making.
Shared values and vision	2a, 2b: Staff shares visions for school improvement that have an undeviating focus on student learning, and are consistently referenced in the staff's work
Collective learning and application of learning	3a, 3b, 3c, 3d, 3e: Staff's collective learning and application of the learning (taking action) create high intellectual learning tasks and solutions to address student needs.
Shared personal practice	4a, 4b: Peers review and give feedback based on observing each other's classroom behaviors to increase individual and organizational capacity.
Supportive conditions	5a, 5b, 5c, 5d, 5e: School conditions and capacities support staff's arrangement as a professional learning organization.

Note. From: Fellows, S. A. (2005). *An Investigation of Teachers' Perceptions of Their Schools as Professional Learning Communities*. (Doctoral Dissertation). Reprinted with permission from Scott A. Fellows

Fellows (2005) also interviewed the principal at each school to obtain information about his or her role in the school's learning community. Fellows employed a semistructured interview protocol using the five dimensions of the professional learning community model developed by Hord (2004), which served as the conceptual framework for the study. According to Fellows, interview questions were designed to elicit information about the structures and procedures that the administrator used to establish, promote, and maintain the professional learning community in the school.

Fellows (2005) conducted semistructured interviews with selected teachers as a third source of data for this comparative case study. According to Fellows, the case study approach was intended to describe the participants' world, their work, and their observations and experiences. The researcher indicated that the interview protocol was developed by referencing the SPSLCQ (Hord, 1996) and the conceptual framework (p. 125). Fellows asserted that open-ended questions eliciting teachers' views of the ways in which they participated in their school's professional community were devised with the goal of adding teachers' experiences to the quantitative data obtained for the study (p. 125).

Fellows (2005) utilized a mixed-method strategy that included both quantitative and qualitative research methods. Fellows contended that the mixed methods were used as a concurrent triangulation strategy designed to offset inherent weaknesses of each type of design. Fellows analyzed data in the study in three stages: a quantitative analysis of the data from the SPSLCQ (Hord, 1996), analysis of the interview data from each of the two sites selected for the study, and collapse of the data for comparison across sites (p. 130).

Fellows (2005) administered the SPSLCQ at faculty meetings at both study sites. Participation in both sites was over 90%, yielding an acceptable return rate for survey research (Fellows, 2005). Survey data were analyzed utilizing SPSS software.

Fellows (2005) predetermined categories for analysis using Hord's (1996) model of professional learning communities as the template to which the data were compared and analyzed. Fellows described this process in which the conceptual framework (Hord, 2004) and the review of the related literature were used to guide the data analysis and provide categories into which data were assigned as "template analysis strategy."

According to Fellows (2005), quantitative data were obtained through the SPSLCQ. The first step in analysis included scoring the data utilizing SPSS software (Fellows, 2005). For purposes of this study, both single-item scores, for each item on the instrument, and summed scores, for each dimension of professional learning communities, were calculated (Fellows, 2005). Prior to beginning analysis, Fellows cleaned the data through visual inspection to eliminate illogical possibilities and other errors.

Descriptive statistics were calculated for each item on the instrument and for each dimension of the conceptual framework (Fellows, 2005). Fellows examined the differences between the schools utilized in this study by comparing aggregate responses to each item on the SPSLCQ from each of the schools utilized and each of the five dimensions of the professional learning community model (Hord, 2004).

Qualitative data utilized in this study were obtained through interviews with select participants. Each high school building administrator participated in a 1-hour interview with the researcher at his or her convenience (Fellows, 2005). Participants in the SPSLCQ were asked to volunteer to participate in the interview portion of the study (Fellows, 2005). According to Fellows, an acceptable response rate from this request for volunteers would have been between 10 and 15 teachers. Participants in the interview consisted of 12 teachers at Adams High School and 18 teachers at Bryant High School, all of whom volunteered to participate (Fellows).

For the purpose of this study, Fellows (2005) analyzed both quantitative and qualitative data to determine the differences between Adams High School, categorized as the high-performing school, and Bryant High School, categorized as the low-performing school, as measured by the percentage of students meeting the state-determined standard on all four parts of the CAPT. Fellows analyzed quantitative data by calculating a score (ranging from 1 to 5) on the

SPSLCQ and a dimension score calculated by summing the scores for the items that constituted each dimension (p. 220).

According to Fellows (2005), the data were analyzed using an independent samples *t*-test for each of the items on the SPSLCQ and for the dimension scores calculated by adding the scores for the individual items that made up each dimension. Fellows asserted that the independent sample *t*-test would enable the researcher to examine three underlying assumptions: the variances among the groups were similar, meaning the groups were homogeneous; the groups were independent; and the subjects were selected at random. Because the groups included teachers from two different schools, the requirement that they be independent and selected at random was satisfied (Fellows, 2005).

Qualitative data were analyzed using Hord's (1997, 2004) model of professional learning communities as the conceptual framework, as compared to detailed teachers' responses to interview questions (Fellows, 2005). From the sample of the respondents that indicated their willingness to participate in the interview part of the study, seven teachers at Adams High School and ten teachers at Bryant High School were interviewed (Fellows, 2005). According to Fellows, interviewees were purposefully selected from the pool of volunteers to represent a variety of school departments, including instructional support areas such as guidance and library–media, and individuals with a range of years of experience.

According to Hord (1996), supportive and shared leadership is defined as the extent to which administrators participate democratically with teachers, sharing power, authority, and decision making. The SPSLCQ included two items to assess teachers' perceptions of supportive and shared leadership (Fellows, 2005). The interview protocol included two questions that

explored teachers' perceptions of participation in decision making and the types of decisions in which teachers were involved (Fellows, 2005).

In comparing the two cases, Adams as the high-performing school and Bryant as the low-performing school, Fellows (2005) found that the mean scores for teachers at Adams High School were statistically higher ($p = .000$) than the mean scores for teachers at Bryant High School. A shared leadership dimension score was calculated from two individual items on the SPSLCQ, resulting in a dimension score that ranged from 2 to 10. Fellows found that for the supportive and shared leadership dimension scale, the mean score for teachers at Adams High School was statistically higher ($p = .000$) than the mean score for teachers at Bryant High School. Based on an independent samples *t*-test of the difference of the means, Fellows found that Adams High School survey respondents rated their school significantly higher ($p = .000$) than Bryant High School survey respondents rated their school on the SPSLCQ supportive and shared leadership dimension.

The responses of Adams High School teachers to interview questions supported the finding that teachers at Adams High School perceived their school to be characterized by a greater sense of shared values and vision than that described by teachers at Bryant High School (Fellows, 2005). According to Fellows, the analysis of teachers' responses to interview questions at both sites led to the finding that the seven teachers (100%) interviewed at Adams High School described their school as characterized by a greater degree of shared values and vision than did the 10 teachers (100%) interviewed at Bryant High School.

Hord (1997, 2004) characterized collective learning and its application as the engagement of the faculty in collaboratively determining their learning needs through an analysis of available data, for the purpose of implementing the new learning. Hord asserted a characteristic of

collective learning and its applications is the ability of the faculty and staff to collaboratively assess the results of the changes on student achievement and determine needed modifications.

According to Fellows (2005), the SPSLCQ included five items to assess the extent to which teachers were involved in the determination of their learning needs, the implementation of that learning, and the degree to which the effects of the innovations were assessed. The interview protocol included two questions that explored teachers' perceptions of the determination, implementation, and assessment of professional development at their respective schools (Fellows, 2005).

Fellows (2005) found that the SPSLCQ mean scores for all five items generated by teachers at Adams High School were statistically higher than the mean scores for teachers at Bryant High School (p. 229). A collective score for the learning and its application dimension was calculated from the scores on the five individual items, resulting in a dimension score that ranged from 5 to 25 (Fellows, 2005).

For the collective learning and its application scale, the mean score for teachers at Adams High School was statistically higher ($p = .000$) than the mean score for teachers at Bryant High School (Fellows, 2005, p. 229). According to Fellows, the analysis of teachers' responses on the SPSLCQ indicated that Adams High School survey respondents rated their school significantly higher ($p = .000$) than Bryant High School survey respondents rated their school on the collective learning and its applications dimension.

The analysis of interview responses of Adams High School supported the finding that Adams High School teachers perceived their school to be characterized by a greater degree of collective learning and its application than did the teachers at Bryant High School (Fellows, 2005). In comparing specific differences in the two schools, Fellows found that teachers

interviewed at Adams ($n = 7$) reported some opportunity to discuss best practices at professional development activities and regular monthly faculty meetings. Fellows also found that interviewees at Adams ($n = 6$) reported that mission and vision statements were developed at meetings of the whole faculty.

Conversely, interviewees at Bryant ($n = 10$) reported that faculty meeting time was primarily used for announcements and general discussions with limited opportunities for faculty members to interact or learn from each other (Fellows, 2005, p. 231). Fellows also found that participants at Adams ($n = 7$) reported that time was allotted for their learning and that the time was being used for teacher interaction; interviewees at Bryant ($n = 10$) suggested that although time was being provided, it was not typically used for faculty interaction.

In summation, teachers at Adams High School described their school as being characterized by a greater degree of collective learning and its application than did the teachers at Bryant High School (Fellows, 2005, p. 232). According to Fellows, the analysis of the responses to interview questions of teachers at both sites led to the finding that teachers (100%) interviewed at Adams High School ($n = 7$) described their school as characterized by a greater degree of collective learning than did the teachers (100%) interviewed at Bryant High School ($n = 10$).

Shared personal practice was defined by Hord (2004) as the regular review of teachers' instructional behavior by colleagues, including feedback and assistance to encourage and support continuous improvement. The SPSLCQ included two items designed to measure the degree to which teachers observed their colleagues' instructional practices and discussed their observations (Fellows, 2005). The interview protocol included two questions that investigated teachers' experiences in observing their colleagues and discussing their observations (Fellows).

According to Fellows (2005), the mean scores for teachers at Adams High School were not statistically different ($p = .102$ and $p = .855$) from the mean scores for teachers at Bryant High School. A shared personal practice dimension score was calculated from the individual scores for each item, resulting in a dimension score that ranged from 2 to 10 for the shared personal practice scale (Fellows). The mean score for teachers at Adams High School was not statistically different ($p = .417$) from the mean score for teachers at Bryant High School. In the analysis of teachers' responses to the SPSLCQ, Fellows found that Adams High School survey respondents did not rate their school significantly differently ($p = .417$) from the way in which Bryant High School survey respondents rated their school on the dimension of shared personal practice.

According to Fellows (2005), shared personal practice was the only area in which teachers at the two schools did not differ in their perceptions of their schools. In conclusion, Fellows found that neither group of teachers reported regular peer observations as a vehicle for instructional improvement (p. 234). Fellows concluded that no difference in teachers' descriptions of regular observation of colleagues' classes for the purpose of instructional improvement was noted between the seven teachers (100%) interviewed at Adams High School and the ten teachers (100%) interviewed at Bryant High School.

The final dimension of professional learning communities described by Hord (2004) is supportive conditions. According to Hord, supportive conditions are defined as the physical conditions and human capacity of the organization that encourages and sustains collective learning and a collegial atmosphere.

The SPSLCQ included five items that assessed the structural conditions that support the professional learning community (Fellows, 2005). The interview protocol included five items

that examined teachers' perceptions of the ways in which the school structures facilitated their interactions (Fellows, 2005).

For all five of the items on the SPSLCQ, the mean scores for teachers at Adams High School were statistically higher (p ranging from .000 to .001) than the mean scores for teachers at Bryant High School (Fellows, 2005, p. 235). A supportive conditions dimension score was calculated from the individual scores for the five items, resulting in a dimension score that ranged from 5 to 25 (Fellows, 2005). For the supportive conditions dimension scale, the mean score for teachers at Adams High School was statistically higher ($p = .000$) than the mean score for teachers at Bryant High School. The analysis of teachers' responses to the SPSLCQ found that Adams High School survey respondents rated their school significantly higher ($p = .000$) than Bryant High School survey respondents rated their school on the supportive conditions dimension (Fellows, 2005, p. 235).

Results from interviews with teachers affirmed this finding (Fellows, 2005). Teachers at Adams High School reported that the conditions at their school were more favorable toward supporting a professional learning community than did teachers at Bryant High School (Fellows, 2005). School leaders at Adams High School deliberately provided time for teacher interaction, whereas time was not typically set aside or used for interaction at Bryant High School (Fellows, 2005).

According to Fellows (2005), interviewees at both schools suggested that relationships were more open, trusting, caring, and collaborative than reported on the SPSLCQ. The analysis of responses to teachers' interview questions at both sites led to the finding that seven teachers (100%) interviewed at Adams High School described their school as characterized by conditions

that were more supportive of the developing professional community than did the 10 teachers (100%) interviewed at Bryant High School (Fellows, 2005).

In summation, Fellows (2005) concluded that the teachers at both sites involved in this study perceived that their respective administrators provided them with the opportunity to participate in shared leadership. Fellows found that teachers at each of the two high schools perceived that their administrator provided them with the opportunity to participate in the decision-making process by soliciting their input and occasionally sharing the authority to make decisions.

As a result of these findings, Fellows (2005) contended that principals in professional learning communities dispense with the traditional power structures that view the principal as all-knowing and all-powerful, in favor of structures based on the trust of those lower in the hierarchy. Within the context of a recommendation from these findings, Fellows cautioned that school administrators who wish to promote supportive and shared leadership within the framework of a professional learning community in their schools should investigate teachers' zones of indifference (Bridges, as cited in Fellows, 2005) to determine the areas in which they want to have input in decision making.

In examining the dimension of shared vision and values as defined in the literature by Hord (2004), Fellows (2005) found that teachers from this sample of two high schools perceived that although their schools were characterized by shared values and vision, they were not guiding teachers' instructional practices (p. 256). As a result of this finding, Fellows recommended that school leaders implement a process to develop and refine the school's mission so that it reflects shared beliefs and includes reference to research and best practices (p. 259). As suggested by

Hord (1997), for a professional learning community in a school to prosper, every individual must be committed to student learning.

Fellows (2005) suggested that because the shared mission, values, and vision serve to guide all decision making in a professional learning community, the mission must be ubiquitous, appearing on school written communications, teacher-to-teacher communications, and teacher–principal communications. Fellows recommended that the faculties operationalize the tenets of the mission statement to make them observable, measurable, and clearly understood to the school community. According to Fellows, a school that wishes to become a professional learning community should validate all decisions against the school’s shared values and vision (p. 261).

In the analysis of the dimension of collective learning and its application as defined in the literature by Hord (2004), Fellows (2005) concluded that teachers from this sample of two high schools perceived their schools to be at different levels along a continuum of seeking new knowledge and solutions for addressing students’ needs and assessing their actions based on their common purpose, student learning.

Based on this finding, Fellows (2005) recommended that the faculties use performance data as a way to determine future teacher learning needs and the efficacy of the learning activities for teachers and staff. According to Fellows, this recommendation may be accomplished by evaluating the ways in which time for teacher learning is used to ensure that the focus of teacher learning is one of the strategies to help teachers implement the mission. Fellows also contended that the focus on teacher learning and the results of that learning may be accomplished by setting aside formal time to celebrate the success of this learning by school leaders and teachers.

According to Hord (2004), a professional learning community is characterized by a culture in which shared personal practices serve to foster continuous school improvement. Shared personal practice, as described by Hord, means that members of the faculty regularly observe each other's practice and reflect on those observations. Fellows (2005) found that teachers in this sample of two high schools reported not reviewing and critiquing their colleagues' practice for the purpose of instructional improvement.

Given this finding, Fellows (2005) suggested that schools that wish to improve teachers' instructional practice should make time available to teachers to observe their colleagues' classes and reflect on their observations. Barth (1990) underscored the importance of this suggestion by describing schools as places in which "teachers and principals talk to each other about their practices, observe each other engaged in their work, share their craft knowledge, and actively help each other to become better" (p. 163). Fellows also recommended that schools wishing to use the expertise of their faculties for increased instructional performance develop structures that encourage collegial conversation in formal settings and provide training to teachers to allow them to engage in productive conversations about teaching and learning.

In the analysis of findings related to the dimension of supportive conditions, Fellows (2005) concluded that teachers in this study perceived that school administrators were beginning to put structures in place that would build and sustain a professional learning community. According to Hord (2004), for a professional learning community to function productively, the physical structure of the organization and the capacities of the individuals in the community must support and enable the development of the other four dimensions of professional learning communities: shared and supportive leadership, shared values and vision, collective learning and its applications, and shared personal practice.

Supportive conditions, as defined by Hord (2004), include the availability of time and information necessary for teachers to collaborate as well as an organizational structure that encourages interactions among teachers. These interactions provide opportunities for relationships that are trusting, open, and productive to develop among individual teachers and groups of teachers (Hord, 2004).

Fellows (2005) recommended that schools wishing to foster collegial sharing for instructional improvement provide time for teachers to interact during their work day (p. 282). According to Darling-Hammond (2009), teachers in the United States are provided with significantly less time to interact with their colleagues than their international counterparts. The limited time for teachers to interact emanates from the traditional factory model of education still prevalent in many schools. Based on the findings of this study and Hord's (2004) conceptual framework of professional learning communities, Fellows suggested that schools wishing to become professional learning communities assess the ways in which the physical structure impedes or fosters faculty interactions and make accommodations for these structural elements.

A final recommendation by Fellows (2005) was that school administrators who wish to foster a culture of teacher collegiality should develop ways in which to build trusting, open, and productive relationships among all staff. According to Tschannen-Moran (2009), the benefits of a trusting environment in schools include improved effectiveness, communication, and organizational citizenship. Fellows concluded that school improvement requires structures in schools that allow teachers regular input into the school improvement process as well as structures to allow teachers to collaborate for improved instructional practice. According to Fellows, teachers can and should be at the heart of school improvement.

Crocker (2007) investigated teacher beliefs and organizational climate constructs of collective efficacy, faculty trust, academic emphasis, enabling bureaucracy, and mindfulness as antecedents for implemented professional development. A foundational premise in Crocker's study was that the readiness state of the school is a factor in implementation of a reform initiative.

Crocker (2007) contended that justification for examining the successful implementation of changes in curriculum, instruction, and practice for the purpose of improving student learning was a problem common to most school districts, schools, and teachers. Crocker also asserted that the investment of time, energy, and resources needed to transfer professional development into classroom practice is important and worthy of study.

The theoretical framework for Crocker's (2007) study was grounded in the operational belief that teachers function both independently and collectively within a school. Tagiuri (as cited in Crocker, 2007) described the organizational climate of the school as the interaction among four dimensions: (a) ecology—the building and its materials, including age, size, design, and condition; (b) milieu—the group of people, its size, motivation, morale, and job satisfaction; (c) organization—the formal structure, rules, control, instruction, and supervision; and (d) culture—the assumptions, values, norms, beliefs, ways of thinking, and history.

Owens (as cited in Crocker, 2007) differentiated between organizational climate and school culture: culture comprises the underlying norms and assumptions of the group, whereas the organizational climate is the perception of those norms and assumptions. Crocker contended that culture is inferred from observations whereas organizational climate can be measured quantitatively and qualitatively by assessing the perceptions of the staff.

In this study, Crocker (2007) measured the organizational climate by examining the constructs of teacher beliefs, collective teacher efficacy, faculty trust in clients, academic emphasis, faculty mindfulness, and enabling bureaucracy as variables of organizational climate. Crocker posited that these measures, as organizational structures, may play a role in the degree of implementation of professional development. Crocker investigated the effectiveness of *Conscious Discipline* book study groups with the hypothesis that higher levels of teacher beliefs, academic optimism, enabling bureaucracy, and faculty mindfulness would result in a greater degree of implementation of conscious discipline.

According to Bailey (as cited in Crocker, 2007), conscious discipline is a professional development program that focuses on building strong student–teacher relationships. The goal of the program is to help students and teachers meet the human needs of safety and connectedness so that the brain’s higher level-thinking, frontal lobe is accessed to make decisions and solve problems. Crocker contended that the effectiveness of professional development is dependent upon the method of delivery, principal support, perceived need, and the quality of the training.

The sample for this study included 800 teachers in 17 elementary schools in one suburban school division in southeastern United States (Crocker, 2007). Crocker evaluated the outcomes of professional development programs by assessing the degree of implementation of conscious discipline as the dependent variable.

Crocker (2007) examined the relationship between the degree of implementation and each of the following factors: teacher beliefs, collective teacher efficacy, faculty trust in clients, academic emphasis, enabling school structures, and faculty mindfulness. Crocker also investigated the relationship between the degree of implementation of professional development

and academic optimism, which was described as a latent construct for the combined variables of collective teacher efficacy, faculty trust, and academic emphasis.

Data collection consisted of gathering quantitative data through the use of an online survey followed by gathering qualitative data through observations and focus group meetings (Crocker, 2007). Quantitative data were collected and analyzed using SPSS 13.0 software.

Quantitative results were first analyzed by examining participant and school demographic variables (Crocker, 2007). Next, the researcher analyzed and aggregated the independent variables of teacher beliefs, collective teacher efficacy, faculty trust in clients, academic emphasis, enabling bureaucracy, and faculty mindfulness, by teacher and school. The researcher investigated the independent variables by examining classroom structures and self-reported degree of implementation of the professional development program (Crocker, 2007).

Crocker (2007) assembled three sets of data: 489 online surveys measuring teacher beliefs and organizational climate; 51 observations, including assessment of the presence of conscious discipline structures in the classroom in each of the 17 schools; and two focus groups comprising two schools with high levels of implementation and two schools with low levels of implementation. Focus group data were collected to explain the quantitative results and to discuss the implementation of professional development in the schools.

In examining the variance between teacher demographic data and organizational climate constructs, Crocker (2007) found that teachers who were older scored significantly higher than teachers who were younger on the constructs of attitudes and beliefs about classroom control and total collective teacher efficacy, as well as the subscale measures of student discipline, faculty trust in clients, academic emphasis, and faculty mindfulness. This finding contradicted previous research indicating that older teachers were more likely to possess an indirect, less controlling

teaching style (Crocker, 2007). It also contradicted previous research that found male teachers to be less controlling than female teachers (Crocker, 2007).

Crocker's (2007) findings revealed similar results in comparing male teachers and female teachers. Male teachers scored significantly higher than female teachers on the measures of total attitudes and beliefs about classroom control and the subscale measure of instructional management. This finding also supported previous research by Cohen and Amidon (as cited in Crocker, 2007) and suggested that male teachers perceived themselves as more controlling in their classroom management style.

Crocker (2007) found that teachers who participated in the *Conscious Discipline* book study groups perceived themselves as less controlling in their approach to classroom management. Study group participants scored significantly lower on attitudes and beliefs about classroom management than teachers who had not participated in the book club.

Crocker (2007) found that more experienced teachers were more trusting of parents and students and believed that students cared about their learning. Teachers with more years of teaching experience scored significantly higher than teachers with less experience on the measures of collective teacher efficacy, faculty trust in clients, academic emphasis, and faculty mindfulness.

In examining the correlations among the constructs of teacher beliefs, collective teacher efficacy, faculty trust in clients, academic emphasis, enabling bureaucracy, and faculty mindfulness, Crocker (2007) found that these constructs were reliable measures. Statistical analysis revealed that intercorrelations for each measure, ranging from .207 to .854, were statistically significant. Crocker also found that internal reliability for each measure was strong and statistically significant, with alpha coefficients ranging from .749 for academic emphasis to

.927 for faculty trust in clients. In addition, Crocker found that these organizational climate constructs had strong positive correlations.

In practical terms, Crocker (2007) found that teachers who perceive their schools as having a positive organizational climate shared the following common beliefs: a greater trust in parents and students, a greater perception that students were concerned about their learning, a stronger belief that their colleagues had strong collective efficacy and a mindful approach to teaching, and belief that the bureaucratic structure of their schools enabled them to perform their jobs effectively. Conversely, Crocker concluded that teachers in schools with weak organizational structure had less trust in parents and students, believed their student were not concerned about learning, believed their colleagues had weaker collective capacity and a less mindful approach to teaching, and viewed the bureaucratic structure as a hindrance to their ability to perform their jobs effectively.

Similarly, Crocker (2007) found that teachers who perceived themselves as less controlling had greater trust in parents and students and a stronger belief that students cared about their learning. The construct measuring attitudes and beliefs about classroom control correlated significantly and negatively with faculty trust in clients and academic emphasis (Crocker, 2007).

Crocker (2007) formed the latent construct of academic optimism by combining the factors of collective teacher efficacy, faculty trust in clients, and academic emphasis. Crocker found significant correlations among the factors of collective teacher efficacy, faculty trust in clients, and academic emphasis. The researcher also found that the construct of academic optimism correlated both strongly and positively with collective teacher efficacy, faculty trust in clients, and academic emphasis. According to McGuigan and Hoy (as cited in Crocker, 2007),

this finding was supported in research that found strong positive correlations among academic optimism, collective teacher efficacy, faculty trust in clients, and academic emphasis.

In examining correlations between the degree of implementation of professional development and organizational climate constructs, Crocker (2007) found that schools with a greater degree of implementation were more likely to have teachers who were less controlling in their approach to classroom management, were more trusting of parents and students, had stronger beliefs that students cared about learning, believed that the school's administrative structure helped them to do their jobs, and perceived their school as having a strong positive academic environment. Crocker found that the total observed degree of implementation reflected significant negative and weak correlations with the constructs of attitudes and beliefs about classroom control.

Teachers in schools in which teachers self-reported a greater degree of implementation perceived that their colleagues had stronger teacher efficacy and were more mindful in their approach to teaching (Crocker, 2007). Crocker also found that teachers in these schools were more trusting of parents, believed strongly that students cared about learning, and believed that the school's bureaucratic structure helped them to perform their duties. Crocker found that the teachers in these schools perceived that their schools had a strong positive academic environment. According to Crocker, the self-reported degree of implementation correlated positively and moderately with collective teacher efficacy, faculty trust in clients, academic emphasis, and faculty mindfulness; and positively but weakly with enabling bureaucracy and academic optimism.

Crocker (2007) also investigated organizational climate constructs as predictors of the degrees of implementation of professional development. Crocker found that the organizational

climate construct of attitudes and beliefs about classroom control predicted 28.6% of the variance in the observed degree of implementation of professional development. Crocker also found that participants in the *Conscious Discipline* book club were more likely to have conscious discipline organizational constructs present in the classroom. Participation in the book club accounted for 53.6% of the variance in the degree of implementation of classroom structures (Crocker, 2007).

Crocker (2007) found that significant predictors of self-reported degree of implementation were teacher beliefs as measured by attitudes and beliefs about classroom control, total collective teacher efficacy, faculty trust in clients, academic optimism, and faculty mindfulness. According to Crocker, faculty mindfulness accounted for 45.1% of the variance for the self-reported degree of implementation, and attitudes and beliefs about classroom control accounted for 39.6% in the degree of implementation.

In addition, teachers in schools with a high degree of implementation of conscious discipline constructs in the classroom believed in not only the basic tenets of the program but also its positive effect on students (Crocker, 2007). According to Crocker, these teachers found time to implement the program constructs into classroom practice because of their belief in its viability. In contrast, Crocker found that teachers in schools with a low degree of implementation believed in the tenets of the program to a lesser degree than did teachers in schools with a high degree of implementation and consequently explained that they were unable to find time for a new initiative.

Given these findings, Crocker (2007) recommended that when hiring teachers, schools and school divisions should consider the value of age and experience. According to Crocker, older teachers with more teaching experience scored significantly higher on measures of

collective teacher efficacy, faculty trust, academic emphasis, academic optimism, and faculty mindfulness.

Crocker (2007) also recommended that when schools and school systems implement a new initiative, school demographics such as size of the school, number of students identified as gifted, number of students receiving special education services, and number of students identified as economically disadvantaged are factors that will impact the degree of implementation of the new initiative. Crocker contended that it might take longer for a school with a high number of economically disadvantaged students to implement a new program or initiative and that teachers in those schools might need additional support during implementation of the initiative.

Crocker (2007) also concluded that the use of a book club as a structured, ongoing professional development strategy for teachers to discuss successes and challenges led to greater implementation of professional development. Crocker found that participation in the book club did increase the use of practices that support improved classroom management.

A final study in this literature review was conducted by Chan-Remka (2007). Chan-Remka examined the perceptions of teachers and administrators in relation to the implementation of professional learning communities. The purpose of Chan-Remka's study was to explore the key factors that contribute to the creation, implementation, and sustainment of effective professional learning communities. Chan-Remka explored the extent to which teachers and administrators understood the professional learning community's impact on teaching and learning.

The researcher employed a sequential mixed method of quantitative and qualitative research in a single case study to assess the teachers' and the principal's perceptions regarding

the impact of a professional learning community in a single middle school located in an urban Rhode Island school district (Chan-Remka, 2007). The collection and analysis of quantitative data were followed by the collection and analysis of qualitative data. The quantitative data were considered as primary data, and the two methods were integrated during the interpretation phase of the study. The main purpose of this approach was to utilize qualitative data to assist in planning and interpreting the findings of the quantitative data (Chan-Remka, 2007).

Chan-Remka's (2007) study was grounded in the research on professional learning communities suggesting that where substantial collegial relationships are fostered and collaboration among teachers is encouraged, there are significant benefits for student learning (Deal & Peterson, 1999; DuFour, 2004; Hord, 1997). Chan-Remka (2007) asserted that a learning organization can be viewed as a social system whose members have learned conscious, communal processes for continually generating, retaining, and leveraging individual and collective learning to improve the performance of the organizational system in ways important to all stakeholders.

Utilizing the attributes of various models of professional learning communities developed by DuFour and Eaker (1998), Hord (1997), and Kruse and Louis, (1995), the researcher contended that there was broad international consensus that a professional learning community is a group of people sharing and critically interrogating their practice in an ongoing, reflective, collaborative, inclusive, learning-oriented, growth-promoting way, thereby operating as a collective enterprise (Chan-Remka, 2007). Chan-Remka organized her study by utilizing the ideas of several key authors, who had described their views of the characteristics and attributes of professional learning communities in specific ways. Chan-Remka consolidated these models into five important elements or dimensions: shared values, beliefs, mission and vision;

collaboration; teacher collegiality; shared and supportive environment; and shared decision making.

Utilizing these dimensions as the conceptual framework for this study, Chan-Remka (2007) developed a twofold purpose for her study. First, research was conducted to examine the professional learning community model based on the review of literature (Chan-Remka, 2007). Second, research was conducted to understand how the perceptions of teachers and the principal identified some of the barriers and necessary action steps to improve the current professional learning community at the school where the study was conducted (Chan-Remka, 2007).

The participants were teachers and the principal at a single school in an urban school district in Rhode Island (Chan-Remka, 2007). There were approximately 62 teachers and a principal in the school. All teachers were surveyed. According to the researcher, this particular middle school was similar to other middle schools in the district in terms of instruction, staffing, scheduling, class size, and standardized test scores.

Chan-Remka (2007) rationalized the use of a purposeful sampling method for several reasons: (a) it assures a high participation rate; (b) it is generalizable to schools in similar educational settings in the district; and (c) even though use of the largest sample size possible is recommended, “a sample size that is only a small percentage of the population can approximate the characteristics of the population satisfactorily” (Schumacher & McMillan, 1997, p. 172). Ultimately, the researcher’s goal was to select a sample that would provide information pertinent to the purpose of the study (Chan-Remka, 2007).

The researcher developed a survey instrument to gather quantitative data prior to obtaining qualitative data (Chan-Remka, 2007). The survey instrument was designed to elicit teacher and administrator perceptions regarding the existence of a professional learning

community in their school (Chan-Remka, 2007). Interviews were conducted to gather in-depth information from a sample of survey respondents. The survey instrument included 25 questions based on the five elements of a professional learning community gleaned from the literature (DuFour et al., 2002; Fullan, 1998; Hord, 1997). The survey instrument was adapted from *Reculturing Schools as Professional Learning Communities* by Huffman and Hipp, with written permission for its use.

To obtain a higher response rate and obtain a broad range of opinions from all teachers, Chan-Remka (2007) distributed and collected completed surveys during school faculty meetings. One-on-one interviews were conducted with a randomly selected group of teachers ($n = 12$) and the principal ($n = 1$) to obtain deeper information regarding their perceptions of their school as a professional learning community within the context of their learning organization (Chan-Remka, 2007). The survey instrument was designed to answer one major research question (How does the school reflect upon the core components of a professional learning community described in the literature?) and three subquestions. The subquestions were (a) Do teachers and the principal perceive their school to be a professional learning community? (b) What have been some of the barriers to becoming a professional learning community at this school? and (c) What actions need to be taken in order to sustain a professional learning community based on the perceptions of teachers and the principal?

All data were analyzed using SPSS version 14.0 software. The researcher used descriptive statistics including comparison of frequencies, percents, means, and standard deviations for all scales and subscales for data analysis. The survey instrument provided schoolwide data about how teachers viewed their school based on the core components of professional learning communities suggested in the research (Hord, 1997). The researcher

utilized personal interviews to investigate teacher and principal perceptions more comprehensively.

The surveys were returned by 59 of the 62 full-time teachers, thereby yielding a return rate of 95%. The survey utilized a Likert scale of responses ranging from *strongly agree* (4) to *strongly disagree* (1). To determine the reliability of the survey instrument for internal consistency, the researcher analyzed the dimensionality of each item by computing Cronbach's alpha using SPSS. The reliability coefficient for each item was greater than .70, which is considered acceptable. Table 6 provides the reliability coefficients for data associated with the professional learning community dimensions.

Table 6.

Dimensions and Item-Level Descriptive Data for Professional Learning Communities (Chan-Remka, 2007)

Dimension	Item number	Alpha reliability coefficient
Shared and supportive leadership	10	.89
Shared values and vision	8	.87
Collective learning and application of learning	9	.82
Shared personal practice	6	.85
Supportive conditions - relationships	4	.85
Supportive conditions - structures	9	.85

In analyzing the data related to the major research question (How does the school reflect upon the core components of a professional learning community described in the literature?) and the first subquestion (Do teachers and the principal perceive their school to be a professional learning community?), Chan-Remka (2007) employed a Likert-scale format for survey responses, ranging from *strongly agree* (4) to *strongly disagree* (1). Chan-Remka found that the majority of respondents, 79% to 90%, acknowledged that their school principal was willing to share power and authority, thereby leading to shared decision making. Only 26% of the

respondents agreed that a shared vision existed in the school. A total of 40% of respondents agreed that decisions were made in alignment with the school's values and vision, but 76% of respondents disagreed that there was collaboration for developing a shared vision among staff.

A majority of respondents believed there were collegial and caring relationships among staff members. A range of respondents, from 50% to 76%, agreed that these practices existed in their school. In contrast, only 16% of the respondents agreed that there were opportunities for staff to informally share ideas to improve learning. One fourth (25%) of respondents indicated that there was a lack of an effective conduit of communication within the school. Table 7 provides an overview of teachers' perceptions of their school as a professional learning community.

Table 7.

Teachers' Perceptions of Their School as a Professional Learning Community
(Chan-Remka, 2007)

Question	Disagree	Agree
The staff is consistently involved in discussing and making decisions about most school issues.	88%	12%
The principal participates democratically with staff, sharing power and authority.	90%	10%
Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority.	79%	21%
Shared values support the norms of behavior that guide decisions about teaching and learning.	74%	26%
Decisions are made in alignment with the school's values and mission.	60%	40%
A collaborative process exists for developing a shared vision among staff.	76%	24%
Collegial relationships that reflect commitment to school improvement efforts exist among staff.	50%	50%
The staff plan and work together to search for solutions to address diverse student needs.	39%	61%
School staff are committed to programs that enhance learning.	24%	76%
Opportunities exist for staff to observe peers and offer encouragement.	84%	16%
The staff informally share ideas and suggestions for improving student learning.	41%	59%
Caring relationships that are built on trust and respect exist among staff and students.	34%	66%
Communication systems support a flow of information among staff.	75%	25%

Chan-Remka (2007) found that the principal purported to believe in a democratic style of leadership and worked to achieve consensus with staff; in contrast, however, 90% of respondents disagreed that the principal participated democratically with staff, sharing power and authority. Chan-Remka speculated that this discrepancy might have been due to the principal's focus on student management and the effective allocation of resources and professional development time as top priorities; however, that assumption was not explicitly supported by teacher survey results and interview data.

Chan-Remka (2007) analyzed each dimension of a professional learning community by examining the critical attributes of each dimension for the school in which the study was conducted. In analyzing the dimension of supportive and shared leadership, Chan-Remka examined the critical attributes of nurturing leadership among staff; shared power, authority, and responsibility; and decision making. Results of the surveys and interviews indicated that the staff viewed their principal as the sole decision maker and leader (Chan-Remka, 2007).

A second dimension of professional learning communities examined by Chan-Remka (2007), shared values and vision, included four critical attributes: collective values and norms, focus on students, high expectations, and shared vision guiding teaching and learning. According to Chan-Remka (2007), this element was described as synergy of efforts in which staff members are committed to principle, believe in each principle, and work toward implementing a professional learning community. Survey and interview results indicated that the school vision was not clear to teachers and that they were not sure if it was student focused (Chan-Remka, 2007).

Collective learning and its application was the third dimension of professional learning communities examined by the researcher. This dimension included five attributes: shared information and dialogue, collaboration and problem solving, application of knowledge, application of skills, and application of strategies (Chan-Remka, 2007). Survey and interview results indicated that three quarters (75%) of respondents disagreed with the statement that communications systems supported a flow of information among staff (Chan-Remka, 2007). Interview results confirmed this finding. Teachers reported that they were frustrated with the lack of support from administration, which made it impossible for teachers to work together. This feeling of frustration might impact teacher retention. According to Sparks (2002), teachers,

even those in the most demanding settings, are far more likely to remain in their positions when they feel supported by administrators, have strong bonds of connection to colleagues, and are aggressively pursuing a collective vision for student learning about which they feel passion and commitment.

The fourth dimension examined by Chan-Remka (2007), shared personal practice, included the following: observation and encouragement, shared outcomes of new practice and feedback, and analysis of student work and related practices. According to Chan-Remka, this process was intended to allow teachers to interact, provide feedback, and share results of students' learning experiences. DuFour et al. (2008) affirmed that a professional learning community engages each member of the organization in an ongoing cycle of gathering evidence of current levels of student learning and developing strategies to build on strengths and address weaknesses in that learning. It was evident in survey and interview results that these processes were not occurring. More than 8 of 10 (84%) respondents disagreed that there were opportunities for staff to observe peers and offer encouragement. Interview results confirmed this finding. Teachers expressed concern about the quality of communication between the principal and teachers (Chan-Remka, 2007).

A final dimension examined by Chan-Remka (2007) included supportive conditions. Supportive conditions include collegial relationships and structures (Chan-Remka, 2007). Collegial relationships include five attributes: caring relationships, trust and respect, recognition and celebration, risk taking, and a unified effort to embed change. A significant structural condition of this dimension is meaningful time for staff to meet and discuss student learning. More than half (62%) of respondents disagreed that time was provided to facilitate collaborative

work. In contrast, two thirds (66%) of respondents agreed that caring relationships built on trust and respect existed among staff and students.

Utilizing a two-phased, sequential mixed-method single case study approach, Chan-Remka (2007) also investigated the obstacles and barriers that hinder implementation as well as strategies to improve the current status of a professional learning community. Chan-Remka contended that like other research traditions within the qualitative research paradigm, case studies are used primarily when the researcher wishes to obtain an in-depth understanding of a relatively small number of individuals, problems, or situations (Patton, 2002). Creswell (2003) affirmed that case studies are intended to take the reader of the research into the world of the subjects and provide a much richer and more vivid picture of the phenomena being examined. Yin (2003) suggested that case inquiry is appropriate when the researcher relies on multiple sources of evidence, with data needed to converge in a triangulation fashion (p. 14). Chan-Remka used multiple sources of evidence by first assessing teachers' and principals' perceptions of the effectiveness of implementing a professional learning community in their school through a survey instrument, followed by interviews.

A selected group of teachers ($n = 12$) and the principal ($n = 1$) were interviewed to obtain deeper information regarding their perceptions of their professional learning community (Chan-Remka, 2007, p. 75). Draft interview questions were piloted with a sample of teachers ($n = 5$) to establish content validity of the interview instrument (Chan-Remka, 2007, p. 75). Interview questions were revised as a result of feedback obtained through the pilot test (Chan-Remka, 2007).

For the second research subquestion (What have been some of the barriers to becoming a professional learning community?), a qualitative analysis of interviews was conducted using a

process of data reduction and interpretation (Chan-Remka, 2007). The information obtained during the interview was organized and aligned with the five dimensions of professional learning communities. Chan-Remka found that among the five dimensions, collective learning and supportive conditions were rated the highest. Table 8 presents the mean and standard deviation for each dimension according to the 4-point Likert scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *agree*, 4 = *strongly agree*).

Table 8.

Professional Learning Community Dimension Ratings (Chan-Remka, 2007)

Dimension	Mean	Standard deviation
Shared and supportive leadership	1.87	.51
Shared values and vision	2.14	.48
Collective learning and application of learning	2.45	.46
Shared personal practice	2.21	.45
Supportive conditions - relationships	2.41	.58
Supportive conditions - structures	2.09	.44

Chan-Remka (2007) found that although collective learning and supportive conditions (relationships) were rated the highest among all dimensions, analysis of interview data indicated that there were many barriers that prevented staff from working collaboratively (p. 94). This finding was consistent with data gathered through the survey. Collectively, the majority of respondents, 62% to 81%, indicated that opportunities for staff collaboration were lacking due to insufficient time. According to Chan-Remka, the interview data indicated that staff felt that 1 hour per week for common planning time was inadequate. Table 9 presents the survey findings for questions related to barriers to the implementation of a professional learning community.

Table 9.

Barriers to the Implementation of a Professional Learning Community
(Chan-Remka, 2007)

Question	Disagree	Agree
Opportunities are provided for staff to initiate change.	68%	32%
Decision making takes place through committee and communication across grade and subject areas.	84%	16%
School goals focus on student learning beyond test scores and grades.	74%	26%
Opportunities exist for coaching and mentoring.	81%	19%
Time is provided to facilitate collaborative work.	62%	38%
A collaborative process exists for developing a shared vision among staff.	76%	24%
The school schedule promotes collective learning and shared practice.	70%	30%
Fiscal resources are available for professional development	58%	42%

Survey and interview results revealed a significant contrast between the perceptions of the principal and the staff (Chan-Remka, 2007). According to the principal, both formal and informal leadership teams were present in the school and provided opportunities through which teachers had input in school decisions (Chan-Remka, 2007). Survey and interview results indicated that the principal believed an atmosphere of democratic decision making existed in the school, especially through leadership teams in general and the school improvement team in particular (Chan-Remka, 2007). The principal also indicated that significant progress had been made in fostering opportunities for collaboration for teachers across grade levels by creating structures and schedules for joint planning once each week. Chan-Remka found that the principal's perceptions were in sharp contrast to the perceptions of teachers regarding school decisions (p. 97). Survey results indicated that 84% of the staff felt that they did not have opportunities to become involved in decision making due to the unwillingness of the principal (Chan-Remka, 2007).

Chen-Remka (2007) also used interviews to determine the actions that needed to be taken to sustain a professional learning community. Utilizing data obtained from interviews, Chen-Remka summarized findings regarding recommended actions for sustaining a professional learning community. Table 10 summarizes recommendations for improving the existing professional learning community within each of the five dimensions.

Table 10.

Teachers' Recommendations for Improving the Existing Professional Learning Community
(Chan-Remka, 2007)

PLC Dimension	Teacher comments
Shared and supportive leadership	<p>Solicit and value faculty input and involvement in decision making</p> <p>Share goals and expectations with all school community members.</p> <p>Provide support to faculty for change initiatives.</p> <p>Encourage and provide support for teacher collaboration.</p> <p>Be willing to share power and authority.</p> <p>Administrators must be visible.</p>
Shared values and vision	<p>Make goals and expectations visible.</p> <p>Decisions should be made in alignment with the school's values and vision.</p> <p>School should focus on student learning instead of just the standardized test scores.</p>
Collective learning and its application	<p>Provide time for staff to work collaboratively.</p> <p>Provide professional development that meets the teachers' needs.</p> <p>Provide opportunities for staff to plan and work together.</p>
Shared personal practice	<p>Staff should share teaching ideas and best practices.</p>
Supportive conditions—relationships and structures	<p>Review student work together to improve teaching and learning.</p> <p>The principal needs to recognize and celebrate successes.</p> <p>Allocate time and resources for teacher collaboration.</p> <p>Communication system should be in place to share school information.</p> <p>Provide mentoring and coaching for new teachers.</p>

Chan-Remka (2007) concluded that the success of any innovation and change in schools is dependent on how well staff can sustain their efforts and embed them into the culture. According to Chan-Remka, information abstracted from interviews suggesting consensus about improved administrative support for collaboration represented a significant finding. Collective recommendations included the following: scheduling that enables teachers more time for collaboration, arranging for team planning, utilizing substitute teachers as a resource to supplement teacher collaboration, organizing classroom allocations more effectively, providing directives and incentives for teachers to work and plan after school, and setting higher expectations for teachers to collaborate in meaningful ways.

An analysis of data indicated a need for change regarding the staff's perceptions (Chan-Remka, 2007). The most pressing challenge facing the school was the lack of shared leadership and decision making (Chan-Remka, 2007). These findings support the research literature suggesting that the principal's practices impact the professional learning community (Deal & Peterson, 1999; DuFour & Eaker, 1998; Hallinger & Heck, 1996; Hord, 1997; Leithwood & Jantzi, 1999).

Based upon evidence from this study, Chan-Remka (1997) concluded that building a professional learning community is a difficult and lengthy task. According to the researcher, survey and interview results indicated that the lack of strategies and efforts to support the professional learning community resulted in significant frustration among staff members (Chan-Remka, 2007). Evidence gleaned from this study suggested that the support structures, including collegiality between school leaders and teachers, required to build and sustain a professional learning community were not adequately present and lacked the appropriate infrastructure

(Chan-Remka, 2007). Professional learning communities are more likely to occur in schools in which staff are looking for opportunities to increase knowledge and improve skills while being provided with sufficient resources and time to develop professionally (Chan-Remka).

In summation, Chan-Remka (2007) concluded that the concept of a professional learning community holds great promise for education, because it has a foundation that is built upon continual learning. Chan-Remka asserted that if educators believe that working collaboratively, adapting to change, and facing challenges collectively are beneficial, they may be ready to embrace the professional learning community as a concept and recognize that it is a continuous process. Nevertheless, the process of becoming a professional learning community may take several years to evolve.

Summary of Literature Review

The purpose of this literature review was to examine research studies related to professional learning communities. Collectively, there is considerable evidence in the literature that suggested that schools functioning as professional learning communities operate organizationally and culturally in the appropriate context for substantive improvements in instruction and student performance. Proponents have suggested there is considerable and emerging evidence that developing the conditions, structures, and organizational practices of professional learning communities is a viable approach to improving school effectiveness so that learning is continuously improving for all children (DuFour et al., 2008; Fullan, 2001; Schmoker, 2006; Stoll et al., 2006).

A core concept embedded in the theoretical framework of professional learning communities is the belief that a learning organization is one where people continually expand their capacity to create the results they truly desire (Senge, 1990). The context learning espoused

by theorists is that it is ongoing, perpetual, collaborative, reflective, inclusive, and continuous (DuFour & Eaker, 1998; Mitchell & Sackney, 2002; Stoll et al., 2006).

A composite model of professional learning communities derived from the work of Senge (1990), Louis et al. (1996), DuFour et al. (1998), and Hord (2004) served as the conceptual framework for this study. The composite model of professional learning communities represents the dimensions and characteristics of professional learning communities.

Hord's (2004) SPSLCQ survey instrument, developed in collaboration with the Southwest Educational Development Laboratory (SEDL), is used to capture data that characterize professional learning communities in five dimensions: (a) supportive and shared leadership, (b) shared values and vision, (c) collective learning and its application, (c) shared personal practice, and (d) supportive conditions. The perceived need to improve teaching and learning in schools resulted in the passage of the No Child Left Behind Act of 2001 as a national initiative aimed at enhancing educational reform through heightened accountability measures. At the heart of current reform efforts has been the perceived need to reculture or restructure schools for student success (Barth, 1990; DuFour et al., 2002).

Research studies examined in the literature review investigated the key factors that contribute to the creation, implementation, and sustainability of professional learning communities as a strategy for fostering conditions, practices, and structures that positively impact student learning. These studies showed that comprehensive redesign of schools, including democratically shared leadership, shared decision making, shared vision for school improvement that focuses on student learning, shared personal practice and its application to learning, and supportive school conditions, can improve student learning. The purpose of this

study was to investigate assistant principals', teachers', and principals' perceptions of their schools as professional learning communities.

Chapter Three: Methodology

Purpose

The purpose of this study was to investigate assistant principals', teachers', and principals' perceptions of their schools as professional learning communities. Each of the schools selected for this study had implemented an intensive school improvement process aimed at enhancing, sustaining, and improving student learning. The schools included in the study were in the 5th year of implementation. Each of the schools was selected based on purposeful and convenience sampling.

This chapter is organized with the following sections: research design and methodology, research design justification, research questions, sample selection, case descriptions, data collection procedures, instrumentation, data management procedures, data analysis techniques, timeline, limitations and delimitation of the study, and methodology summary.

Research Design and Methodology

This study employed a comparative case study research methodology to investigate assistant principals', teachers', and principals' perceptions of their schools as professional learning communities. Yin (2003) contended that "a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident" (p. 13). Yin also suggested that the case study method is appropriate when the contextual conditions within which the study is situated may be highly pertinent to the phenomenon being investigated. Applying Yin's definition of the case study research strategy to this study, the contemporary phenomenon under investigation is the professional learning community in each of the schools. Each learning community was embedded within the school context; therefore, the case study was an

appropriate research strategy (Yin, 2003). The phenomenon under consideration in each school in this study was the composite model of professional learning community as defined by Jones (2011). This study did not involve the manipulation of the behaviors of assistant principals, teachers, and principals in an attempt to create a professional learning community in the two schools; rather the research determined the extent to which a professional learning community existed in each school, thereby making the case study a suitable design.

Applying Creswell's (2007) definition of case study research to this study, each of the schools selected for the study represented the bounded system within which the phenomenon might exist. A foundational conceptual framework for the context, characteristics, and dimensions of professional learning communities as defined by Hord (2004) served as the theoretical model to which each of the schools was compared and analyzed.

Research Design Justification

According to Yin (2003), in determining an appropriate research strategy in the social sciences, the researcher should consider three conditions: the type of research questions posed, the extent of the investigator's control over actual behavioral events, and the degree of focus on contemporary as opposed to historical events. In this study, the researcher sought to understand how participants viewed their schools organizationally, how they participated in decision making, and how they worked with their colleagues toward the mission and vision of improving student learning and achievement. Yin stated that the case study method is an appropriate research strategy when the researcher is investigating how and why questions that seek to explain a phenomenon.

Similarly, Rossman and Rallis (2003) suggested that case studies are descriptive or explanatory and depict events, processes, and perspectives as they unfold. The case study's

unique strength is its ability to deal with a variety of evidence: documents, interviews, situations, and occurrences arising from everyday practice (Rossman & Rallis, 2003; Yin, 2003).

Another justification for case study as an appropriate research method for this study is its reliance on the comparison of information-rich cases to gain in-depth understanding of the questions under study. Patton (2002) contended that “information rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research” (p. 46). This study was purposive in its intent to investigate the existence of professional learning communities within the context of the schools selected as units of analysis for the study. According to Patton, information-rich cases yield insights and in-depth understanding rather than empirical generalizations. Applying this logic to the current study, the researcher sought to determine the degree to which assistant principals’, teachers’, and principals’ perceptions of their schools as professional learning communities might serve as rich examples of the phenomenon of interest. It was posited that the existence of the intensive school improvement process in each school was a practice that had contributed to the existence of the dimensions of a professional learning community, as described by Hord (2004).

A final justification for the case study method is its reliance on intensity sampling for an information-rich case that manifests the phenomenon of interest intensely but not extremely (Patton, 2002). Applying Patton’s definition of intensity sampling, the high school and middle school, each of which had adopted an intensive school improvement process focused on improving student learning, served as rich examples of the phenomenon of interest through the degree to which they represented professional learning communities.

Research Questions

The purpose of this study was to investigate assistant principals', teachers', and principals' perceptions of their schools as professional learning communities, as defined by Jones (2011).

The research questions that served as the basis of this study are as follows:

1. How do two schools' assistant principals, teachers, and principals reflect upon the core components of a professional learning community as described in the literature?

Subquestions

- 1.1 How do assistant principals, teachers, and principals perceive their respective schools as being characterized by shared leadership?
 - 1.2 How do assistant principals, teachers, and principals perceive their respective schools as having a shared vision?
 - 1.3 How do assistant principals, teachers, and principals perceive their respective schools as being characterized as schools in which collective learning occurs and the application of that learning is used to take action in addressing student needs?
 - 1.4 How do assistant principals, teachers, and principals perceive their respective schools as being characterized as schools in which peers review and give feedback to one another to improve organization capacity?
 - 1.5 How do assistant principals, teachers, and principals perceive their respective schools as being characterized as schools in which school conditions and capacities support the development of a professional learning community?
2. What is the relationship between the perceptions of assistant principals, teachers, and the principal of their school as a professional learning community?

3. What, if any, are the differences between the levels of maturity of the professional learning communities between the two schools?

Sample Selection

The units of analysis included one high school and its feeder middle school in one school division in Virginia that were serving as demonstration sites for a federally funded grant addressing literacy improvement for all students at the middle and high school level. Through the Virginia Department of Education (VDOE) (2005), these schools received funds to develop and implement a research-proven approach to improving literacy for all students. To be eligible to receive state funding for the schoolwide literacy improvement instructional model, schools were required to meet the following criteria established by the VDOE:

1. Each high school must be paired with its feeder middle school.
2. The superintendent and central office staff must agree to the adoption and implementation of the literacy model.
3. The principal and at least one other building administrator must be willing to engage in activities to support the adoption over time.
4. The adoption of the literacy instruction model must be aligned and consistent with the school improvement plan.
5. Safety and discipline concerns must not be a major thrust of the school improvement plan.
6. No other significant innovation requiring a major commitment of time and resources can be planned during the same period as the adoption and implementation of the literacy model.

7. High-quality professional development must be valued by administrators and faculty as a tool for school improvement.
8. Faculty and staff must be willing to engage in high-quality professional development, including coaching, to learn the tools for successful implementation and adoption.

According to Pedhazur and Schmelkin (1991), there are two processes by which a sample may be obtained: probability or nonprobability sampling. Nonprobability sampling is a term used to describe samples of convenience or purposive methods of selection (Pedhazur & Schmelkin, 1991). This study employed a purposive convenience sample in an effort to target populations. The sample selected also represented the use of intensity sampling for an information-rich case that manifested the phenomenon of interest.

In addition, the schools selected for this study adopted identical professional development models and training aimed at improving literacy for all students in the middle and high school. The agency responsible for professional development administered the same training to staff at both schools simultaneously and assisted each school in identifying its own staff to serve as on-site trainers. On-site trainers were trained at each school for the purpose of providing ongoing training and professional development to teachers and administrators that was sustainable, ongoing, and consistent. It was posited that the extent to which training was available to both schools would result in the identical rate of maturity of the components, dimensions, and practices associated with professional learning communities.

Case Descriptions

Virginia's accountability system. According to the VDOE (2009), Virginia's accountability system supports teaching and learning by setting rigorous academic standards, known as the Standards of Learning (SOL), and implementing annual assessments of student

achievement. The accountability system is part of a statewide program of support for the commonwealth's public schools and school divisions. Schools receive two annual accountability ratings based on the performance of students on SOL tests and other statewide assessments.

A school's state accreditation rating reflects overall achievement in English, history/social science, mathematics, and science. Schools in which students meet or exceed achievement objectives established by the Virginia Board of Education in these four major content areas are rated as "fully accredited." Schools and school divisions are also rated according to their progress toward the goals of the Elementary and Secondary Education Act (ESEA), also known as the No Child Left Behind Act of 2001. This federal law requires states to set annual achievement benchmarks in reading and mathematics leading to 100% proficiency by 2014. The law also requires testing in science at least once in elementary, middle, and high school. Schools and school divisions that meet or exceed all annual benchmarks in reading and mathematics are rated as having made Adequate Yearly Progress (AYP).

Alpha High School. Alpha High School was a large public high school located in the rural central region of Virginia with students enrolled in grades nine through twelve. The student enrollment was approximately 1500 students for the 2009-2010 school year. Alpha High School was considered a comprehensive public high school offering academic areas of focus that included career and technical education, International Baccalaureate (IB), advanced placement (AP), dual enrollment, English as a second language (ESL), general education, special education, and gifted and talented programs.

Alpha High School earned the fully accredited accreditation rating, as established by the Virginia Board of Education, for the 2009-2010 school year. The school met or exceeded annual achievement benchmarks, commonly referred to as AYP, in reading and mathematics, as

established by the VBOE during the 2007-2008 and 2008-2009 school years. Alpha High School did not make AYP for the 2009-2010 school year.

The No Child Left Behind Act of 2001 also requires that schools and school divisions make progress in high school graduation rates. The 2009 NCLB overall graduation rate for Alpha High School was 84% for all students, 73% for Black students, 86% for White students, 51% for students with disabilities (SWD), and 63% for students considered economically disadvantaged.

Of those students who graduated in 2009, 50% received advanced diplomas, 5% received general education diplomas (GEDs), 4% completed modified standard diplomas, and 38% received standard diplomas. Less than 1% percent of the students dropped out of school or received a special diploma through the special education program.

Virginia's accountability system recognizes the importance of teacher quality by tracking the number of core academic classes taught by teachers not meeting the federal requirement of "highly qualified" as defined by ESEA of 2001. In 2008-2009, 100% of the teachers at Alpha High School were teaching core and elective academic classes in areas for which they were highly qualified.

Alpha Middle School. Alpha Middle School was a public middle school also located in the rural central region of Virginia with students enrolled in grades six through eight. The student enrollment for the 2009-2010 school year was approximately 1100 students. Alpha Middle School academic areas of focus included career and technical education, ESL, general education, special education, and gifted and talented programs.

Based on its accreditation rating for the 2009-2010 school year, Alpha Middle School was fully accredited. The school met or exceeded annual achievement benchmarks in reading

and mathematics as required for AYP during the 2008-2009 and 2009-2010 school years but did not make AYP in the 2007-2008 school year. In 2008-2009, 100% of the teachers at Alpha Middle School were teaching core and elective academic classes in areas for which they were highly qualified. Table 11 provides a comparison of key descriptors of each case.

Table 11.

Comparison of Case Descriptions

School	School type	2009 Student population	Accreditation status	2009 AYP status	Highly qualified teachers
Alpha High	Large, public	1602	Fully Accredited	Made AYP	100%
Alpha Middle	Large, public	1086	Fully Accredited	Made AYP	100%

Data Collection Procedures

In this study, Hord's (2004) SPSLCQ survey served as the instrument for measuring the extent to which the foundational theoretical model for a professional learning community guided the investigation. Additionally, this study relied on multiple sources of evidence, with data converging in a triangulated fashion. The study employed a concurrent triangulation strategy that utilized distinct quantitative and qualitative methods to offset inherent weaknesses in each design.

A comparative design was employed to investigate the differences in the perceptions of assistant principals, teachers, and principals at the two schools. This study utilized a mixed-methods approach that included both quantitative and qualitative research designs.

The protocol for data collection for this study consisted of a description of the instruments to be used to collect data, a data source matrix, and data collection procedures. A

discussion of the relationship between the data sources and research questions is also presented in this section.

Instrumentation

Four instruments were used to collect data for this study. First, a demographic survey created by the researcher was used to gather data related to all participants and to provide descriptive information related to possible explanatory variables. The demographic survey (Appendix B) included questions related to participant gender, ethnicity, title (assistant principal, teacher, principal), number of years in current position, number of years in the education profession, number of years present at current school site, and number of years of involvement with the school improvement team.

Second, with the permission of SEDL, the School Professional Staff as Learning Community Questionnaire (SPSLCQ) (Hord, 1997), an existing instrument, was used (Appendix C). The SPSLCQ was administered to assistant principals, teachers, and the principal at each of the schools selected for this study. Third, the principal at each school was interviewed to extract information about the practices, processes, and conditions that promoted the learning community at their school (Appendix D). Fourth, faculty at each school site who served as instructional staff during the 5 years of the intensive school improvement process participated in a focus group interview to provide qualitative data for this study. Teachers that were hired after the intensive school improvement had begun, or who left the school for any reason during the implementation of the program, were not included in the focus groups. At each site, the principal was asked to identify staff to participate in the focus group interview. At Alpha High School, the focus group included administrators and eighteen teachers who had been serving as the school team tasked with oversight of the intensive improvement process. The principal at Alpha Middle School

identified six teachers who had been on staff since the intensive school improvement had begun to serve as participants in the focus group interview. The six teachers selected by the principal at Alpha Middle School served as the focus group.

School Professional Staff as Learning Community Questionnaire (SPSLCQ). With the permission of SEDL, the SPSLCQ was used to collect quantitative data regarding the extent to which assistant principals, teachers, and principals perceived their schools as professional learning communities (Appendix C). The instrument was developed by Hord (1996) to assess the maturity of a school's professional staff as a learning community.

As part of its contract to develop a framework for continuous improvement in schools in its four-state region, the Appalachia Educational Laboratory (AEL) staff agreed to field test Hord's instrument (Hord, 2004; Meehan, Orletsky, & Sattes, 1997). To find schools that had become professional learning communities, researchers used as criteria the five dimensions of professional learning communities: supportive and shared leadership, shared values and vision, collective learning and application of learning, supportive conditions, and shared practice (Hord, 2004).

The staff of the Appalachia Educational Laboratory conducted field tests of the instrument using three objectives: to assess the instrument's reliability, to assess the instrument's validity, and to draw conclusions about its utility as a tool for assessing educational improvement (Meehan et al., 1997). The instrument consists of 17 descriptors of a professional learning community grouped into the five major dimensions (Meehan et al., 1997). The responses for each descriptor utilize a 5-point scale along a continuum designed to assess a range from *least* to *most like* the corresponding dimension or item.

The SPSLCQ is composed of the following dimensions and descriptors (Hord, 1996):

Dimension 1: School administrators participate democratically with teachers, sharing power, authority, and decision making.

Descriptor 1a: Although there are some legal and fiscal decisions required of the principal, school administrators consistently involve staff in discussing and making decisions about school issues.

Descriptor 1b: Administrators involve the entire staff.

Dimension 2: The staff shares visions for school improvement that have an undeviating focus on student learning, and these visions are consistently referenced in the staff's work.

Descriptor 2a: Visions for improvement are discussed by the entire staff such that consensus and shared vision result.

Descriptor 2b: Visions for improvement are always focused on students, teaching, and learning.

Descriptor 2c: Visions for improvement target high-quality learning experiences for all students.

Dimension 3: The staff's collective learning and application of learning (taking action) create high intellectual learning tasks and solutions to address student needs.

Descriptor 3a: The entire staff meets to discuss issues, share information, and learn with and from one another.

Descriptor 3b: The staff meets regularly and frequently on substantive student-centered educational issues.

Descriptor 3c: The staff discusses the quality of their teaching and students' learning.

Descriptor 3d: The staff, based on their learning, makes and implements plans that address students, needs, more effective teaching, and more successful student learning.

Descriptor 3e: The staff debriefs and assesses the impact of their actions and makes revisions.

Dimension 4: Peers review and give feedback based on observing one another's classroom behaviors to increase individual and organizational capacity.

Descriptor 4a: Staff members regularly and frequently visit and observe one another's classroom teaching.

Descriptor 4b: Staff members provide feedback to one another about teaching and learning based upon their classroom observations.

Dimensions 5: School conditions and capacities support the staff's arrangement as a professional learning organization.

Descriptor 5a: Time is arranged and committed for whole staff interactions.

Descriptor 5b: The size, structure, and arrangement of the school facilitate staff proximity and interaction.

Descriptor 5c: A variety of processes and procedures are used to encourage staff communication.

Descriptor 5d: Trust and openness are characteristic of all staff members.

Descriptor 5e: Caring, collaborative, productive relationships exist among all staff members.

A pilot test of the SPSLCQ instrument was conducted by the Appalachia Educational Laboratory (AEL) in 1996 with a sample of 28 students, parents and educators participating in an

AEL summer experience (Hord, Meehan, Orletsky, & Sattes, 1999). Hord et al. inferred that this sample represented a typical school community and, as a result of positive results in the pilot test, suggested that the instrument be given to a wide range of participants in a school community.

The pilot field test of the instrument was conducted with the faculties of 21 schools located in Kentucky, Tennessee, Virginia, and West Virginia (Hord 1996; Hord et al., 1999). The sample included six elementary schools, six middle schools, and nine high schools, involving a total of 690 teachers (Hord, 1996; Meehan et al., 1997). According to Hord et al. (1999), schools volunteered to participate in the field test, and four large high schools also agreed to participate in a concurrent validity and reliability study.

Reliability of the SPSLCQ instrument. Information concerning the validity and reliability of the instrument was obtained using both a pilot and a field test. For the field-test results, all five consistency reliability coefficients for the dimension items were in the mid-.80s (Hord, 1996; Hord et al., 1999). The results from the pilot test yielded a Cronbach's alpha reliability coefficient of .92 for 17 items (Hord, 1996; Meehan et al., 1997). The field test involving 690 teachers from 21 schools yielded a coefficient alpha for the total instrument of .94 (Hord, 1996; Meehan et al., 1997). The alpha coefficients for the individual schools ranged from .62 to .95 (Hord, 1996; Meehan et al., 1997). The general research standard for internal consistency is .75 or above (Hord, 1996; Meehan et al., 1997).

Validity of the SPSLCQ instrument. Content validity was assessed during three stages: development, early review, and reformatting of the instrument (Hord, 1996; Meehan et al., 1997). Construct validity was obtained using two methods. First, the scores of teachers from previous research studies who were identified as members of a professional learning community

were compared to scores of all teachers in the field test data base (Hord, 1996; Meehan et al., 1997). The analysis of the scores using a *t*-test revealed significantly higher scores for the teachers who were in schools that had previously implemented a professional learning community (Hord & Boyd, 1995; Meehan et al., 1997). Factor analysis was the second method of construct validation. According to the developers, the 17-item instrument represents a unitary construct of a professional learning community within schools (Hord, 1997; Hord & Boyd, 1995; Meehan et al., 1997).

According to Hord et al. (1999), the resulting instrument was patterned as a basic innovation configuration matrix designed to assess the degree of existence of the components of a professional learning community in operation in a school staff. In its final form, the instrument includes 17 items unequally distributed across the five dimensions of professional learning communities. The five dimensions defined in the instrument are aligned with the five dimensions, which served as the conceptual framework for this study. Table 12 depicts these five dimensions of professional learning communities as the conceptual framework for this study in relation to the SPSLCQ instrument.

Table 12.

The Dimensions of Professional Learning Communities in Relation to the SPSLCQ

Dimensions of professional learning communities	SPSLCQ items
Supportive and shared leadership	(1a, 1b) School administrators participate democratically with teachers, sharing power, authority, and decision making.
Shared values and vision	(2a, 2b, 2c) The staff shares visions for school improvement that have an undeviating focus on student learning, and these visions are consistently referenced in the staff's work.
Collective learning and its application	(3a, 3b, 3c, 3d, 3e) The staff's collective learning and application of learning (taking action) create high intellectual learning tasks and solutions to address student needs.
Shared personal practice	(4a, 4b) Peers review and give feedback based on observing one another's classroom behaviors to increase individual and organizational capacity.
Supportive conditions	(5a, 5b, 5c, 5d, 5e) School conditions and capacities support the staff's arrangement as a professional learning organization.

Interview protocol. A third source of data collection for this comparative case study included an interview with the principal at each school. The principal at each school was interviewed to extract information about the practices, processes, and conditions that promote the learning communities at their respective schools. Because this researcher sought to understand and describe how participants viewed their school organizationally, how they participated in decision making, and how they worked with their colleagues toward the mission and vision of

improving student learning and achievement, the interview protocol was an appropriate research strategy (Patton, 2002; Yin, 2003).

Yin (2003) contended that interviews are an essential source of case study evidence because most case studies are about human affairs (p. 92). The human affairs examined in this study were those that contributed to the existence of a professional learning community in each of the schools investigated.

Similarly, Patton (2002) suggested that the purpose of the interview is to capture how those being interviewed view their world as well as the complexities of their individual perceptions and experiences. This study of two schools investigated the relationships among assistant principals', teachers', and principals' perceptions of their schools as professional learning communities, as defined by Jones (2011).

The interview protocol was guided by referencing the SPSLCQ instrument (Hord, 1996) and the conceptual framework as parameters for facilitating questioning for this study. Referencing the SPSLCQ (Hord) and the conceptual framework as parameters for open-ended questioning was intended to capture the participant's perspective on the phenomenon of interest as it unfolded to corroborate or refute findings from other data sources. According to Yin (2003), interviews that follow a certain set of questions, but remain open-ended, are considered focused interviews.

The purpose of interviewing in this study was to corroborate the extent to which the dimensions of professional learning communities existed in the schools that were the subjects of this investigation. Table 13 displays the five dimensions of professional learning communities serving as the conceptual framework for this study in relation to the interview protocol.

Table 13.

The Dimensions of Professional Learning Communities in Relation to the Interview Protocol

Dimensions of professional learning communities	Interview protocol items
Supportive and shared leadership	1, 1.1, 1.2
Shared values and vision	1, 1.1, 2
Collective learning and its application	1, 1.1, 2, 3, 4
Shared personal practice	1, 1.1, 1.2
Supportive conditions	1, 1.1

A small-scale pilot test of the interview questions and prompts was conducted using a group of 15 administrators in the Virginia Tech doctoral cohort. The participants in the pilot test were asked to examine the questions for clarity, meaning, and interpretation. Modifications were made based on the feedback from pilot participants.

Focus group interview protocol. A fourth source of data collection for this comparative case study involved focus group interviews at each school (Appendix E). Rossman and Rallis (2003) suggested that focus groups are generally composed of seven to ten people, who have been selected because they share certain characteristics. In this study, the principal at each school was asked to identify staff members to participate in the focus group by selecting staff who had been at the school since the intensive improvement process had begun. At Alpha High, the focus group included the principal, an assistant principal, and 18 teachers who had been serving as the school team tasked with oversight of the intensive improvement process. The principal at Alpha Middle School identified six teachers who had been on staff since the beginning of the intensive school improvement to serve as participants in the focus group interview.

According to Creswell (2007), focus groups are advantageous when the interaction among interviewees is likely to yield the best information, when the interviewees are similar and cooperative with each other, and when there is limited time to collect information. Because the interview is one of the most important sources of data collection in a case study (Yin (2003), it was believed that the interactions among participants in a focus group interview format might significantly enhance the quality of data regarding the extent to which a professional learning community existed in each of the schools that were the subjects of this investigation.

The focus group interview protocol questions pertained to each of the five dimensions of professional learning communities as defined by Jones (2011). The questions were designed to elicit information regarding the ways the school operated and functioned in relation to each dimension. Therefore, the purpose of the focus group was to extract information from teachers about the practices, processes, and conditions that promoted the learning communities at their respective schools. In addition, focus group questions were used to understand how principals and assistant principals established, promoted, maintained, and sustained the professional learning communities in their schools.

As recommended by Rossman and Rallis (2003), focus group participants targeted for this proposed study included teachers and administrators who had been at each of the schools for at least 5 years before this study. This criterion for selection was designed to ensure that feedback was obtained from individuals who had experienced and participated in their schools' change efforts; they had shared the experience of being involved in the implementation of a schoolwide literacy model for the previous 5 years.

Teachers and administrators were interviewed to extract information about the practices, processes, and conditions that promoted the learning communities at their respective schools.

Because this study sought to understand and describe how participants viewed their school organizationally, how they participated in decision making, and how they worked with their colleagues toward the mission and vision of improving student learning and achievement, the focus group interview protocol was an appropriate research strategy (Patton, 2002; Rossman & Rallis, 2003). The five dimensions of professional learning communities serving as the conceptual framework for this study are shown in Table 14, in relation to the interview protocol.

Table 14.

The Dimensions of a PLC in Relation to the Focus Group Interview Protocol

Dimensions of professional learning communities	Interview protocol items
Supportive and supportive leadership	1, 1.1, 1.2
Shared values and vision	1, 1.1, 2
Collective learning and its application	1, 1.1, 2, 3, 4
Shared personal practice	1, 1.1, 1.2
Supportive conditions	1, 1.1

A small-scale review test of the interview questions and prompts was conducted with a group of school leaders involved in a graduate school seminar class at a Virginia public university. The participants in the pilot were asked to examine the questions for clarity, meaning, and interpretation. Modifications were made based on the feedback from pilot participants.

The collection of multiple sources of evidence is a research strategy designed to converge the lines of inquiry for the purpose of triangulating the data. Because examination of the phenomenon of a professional learning community served as the theoretical perspective from

which this study was designed, the following data gathering procedures were employed to ensure reliability and construct validity (Creswell, 2009; Yin, 2003).

The name and e-mail address of the respective superintendent was obtained from the Virginia Department of Education (VDOE) Web site. Information packets explaining the purpose of the study and seeking permission to survey the principals, assistant principals, and teachers in the school division were e-mailed to the respective school division superintendent (Appendix F). If a response was secured via e-mail, the superintendent was sent a letter asking for permission to conduct the study. If a response was not secured through written correspondence, a personal phone call was made to request permission to conduct the study.

Once permission was granted, an informational packet was sent via e-mail to the principal of each of schools identified for participation in this study. The e-mail message included an introduction to the research proposal, a cover letter providing a brief explanation of the research project, and a preliminary request to administer the demographic survey and the School Professional Staff as Learning Community Questionnaire (SPSLCQ) at a faculty or staff meeting. The e-mail message was followed by a phone call to each principal to discuss the details of administering the demographic survey, the SPSLCQ, individual interviews, and focus group interviews.

The request to conduct the surveys at faculty meetings was intended to provide the researcher with an opportunity to explain the purpose of the study and maximize the response rate among participants. In addition, the researcher provided prospective participants with an informed consent form and an opportunity to complete the survey and return it in a self-addressed, postage prepaid, return envelope if they were not available at the faculty meeting or felt more comfortable mailing the survey documents to the researcher.

Data Management Procedures

In accordance with procedures set forth by the Virginia Polytechnic Institute and State University Institutional Review Board (IRB), this study was conducted with a commitment to protecting the rights and ensuring the safety of human subjects participating in this comparative case study. The research conducted through this study was guided by the ethical principles described in *The Belmont Report* and in applicable federal regulations, as required by federal law.

Each participant in this study received a cover letter introducing this study, detailing the purpose of the study, and notifying the participant of his or her right as a volunteer to withdraw at any time, without penalty. Prior to participating in this study, each participant received a notification of informed consent. A copy of this notification is included in Appendix A, and a copy of the cover letter provided to each participant in the study is included in Appendix G.

All data collected for this study were kept in a secured file and were accessible exclusively to the researcher. Because this proposed study employed a comparative case study approach, the researcher is prohibited from disclosing confidential and personally identifiable information concerning the subjects, individuals, or research participants (American Psychological Association, 2010, p. 16). In addition, the researcher will retain data, instructions, coding systems, details of research procedures, and analysis of data for a period of 5 years after publication of this study (American Psychological Association, 2010, p. 241).

In an effort to protect the confidentiality of participants in this study, the names of the schools used in this study were changed to pseudonyms to prevent them from being identified by name or location. Quantitative data obtained through the SPSLCQ instrument were reported as

aggregate data to prevent the identification of responses from individuals. Pseudonyms were used for participants in individual interviews and focus group interviews during this study.

Data Analysis Techniques

Demographic data collected for this study through use of the Demographic Informational Survey (Appendix B) were recorded and tabulated by frequency and range; the data were stored and analyzed using SPSS statistical software version 16.0. Because demographic data are categorical and differ in frequency for each case in this study, the data were assigned dummy coding and analyzed using SPSS statistical software for the purpose of obtaining descriptive information about each case. Dummy coding consisted of assigning a number such as 1 or 0 to signify membership in a category. Descriptive statistics recorded for the individual characteristics from each of schools participating in the study included total years of administrative experience, number of White and non-White participants, number of male and female respondents, range of years at each school, number of years working with the school improvement team, number of years of working with the current principal, number of years of working with the current assistant principal.

The SPSLCQ instrument was utilized to collect quantitative data to examine the relationships between the independent variables or groups. The independent variables in this study included the various groups participating in the study within each school or case. Each school or case served as a unit of analysis in the examination of the dependent variable or phenomenon. The dependent variables consisted of the individual items measured on the instruments as well as summed scores for each dimension of a professional learning community, which composed the conceptual framework for this study. By averaging the scores of the various groups, assistant principals, teachers, and principals within the same school, a school

rating was obtained regarding the extent to which the school resembled a professional learning community.

The first research question was addressed by calculating ranges, means, variances, and descriptive statistics for each item on the SPSLCQ instrument. Each dimension of the composite conceptual framework of the professional learning community (Jones, 2011) corresponded with each of the subquestions, 1.1, 1.2, 1.3, 1.4, and 1.5, which were addressed using descriptive statistics. Qualitative data obtained from individual interviews with each school principal and focus group interviews at each school were used to triangulate data for greater validity.

The second research question was addressed using multivariate analysis of variance (MANOVA) to test for differences in means of the dependent variables by levels of the independent variable. The independent variables include assistant principals, teachers and principals and the dependent variables are the dimension scores on the SPSCLQ survey. Dimension scores were calculated by summing the scores for items that comprised each dimension.

The third research question was addressed using an independent samples *t*-test to compare means of two independent groups to determine if the variances among the groups are similar statistically. There are three assumptions underlying the independent samples *t*-test: the test variable is normally distributed in each of the two populations; the variances of the normally distributed test variable for the populations are equal; and, the cases represent a random sample from the population and the scores on the test variable are independent of each other (Green and Salkind (2008). The null hypothesis would be that the means of the two groups are the same. Using SPSS, Levene's Test for Equality of variances was conducted by combining single-item scores on the SPSLCQ to determine and compare variances for each dimension of professional

learning communities. A low p -value ($p < 05$) would indicate that there is a sufficiently large difference between the two groups to conclude that the two groups are significantly different, resulting in rejection of the null hypothesis. The final results of the data are reported in Chapter Four using numerical and graphic techniques to report descriptive statistics, including means, frequencies, percentages, and levels of statistical significance.

Analytical procedures for qualitative data in this study included organizing and preparing the data, screening the data for overall depth and usefulness, and coding the data into segments and categories to enhance its meaning (Creswell, 2009).

To ensure the validity and reliability of qualitative research methods, this study utilized both administrative interviews and focus group sessions as sources of data. Individual administrative interviews and focus group interviews were recorded and transcribed verbatim using a standard word processing program. The investigator developed case study notes from the transcriptions that were subdivided in major subjects or themes. The first step for managing qualitative data for this study consisted of coding of the data by assigning shorthand codes to each participant. For the individual interviews with the principal at each, transcript data was designated as, AHSP (Alpha High School Principal) and AMSP for Alpha Middle Principal.

For the focus group interviews, each participant was assigned shorthand code for each participant. For example, Alpha High School teachers were designated as AHST1, or AHST2, through AMST 18 to account for each of the 18 participants in the focus group interviews. An identical coding method was used to code participants at Alpha Middle School. Alpha Middle School Teachers were coded as AMST1 through AMST6, for each of the participants in the focus group.

Each participant comment was numbered so that the research could classify and organize data into themes or patterns for interpreting results and findings. For example a comment from an Alpha Middle School Teacher was coded as; AHST7 PC21, meaning Alpha High School Teacher number 7 and participant comment (PC) number twenty-one. This process enabled the researcher to analyze the extent to which a specific comment was in correlation with focus group questions or prompts. Content analysis of the transcripts involved identifying, categorizing, and classifying qualitative to determine primary patterns that were or were not related to the key dimensions of professional learning communities. This study employed such techniques as a chain of evidence for identifying the pertinent information about each participant or case as well as its pattern or thematic relationship with the conceptual framework (Creswell, 2009). Table 15 displays the relationship between the data sources and the research questions in this study.

Table 15.

Relationship Between Research Questions and Data Sources

Research question(s)	SPSLCQ instrument	Administrator interview	Teacher focus group interview
1. How does the school reflect upon the core components of a professional learning community as described in the literature?	All items	All items	All items
1.1: How do assistant principals, teachers, and the principal perceive their school as characterized by shared leadership?	1a, 1b	1, 1.1, 1.2	1, 1.1, 1.2
1.2: How do assistant principals, teachers, and the principal perceive their school as characterized by a shared vision?	2a, 2b, 2c	1, 1.1, 2	1, 1.1, 2
1.3: How do assistant principals, teachers, and the principal perceive their school as being characterized as one in which collective learning occurs and the application of that learning is used to take action in addressing student needs?	3a, 3b, 3c, 3d, and 3e	1, 1.1, 2, 3, 4	1, 1.1, 2, 3, 4
1.4: How do assistant principals, teachers, and the principal perceive their school as characterized by one in which peers review and give feedback to one another in order to improve organization capacity?	4a, 4b	1, 1.1, 1.2	1, 1.1, 1.2
1.5: How do assistant principals, teachers, and the principal perceive their school as being characterized as one in which school conditions and capacities support the development of a professional learning community?	5a, 5b, 5c, 5d and 5e	1, 1.1	1, 1.1
2. What is the relationship between the perceptions of assistant principals, teachers, and the principal of their school as a professional learning community?	All items	All items	All items
3. What, if any, are the differences between the levels of maturity of the professional learning communities between the two schools?	All items	All items	All items

Timeline

The timeline for data collection and analysis is depicted in Table 16.

Table 16.

Timeline for Data Collection and Analysis

Timeline	Event or activity
May 2010	Confirm access to case study sites
June 2010	Administer SPSLCQ instrument
June 2010	Conduct administrative interviews and teacher focus group interviews
July 2010	Analyze SPSLCQ quantitative data
July 2010	Transcribe data, analyze and code interview data
August – November 2010	Complete analysis, interpret findings

Limitations and Delimitations of the Study

The nature of research is that there are inherent limitations (Creswell, 2009; Lomax, 2001; Patton, 2002; Pedhazur & Schmelkin, 1991; Rossman & Rallis, 2003; Yin, 2003). Specific limitations inherent in this study included the use of interviews as a data collection method. The use of interviews for data collection may result in salient topics' being inadvertently omitted (Patton, 2002). Another challenge of interviewing is the dependence on the skills of the investigator. The interviewer's flexibility or inflexibility in the sequencing of wording and questions may result in substantially different responses from different perspectives (Patton, 2002). Patton suggested that these types of challenges may result in a potential reduction in the comparability of responses.

Additionally, focus groups, as do other sources of data collection, also have limitations. A particular challenge of focus group, according to Patton (2002), is facilitating and conducting the focus group interviews. Patton contended that the focus group interview requires considerable group process skills beyond simply asking questions; the investigator must be able to effectively manage the interview so that it is not dominated by only one or two participants and others may share their views and perspectives equally. This study was largely dependent upon the unique skills of the investigator in adequately conducting the focus group sessions objectively. It was also dependent upon the researcher's ability to manage the intergroup dynamics that might occur among participants during the data collection process.

Another limitation of this study was the process through which focus group participants were selected for interviews. The principal at each school was asked to identify the staff to serve as part of the focus group at the site. This process of selection may have resulted in the selection of staff who were proponents of the specific continuous improvement effort in each school, thereby increasing the opportunity for bias. In addition, the principal at Alpha High School participated in the focus group interview with the staff. The presence of the principal as a participant in the focus group interview may have limited true objectivity of the staff participating in the focus, thereby resulting in an immeasurable degree of bias.

A final limitation was the size of the focus group at Alpha High School. According to Patton (2002) an ideal focus group involves five to eight people focused on a specifically targeted issue or problem (Patton, 2002). The principal at Alpha High School identified a preselected group composed of 18 teachers, an assistant principal, and the principal to serve as the focus group to be interviewed by the researcher. The size of this group may have negatively affected the quality of interactions among participants and the researcher's ability to effectively

manage the collection of data from a large group interview. The collection of data from multiple sources was a strategy designed to triangulate data sources and validate findings.

A delimitation used by the researcher was to limit participation to teachers who were at each school during the initiation of the intensive school improvement and who had remained on staff at least 3 to 5 years during the implementation of the program. The researcher did not include teachers who were hired after the intensive school improvement program had begun or teachers who left for any reason during the implementation of the intensive school improvement process. This approach enabled the researcher to reduce the likelihood of outlier data and enhanced the viability of collecting data from those who had been most impacted by the implementation of the intensive school improvement process. Only schools that had been involved in the intensive school improvement process for the previous 5 years were selected to participate in the study.

Summary

The purpose of this chapter was to describe the research design and methodology, research design justification, research questions and definition of terms, population and sample, data collection procedures, instrumentation, data management procedures, data analysis techniques, timeline, and limitations and delimitations of the study. This study employed a comparative case study approach, using both quantitative and qualitative research methods to investigate assistant principals', teachers', and principals' perceptions of their schools as professional learning communities.

Chapter Four: Results

This chapter details the findings of this comparative case study of assistant principals', teachers', and principals' perceptions of their schools as professional learning communities, as defined by Jones (2011). The purpose of this study was to investigate the perceptions held by assistant principals, teachers, and principals in one high school and its feeder middle school regarding their schools as professional learning communities.

This chapter includes a description of each of the two units of analysis that were selected for this study based upon demographic data. Following the presentation of demographic data, this chapter is organized according to the three major research questions. First, data are presented in response to Research Question 1 and its subquestions to report the ways in which assistant principals, teachers, and principals perceived their respective schools as being characterized by the core components of a professional learning community. Second, data are presented in response to Research Question 2 to report the perceptions held by assistant principals, teachers, and the principal with regard to the school's being a professional learning community. Finally, data are presented in response to Research Question 3 to describe the differences that existed or were perceived to exist between the two schools with regard to the maturity of the professional learning community.

Each of the results presented in this chapter was formulated based upon an analysis of the quantitative data obtained through the demographic survey, the SPSLCQ, and qualitative data obtained through interviews at each site. The interview protocol was designed to examine the variables measured by the SPSLCQ and to provide greater insight into teachers' and administrators' perceptions of their work at each site. The descriptors used in the analysis of qualitative data were aligned with the variables from the SPSLCQ and the conceptual framework

described in Chapter One (Hord, 1997, 2004). Quantitative data were analyzed using descriptive statistics and statistics derived through independent samples *t*-tests for Research Question 1 and subquestions, Research Question 2, and Research Question 3.

Results

Demographic data. Alpha High School and its feeder school, Alpha Middle School, were the units of analysis for this study. A total of 83 staff members from Alpha High School and 72 members from Alpha Middle School participated in the study. Study participants from Alpha High School included 81 teachers, an assistant principal, and the principal. Study participants from Alpha Middle School included 69 teachers, two assistant principals, and the principal.

Nearly all of the participants (98.8%) at Alpha High School reported that they had worked with the current principal during the past 3 years. At the time of this study, the principal at Alpha High School had completed his 3rd year at the school. Further, 65 (78.3%) of the Alpha High School participants indicated that they had worked with an assistant principal for 1 to 5 years, four (4.8%) had worked with an assistant principal for 11 to 15 years, and 14 (16.9%) for 6 to 10 years.

Of the study participants at Alpha Middle School, 32 (44.4%) reported that they had worked with the current principal for 1 to 5 years, 39 (54.4%) for 6 to 10 years, and only one (1.4%) had worked with the current principal for 11 to 15 years. At the time of this study, the principal had completed his 10th year. Of the Alpha Middle School respondents, 46 (63.8%) indicated that they had worked with an assistant principal for 1 to 5 years and 25 (34.7%) had worked with an assistant principal for 6 to 10 years.

Of the total number of participants ($N = 155$) in this study, 110 (71.0%) were female and 45 (29.0%) were male, 139 (89.7%) were White, 15 (9.7%) were non-White, and one respondent (0.6%) did not indicate race. With regard to experience, 28 (18.1%) of the participants were educators with 1 to 5 years of experience, 63 (40.6%) had been teaching 6 to 10 years, 17 (11.0%) had been teaching 11 to 15 years, 12 (7.7%) 16 to 20 years, 8 (5.2%) 21 to 25 years, and 27 (17.5%) had been teaching for more than 26 years.

Among the staff at both schools, 62 (40.0%) of participants indicated that they had served on the school improvement team for 1 to 5 years, 60 (38.7%) had served on the team for 6 to 10 years, 14 (9.0%) had served for 11 to 15 years, two (1.3%) for 16 to 20 years, 5 (3.2%) for 21 to 25 years, and 12 (7.7%) had served on the school improvement team for 26 years or more. Table 17 presents responses from the demographic survey instrument for Alpha High School and Alpha Middle School.

Table 17.

Demographic Data

	Alpha High School	Alpha Middle School	Total
Position			
Teacher	<i>n</i> = 81	<i>n</i> = 69	<i>n</i> = 150
Assistant principal	<i>n</i> = 1	<i>n</i> = 2	<i>n</i> = 3
Principal	<i>n</i> = 1	<i>n</i> = 1	<i>n</i> = 2
Gender			
Female	<i>n</i> = 52	<i>n</i> = 58	<i>n</i> = 110
Male	<i>n</i> = 31	<i>n</i> = 14	<i>n</i> = 45
Ethnicity			
White	<i>n</i> = 76	<i>n</i> = 63	<i>n</i> = 139
Non-White	<i>n</i> = 7	<i>n</i> = 8	<i>n</i> = 15
Unknown	<i>n</i> = 0	<i>n</i> = 1	<i>n</i> = 1
Years of teaching			
1 – 5	<i>n</i> = 15	<i>n</i> = 13	<i>n</i> = 28
6 – 10	<i>n</i> = 30	<i>n</i> = 33	<i>n</i> = 63
11 – 15	<i>n</i> = 14	<i>n</i> = 3	<i>n</i> = 17
16 – 20	<i>n</i> = 5	<i>n</i> = 7	<i>n</i> = 12
21 – 25	<i>n</i> = 2	<i>n</i> = 6	<i>n</i> = 8
26 or more	<i>n</i> = 17	<i>n</i> = 10	<i>n</i> = 27
Years at present school			
1 – 5	<i>n</i> = 29	<i>n</i> = 33	<i>n</i> = 62
6 – 10	<i>n</i> = 31	<i>n</i> = 29	<i>n</i> = 60
11 – 15	<i>n</i> = 12	<i>n</i> = 2	<i>n</i> = 17
16 – 20	<i>n</i> = 0	<i>n</i> = 2	<i>n</i> = 2
21 – 25	<i>n</i> = 3	<i>n</i> = 2	<i>n</i> = 5
26 or more	<i>n</i> = 8	<i>n</i> = 12	<i>n</i> = 20
Years with school improvement plan (SIP) team			
0	<i>n</i> = 10	<i>n</i> = 2	<i>n</i> = 14
1 – 5	<i>n</i> = 58	<i>n</i> = 36	<i>n</i> = 94
6 – 10	<i>n</i> = 11	<i>n</i> = 25	<i>n</i> = 36
11 – 15	<i>n</i> = 1	<i>n</i> = 3	<i>n</i> = 4
16 – 20	<i>n</i> = 0	<i>n</i> = 2	<i>n</i> = 2
21 – 25	<i>n</i> = 0	<i>n</i> = 2	<i>n</i> = 2
26 or more	<i>n</i> = 3	<i>n</i> = 0	<i>n</i> = 3
Years with current principal			
1 – 5	<i>n</i> = 82	<i>n</i> = 32	<i>n</i> = 114
6 – 10	<i>n</i> = 1	<i>n</i> = 39	<i>n</i> = 40
11 – 15	<i>n</i> = 0	<i>n</i> = 1	<i>n</i> = 1
16 – 20	<i>n</i> = 0	<i>n</i> = 0	<i>n</i> = 0
21 – 25	<i>n</i> = 0	<i>n</i> = 0	<i>n</i> = 0
26 or more	<i>n</i> = 0	<i>n</i> = 0	<i>n</i> = 0
Years with current assistant principal			
1 – 5	<i>n</i> = 65	<i>n</i> = 46	<i>n</i> = 111
6 – 10	<i>n</i> = 14	<i>n</i> = 25	<i>n</i> = 39
11 – 15	<i>n</i> = 4	<i>n</i> = 0	<i>n</i> = 4
16 – 20	<i>n</i> = 0	<i>n</i> = 0	<i>n</i> = 0
21 – 25	<i>n</i> = 0	<i>n</i> = 0	<i>n</i> = 0
26 or more	<i>n</i> = 0	<i>n</i> = 0	<i>n</i> = 0
			<i>N</i> = 155

Research Question 1. How do the two schools' assistant principals, teachers, and principals reflect upon the core components of a professional learning community as described in the literature?

Alpha High School and its feeder school, Alpha Middle School, were the units of analysis for this study. Staffs at both schools were invited to complete the SPSLCQ regardless of how long they had been at the school. The survey was distributed and collected at a faculty meeting at each school on June 1, 2010. Of the 93 teachers at Alpha High School, 81 participated in the survey portion of this study, resulting in a response rate of 87.0%. Alpha High School administrative staff participating in the survey portion of the study included one assistant principal and the principal. An individual interview with the principal and a focus group interview with 18 teachers, an assistant principal, and the principal were conducted to supplement the quantitative data with in-depth descriptions of the teachers', assistant principals' and principal's experiences.

Of the 75 teachers at Alpha Middle School, 69 participated in the survey portion of this study, thereby yielding a 92.0% response rate. Alpha Middle School administrative staff consisted of two assistant principals and the principal; all three administrators completed the survey. An individual interview with the principal and a focus group interview with six teachers, an assistant principal, and the principal were conducted to supplement the quantitative data with in-depth descriptions of the teachers', assistant principals' and principal's experiences. Collectively, 155 of the 175 staff members participated in the survey portion of this study, thereby generating an overall response rate of 88.5%. A total of 27 staff members participated in interviews.

Research Question 1.1. How do assistant principals, teachers, and principals perceive their respective schools as being characterized by shared leadership?

As noted in Chapter One, the concept of supportive and shared leadership was defined as the extent to which school leaders share power, authority, and leadership democratically with teachers and staff (Hord, 2004). The SPSLCQ included two items to assess teachers', assistant principals', and principals' perceptions of supportive and shared leadership. Table 18 depicts responses to Items 1a and 1b on the SPSLCQ for Alpha High School, Alpha Middle School, and for both schools combined for the dimension of supportive and shared leadership.

Table 18.

Alpha High School, Alpha Middle School, and Total Responses to the SPSLCQ Items 1a and 1b

Item	Response continuum	Alpha High School		Alpha Middle School		Total responses	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1a	1. Administrators never share information with the staff nor provide opportunities to be involved in decision making.	0	0	4	5.6	4	2.59
	2.	16	19.3	14	19.4	30	19.4
	3. Administrators invite advice and counsel from staff and then make decision themselves.	29	34.9	37	51.4	66	64.9
	4.	32	38.6	14	19.4	46	29.7
	5. Although there are some legal and fiscal decisions required of the principal, school administrators consistently involve the staff in discussing and making decisions about school issues.	6	7.2	3	4.2	9	5.8
1b	1. Administrators do not involve any staff.	0	0	2	2.8	2	1.3
	2.	5	6.0	9	12.5	14	9.0
	3. Administrators involve a small committee, council, or team of staff.	46	55.4	45	62.5	91	58.7
	4.	25	30.1	16	22.2	41	26.5

5. Administrators involve the entire staff.	7	8.4	0	0	7	5.5
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In response to Item 1a on the SPSLCQ, which assessed the degree of decision making shared among school administrators and teachers, 35.4% ($n = 29$) of the respondents from Alpha High School selected Level 3 of the response continuum, thereby indicating that administrators invited input into decisions but then made the decisions themselves. An additional 38.6% ($n = 32$) of respondents selected Level 4 of the response continuum, thereby indicating that they perceived their input into decision making to lie between being asked for advice and being consistently involved in discussing and making decisions about school issues.

Of the respondents from Alpha Middle School, 19.4% ($n = 14$) selected Level 2 on the response continuum, thereby indicating that their perceptions of administrators' sharing decision making lay somewhere between neither sharing information with the staff nor providing opportunities to be involved in decision making and inviting advice and counsel from staff and then making decision themselves. An equal number of respondents from Alpha Middle School, 19.4% ($n = 14$), selected Level 4 of the response continuum, thereby indicating that they perceived the degree of sharing power, authority, and decision making to range from administrators' inviting input into decisions but then making the decisions themselves to their consistently involving the staff in discussing and making decisions about school issues. Slightly more than half of the Alpha Middle School respondents, 51.4% ($n = 37$), selected Level 3 on the response continuum. This response indicated that administrators invited their input into decisions but then made the decisions themselves.

Collectively, 42.9% ($n = 66$) of respondents from both schools selected Level 3 of the response continuum. This response level indicated that administrators invited their input into

decisions but then made the decisions themselves. An additional 29.7% ($n = 46$) of respondents described their input into decision making as lying on the continuum between being asked for advice and being consistently involved in discussing and making decisions about school issues. The mean response to Survey Item 1a was 3.17, indicating that respondents perceived that administrators invited input and advice from teachers but had yet to involve them fully in the decision-making process.

The SPSLCQ included a second item to assess teachers', assistant principals', and principals' perceptions of supportive and shared leadership. Item 1b assessed the degree to which administrators involved staff in decision making on a continuum from not involving any staff to involving the entire staff. For this item, 55.4% ($n = 46$) of the Alpha High School respondents selected Level 3 of the response continuum. This response level indicated that administrators involved a small committee, council, or team of staff in decision making. An additional 30.1% ($n = 25$) of the respondents selected Level 4 of the response continuum, thereby indicating that they perceived their input into decision making as lying between involvement of a small committee, council, or team and involvement of the entire staff.

Responses for Item 1b were similar for Alpha Middle School. The majority of the respondents (62.5%, $n = 45$) at Alpha Middle School selected Level 3 of the response continuum, thereby indicating that administrators involved the staff in decision making through a small committee, council, or team of staff. An additional 22.2% ($n = 16$) of respondents selected Level 4 of the response continuum, thereby indicating that respondents perceived their input into decision making as lying between involvement of a small committee, council, or team and involvement of the entire staff.

Collectively, almost three fifths (58.7%, $n = 91$) of all respondents perceived their input into decision making as consisting of involvement through a small committee, council, or team. An additional 26.5% ($n = 41$) of all respondents perceived that their input into decision making lay between involvement of a small committee, council, or team and involvement of the entire staff.

Similar results were extracted from qualitative data obtained through individual interviews with both principals as well as focus group interviews at the two schools involved in this study. The individual interview with the principal at Alpha High School was held on June 21, 2010 and the individual interview with the principal at Alpha Middle school was held on June 22, 2010. The focus group interview with teachers and administrators at Alpha High School was held on June 15, 2010 and the focus group interview with teachers at Alpha Middle School was held on June 16, 2010.

The individual interview with the Alpha High School principal (AHSP) revealed different “tiers of leadership” within the school decision-making organizational framework (p. 1 of transcript). According to the Alpha High School principal (AHSP), department chairs served as the management team and provided communication and “feedback on the direction of the school as far as instructional aspects” (p. 2 of AHSP individual interview transcript). Teachers were highly engaged in the school improvement process, which was organized by committee within the framework of school board goals, superintendents’ goals, the principal’s goals, and the school’s goals (p. 3 AHS focus group transcript). According to the principal, “every aspect of professional development [was] set by the teachers” and “focuse[d] on data and student improvement, and student achievement” (p. 2 of AHSP individual interview transcript).

When asked to describe the decision-making process used by administrators at Alpha High School, all 20 of the participants in the focus group indicated that administrators asked for input on decisions (AHS). The focus group included 18 teachers, one assistant principal, and the principal. According to AHST4 (p. 1 of AHS focus group transcript), most of the discussion and deliberation about decisions occurred through department chairs as direct liaisons with the principal. This perception was confirmed by AHST2 (p. 2 of AHS focus group transcript) who described department heads as the “voice of the faculty.” AHST 4 (p. 1 of AHS focus group transcript) shared that discussions within and across departments were designed to ensure that the goals for the school were met and that “any concerns, problems, celebrations [were] addressed.” Alpha High School Teacher 5 (AHST5) indicated that there was one faculty or staff representative from each department and that this team met at least monthly (p. 2 AHS focus group transcript).

In describing individual access to school leaders’ decision making, AHST5 added, “What I do is typically go to my assistant principal or senior teacher and say, ‘Look, we have to work on this’ (p. 2 of AHS focus group transcript). According to AHST3, “The principal really solicits a lot [of input] from the staff for decision making” (p. 3 AHS focus group transcript). AHST3 described this involved group as the faculty advisory committee and indicated that they had significant input regarding school governance (p. 3 AHS focus group transcript).

The ASHP, (Alpha High School Principal) confirmed this finding by stating, “I count heavily on my department chairs” for input (p. 2 AHS focus group transcript). The AHSAP (Alpha High School Assistant Principal) indicated that from the top of the organization through its advisory committees, school improvement team, and department chairpersons, the bulk of decision making was shared (p. 2 AHS focus group transcript). AHST10 confirmed that the

principal held monthly early morning meetings with parents to discuss school issues and met regularly with booster groups that supported athletic, cocurricular and extracurricular programs (p. 2 AHS focus group transcript).

When prompted to explain how the school improvement team and faculty advisory committee interacted, AHSAP, AHST5 and the principal (AHSP) indicated that all of the resources in the school came together through this structure to support and drive decision making (p. 2 AHS focus group transcript). The AHSAP indicated that, organizationally, these groups all reported back to the principal and provided input for decision making (p. 2 AHS focus group transcript). AHST11 acknowledged that much of the input and ideas regarding school issues was communicated back and forth through departments by way of the faculty advisory committee and school improvement team and its subcommittees (p. 2 AHS focus group transcript).

The individual interview held with the Alpha Middle School principal (AMSP) revealed that the administrative team, which consisted of four senior teachers, two assistant principals, and the principal, worked directly with a teacher leader group at each grade level to align student achievement with the superintendent's, school board's, and school division's goals for student achievement (p. 2 AMSP individual interview transcript). Each grade-level team consisted of two teacher leaders per grade for a total of six grade-level teacher leaders (p. 1 AMSP individual interview transcript). According to the principal (AMSP), the administrative team and the teacher leader teams met on a regular basis, at least monthly, and meetings were scheduled around team planning periods so that all members of a grade-level team were available (p. 2 of transcript). In addition, make-up teacher leader meetings also were held so that "we [were] sure that we [had] everyone" involved in decision making (p. 2 AMSP individual interview transcript).

The principal (AMSP) indicated that when meetings were held, these groups served as representatives for the entire school staff; the principal stated,

They know the questions in advance, and they know the purpose of it is to gather their inputs, their thoughts and feelings, instructional, what we're doing and how we're doing it, what they see, as far as the future for the school (p. 2 AMSP individual interview transcript).

The principal further indicated that although there was a considerable effort to involve teachers heavily in school-based decision making, “some...top-down decisions...need[ed] to be made.”

For example, the principal explained,

If a bus is in the bus loop and a child is getting ready to get run over, the administrative team makes that decision. We're not going to ask anybody about that, but when we look at making any type of significant changes or we're looking for input, then we have a focus group or teacher survey (p. 2 AMSP individual interview transcript).

At Alpha Middle School, six teachers participated in the focus group session. When prompted to describe the decision-making process in the school, AMST6 teacher indicated that there was a tremendous focus on literacy across all classrooms and curricular areas (p. 2 of AMS focus group transcript). AMST6 indicated that student achievement data were examined by various groups of teachers, including teacher teams at each grade level, and that these data were used to determine and “to decide what professional development and what kind of follow-up sessions” were needed for teachers to improve student performance (p. 2 of AMS focus group transcript). AMST2 indicated that professional development was designed around data gathered from “classroom walkthroughs” as well as student achievement data (p. 14 AMS focus group transcript). This information was used to develop “coaching sessions” for teachers and a “coaching calendar” that was made available to all teachers (p. 14 AMS focus group transcript).

AMST2 explained that a needs-assessment survey was disseminated at the beginning of the school year “to see what new [instructional] routines or strategies teachers would want

professional development in or what they would want follow-up in” as related to effective instructional strategies focused on schoolwide literacy (p. 2 AMS focus group transcript).

AMST2 added that teachers were given an opportunity to provide additional feedback before the professional development training schedule was finalized (p. 2 AMS focus group transcript).

When prompted to provide additional information about the needs assessment, AMST6 indicated that “different departments [had] different needs” and that this process enabled teachers to participate in professional development training based on these different needs (p. 6 AMS focus group transcript). All AMS focus group teachers indicated that structured teacher leader meetings held monthly were a source through which decisions about professional development were processed. According to AMST1, this structure enabled teachers to discuss these decisions collectively and take others “back to the table” or to meet again to work through issues or concerns (p. 3AMS focus group transcript).

Collectively for the dimension of supportive and shared leadership, the principals at both schools, 20 participants (100%) in the focus group at Alpha High School, and six participants (100%) from Alpha Middle School indicated that they were involved in the decision-making process. This analysis of individual and focus group responses were related to Dimension 1 of the survey, supportive and shared leadership, as well as interview and focus group protocol Items 1, 1.1, and 1.2.

Research Question 1.2. How do assistant principals, teachers, and principals perceive their respective schools as having a shared vision?

As noted in Chapter One, the concept of shared values and vision was defined as the staff’s consistent focus on students’ learning, which was strengthened by the staff’s own continuous learning (Hord, 2004). The SPSLCQ included three items to assess teachers’,

assistant principals', and principals' perceptions of shared values and vision. The interview protocol, including focus group interviews, included three questions that probed for teachers', assistant principals', and principals' perceptions of the degree to which the staff shared its vision for school improvement with an undeviating focus on student learning. Table 19 depicts responses to Items 2a, 2b, and 2c on the SPSLCQ for Alpha High School, Alpha Middle School, and for both schools combined for the dimension of shared values and vision.

Table 19.

Alpha High School, Alpha Middle School, and Total Responses to the SPSLCQ Items 2a, 2b, and 2c

Item	Response continuum	Alpha High School		Alpha Middle School		Total responses	
		<i>N</i>	%	<i>n</i>	%	<i>n</i>	%
2a	1. Visions for improvement held by the staff members are widely divergent.	1	1.2	3	4.2	4	2.6
	2.	6	7.2	7	9.7	13	8.4
	3. Visions for improvement are not thoroughly explored; some staff members agree and others do not.	29	34.9	37	51.4	66	42.6
	4.	40	48.2	16	20.8	55	35.5
	5. Visions for improvement are discussed by the entire staff such that consensus and a shared vision result.	7	8.4	8	11.1	15	9.7
2b	1. Visions for improvement do not target students, teaching, and learning.	1	1.2	1	1.4	2	1.3

2.	3	3.6	5	6.9	8	5.2
3. Visions for improvement are sometimes focused on students, teaching, and learning.	13	15.7	20	27.8	33	21.3
4.	33	39.8	24	33.3	57	36.8
5. Visions for improvement are always focused on students, teaching, and learning.	33	39.8	21	29.2	54	34.8

Table 19 (continued)

2c	1. Visions for improvement do not include concerns about the quality of learning experiences.	1	1.2	2	2.8	3	1.9
	2.	5	6.0	7	9.7	12	7.7
	3. Visions for improvement address quality learning experiences in terms of students' abilities.	20	24.1	26	36.1	46	29.7
	4.	35	42.2	23	33.9	58	37.4
	5. Visions for improvement target high-quality learning experiences for all students.	22	26.5	13	18.1	35	22.6

In response to Item 2a on the SPSLCQ, which assessed the degree to which visions for improvement were shared by staff, 34.9% ($n = 29$) of the respondents from Alpha High School

selected Level 3 of the response continuum. This response level indicated that visions for improvement were not thoroughly explored, with some staff members' agreeing and others not. An additional 48.2% ($n = 40$) of the respondents selected Level 4 of the response continuum, thereby indicating that they perceived visions for improvement among staff to lie between not being thoroughly explored, with some staff members' agreeing and others not, and their being discussed by the entire staff such that consensus and shared vision resulted.

More than half (51.4%, $n = 37$) of the respondents from Alpha Middle School selected Level 3 on the response continuum, thereby indicating that visions for improvement were not thoroughly explored, with some staff members' agreeing and others not. An additional 20.8% ($n = 15$) of Alpha Middle School respondents selected Level 4 of the response continuum, thereby indicating that visions for improvement were perceived between not being thoroughly explored, with some staff members' agreeing and others not, and being discussed by the entire staff such that consensus and shared vision resulted.

Collectively, 58.7% ($n = 91$) of the respondents from both schools selected Level 3 of the response continuum. This level of response indicated that visions for improvement were not thoroughly explored, with some staff members' agreeing and others not. An additional 26.5% ($n = 41$) of the respondents perceived visions for improvement between not being thoroughly explored, with some staff members' agreeing and others not, and being discussed by the entire staff such that consensus and shared vision result. The mean response to Survey Item 2a was 3.42, indicating that respondents perceived that visions for improvement were not thoroughly explored, with some staff members' agreeing and others not.

The SPSLCQ included a second item to assess teachers', assistant principals', and principals' perceptions of visions for improvement. Item 2b assessed the degree to which visions

for improvement were targeted toward students, teachers, and learning. In response to Item 2b on the SPSLCQ, 15.7% ($n = 15$) of the respondents from Alpha High School selected Level 3 of the response continuum. This response level indicated that visions for improvement were sometimes focused on students, teaching, and learning. An additional 39.8% ($n = 33$) of the respondents selected Level 4 of the response continuum, thereby indicating that they perceived visions for improvement between being sometimes focused on students, teaching, and learning and being always focused on students, teaching, and learning. An equal number of respondents (39.8%, $n = 33$) selected Level 5 of the response continuum, thereby indicating that they perceived visions for improvement as being always focused on students, teaching, and learning.

In response to Item 2b, 27.8% ($n = 45$) of Alpha Middle School respondents selected Level 3 of the response continuum, thereby indicating that visions for improvement were sometimes focused on students, teaching, and learning. An additional 33.3% ($n = 24$) of respondents selected Level 4 of the response continuum, thereby indicating that visions for improvement were between being sometimes focused on students, teaching and learning and being always focused on students, teaching, and learning. Respondents who selected Level 5 on the response continuum represented 29.2% ($n = 21$), nearly a third of all respondents from Alpha Middle School. This response level indicated that respondents perceived that visions for improvement were always focused on students, teaching, and learning.

In summation, 21.3% ($n = 33$) of respondents from both schools selected Level 3 of the response continuum. This response level indicated that respondents perceived visions for improvement as being sometimes focused on students, teaching, and learning. An additional 36.8% ($n = 57$) of respondents perceived that visions for improvement were on a continuum between being sometimes focused on students, teaching, and learning and being always focused

on students, teaching, and learning. More than a third (34.8%, $n = 54$) of all respondents perceived that visions for improvement were always focused on students, teaching, and learning. The mean response to Survey Item 2b was 3.99, thereby indicating that respondents perceived visions for improvement as being on a continuum between being sometimes focused on students, teaching, and learning and being always focused on students, teaching, and learning.

The SPSLCQ included a third item to assess teachers', assistant principals', and principals' perceptions of visions for improvement. Item 2c on the SPSLCQ assessed the degree to which visions for improvement addressed the quality of learning of learning experiences for students. In response to Item 2c on the SPSLCQ, 24.1% ($n = 20$) of the respondents from Alpha High School selected Level 3 of the response continuum. This response level indicated that visions for improvement addressed quality learning experiences in terms of students' abilities. An additional 42.2% ($n = 35$) of respondents selected Level 4 of the response continuum, thereby indicating that respondents perceived visions for improvement as being on a continuum between addressing quality learning experiences in terms of students' abilities and targeting high-quality learning experiences for all students. More than a fourth (26.5%, $n = 22$) of respondents selected Level 5 of the response continuum, thereby indicating that they perceived visions for improvement as targeting high-quality learning experiences for all students.

In response to Item 2c, 36.1% ($n = 45$) of Alpha Middle School respondents selected Level 3 of the response continuum, thereby indicating that visions for improvement addressed quality learning experiences in terms of students' abilities. An additional 31.9% ($n = 23$) of respondents selected Level 4 of the response continuum, thereby indicating that visions for improvement were on a continuum between addressing quality learning experiences in terms of students' abilities and targeting high-quality learning experiences for all students. Nearly one in

five respondents from Alpha Middle School (18.1%, $n = 13$) selected Level 5 on the response continuum. This response level indicated that respondents perceived that visions for improvement targeted high-quality learning experiences for all students.

In summation, 29.7% ($n = 46$) of respondents from both schools selected Level 3 of the response continuum. This response level indicated that visions for improvement addressed quality learning experiences in terms of students' abilities. An additional 37.4% ($n = 58$) of respondents selected Level 4 on the response continuum, thereby indicating that they perceived visions for improvement as being on a continuum between addressing quality learning experiences in terms of students' abilities and targeting high-quality learning experiences for all students. More than one in five of all respondents (22.6%, $n = 35$) selected Level 5 on the response continuum, thereby indicating they perceived visions for improvement as targeting high-quality learning experiences for all students. The mean response to Survey Item 2b was 3.71, indicating that respondents perceived visions for improvement as being on a continuum between addressing quality learning experiences in terms of students' abilities and targeting high-quality learning experiences for all students.

This result was supported by qualitative data obtained through individual interviews with both principals as well as focus group interviews. According individual interview with the Alpha High School principal (AHSTP), the mission and vision were established by the faculty, staff, parents, and students (p. 2 of transcript). When asked in the individual interview who was involved in the creation and maintenance of the school's vision and values, the AHSTP responded, "[The] mission, vision have been in place since prior to my tenure, and that was all done by the faculty. Parents were involved in that process as well as students" (p. 2 of transcript). According to the principal, the mission and vision were established "by asking the

essential questions, what [Alpha High School] is and what direction did we want to go” (p. 2 of transcript). The principal indicated that the process for building consensus on the vision and mission involved using focus groups and committees (p. 2 of transcript).

Teachers and staff participating in the focus group interview ($N = 20$) indicated that the “tone” for the vision and mission was set by the principal and reflected in the principal’s goals (AHS). According to AHST17, the principal’s goals were “directed to department chairs and assistant principals to use where they set their target goals for the year” (p. 3 of transcript). AHST15 remarked, “[The] mission statement is looked at on a continuing 5-year basis through the school improvement process with the school and community members’ schools. The committee makes changes when needed” (p. 3 of AHS focus group transcript).

When prompted to describe how the vision and values of the school were manifested in the daily work of teachers, the principal stated, “I think everything we do is around our mission and our vision. Everything we do is centered around addressing our student achievement. So, you know, that pretty much guides us because that is [Alpha High School] and our mission statement” (p. 3 of AHS focus group transcript).

AHST9 (p. 4 of AHS focus group transcript) explained that one example of how the vision and values were manifested was in “the classrooms.” AHST9 stated, “The graphic arts classrooms designed the cover for the [student] agenda (p. 4 of AHS focus group transcript). AHST9 added, I think that was an excellent use of the content of that specific discipline used in a real-world application that will carry on after high school.” AHST18 added,

A lot of it [manifestation of the mission and vision] comes from student council as well, like we were mentioning earlier with the clubs and things like that. The kids really take on a lot of responsibility for activities and programs and organize things that I think the parents really appreciate. You can see that as lifelong learning as well (p. 5 of AHS focus group transcript).

AHST11 explained that the mission and vision were manifested through the widespread use of instructional tools such the “graphic organizer”:

There are ways that the [graphic organizer] is used to check for understanding and see where you need to go. So you kind of always are checking to see where they are with what you're teaching, backtrack if you need to or move on. Teachers have some really great things they're doing with these devices that lead to strategic teaching and effective questioning techniques (p. 6 of AHS focus group transcript).

When asked to describe how the teachers’ work was monitored to ensure that their practices reflected the values and vision of the school, the Alpha High School principal (AHSP) explained,

We get feedback from department chairs. Department chairs do walkthroughs. They do observations. My administrative team, we do walkthroughs, formal observations. We also do pop-ins where we just walk in. We also have outside people coming in and do observations, specialists, instructional specialists that do that. So we're always in the classrooms (p. 3 of individual interview transcript with the AHSP).

A final qualitative research prompt related to shared values and vision sought to determine how the school’s values and vision were communicated to the community. The AHSP responded to this question by stating,

It's on our Web site. It's on our school newsletters. We do it with the e-mail connections. It's listed on the walls. It's in the classrooms, and we print out a sheet for each classroom and it's reviewed each year with our students (p. 4 of individual interview transcript with the AHSP).

One focus group respondent, AHST16 stated,

I know this is a really strange thing but it is in the bathrooms here. It is in the library. Our mission statement is on the back of the door, and it's something that I read all the time. And so it's primary in my mind. I mean, that's why I know the last words are "lifelong learners (p. 7 of AHS focus groups interview transcript).

When asked who was involved in the creation and maintenance of the school's vision, the Alpha Middle School principal (AMSP) responded that all teachers and stakeholders were involved in developing the mission statement (p. 2 of AMS individual interview transcript). The

principal shared that the mission and vision statements were recently reviewed and “tweaked” in preparation for a school division accreditation visit scheduled for the fall of 2010 (p. 2 of AMS individual interview transcript).

When teachers ($n = 6$) in the focus group interview at Alpha Middle School were prompted to explain who was involved in the creation and maintenance of the school’s vision, AMST2 explained,

We had individual school improvement groups, and we met with a template and kind of just brainstormed what we thought were the important things to focus on moving forward, and then each group [had] a leader that then came together (p. 4 of AMS focus group interview transcript).

AMST4 shared that those leaders met, compiled, and organized themes that emerged from the various groups into draft statements, reconvened with their original groups to provide feedback, and developed a schoolwide vision statement (p. 4 of AMS focus group interview transcript).

AMST6 indicated that this process required the groups to find the appropriate language for conveying the meaning of the vision and values statements through a group consensus-building process (p. 4 of AMS focus group interview transcript). All respondents affirmed that they had been involved in the process of developing the mission and vision statements (AMS).

When prompted to explain how the vision and values were manifested in the daily work of teachers, the principal stated, “The main focus, of course, is to be inclusive of our community and also to focus on learning, the actual teaching and learning part, and to ensure that we have the right vehicles in place” (p. 3 of AMSP individual interview transcript). The principal added,

We use our own evaluation process. We complete [classroom] walkthroughs. We observe them teach one day and turn that into data which all relates back to our professional development. We compare our walkthroughs with what our [data] collections are showing us, so that the focus is on learning (p. 3 of AMSP individual interview transcript).

When prompted to explain how the vision and values were manifested in the daily work of teachers, AMST3 stated, “The mission statement is supposed to be posted in each room” (p. 5 of AMS focus group interview transcript). AMST4 commented,

Maybe not the mission itself, but as far as our school improvement goals, like we have a goal for technology-based instruction. If you go through the school, you see that happening all the time, and we had a goal for teacher retention, which is easy to kind of monitor year to year. We had a goal for climate, and, you know, that can be measured maybe more than just the positive lifelong learners, safe and caring community, that the individual goals from our school improvement plan are more measurable than that (p. 5 of AMS focus group interview transcript).

AMST6 added, “We've had programs we've done last year and this year that have helped the students be part of that. No name calling, no bullying” (p. 5 of AMS focus group interview transcript). AMST1 explained, “[This program has been supported through] student-led conferences and the student leadership council” (p. 5 of AMS focus group interview transcript). AMST6 added, “It goes in the individual classrooms, too” (p. 5 of AMS focus group interview transcript).

AMST1 explained that the school had developed some consistent language across both instructional and climate issues as evidence of how the vision and mission were manifested in the daily work of teachers and staff (p. 6 of AMS focus group interview transcript). AMST6 explained from an instructional perspective, “that common language is a big part of it” [instructional artifacts related to mission and vision] (p. 6 of AMS focus group interview transcript). AMST6 explained further, “Content enhancement routines give us [teachers and staff] all common language and helps the kids know what to expect from class to class” (p. 6 of AMS focus group interview transcript). AMST1 added that the common language was reflected in how “both the school goals and [teachers’] personal professional goal[s] for the year” were aligned (p. 6 of AMS focus group interview transcript).

To further understand how common instructional practices and common language were related to the school's vision and mission, the researcher prompted focus group participants to explain how the school's vision and mission served as a guide to the development of instruction (p. 6 of AMS focus group interview transcript). AMST1 provided the following explanation:

Positive lifelong learning and content literacy is one of the goals. To take these routines and/or strategies and learn to use them in classrooms, and then, with learning strategies, it's part of the actual curriculum that the students have to generalize it to other places. And with routines, that's kind of the goal, that they will generalize it to other places. So that's helped us to create or to give students a structure to learn outside of the classroom and..., within each individual subject, ... speaking for history teachers, ... we talk about connecting past and present and with content areas. So I think a lot of us work towards giving them content that they can use outside of class, as well as ways to learn things that are not necessarily taught in our classrooms (p. 7 of AMS focus group interview transcript).

AMST6 added, “[This instructional approach] is a consistent way of organizing information that you can apply to a real life problem or issue” (p. 7 of AMS focus group interview transcript). AMST1 stated,

Instruction has to be focused so that we all have the goal now in our classroom, that we all want to make you better learners and prepare you for bigger and better things, and, I mean, I think that's kind of everybody's goal, whether we do it or whether we saw it or not. We feel like we're better preparing our kids to be able to do that and make better thinkers and problem solvers (p. 7 of AMS focus group interview transcript). .

A final respondent, AMST5 stated,

And, you know, the other part of our mission, safe and caring community, means that our focus on instruction and differentiated instruction and respecting each student and their needs and what they need to learn, and nobody's, like, if you don't learn it my way, you can't do it. I mean, teachers here offer lots of opportunity to learn and relearn and take your test, take your test somewhere else, whatever the kids need to feel safe, so they can learn (p. 5 of AMS focus group interview transcript).

When asked how the school's vision and values were communicated to the community, the principal explained that the school's mission statement was posted in every classroom and mentioned or referenced in announcements (p. 3 of AMSP individual interview transcript). All

AMS focus group participants reported that the mission statement was communicated to the public in a variety of ways. AMST3 explained that the mission statement was highlighted in the opening school announcements (p. 7 of AMS focus group interview transcript). AMST1 added that the mission statement was highlighted in the “school newsletter and through e-connect messages [e-mail announcements].” AMST3 added, “It is also our Blackboard Web site [an electronic Web site for student and teacher use]” (p. 7 of AMS focus group interview transcript). AMST3 stated, “The mission and vision are a part of teachers’ goals, teacher performance targets, and much of the home and school communication. Students are taking this home using our verbiage and, in turn, we get it back from them” (p. 7 of AMS focus group interview transcript).

Collectively, the principals at both schools, 20 participants (100%) in the focus group at Alpha High School, and six participants (100%) from Alpha Middle indicated that the staff shared a vision for school improvement that had an undeviating focus on student learning and that was consistently referenced in the staff’s work. This analysis of individual and focus group responses were related to Dimension 2, shared values and vision, as well as individual and focus group responses to the interview protocol items for Dimension 2, Questions 1, 2, and 3.

Research Question 1.3. How do assistant principals, teachers, and principals perceive their respective schools as being characterized as schools in which collective learning occurs and the application of that learning is used to take action in addressing student needs?

As noted in Chapter One, the concept of collective learning and its application was defined as the engagement of staff at all levels in seeking the knowledge required to continuously improve student learning and student achievement (Hord, 2004). The SPSLCQ included five items to assess teachers’, assistant principals’, and principals’ perceptions of

collective learning and application of the learning (taking action) to create high intellectual learning tasks and solutions to address student needs. The interview protocol, including focus group interviews, included four questions that probed for teachers', assistant principals', and principals' perceptions of the degree to which the staff perceived their respective schools as being characterized as schools in which collective learning occurred and the application of that learning was used to take action in addressing student needs. Table 20 depicts responses to Item 3a, 3b, 3c, 3d, and 3e on the SPSLCQ for Alpha High School, Alpha Middle School, and both schools combined for the dimension of collective learning and its application.

Table 20.

Alpha High School, Alpha Middle School, and Total Responses to the SPSLCQ Items 3a, 3b, 3c, 3d, and 3e

Item	Response continuum	Alpha High School		Alpha Middle School		Total responses	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
3a	1. Individuals randomly discuss issues, share information, and learn with and from one another.	3	3.6	3	4.2	6	3.9
	2.	5	6.0	12	16.7	17	11.0
	3. Subgroups of the staff meet to discuss issues, share information, and learn with and from one another.	42	50.6	37	51.4	79	51.0
	4.	26	31.3	18	25.0	44	28.4
	5. The entire staff meet to discuss issues, share information, and learn with and from one another.	7	8.4	1	1.4	8	5.2
3b	1. The staff never meet to consider substantive student-centered educational issues.	1	1.2	2	2.8	3	1.9
	2.	7	8.4	11	15.3	18	11.6
	3. The staff meet occasionally on substantive student-centered educational issues.	26	31.3	37	51.4	58	37.4
	4.	31	37.3	18	25.0	50	32.3
	5. The staff meet regularly and frequently on substantive student-centered educational issues.	18	21.7	1	1.4	25	16.1
3c	1. The staff basically discuss nonteaching and nonlearning issues.	1	1.2	1	1.4	2	1.3
	2.	3	3.6	6	8.3	9	5.8

Table 20 (continued)

	3. The staff does not often discuss their instructional practices or the influence of their practices on student learning.	16	19.3	24	33.3	40	25.8
	4.	46	55.4	34	47.2	80	51.6
	5. The staff discuss the quality of their teaching and students' learning.	17	20.5	7	9.7	24	15.5
3d	1. The staff do not act on their learning.	0	0	0	0	0	0
	2.	1	1.2	6	8.3	7	4.5
	3. The staff occasionally act on their learning and make and implement plans to improve teaching and learning.	18	21.7	25	34.7	43	27.7
	4.	40	48.2	27	37.5	67	43.2
	5. The staff, based on their learning, make and implement plans that address students' needs, more effective teaching, and more successful learning.	24	28.9	13	18.1	37	23.9
3e	1. The staff do not assess their work.	1	1.2	1	1.4	2	1.3
	2.	2	2.4	9	12.5	11	7.1
	3. The staff infrequently assess their work and seldom make revisions based on results.	17	20.5	29	40.3	46	29.7
	4.	49	59.0	26	36.1	75	48.4
	5. The staff debrief and assess the impact of their actions and make revisions.	14	16.9	7	9.7	21	13.5

In response to Item 3a on the SPSLCQ, which assessed the degree to which the staff met to discuss issues, share information, and learn with and from one another, 50.6% ($n = 42$) of the Alpha High School respondents selected Level 3 of the response continuum. This response level indicated that subgroups of the staff met to discuss issues, share information, and learn with and from one another. An additional 31.3% ($n = 26$) of the respondents selected Level 4 of the response continuum, thereby indicating that they perceived the degree to which the staff met to discuss issues, share information, and learn with and from one another to be between subgroups of the staff's meeting to discuss issues, share information, and learn with and from one another and the entire staff's meeting to discuss issues, share information, and learn with and from one another.

More than half (51.4%, $n = 37$) of the respondents from Alpha Middle School selected Level 3 on the response continuum, thereby indicating that subgroups of the staff met to discuss issues, share information, and learn with and from one another. An additional 25% ($n = 18$) of the Alpha Middle School respondents selected Level 4 of the response continuum, thereby indicating that they perceived the degree to which the staff met to discuss issues, share information, and learn with and from one another to be between subgroups of the staff's meeting to discuss issues, share information, and learn with and from one another and the entire staff's meeting to discuss issues, share information, and learn with and from one another.

Collectively, 51.0% ($n = 79$) of the respondents at both schools selected Level 3 of the response continuum. This response level indicated that subgroups of the staff met to discuss issues, share information, and learn with and from one another. An additional 28.4% ($n = 44$) of the respondents perceived that the degree to which the staff met to discuss issues, share information, and learn with and from one another was between subgroups of the staff's meeting

to discuss issues, share information, and learn with and from one another and the entire staff's meeting to discuss issues, share information, and learn with and from one another. The mean response to Survey Item 3a was 3.20, indicating that respondents perceived that subgroups of the staff met to discuss issues, share information, and learn with and from one another.

The SPSLCQ included a second item to assess teachers', assistant principals', and principals' perceptions of collective learning and application of the learning (taking action) to create high intellectual learning tasks and solutions to address student needs. Item 3b assessed the degree to which the staff met to consider substantive student-centered educational issues. In response to Item 3b on the SPSLCQ, 31.3% ($n = 26$) of the Alpha High School respondents selected Level 3 of the response continuum. This response level indicated that the staff met occasionally on substantive student-centered educational issues. An additional 37.3% ($n = 31$) of the respondents selected Level 4 of the response continuum, thereby indicating that they perceived that the degree to which the staff met to consider substantive student-centered educational issues was between the staff's meeting occasionally on substantive student-centered educational issues and the staff's meeting regularly and frequently on substantive student-centered educational issues. More than one fifth (21.7%, $n = 18$) of the respondents selected Level 5 of the response continuum, thereby indicating that they perceived the staff as meeting regularly and frequently on substantive educational issues.

In response to Item 3b, 44.4% ($n = 32$) of the Alpha Middle School respondents selected Level 3 of the response continuum, thereby indicating that the staff met occasionally on substantive student-centered educational issues. An additional 26.4% ($n = 19$) of the respondents selected Level 4 of the response continuum, thereby indicating that they perceived the degree to which the staff met to consider substantive student-centered educational issues to be between the

staff's meeting occasionally on substantive student-centered educational issues and the staff's meeting regularly and frequently on substantive student-centered educational issues.

In summation, 37.4% ($n = 58$) of the respondents from both schools selected Level 3 of the response continuum. This response level indicated that the staff met occasionally on substantive student-centered educational issues. An additional 32.3% ($n = 50$) of the respondents perceived that the degree to which the staff met to consider substantive student-centered educational issues was between the staff's meeting occasionally on substantive student-centered educational issues and the staff's meeting regularly and frequently on substantive student-centered educational issues. Less than one fifth (16.1%, $n = 25$) of all respondents perceived that the staff met regularly and frequently on substantive student-centered educational issues. The mean response to Survey Item 3b was 3.49 thereby indicating that respondents perceived the degree to which the staff met to consider substantive student-centered educational issues to be between the staff's meeting occasionally on substantive student-centered educational issues and the staff's meeting regularly and frequently on substantive student-centered educational issues.

The SPSLCQ included a third item to assess teachers', assistant principals', and principals' perceptions of collective learning and application of the learning (taking action) to create high intellectual learning tasks and solutions to address student needs. Item 3c on the SPSLCQ assessed the degree to which staff discussed the quality of their teaching and students' learning. In response to Item 3c on the SPSLCQ, 19.3% ($n = 16$) of the respondents from Alpha High School selected Level 3 of the response continuum. This response level indicated that the staff did not often discuss their instructional practices or the influence of their practices on student learning. An additional 55.4% ($n = 46$) of the respondents selected Level 4 of the response continuum, thereby indicating that respondents perceived the degree to which staff

discussed the quality of their teaching and students' learning to lie on a continuum between the staff's not often discussing their instructional practices or the influence of their practices on student learning and the staff's discussing the quality of their teaching and students' learning. One fifth of the respondents (20.5%, $n = 22$) of the respondents selected Level 5 of the response continuum, indicating that they perceived that the staff discussed the quality of their teaching and students' learning.

In response to Item 3c, 33.3% ($n = 24$) of respondents at Alpha Middle School selected Level 3 of the response continuum, thereby indicating that the staff did not often discuss their instructional practices or the influence of their practices on student learning. An additional 47.2% ($n = 34$) of the respondents selected Level 4 of the response continuum, thereby indicating that respondents perceived the degree to which staff discussed the quality of their teaching and students' learning to be on a continuum between the staff's not often discussing their instructional practices or the influence of their practices on student learning and the staff's discussing the quality of their teaching and students' learning. Slightly less than a tenth (9.7%, $n = 7$) of the respondents from Alpha Middle School selected Level 5 on the response continuum, thereby indicating that staff discussed the quality of their teaching and students' learning.

In summation, 25.8% ($n = 46$) of the respondents from both schools selected Level 3 of the response continuum. This response level indicated that the staff did not often discuss their instructional practices or the influence of their practices on student learning. An additional 51.6% ($n = 80$) of the respondents selected Level 4 on the response continuum, thereby indicating the perceived degree to which staff discussed the quality of their teaching and students' learning to be on a continuum between the staff's not often discussing their instructional practices or the influence of their practices on student learning and the staff's

discussing the quality of their teaching and students' learning. Less than a fifth of all respondents (15.5%, $n = 35$) selected Level 5 on the response continuum, thereby indicating a perception that staff discussed the quality of their teaching and students' learning.

The mean response to Survey Item 3c was 3.74, indicating that respondents perceived the degree to which staff discussed the quality of their teaching and students' learning to be on a continuum between the staff's not often discussing their instructional practices or the influence of their practices on student learning and the staff's discussing the quality of their teaching and students' learning.

The SPSLCQ included a fourth item to assess teachers', assistant principals', and principals' perceptions of collective learning and application of the learning (taking action) to create high intellectual learning tasks and solutions to address student needs. Item 3d on the survey assessed the degree to which the staff, based on their learning, made and implemented plans that addressed student needs, more effective teaching, and more successful student learning. In response to Item 3d on the SPSLCQ, 21.7% ($n = 18$) of the respondents from Alpha High School selected Level 3 of the response continuum. This response level indicated that the staff occasionally acted on their learning to make and implement plans to improve teaching and learning. An additional 48.2% ($n = 40$) of the respondents selected Level 4 of the response continuum, thereby indicating that they perceived the degree to which the staff, based on their learning, made and implemented plans that addressed student needs, more effective teaching, and more successful student learning to be on a continuum between the staff's occasionally acting on their learning to make and implement plans to improve teaching and learning and the staff's, based on their learning, making and implementing plans that addressed student needs, more effective teaching, and more successful student learning. More than one quarter of the

respondents (28.9%, $n = 24$) selected Level 5 of the response continuum, thereby indicating that they perceived the staff, based on their learning, as making and implementing plans that addressed student needs, more effective teaching, and more successful student learning.

In response to Item 3d, 34.7% ($n = 25$) of respondents at Alpha Middle School selected Level 3 of the response continuum, thereby indicating that the staff occasionally acted on their learning to make and implement plans to improve teaching and learning. An additional 47.2% ($n = 34$) of the respondents selected Level 4 of the response continuum, thereby indicating that they perceived the degree to which the staff, based on their learning, made and implemented plans that addressed student needs, more effective teaching, and more successful student learning to be on a continuum between the staff's occasionally acting on their learning to make and implement plans to improve teaching and learning and the staff's, based on their learning, making and implementing plans that addressed student needs, more effective teaching, and more successful student learning. Nearly one in five respondents (18.1%, $n = 13$) from Alpha Middle School selected Level 5 on the response continuum, thereby indicating that the staff, based on their learning, made and implemented plans that addressed student needs, more effective teaching, and more successful student learning. In summation, 27.7% ($n = 43$) of the respondents from both schools selected Level 3 of the response continuum. This response level indicated that the staff occasionally acted on their learning to make and implement plans to improve teaching and learning. An additional 43.2% ($n = 67$) of the respondents selected Level 4 on the response continuum, thereby indicating that they perceived the degree to which the staff, based on their learning, made and implemented plans that addressed student needs, more effective teaching, and more successful student learning to be on a continuum between the staff's occasionally acting on their learning to make and implement plans to improve teaching and learning and the staff's,

based on their learning, making and implementing plans that addressed student needs, more effective teaching, and more successful student learning. Nearly one in four (23.9%, $n = 37$) of all respondents selected Level 5 on the response continuum, thereby indicating that the staff, based on their learning, made and implemented plans that addressed student needs, more effective teaching, and more successful student learning.

The mean response to Survey Item 3d was 3.87, indicating that respondents perceived the degree to which the staff, based on their learning, made and implemented plans that addressed student needs, more effective teaching, and more successful student learning to be on a continuum between the staff's occasionally acting on their learning to make and implement plans to improve teaching and learning and the staff's, based on their learning, making and implementing plans that addressed student needs, more effective teaching, and more successful student learning.

The SPSLCQ included a fifth item to assess teachers', assistant principals', and principals' perceptions of collective learning and application of the learning (taking action) to create high intellectual learning tasks and solutions to address student needs. Item 3e on the survey assessed the degree to which the staff assessed the impact of their actions and made revisions to their work. In response to Item 3e on the SPSLCQ, 20.5% ($n = 17$) of the respondents from Alpha High School selected Level 3 of the response continuum. This response level indicated that the staff infrequently assessed their actions and seldom made revisions based on the results. An additional 59.0% ($n = 49$) of the respondents selected Level 4 of the response continuum, thereby indicating that they perceived the degree to which the staff assessed the impact of their actions and made revisions to their work to be on a continuum between the staff's infrequently assessing their actions and seldom making revisions based on the results and the

staff's debriefing and assessing the impact of their actions and making revisions. Less than a fifth of the respondents (16.9%, $n = 14$) selected Level 5 of the response continuum, thereby indicating that they perceived that the staff debriefed and assessed the impact of their actions and made revisions.

In response to Item 3e, 40.3% ($n = 29$) of the respondents at Alpha Middle School selected Level 3 of the response continuum, thereby indicating that they perceived the staff to be infrequently assessing their actions and seldom making revisions based on the results. An additional 36.1% ($n = 26$) of the respondents selected Level 4 of the response continuum, thereby indicating that they perceived the degree to which the staff assessed the impact of their actions and made revisions to their work to be on a continuum between the staff's infrequently assessing their actions and seldom making revisions based on the results and the staff's debriefing and assessing the impact of their actions and making revisions. Less than one in ten respondents (9.7%, $n = 7$) from Alpha Middle School selected Level 5 on the response continuum, thereby indicating that they perceived that the staff debriefed and assessed the impact of their actions and made revisions.

In summation, 29.7% ($n = 46$) of the respondents from both schools selected Level 3 of the response continuum. This response level indicated that respondents perceived the staff to be infrequently assessing their actions and seldom making revisions based on the results. An additional 48.4% ($n = 75$) of the respondents selected Level 4 on the response continuum, thereby indicating that they perceived the degree to which the staff assessed the impact of their actions and made revisions to their work to be on a continuum between the staff's infrequently assessing their actions and seldom making revisions based on the results and the staff's debriefing and assessing the impact of their actions and making revisions. More than one in ten

(13.5%, $n = 21$) of all respondents selected Level 5 on the response continuum, thereby indicating that they perceived that the staff debriefed and assessed the impact of their actions and made revisions.

The mean response to Survey Item 3e was 3.66, indicating that respondents perceived the degree to which the staff assessed the impact of their actions and made revisions to their work was on a continuum between the staff's infrequently assessing their actions and seldom making revisions based on the results and the staff's debriefing and assessing the impact of their actions and making revisions.

This result was supported by qualitative data obtained through individual interviews with the principals as well as focus group interviews. When prompted to explain the staff's collective learning and the application of that learning to address students' needs, the principal at Alpha Middle School indicated that the staff used student performance data to guide school improvement (p. 4 of AMSP individual interview transcript). According to the principal, standardized student achievement tests, quarterly teacher-developed benchmark tests, and feedback from teachers, department heads, and teacher leaders were used as tools to assess the staff's collective learning (p. 4 of AMSP individual interview transcript).

When prompted to explain how school performance data were used at Alpha High School in making decisions about teachers' learning, the principal indicated that the school had "professional developers on staff that use[d] staff surveys and performance data to determine professional development needs and training" (p. 4 of AHSP individual interview transcript). According to the principal, standardized reading inventory scores, actual student grades, standard achievement scores, and benchmark test results were data used to guide instruction (p. 4 of AHSP individual interview transcript). The principal stated, "We really mine the data we get in

with various [instructional] strands, questions, and subgroup [performance]” (p. 4 of AHSP individual interview transcript). The principal added, “We look at specific strands where students are struggling to see if we need to redirect our instruction and hit those strands” (p. 3 of AHSP individual interview transcript). The principal explained that all decision making was based on data (p. 4 of AHSP individual interview transcript).

When asked to explain when and how teachers found time to analyze performance data, the principal explained that teachers could access performance data via the Internet and were given opportunities during planning weeks, professional development days, department meetings, curriculum planning meetings, and other times throughout the academic calendar year to assess student performance data and participate in professional development workshops (p. 5 of AHSP individual interview transcript). The principal also explained that teachers had been trained on how to access student performance data, perform data analysis, and interpret the results (p. 5 of AHSP individual interview transcript).

When asked how teacher learning was monitored and assessed to determine if professional development was being implemented with fidelity, the principal indicated that student performance data were disaggregated to determine how students were performing based on a particular learning objective each 9 weeks (p. 5 of AHSP individual interview transcript). The principal also indicated that the professional developers on staff worked with school and teacher leaders to survey staff and determine the effectiveness of professional development activities (p. 5 of AHSP individual interview transcript).

A final individual interview question sought to determine what structures were in place to facilitate teacher learning. The principal explained that teacher leaders worked with professional developers to determine professional development needs (p. 5 of AHSP individual interview

transcript). As an example, the principal explained that the school had a designated math coach, access to an instructional specialist to assist with reading, and a freshman academy designed to optimize the success of ninth-grade students (p. 5 of AHSP individual interview transcript).

When prompted to explain how the learning needs for teachers and staff were determined, teachers and staff participating in the Alpha High School focus group interview ($n = 20$) indicated that the staff completed surveys related to curriculum and professional development needs each spring (AHS). AHST4 explained that the professional development needs were determined through the surveys collected each spring and strategies were implemented using “in-house coaching” (p. 9 of AHS focus group interview transcript). AHST5 added, “There is also outside training that is offered throughout the year that is promoted by the principal” (p. 9 of AHST focus group interview transcript). AHST4 explained that teacher learning was determined by “what we need for our students” (p. 9 of AHS focus group interview transcript).

When asked to explain how school performance data were used in making decisions about teachers’ learning, the AHSP explained that subgroup academic achievement data, student performance data from standardized tests and benchmark tests, and a variety of other data sources were used to guide all decision making so that teachers and staff could determine professional development needs (p. 9 of AHS focus group interview transcript). AHST18 explained that the schoolwide focus on literacy had enabled to teachers to “know the independent reading levels [of students] and better meet their needs” (p. 9 of AHS focus group interview transcript). AHST18 added that the focus on literacy had enabled the teachers and staff to collectively and individually “identify those students who need help and give them the help necessary to make them better learners” (p. 10 of AHS focus group interview transcript).

AHST18 explained that the focus on literacy had enabled teachers to give students the appropriate reading materials at the appropriate reading level, thereby resulting in the students' being able to work more independently to build their own skills and improve their own learning (p. 10 of AHS focus group interview transcript). AHST17 cited career and technical courses through which students earned industry certification as one example of how the focus on literacy had been successful (p. 10 of AHS focus group interview transcript). AHST13 indicated that the benchmark testing of students at the end of each quarter and the analysis of those results enabled teachers to adjust instruction according to student needs (p. 10 of AHST focus group interview transcript). The Alpha High Assistant Principal (AHSAP) suggested that the benchmark testing also enabled teacher leaders, administrators, and curriculum coaches to provide assistance to teachers who might be struggling or underperforming (p. 10 of AHST focus group interview transcript).

The principal at Alpha Middle School described the process of determining the learning needs of staff as a process that included the collection of data from classroom walkthroughs, surveys about professional development needs, benchmark test results, and student achievement data designed to inform school leaders regarding the levels at which students were learning (p. 4 AMSP individual interview transcript). The principal explained that professional development needs were based on "the needs of teachers and students" (p. 4 AMSP individual interview transcript). The principal indicated that the data collections were designed to measure the effectiveness of learning strategies and techniques utilized by teachers (p. 4 AMSP individual interview transcript). The principal explained that teachers were provided opportunities to expand their learning through curriculum meetings, common planning periods, professional development sessions, book talks, and other opportunities for teachers to collaborate with each

other and with teacher leaders who led professional development (p. 4 AMSP individual interview transcript).

When prompted to explain how school performance data were used in making decisions about teachers' learning, the principal emphasized the use of student performance data as a tool for identifying the learning needs of teachers and staff p. 4 AMSP individual interview transcript). As an example, the principal explained that the schoolwide focus on literacy instruction might include "specific [instructional] strategies" that were determined from Scholastic Reading Inventory scores or from some other standardized reading measure (p. 4 AMSP individual interview transcript). When describing how the teacher might use performance data to address a specific student's learning needs, the principal stated,

If you're not doing well, then it tells us to look further. Is it motivation? Is it something else? Is it something that we can get you some help with? You have to look further into their [student's] scores and see whether there are weaknesses (p. 5 AMSP individual interview transcript).

The principal indicated that if it was determined that a particular set or group of students was having difficulty with reading, the staff had a duty and responsibility to provide additional instruction designed to help improve literacy skills and, ultimately, learning (p. 5 AMSP individual interview transcript).

A final interview question was directed at the process for monitoring and assessing the implementation of what teachers and staff learned through professional development. The principal indicated that much of the responsibility of monitoring and assessing what teachers and staff learned was the responsibility of professional developers and curriculum coaches who were on staff (p. 6 AMSP individual interview transcript). The principal explained that the school had its own cadre of instructional specialists on staff, including a math coach, a reading coach, and content literacy specialists (p. 5 AMSP individual interview transcript). According to the

principal, much of the professional development aimed at literacy was conducted by these staff members, who used a variety of data sources to determine teachers' learning needs (p. 9 AMSP individual interview transcript)..

When prompted to explain how the staff's collective application of their learning (taking action) created high intellectual learning tasks and solutions to address student needs, participants in the focus group ($n = 6$) at Alpha Middle School indicated that teachers had been given significant opportunities to give feedback on their needs (AMS). AMST3 indicated that teachers were given opportunities to provide feedback on professional development through collected surveys that enabled teachers to give feedback on "what they [saw] happening, what they would like to see more of, and what they would like to see less of" (p. 9 AMS focus group interview transcript). AMST6 indicated that in addition to feedback from surveys, teachers could also communicate their needs and concerns through teacher leader groups that included the school improvement team, department chairpersons, curriculum coaches, and professional development leaders (p. 2 AMS focus group interview transcript). AMST3 indicated that teachers collectively had professional developers on staff that were committed to helping teachers improve their professional practice (p. 2 AMS focus group interview transcript). When prompted to explain what role teachers played in determining their learning needs, AMST2 indicated that the structures mentioned by other focus group participants were effective structures through which teachers' learning needs were effectively addressed (p. 2 AMS focus group interview transcript). AMST1 added, "[We] are able to explore new opportunities [for learning] one-on-one, staff wide" or by department or content area" (p. 2 AMS focus group interview transcript).

When prompted to explain how school performance data were used in making decisions about teachers' learning, AMST3 confirmed that Scholastic Reading Inventory data and Standards of Learning student performance data were tools used for determining the effectiveness "of learning strategies at each grade level in reading, writing, language arts and rest" (p. 10 AMS focus group interview transcript).

Collectively, 20 participants (100%) in the focus group at Alpha High School and six participants (100%) from Alpha Middle School indicated that the staff's collective learning and the application of that learning (taking action) created high intellectual learning tasks and solutions to address student needs (AHS). This analysis was extracted from individual and focus group responses to interview protocol items for Dimension 3, collective learning and its application and Questions 1, 2, 3, and 4.

Research Question 1.4. How do assistant principals, teachers, and principals perceive their respective schools as being characterized as schools in which peers review and give feedback to one another to improve organizational capacity?

As noted in Chapter One, the concept of shared personal practice was defined as the regular review by colleagues of a teacher's behaviors and practice, which includes feedback, visits to each other's classroom to observe instructional practices, and meaningful discussion about their observations with the teachers they have visited Hord (2004). The SPSLCQ included two items to assess teachers', assistant principals', and principals' perceptions of the extent to which staff members gave feedback based on observing one another's classroom behaviors to increase individual and organizational capacity. The interview protocol, including focus group interviews, included one question that probed for teachers', assistant principals', and principals' perceptions of the extent to which staff members gave feedback based on observing one

another's classroom behaviors to increase individual and organizational capacity. Table 21 depicts responses to Item 4a and 4b on the SPSLCQ for Alpha High School, Alpha Middle School, and both schools combined.

Table 21.

Alpha High School, Alpha Middle School, and Total Responses to the SPSLCQ Items 4a and 4b

Item	Response continuum	Alpha High School		Alpha Middle School		Total responses	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
4a	1. Staff members never visit their peers' classrooms.	8	9.6	13	18.1	21	13.5
	2.	18	21.7	23	31.9	41	26.5
	3. Staff members occasionally visit and observe one another's teaching.	35	42.2	27	37.5	62	40.0
	4.	20	24.1	8	11.1	28	18.1
	5. Staff members regularly and frequently visit and observe one another's classroom teaching.	2	2.4	1	1.4	3	1.9
4b	1. Staff do not interact after classroom observations.	7	8.4	11	15.3	18	11.6
	2.	13	15.7	13	18.1	26	16.8
	3. Staff members discuss nonteaching issues after classroom observations.	25	30.1	25	34.7	50	33.1
	4.	26	31.3	18	25.0	44	28.4
	5. Staff members provide feedback to one another about teaching and learning based on their classroom observations.	10	12.0	3	4.2	13	8.4

In response to Item 4a on the SPSLCQ, which assessed the degree to which the staff visited and observed one another's classroom teaching, 42.2% ($n = 35$) of the respondents from Alpha High School selected Level 3 of the response continuum. This response level indicated that staff members occasionally visited and observed one another's teaching. An additional

24.1% ($n = 20$) of the respondents selected Level 4 of the response continuum, thereby indicating that they perceived the extent to which the staff visited and observed one another's teaching to be between staff members' occasionally visiting and observing one another's teaching and staff members' regularly and frequently visiting and observing one another's classroom teaching.

Nearly a third of the respondents from Alpha Middle School (31.9%, $n = 23$) selected Level 2 on the response continuum, thereby indicating they perceived the extent to which the staff visited and observed one another's teaching to be between staff members' occasionally visiting and observing one another's teaching and staff members' never visiting their peers' classrooms. An additional 37.5% ($n = 27$) of the respondents from Alpha Middle School selected Level 3 of the response continuum, thereby indicating a perception that staff members occasionally visited and observed one another's teaching. Only 11.1% ($n = 8$) selected Level 4 of the response continuum, thereby indicating they perceived the extent to which the staff visited and observed one another's teaching to be between staff members' occasionally visiting and observing one another's teaching and staff members' regularly and frequently visiting and observing one another's classroom teaching.

Collectively, more than a quarter (26.5%, $n = 41$) of the respondents from both schools selected Level 2 of the response continuum. This response level indicated that respondents perceived that the extent to which the staff visited and observed one another's teaching was between staff members' occasionally visiting and observing one another's teaching and staff members' never visiting their peers' classrooms. An additional 40.0% ($n = 62$) of the respondents from both schools selected Level 3 of the response continuum, thereby indicating a perception that staff members occasionally visited and observed one another's teaching. Less than a fifth (18.1%, $n = 28$) of the respondents from both schools selected Level 4 of the

response continuum, thereby indicating their perception that the extent to which the staff visited and observed one another's teaching was between staff members' occasionally visiting and observing one another's teaching and staff members' regularly and frequently visiting and observing one another's classroom teaching. The mean response to Survey Item 4a was 2.68, indicating that respondents perceived the extent to which the staff visited and observed one another's teaching to be between staff members' occasionally visiting and observing one another's teaching and staff members' never visiting their peers' classrooms.

The SPSLCQ included a second item to assess teachers', assistant principals', and principals' perceptions of the extent to which staff members gave feedback, based on observing one another's classroom behaviors, to increase individual and organizational capacity. In response to Item 4b on the SPSLCQ, which assessed the degree to which the staff members provided feedback to one another about teaching and learning based on their classroom observations, 30.1% ($n = 25$) of the respondents from Alpha High School selected Level 3 of the response continuum. This response level indicated that staff members discussed nonteaching issues after classroom observations. An additional 31.3% ($n = 26$) of the respondents selected Level 4 of the response continuum, thereby indicating that they perceived the extent to which staff members gave feedback based on observing one another's classroom behaviors to increase individual and organizational capacity to be between staff members' discussing nonteaching issues after classroom observations and staff members' providing feedback to one another about teaching and learning based on their classroom observations.

More than a third (34.7%, $n = 25$) of the respondents from Alpha Middle School selected Level 3 on the response continuum, thereby indicating they perceived that staff members discussed nonteaching issues after classroom observations. An additional 25.0% ($n = 18$) of the

respondents from Alpha Middle School selected Level 4 of the response continuum, thereby indicating their perception that the extent to which staff members gave feedback, based on observing one another's classroom behaviors, to increase individual and organizational capacity was between staff members' discussing nonteaching issues after classroom observations and staff members' providing feedback to one another about teaching and learning based on their classroom observations. A third of all respondents from Alpha Middle School indicated that the extent to which staff members gave feedback based on observing one another's classroom behaviors to increase individual and organizational capacity was between staff members' discussing nonteaching issues after classroom observations and staff members' not interacting after classroom observation, with 18.1% ($n = 13$) selecting Level 2 and 15.3% ($n = 11$) selecting Level 1 on the response continuum.

Collectively, almost a third (32.3%, $n = 50$) of the respondents from both schools selected Level 3 of the response continuum. This response level indicated that respondents perceived that staff members discussed nonteaching issues after classroom observations. An additional 28.4% ($n = 44$) of respondents from both schools selected Level 4 on the response continuum, thereby indicating their perception that the extent to which staff members gave feedback, based on observing one another's classroom behaviors, to increase individual and organizational capacity lay between staff members' discussing nonteaching issues after classroom observations and staff members' providing feedback to one another about teaching and learning based on their classroom observations.

This result was supported by qualitative data obtained through individual interviews with both principals as well as focus group interviews. When asked to describe what structures, both formal and informal, were in place to allow and encourage teachers to work collaboratively and

to share personal practice, the principal at Alpha High School indicated that professional developers were on staff and assisted teachers through coaching. According to the principal, content area coaches “[would] go in and do an observation on the individual teacher to work with them.” The principal explained that these kinds of observations were often peer led but also were used when a teacher was struggling with a particular instructional or teaching issue. In those instances, when a teacher was having difficulty, the teacher needing assistance might be observed by the content area coach and the department chairperson or other teachers who were skilled in helping the teacher to address any deficiencies. The principal at Alpha High School also explained that each new teacher was assigned a peer mentor to assist him or her in transition as a new member of the school community.

When asked to explain how training for collaboration and peer coaching was organized, the principal at Alpha High School indicated that much of the focus on literacy instruction was supported through a university partnership. The principal indicated that as a result of this partnership, ongoing training for teachers, peer coaches, department heads, content specific professional developers, and administrative team members had been provided.

Focus group participants ($n = 20$) at Alpha High School indicated that content area instructional coaches observed teachers in the various content areas. One respondent who taught math said, “Some of us have gone in [classrooms] as coaches and actually copresented a lesson.” Another respondent indicated that most of the time teachers who needed assistance or desired to have someone model a lesson usually prearranged the observations during a planning period or duty period. Another teacher explained that for many of the professional developers on staff, their teaching assignment was to work with teachers by presenting, modeling, observing, and providing feedback related to effective instructional practices.

When prompted to explain how teacher learning was monitored and assessed, one respondent explained that in the math department teachers participated in “subject area meetings where all Algebra I or all Geometry teachers [met] to talk about pacing and where we are and what can we do better.” The respondent indicated that these meeting enabled teachers to talk constructively about what instructional practices were effective and how to assist students in learning a particular concept or strategy. Another respondent indicated that professional development days enabled departments and content area teachers to “share ideas” and work collaboratively with peers. Another respondent added that these meetings often included presentations by professional developers or teacher leaders from which were derived the strategic teaching model that was promoted schoolwide.

Similar results were culled from the analysis of qualitative data at Alpha Middle School. The principal at Alpha Middle School perceived that staff members gave feedback, based on observing one another’s classroom behaviors, to increase individual and organizational capacity through both informal and formal structures that enabled teachers to work collaboratively and to share personal practice. Six teachers (100%) that were interviewed at Alpha Middle School perceived that staff members gave feedback based on observing one another’s classroom behaviors to increase individual and organizational capacity through both informal and formal structures that enabled teachers to work collaboratively and to share personal practice.

This analysis was extracted from individual and focus group responses to the interview protocol for Dimension 4, Item 1.

Research Question 1.5. How do assistant principals, teachers, and principals perceive their respective schools as being characterized as schools in which school conditions and capacities support the development of a professional learning community?

As noted in Chapter One, the concept of supportive conditions was defined as the physical conditions, structures, and human capacities that encourage and sustain a collegial atmosphere and collective learning (Hord, 2004). The SPSLCQ included five items to assess teachers', assistant principals', and principals' perceptions of the extent to which school conditions and capacities supported the staff's arrangement as a professional learning organization. The interview protocol, including focus group interviews, included one question that probed for teachers', assistant principals', and principals' perceptions of the extent to which school conditions and capacities supported the staff's arrangement as a professional learning organization. Table 22 depicts responses to Item 5a, 5b, 5c, 5d, and 5e, on the SPSLCQ for Alpha High School, Alpha Middle School, and both schools combined.

Table 22.

Alpha High School, Alpha Middle School, and Total Responses to the SPSLCQ Items 5a, 5b, 5c, 5d, and 5e

Item	Response continuum	Alpha High School		Alpha Middle School		Total responses	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
5a	1. Staff cannot arrange time for interacting.	0	0	6	8.3	6	3.9
	2.	10	12.0	4	5.6	14	9.0
	3. Time is arranged but frequently the staff fail to meet.	16	19.3	17	23.6	33	21.3
	4.	35	42.2	36	50.0	71	45.8
	5. Time is arranged and committed for whole staff interactions.	22	26.5	7	9.7	29	18.7
5b	1. The staff take no action to manage the facility and personnel for interaction.	1	1.2	4	5.6	5	3.2
	2.	8	9.6	15	20.8	23	14.8
	3. Considering the size, structure, and arrangements of the school, staff are working to maximize interaction.	31	37.3	33	45.8	64	41.3
	4.	12	14.5	15	20.8	45	29.0
	5. The size, structure, and arrangements of the school facilitate staff proximity and interaction.	1	1.2	3	4.2	15	9.7
5c	1. Communication devices are not given attention.	1	1.2	1	1.4	2	1.3
	2.	2	2.4	10	13.9	12	7.7
	3. A single communication method exists and is sometimes used to share information.	14	16.9	20	27.8	34	21.9
	4.	47	56.6	29	40.3	76	49.0
	5. A variety of processes and procedures is used to encourage staff communication.	19	22.9	10	13.9	29	19.0

Table 22 (continued)

5d	1. Trust and openness do not exist among staff members.	3	3.6	7	9.7	10	6.5
	2.	2	2.4	17	23.6	19	12.3
	3. Some of the staff members are trusting and open.	37	44.6	33	45.8	70	45.2
	4.	33	39.8	13	18.1	46	29.7
	5. Trust and openness characterize all of the staff members.	8	9.6	2	2.8	10	6.5
5e	1. Staff members are isolated and work alone at their task.	1	1.2	4	5.6	5	3.2
	2.	2	2.4	12	16.7	14	9.0
	3. Caring and collaboration are inconsistently demonstrated among the staff members.	17	20.5	32	44.4	49	31.6
	4.	50	60.2	18	25.0	68	43.9
	5. Caring, collaborative, and productive relationships exist among all staff members.	13	15.7	5	6.9	18	11.6

In response to Item 5a on the SPSLCQ, which assessed the degree to which time was arranged and committed for whole staff interactions, 42.2% ($n = 35$) of the respondents from Alpha High School selected Level 4 on the response continuum. This response level indicated that respondents perceived that the extent to which time was arranged and committed for whole staff interactions was between time's being arranged but staff's frequently failing to meet and time's being arranged and committed for whole staff interactions. An additional 26.5% ($n = 22$) of the respondents selected Level 5 of the response continuum, thereby indicating that they perceived that time was arranged and committed for whole staff interactions.

Less than one in four respondents (23.6%, $n = 17$) from Alpha Middle School selected Level 3 on the response continuum, thereby indicating they perceived that time was arranged but that frequently the staff failed to meet. An additional 50.0% ($n = 36$) of respondents from Alpha Middle School selected Level 4 on the response continuum, thereby indicating their perception that the extent to which time was arranged and committed for whole staff interactions was between time's being arranged but staff's frequently failing to meet and time's being arranged and committed for whole staff interactions.

Collectively, more than a fifth of the respondents (21.3%, $n = 33$) from both schools selected Item 3 on the response continuum, thereby indicating their perception that time was arranged but that frequently the staff failed to meet. An additional 45.8% ($n = 71$) of the respondents from both schools selected Item 4 on the response continuum. This response level indicated that respondents perceived that the extent to which time was arranged and committed for whole staff interactions lay between time's being arranged but staff's frequently failing to meet and time's being arranged and committed for whole staff interactions. The mean response to Survey Item 5a was 3.67, indicating that respondents perceived that the extent to which time was arranged and committed for whole staff interactions was between time's being arranged but staff's frequently failing fail to meet and time's being arranged and committed for whole staff interactions.

The SPSLCQ included a second item to assess teachers', assistant principals', and principals' perceptions of the extent to which school conditions and capacities supported the staff's arrangement as a professional learning organization. In response to Item 5b on the SPSLCQ, which assessed the degree to which the size, structure, and arrangement of the school facilitated staff proximity and interaction, 37.3% ($n = 31$) of the respondents from Alpha High

School selected Level 3 of the response continuum. This response level indicated that respondents perceived that, considering the size, structure, and arrangements of the school, the staff were working to maximize interaction. An additional 36.1% ($n = 30$) of the respondents selected Level 4 of the response continuum, thereby indicating their perception that the extent to which the size, structure, and arrangements of the school facilitated staff proximity and interaction lay between a belief that, considering the size, structure, and arrangements of the school, the staff were working to maximize interaction and a belief that the size, structure, and arrangements of the school facilitated staff proximity and interactions.

Nearly half of the respondents (45.8%, $n = 33$) from Alpha Middle School selected Level 3 on the response continuum, indicating they perceived that, considering the size, structure, and arrangements of the school, the staff were working to maximize interaction. An additional 20.8% ($n = 15$) of the respondents from Alpha Middle School selected Level 4 of the response continuum, thereby indicating their perception that the extent to which the size, structure, and arrangements of the school facilitated staff proximity and interaction lay between a belief that, considering the size, structure, and arrangements of the school, the staff were working to maximize interaction and a belief that the size, structure, and arrangements of the school facilitated staff proximity and interactions.

Collectively, 41.3% ($n = 66$) of the respondents from both schools selected Level 3 of the response continuum. This response level indicated that respondents perceived that, considering the size, structure, and arrangements of the school, the staff were working to maximize interaction. An additional 29.0% ($n = 45$) of the respondents from both schools selected Level 4 on the response continuum, indicating that respondents perceived that the extent to which the size, structure, and arrangements of the school facilitated staff proximity and interaction lay

between a belief that, considering the size, structure, and arrangements of the school, the staff were working to maximize interaction and a belief that the size, structure, and arrangements of the school facilitated staff proximity and interactions. The mean response to Survey Item 5b was 3.28, indicating that respondents perceived that, considering the size, structure, and arrangements of the school, the staff were working to maximize interaction.

The SPSLCQ included a third item to assess teachers', assistant principals', and principals' perceptions of the extent to which school conditions and capacities supported the staff's arrangement as a professional learning organization. In response to Item 5c on the survey, which assessed the degree to which a variety of processes and procedures were used to encourage staff communication, 56.6% ($n = 47$) of the respondents from Alpha High School selected Level 4 on the response continuum. This response level indicated that respondents perceived that the extent to which a variety of processes and procedures was used to encourage staff communication lay between a single communication method's existing and being sometimes used to share information and the use of a variety of processes and procedures to encourage staff communication. An additional 22.9% ($n = 30$) of the respondents selected Level 4 of the response continuum, thereby indicating their perception that a variety of processes and procedures was used to encourage staff communication.

More than a fourth of the respondents (27.8%, $n = 20$) from Alpha Middle School selected Level 3 on the response continuum, thereby indicating that they perceived that a single communication method existed and was sometimes used to share information. An additional 40.3% ($n = 29$) selected Level 4 on the response continuum, thereby indicating that they perceived that the extent to which a variety of processes and procedures was used to encourage staff communication lay between a single communication method's existing and being

sometimes used to share information and the use of a variety of processes and procedures to encourage staff communication.

Collectively, 21.9% ($n = 34$) of the respondents from both schools selected Level 3 on the response continuum. This response level indicated that respondents perceived that a single communication method existed and was sometimes used to share information. An additional 49.0% ($n = 76$) of the respondents from both schools selected Level 4 on the response continuum, thereby indicating their perception that the extent to which a variety of processes and procedures was used to encourage staff communication lay between a single communication method's existing and being sometimes used to share information and the use of a variety of processes and procedures to encourage staff communication. The mean response to Survey Item 5c was 3.77, indicating that respondents perceived that the extent to which a variety of processes and procedures was used to encourage staff communication lay between a single communication method's existing and being sometimes used to share information and the use of a variety of processes and procedures to encourage staff communication.

The SPSLCQ included a fourth item to assess teachers', assistant principals', and principals' perceptions of the extent to which school conditions and capacities supported the staff's arrangement as a professional learning organization. In response to Item 5d on the survey, which assessed the degree to which trust and openness characterized staff members, 44.6% ($n = 37$) of the respondents from Alpha High School selected Level 3 on the response continuum. This response level indicated that respondents perceived that some of the staff members were trusting and open. An additional 39.8% ($n = 33$) of the respondents selected Level 4 of the response continuum, thereby indicating that they perceived that the degree to

which trust and openness characterized staff members lay between some of the staff members' being trusting and open and all of the staff members' being characterized by trust and openness.

Nearly half of the respondents (45.8%, $n = 33$) from Alpha Middle School, selected Level 3 on the response continuum, thereby indicating their perception that some of the staff members were trusting and open. An additional 18.1% ($n = 13$) selected Level 4 on the response continuum, thereby indicating they perceived that the degree to which trust and openness characterized staff members was between some of the staff members' being trusting and open and all of the staff members' being characterized by trust and openness. Nearly one in four respondents from Alpha Middle School selected Level 2 on the response continuum. This response level indicated that respondents perceived that the degree to which trust and openness characterized staff members lay between the nonexistence of trust and openness among the staff and some of the staff members' being trusting and open.

Collectively, 45.2% ($n = 70$) of the respondents from both schools selected Level 3 on the response continuum. This response level indicated that respondents perceived that some of the staff members were trusting and open. An additional 29.7% ($n = 46$) of the respondents from both schools selected Level 4 on the response continuum, thereby indicating their perception that the degree to which trust and openness characterized staff members lay between some of the staff members' being trusting and open and all of the staff members' being characterized by trust and openness. The mean response to Survey Item 5d was 3.17, indicating that respondents perceived that some of the staff members were trusting and open.

The SPSLCQ included a fifth item to assess teachers', assistant principals', and principals' perceptions of the extent to which school conditions and capacities supported the staff's arrangement as a professional learning organization. In response to Item 5e on the

SPSLCQ, which assessed the degree to which caring, collaborative, and productive relationships existed among all staff members, 20.5% ($n = 17$) of the respondents from Alpha High School selected Level 3 on the response continuum, thereby indicating that caring and collaboration were inconsistently demonstrated among the staff members. An additional 60.2% ($n = 50$) of the respondents from Alpha High School selected Level 4 on the response continuum. This response level indicated that respondents perceived the degree to which caring, collaborative, and productive relationships existed among all staff members to be between such relationships' being inconsistently demonstrated among the staff members and caring, collaborative, and productive relationships' existing among all staff members.

Less than half of the respondents from Alpha Middle School (44.4%, $n = 32$) selected Level 3 on the response continuum, thereby indicating their perception that caring and collaboration were inconsistently demonstrated among the staff members. An additional 25.0% ($n = 18$) selected Level 4 on the response continuum, thereby indicating that they perceived that the degree to which caring, collaborative, and productive relationships existed among all staff members lay between caring and collaborative relationships' being inconsistently demonstrated among the staff members and caring, collaborative, and productive relationships' existing among all staff members.

Collectively, 31.6% ($n = 49$) of the respondents from both schools selected Level 3 on the response continuum. This response level indicated that respondents perceived that caring and collaboration were inconsistently demonstrated among the staff members. An additional 43.9% ($n = 68$) of the respondents from both schools selected Level 4 on the response continuum, indicating their perception that the degree to which caring, collaborative, and productive relationships existed among all staff members lay between caring and collaborative

relationships' being inconsistently demonstrated among the staff members and caring, collaborative, and productive relationships' existing among all staff members. The mean response to Survey Item 5d was 3.77, indicating that respondents perceived the degree to which caring, collaborative, and productive relationships existed among all staff members to lie between caring and collaborative relationships' being inconsistently demonstrated among the staff members and caring, collaborative, and productive relationships' existing among all staff members.

These results were supported by qualitative data obtained through individual interviews with both principals as well as focus group interviews. When asked what structures and conditions were in place to support the existence and sustainability of the school's arrangement as a professional learning community, the principal at Alpha High School stated, "Each subject area has a separate wing or separate hallway within the building" (p. 7 AHSP individual interview transcript). The principal indicated that although the physical design of the school did not support natural interactions among staff in different subject areas, teachers in different subject areas were given some opportunities for common planning periods and lunch periods so that they could meet within and across departments (p. 7 AHSP individual interview transcript). The principal also explained that the faculty workrooms were shared by departments and that this particular practice was one that enabled teachers from different departments to collaborate with each other (p. 7 AHSP individual interview transcript).

Asked to describe structures and conditions that were in place to support the existence and sustainability of the school's arrangement as a professional learning community, all 20 focus group participants indicated the existence of both structures and conditions that supported collaboration among faculty and staff (AHS) For example, AHST4 stated, "I think it's trust and

the positive attitude on the part of administrators” (p. 12 AHS focus group transcript). AHST explained that the strong administrative presence throughout the school was positive and upbeat (p. 12 AHS focus group transcript).

AHST18 indicated that the faculty workrooms were arranged in a manner that enabled “teachers to gather and have discussions especially on teacher professional development days” (p. 13 AHS focus group transcript). According to AHST18, various departments shared work space, and this arrangement contributed to an atmosphere of cooperation and collaboration (p. 13 AHS focus group transcript). AHST11 stated, “Each department takes a month and also has food or a social for us, so that we [teachers] can get together” (p. 13 AHS focus group transcript). AHST9 added that the building was arranged with departments assigned to various wings so that all math teachers and other subject areas teachers were very accessible to each other (p. 13 AHS focus group transcript). According to AHST9, this situation represented a supportive condition.

AHST7 indicated that the building’s design also presented some challenges: “Just to not be totally positive, there is a problem with fine arts. Music is at one end of the building and art is at the other end” (p. 13 AHS focus group transcript). AHST8 indicated that this kind of structural arrangement sometimes made it more challenging for teachers to get together; therefore, these teachers had to take a more deliberate approach to planning to meet or collaborate (p. 13 AHS focus group transcript).

AHST12 explained that it was rare for a teacher to have his or her own individual classroom that was not shared with another staff member in the same department or, on occasion, with a teacher in a different subject area (p. 14 AHS focus group transcript). According to AHST12, this arrangement provided teachers the opportunity to collaborate because they shared space (p. 14 AHS focus group transcript). In conclusion, most interviewees ($n = 20$) perceived

that physical structures and school conditions supported the school's arrangement as a professional learning community (AHS). AHST6 summarized by stating that "the physical structure [could] be a hindrance" as well as a supportive condition (p. 13 AHS focus group transcript).

The principal at Alpha Middle School indicated that he dedicated a classroom site for teacher collaboration, instructional coaching, and professional development; the site was used widely across departments as a supportive physical condition in the school (p. 6 AMSP individual interview transcript). According to the principal, the school had maintained the room for the previous 6 years and had stocked it generously with instructional materials, the latest technology tools for professional development, and more than adequate meeting space (p. 6 AMSP individual interview transcript). The principal stated, "We have everything set up for presentations that we need, and that's kind of the hub" for professional development (p. 6 AMSP individual interview transcript). When asked if there were any physical or organizational structures that prohibited or impeded efforts to create a professional community, the principal did not specify any particular structures that were prohibitive (p. 7 AMSP individual interview transcript)..

All six teachers interviewed for the Alpha Middle School focus group indicated that both physical conditions and supportive conditions impacted the school's arrangement as a professional learning community (AMS). AMST2 stated, "The structure of the building prohibits"; AMST2 added, "I'm from the south side of the building and you don't cross that invisible line, the cafeteria and library, that often" (p. 18 AMS focus group interview transcript). AMST1 added, "You need a passport" (p. 18 AMS focus group interview transcript). Collectively, the six participants joked about the layout of the building, suggesting that the

building physical design had features that could be prohibitive to natural interaction among teachers and staff ” (p. 19 AMS focus group interview transcript).

Participants also indicated that staff worked around physical design barriers by arranging for core instructional teams to have common planning periods, sharing professional development resources, sharing groups of the same students across content areas, and team teaching (p. 19 AMS focus group interview transcript). AMST1 explained that teacher leader meetings involved teachers from across content areas and departments (p. 19 AMS focus group interview transcript). According to AMST2, “there [were] some physical design features that [were] not ideal, but you [could] mitigate some of this through human interactions.” In summation, all six (100%) focus group participants agreed that physical conditions could be overcome through teacher and staff behavior (p. 20 AMS focus group interview transcript). This analysis was extracted from individual and focus group responses to interview protocol for Dimension 5, Item 1.

Research Question 2. What is the relationship between the perceptions of assistant principals, teachers, and the principal of their school as a professional learning community?

As indicated in Chapter Three, the second research question examined the difference among assistant principals’, teachers’ and principals’ perceptions of their respective schools as professional learning communities. The second research question was addressed using multivariate analysis of variance (MANOVA) to test the significance of differences in means of dependent variables according to one independent variable. The dependent variables were the SPSCQLQ scores representing the dimensions of supportive and shared leadership, shared values and vision, collective learning and its application, shared personal practice, and supportive

conditions. Dimension scores were calculated by summing the scores for items that made up each dimension. The independent variable was position: assistant principal, teacher, or principal.

As noted in Chapter One, the concept of supportive and shared leadership was defined as the extent to which school leaders shared power, authority, and leadership democratically with teachers and staff (Hord, 2004). The SPSLCQ included two items to assess teachers', assistant principals', and principals' perceptions of shared values and vision. The SPSLCQ shared and supportive leadership dimension score was formulated from two individual items (1a and 1b) on the survey.

As noted in Chapter One, the concept of shared values and vision was defined as the staff's consistent focus on students' learning, which was strengthened by the staff's own continuous learning (Hord, 2004). The SPSLCQ included three items to assess teachers', assistant principals', and principals' perceptions of shared values and vision. The SPSLCQ shared values and vision dimension score was formulated from three individual items (2a, 2b, and 2c) on the survey.

As noted in Chapter One, the concept of collective learning and its application was defined as the engagement of staff at all levels in seeking the knowledge required to continuously improve student learning and student achievement (Hord, 2004). The SPSLCQ included five items to assess teachers', assistant principals', and principals' perceptions of collective learning and the application of the learning (taking action) to create high intellectual learning tasks and solutions to address student needs. The SPSLCQ collective learning and application dimension score was formulated from five individual items (3a, 3b, 3c, 3d, and 3e) on the survey.

As noted in Chapter One, the concept of shared personal practice was defined as the regular review by colleagues of a teacher's behaviors and practice, including feedback, visits to each other's classrooms to observe instructional practices, and meaningful discussion about their observations with the teachers they have visited Hord (2004). The SPSLCQ included two items to assess teachers', assistant principals', and principals' perceptions of the extent to which staff members gave feedback, based on observing one another's classroom behaviors, to increase individual and organizational capacity. The SPSLCQ shared personal practice dimension score was formulated from two individual items (4a, and 4b) on the survey.

As noted in Chapter One, the concept of supportive conditions was defined as the physical conditions, structures, and human capacities that encourage and sustain a collegial atmosphere and collective learning (Hord, 2004). The SPSLCQ included five items to assess teachers', assistant principals', and principals' perceptions of the extent to which school conditions and capacities supported the staff's arrangement as a professional learning organization. The SPSLCQ shared personal practice dimension score was formulated from five individual items (5a, 5b, 5c, 5d, and 5e) on the survey.

A MANOVA was conducted to determine the effect of position on the dependent variables: supportive and shared leadership, shared values and vision, collective learning and its application, shared personal practice, and supportive conditions. Dimension scores were calculated by summing the scores for items that made up each dimension. An alpha level of .05 was used for all statistical tests. MANOVA results indicate that position [Wilks' $\Lambda = .953$, $F(10, 272) = .664$, $p < .05$, ($p = .757$), $\eta^2 = .024$] does not significantly affect the dependent variables: supportive and shared leadership dimension, shared values and vision dimension, collective learning and its application dimension, shared personal practice dimension, and supportive

conditions dimension for professional learning community. The multivariate effect sizes are large. Table 23 depicts results of MANOVA for the dependent variables of supportive and shared leadership, shared values and vision, collective learning and its application, shared personal practice, and supportive conditions according to the independent variable, position.

Table 23.

Results of MANOVA of Supportive and Shared leadership, Shared Values and Vision, Collective Learning and Its Application, Shared Personal Practice, and Supportive Conditions for Position

Source	<i>df</i>	Wilks' Lambda	<i>F</i>	η^2
Position	10	.953	.664	.024

* $p < 0.05$

The results of MANOVA led indicate that there is no significant difference ($p < .05$) among the perceptions held by assistant principals, teachers, and principals in rating their respective schools on each dimension of the SPSCLQ with regard to being a professional learning community.

Research Question 3. What, if any, are the differences between the levels of maturity of the professional learning communities between the two schools?

As indicated in Chapter Three, the third research question examined the difference perceived to exist in the maturity of the professional learning communities between the two schools. The third research question was addressed using an independent samples *t*-test to compare means of two independent groups, SPSLCQ respondents from Alpha High School and SPSLCQ respondents from Alpha Middle School. The *t*-test was used to test the following assumptions for each independent group: (a) the scores on the dependent variable are normally distributed in each of the two populations; (b) observations with each treatment condition are independent, meaning that the groups are independent; and (c) the population distributions have the same variances, meaning that the populations are homogeneous. The null hypothesis would

be that the means of the two groups are the same. The dependent variables were the scores on the SPSCLQ for the following dimensions: supportive and shared leadership, shared values and vision, collective learning and its application, shared personal practice, and supportive conditions. Dimension scores were calculated by summing the scores for items that made up each dimension. The independent variable was the level of school: high school or middle school.

An independent samples *t*-test was conducted for the dependent variables of supportive and shared leadership dimension, shared values and vision dimension, collective learning and its application dimension, shared personal practice dimension, and supportive conditions dimension across the groups, high school and middle school (independent variables). An alpha level of .05 was used for all statistical tests on each of the five dimension scores on the SPSCLQ. Table 24 depicts results of the *t*-test for the dependent variables of supportive and shared leadership, shared values and vision, collective learning and its application, shared personal practice, and supportive conditions according to the independent variable of school level: high or middle.

Table 24.

Group Differences Between School Level on the Dependent Variables of Supportive and Shared Leadership Dimension Scale, Shared Values and Vision Dimension Scale, Collective Learning and Its Application Dimension Scale, Shared Personal Practice Dimension Scale, and Supportive Conditions Dimension Scale

SPSLCQ dimensions of professional learning communities	Alpha High School		Alpha Middle School		<i>df</i>	<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
1. Supportive and supportive leadership	6.74	1.43	6.02	1.43	153	3.119
2. Shared values and vision	11.55	2.21	10.65	2.57	151	2.319
3. Collective learning and its application	18.87	3.19	16.88	3.64	150	3.569
4. Shared personal practice	6.16	1.96	5.30	1.93	149	2.702

SPSLCQ dimensions of professional learning communities	Alpha High School		Alpha Middle School		<i>df</i>	<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
5. Supportive conditions	18.74	3.31	15.88	4.02	148	4.776

* $p < .05$; ** $p < .01$.

As noted in Chapter One, the concept of supportive and shared leadership was defined as the extent to which school leaders share power, authority, and leadership democratically with teachers and staff (Hord, 2004). The SPSLCQ included two items to assess teachers', assistant principals', and principals' perceptions of shared values and vision. The SPSLCQ shared and supportive leadership dimension score was formulated from two individual items (1a and 1b) on the survey.

For the SPSLCQ supportive and shared leadership dimension scale, the mean scores for respondents at Alpha High School and Alpha Middle School were calculated. The test revealed a statistically significant difference between the scores of respondents at Alpha High School and Alpha Middle School, $t(153) = 3.119$, $*p < .05$ ($p = .002$). The mean score for respondents at Alpha High School ($M = 6.74$, $SD = 1.43$) was higher than the mean score for respondents at Alpha Middle School ($M = 6.02$, $SD = 1.43$). The effect size, $d = 0.24$, was computed to be 0.50, thereby representing a medium effect size. The independent samples t -test analysis results indicate that Alpha High School survey respondents rated their school significantly higher ($*p = .002$) than Alpha Middle School survey respondents rated their school on the supportive and shared leadership dimension scale.

As noted in Chapter One, the concept of shared values and vision was defined as the staff's consistent focus on students' learning, which was strengthened by the staff's own

continuous learning (Hord, 2004). The SPSLCQ included three items to assess teachers', assistant principals', and principals' perceptions of shared values and vision. The SPSLCQ shared values and vision dimension score was formulated from three individual items (2a, 2b, and 2c) on the survey.

For the SPSLCQ shared values and vision dimension scale, the mean scores for respondents at Alpha High School and Alpha Middle School were calculated. The test revealed a statistically significant difference between the scores of respondents at Alpha High School and Alpha Middle School, $t(151) = 2.319$, $*p < .05$ ($*p = .022$). The mean score for respondents at Alpha High School ($M = 11.55$, $SD = 2.21$) was higher than the mean score for respondents at Alpha Middle School ($M = 10.65$, $SD = 2.57$). The effect size, $d = 0.373$, was computed to be 0.183, thereby representing a small effect size. The independent samples t -test analysis results indicate that Alpha High School survey respondents rated their school significantly higher ($*p = .022$) than Alpha Middle School survey respondents rated their school on the shared values and vision dimension scale.

As noted in Chapter One, the concept of collective learning and its application was defined as the engagement of staff at all levels in seeking the knowledge required to continuously improve student learning and student achievement (Hord, 2004). The SPSLCQ included five items to assess teachers', assistant principals', and principals' perceptions of collective learning and the application of the learning (taking action) to create high intellectual learning tasks and solutions to address student needs. The SPSLCQ collective learning and application dimension score was formulated from five individual items (3a, 3b, 3c, 3d, and 3e) on the survey.

For the SPSLCQ collective learning and application dimension scale, the mean scores for respondents at Alpha High School and Alpha Middle School were calculated. The test revealed a statistically significant difference between the scores of respondents at Alpha High School and Alpha Middle School, $t(150) = 3.596$, $*p < .05$ ($*p = .000$). It is noted that statistical analysis conducted using SPSS calculations result in an alpha or p statistic utilizing a maximum of three decimal places. The mean score for respondents at Alpha High School ($M = 18.87$, $SD = 3.19$) was higher than the mean score for respondents at Alpha Middle School ($M = 16.88$, $SD = 3.64$). The effect size, $d = 0.581$, was computed to be 0.27, thereby representing a medium effect size. The independent samples t -test analysis results indicate that Alpha High School survey respondents rated their school significantly higher ($*p = .000$) than Alpha Middle School survey respondents rated their school on the collective learning and application dimension scale.

As noted in Chapter One, the concept of shared personal practice was defined as the regular review by colleagues of a teacher's behaviors and practice, including feedback, visits to each other's classrooms to observe instructional practices, and meaningful discussion about their observations with the teachers they have visited Hord (2004). The SPSLCQ included two items to assess teachers', assistant principals', and principals' perceptions of the extent to which staff members gave feedback, based on observing one another's classroom behaviors, to increase individual and organizational capacity. The SPSLCQ shared personal practice dimension score was formulated from two individual items (4a, and 4b) on the survey.

For the SPSLCQ shared personal practice dimension scale, the mean scores for respondents at Alpha High School and Alpha Middle School were calculated. The test revealed a statistically significant difference between the scores of respondents at Alpha High School and Alpha Middle School, $t(149) = 2.702$, $*p < .05$ ($*p = .008$). The mean score for respondents at

Alpha High School ($M = 6.16$, $SD = 1.96$) was higher than the mean score for respondents at Alpha Middle School ($M = 5.30$, $SD = 1.93$). The effect size, $d = 0.442$, was computed to be 0.21, thereby representing a small effect size. The independent samples t -test analysis results indicate that Alpha High School survey respondents rated their school significantly higher ($*p = .008$) than Alpha Middle School survey respondents rated their school on the shared personal practice dimension scale.

As noted in Chapter One, the concept of supportive conditions was defined as the physical conditions, structures, and human capacities that encourage and sustain a collegial atmosphere and collective learning (Hord, 2004). The SPSLCQ included five items to assess teachers', assistant principals', and principals' perceptions of the extent to which school conditions and capacities supported the staff's arrangement as a professional learning organization. The SPSLCQ shared personal practice dimension score was formulated from five individual items (5a, 5b, 5c, 5d, and 5e) on the survey.

For the SPSLCQ supportive conditions dimension scale, the mean scores for respondents at Alpha High School and Alpha Middle School were calculated. The test revealed a statistically significant difference between the scores of respondents at Alpha High School and Alpha Middle School, $t(148) = 4.776$, $*p < .05$ ($*p = .000$). The mean score for respondents at Alpha High School ($M = 18.74$, $SD = 3.31$) was higher than the mean score for respondents at Alpha Middle School ($M = 15.88$, $SD = 4.02$). The effect size, $d = 0.442$, was computed to be 0.21, thereby representing a small effect size. The independent samples t -test analysis results indicate that Alpha High School survey respondents rated their school significantly higher ($p = .000$) than Alpha Middle School survey respondents rated their school on the supportive conditions dimension scale.

Collectively, the results of the independent samples *t*-test analysis revealed that Alpha High School survey respondents rated their school significantly higher than Alpha Middle School survey respondents in the maturity of the professional learning community as measured by each dimension scale of the SPSLCQ.

Summary

The purpose of this chapter was to present findings of this comparative case study of assistant principals', teachers', and principals' perceptions of their schools as professional learning communities, as defined by Jones (2011). Analysis of data resulted in 10 findings that described the perceptions, differences, and maturity of the professional learning communities in Alpha High School and Alpha Middle School.

In summation, the results yielded no significant differences among perceptions of teachers, assistant principal, and principals as characterized by each dimension of professional learning community: supportive and shared leadership, shared vision and values, collective learning and its application, shared personal practice, and supportive conditions. Results from qualitative data sources, individual and focus interview, yielded similar results. The results a MANOVA conducted to determine the effect of position on the dependent variables: supportive and shared leadership, shared values and vision, collective learning and its application, shared personal practice, and supportive conditions also did not yield any significant differences among perceptions of assistant principal, teachers, and the principal of their school as a professional learning community.

In contrast to these results, an independent samples *t*-test conducted for the dependent variables of supportive and shared leadership dimension, shared values and vision dimension, collective learning and its application dimension, shared personal practice dimension, and

supportive conditions dimension across the groups, high school and middle school (independent variables) yielded statistically significant difference, $*p < .05$ ($*p = .000$), between the scores of respondents at Alpha High School and Alpha Middle School. In summation, Alpha High School survey respondents rated their school significantly higher than Alpha Middle School survey respondents in the maturity of the professional learning community as measured by each dimension scale of the SPSLCQ. Chapter Five highlights the significance of these results and examines conclusions, recommendations, and implications for practice as well as suggestions for further study based on findings.

Chapter Five: Summary and Conclusions

The purpose of this chapter is to present a summary of findings and the research to support or refute findings based on the data collected and the analysis of those data for this study of the perceptions of schools as professional learning communities held by assistant principals, teachers, and principals in those schools: one high school and its feeder middle school. The chapter is organized into a summary of findings and research related to findings, implications of findings for practitioners, and recommendations for further research.

In conducting this study, the researcher was interested in examining how two schools' assistant principals, teachers, and principals reflected upon the core components of a professional learning community as described in the literature. A composite model gleaned from the research on professional learning communities served as the theoretical framework that guided this study. The purpose of this study was to compare assistant principals', teachers', and principals' perceptions of their schools as professional learning communities, both of which had implemented an intensive school improvement process aimed at enhancing, sustaining, and improving student learning. There were three major research questions and five subquestions that guided this study:

1. How do the two schools' assistant principals, teachers, and principals reflect upon the core components of a professional learning community as described in the literature?

Subquestions

- 1.1. How do assistant principals, teachers, and principals perceive their respective schools as being characterized by shared leadership?
- 1.2. How do assistant principals, teachers, and principals perceive their respective schools as having a shared vision?

- 1.3. How do assistant principals, teachers, and principals perceive their respective schools as being characterized as schools in which collective learning occurs and the application of that learning is used to take action in addressing student needs?
- 1.4. How do assistant principals, teachers, and principals perceive their respective schools as being characterized as schools in which peers review and give feedback to one another to improve organization capacity?
- 1.5. How do assistant principals, teachers, and principals perceive their respective schools as being characterized as schools in which school conditions and capacities support the development of a professional learning community?
2. What is the relationship between the perceptions of assistant principals, teachers, and the principal of their school as a professional learning community?
3. What, if any, are the differences between the levels of maturity of the professional learning communities between the two schools?

Summary of Findings

The research relied primarily on a mixed-methods investigative approach that involved the collection of both quantitative and qualitative data. Quantitative data were extracted from the SPSLCQ results (Hord, 1996), and qualitative data were culled from individual and focus group interviews conducted at each school. Triangulation of the data was achieved by collecting survey data through the SPSLCQ and other data through individual and focus group interviews at each school

Finding 1. Both the quantitative and qualitative findings of this study indicate that the principals in the two schools that were the subjects of this study were utilizing strategies to

empower staff to be involved in decision making. The first research question asked, “How do the two schools’ assistant principals, teachers, and principals reflect upon the core components of a professional learning community as described in the literature with regard to the dimension of shared leadership?” Assistant principals’, teachers’, and principals’ perceptions of their respective schools indicated a shared belief that supportive and shared leadership was a part of the school culture.

SPSLCQ respondents at each school perceived that school administrators shared power, authority, and decision making by involving them in discussions about school issues. Collectively, respondents at both schools indicated that the staff had significant input with regard to school governance. The results of the SPSLCQ instrument indicated that, collectively, 121 (78%) of all survey respondents ($N = 155$) indicated that administrators’ involvement of the staff in decision making lay on a continuum between their being asked for advice and their being consistently involved in discussing and making decisions about school issues.

Findings from qualitative data supported these results. The individual interview with the principal at Alpha High School revealed different “tiers of leadership” within the school decision-making organizational framework. According to the Alpha High School principal, department chairs served as the management team and provided communication and “feedback on the direction of the school as far as instructional aspects.” When asked to describe the decision-making process used by administrators at Alpha High School, all 20 of the participants in the focus group indicated that administrators asked for input on decisions. The focus group included 18 teachers, one assistant principal, and the principal.

Similar results were culled from the analysis of findings at Alpha Middle School. Each grade-level team consisted of two teacher leaders per grade for a total of six grade-level teacher

leaders. According to the principal, the administrative team and the teacher leader teams met on a regular basis, at least monthly, and meetings were scheduled around team planning periods so that all members of a grade-level team were available. In addition, make-up teacher leader meetings were held so that “we [were] sure that we [had] everyone” involved in decision making.

This finding is widely supported in the literature that suggests that shared and supportive leadership has a positive impact on teacher efficacy and student achievement. Collectively, research conducted by Newman and Wehlage (1995), Louis and Kruse (2000), Sebring and Bryk (2000), Hord (2004), Coleman (2005), Fellows (2005), Chen-Remka (2007), and Crocker (2007) indicated that schools that instituted practices that included democratically shared leadership and shared decision making were able to improve student learning. Louis and Kruse suggested that effective leaders “emerge from the center of the school, rather than the top” (p. 4); this phenomenon requires leaders to give up typical authoritative behaviors, such as running meetings and imposing rules, and to adopt more democratic behaviors, such as creating networks of conversations that tie faculty together around the common issues of teaching and learning. Sebring and Bryk found that principals of productive schools were characterized as being inclusive and using a facilitative orientation. Similarly, Hord found that when principals develop collegial relationships that focus on student learning and involve teachers in decision making, the school staff collectively increases their capacity to learn and improve learning.

Finding 2. The results of both quantitative and qualitative findings of this study indicated that the two schools that were subjects of this study were moving along the continuum of being sometimes focused on students, teaching, and learning and being always focused on students, teaching, and learning. Assistant principals’, teachers’, and principals’ perceptions of their

respective schools indicated that they participated in developing, implementing, and focusing practice toward a shared vision for the school.

Collectively, 92.9% ($n = 144$) of SPSLCQ respondents at both schools perceived that visions for improvement were on a continuum between being sometimes focused on students, teaching, and learning and being always focused on students, teaching, and learning.

A similar finding was extracted from the analysis of qualitative data. Collectively, the principals at both schools, 20 participants (100%) in the focus group at Alpha High School, and six participants (100%) from Alpha Middle indicated that the staffs shared a vision for school improvement that had an undeviating focus on student learning and that was consistently referenced in the staffs' work. As described in the qualitative data, each school's vision and mission were articulated in the principal's written goals, which were then aligned with the department chairs' written goals and teachers' written performance targets, which were established annually. These goals were aligned with school board goals, the goals of the superintendent, and the goals of other key leaders throughout the school division.

The benefits of developing and articulating shared values and a shared vision are widely supported in the literature. Collectively, Senge (1990), Louis et al. (1996), Morrissey (2000), DuFour et al. (2002, 2008), and Hord (2004) concluded that shared values and vision are critical components of professional learning communities. In the context of actual practice, DuFour et al. (2002) argued that the difference between the traditional school and a professional learning community is evident in the process through which organizational goals are developed. In traditional schools, the vision is developed by collecting the opinions of staff members and developing consensus on generic statements that articulate the vision that all staff members agree to accept. In professional learning communities, members develop statements that clarify what

students will learn, address how the staff will know what students have learned, and clarify how the school will respond when students do not learn.

Finding 3. Assistant principals', teachers', and principals' perceptions of their respective schools characterized the schools as those in which collective learning occurred and the application of that learning was used to take action in addressing student needs.

Collectively, 133 (85.8%) of all survey participants ($N = 155$) perceived that the degree to which the staff met to consider substantive student-centered educational issues was on a continuum between the staff's meeting occasionally on substantive student-centered educational issues and the staff's meeting regularly and frequently on substantive student-centered educational issues.

Collectively, these findings indicate that there was a deliberate effort among school leaders and most staff to utilize the process of collective learning to address student needs.

The results of qualitative data indicated that the process of collective inquiry was being utilized at each of the schools in this study. Specific examples of the practices supportive of the process of collective inquiry were gleaned from the analysis of qualitative data. When prompted to explain how school performance data were used in making decisions about teachers' learning, the principal at Alpha High School indicated that the school had "professional developers on staff that use[d] staff surveys and performance data to determine professional development needs and training." According to the principal, standardized reading inventory scores, actual student grades, standard achievement scores, and benchmark test results were data used to guide instruction.

When a similar question was asked of the focus group participants at Alpha High School, one respondent explained that subgroup academic achievement data, student performance data

from standardized tests and benchmark tests, and a variety of other data sources were used to guide all decision making so that teachers and staff could determine professional development needs. Another respondent explained that the schoolwide focus on literacy had enabled teachers to “know the independent reading levels [of students] and better meet their needs.” The respondent added that the focus on literacy had enabled the teachers and staff to collectively and individually “identify those students who need help and give them the help necessary to make them better learners.”

Similar findings were extracted through the analysis of qualitative data at Alpha Middle School. The principal explained that professional development needs were based on “the needs of teachers and students,” indicating that the data collections were designed to measure the effectiveness of learning strategies and techniques utilized by teachers. In addition, teachers were provided opportunities to expand their learning through curriculum meetings, common planning periods, professional development sessions, book talks, and other opportunities for teachers to collaborate with each other and with teacher leaders who led professional development.

Data collected through the focus group interview at Alpha Middle School supported this finding. When prompted to explain how the staff’s collective application of their learning (taking action) created high intellectual learning tasks and solutions to address student needs, participants in the focus group at Alpha Middle School ($n = 6$) indicated that teachers had been given significant opportunities to provide feedback on their needs. One respondent indicated that teachers were given opportunities to provide feedback on professional development through collected surveys that enabled them to indicate “what they [saw] happening, what they would like to see more of, and what they would like to see less of.”

Collective learning and the application of that learning toward instructional practices is a strategy that is supported in the literature as one that enables schools to continually improve student learning. According to Senge (1990), collective learning or team learning is more a process than a product in that a learning organization is always in the process of practicing for the purpose of becoming better or worse. Louis et al. (1996) further defined the importance of collaboration by describing it as the “reflective dialogue” between teachers that holds practice, pedagogy, and student learning under scrutiny. The authors contended that this type of collaboration results in growth and greater focus on student learning. Similarly, Hord (2004) asserted that when staffs conduct meaningful conversations about students, teaching, and learning, they are able to apply new ideas and information to problems and to identify solutions.

Finding 4. Assistant principals’, teachers’, and principals’ perceptions of their respective schools characterized the schools as those in which peers reviewed and gave feedback to one another to improve organization capacity.

Collectively, almost a third (32.3%, $n = 50$) of the respondents from both schools indicated that respondents perceived that staff members discussed nonteaching issues after classroom observations. An additional 28.4% ($n = 44$) of respondents from both schools indicated that their perception of the extent to which staff members gave feedback, based on observing one another’s classroom behaviors, to increase individual and organizational capacity lay between staff members’ discussing nonteaching issues after classroom observations and staff members’ providing feedback to one another about teaching and learning based on their classroom observations.

The findings gleaned from the qualitative data indicated that the process of collective inquiry was being utilized at each of the schools in this study. When asked to describe specific

structures, both formal and informal, that were in place to allow and encourage teachers to work collaboratively and to share personal practice, the principal at Alpha High School indicated that professional developers, who were on staff, assisted teachers through coaching.

This finding was supported by data extracted from the focus group interview at Alpha High School. One respondent who taught math said, “Some of us have gone in [classrooms] as coaches and actually copresented a lesson.” Another respondent indicated that most of the time teachers who needed assistance or desired to have someone model a lesson prearranged the observations during a planning period or duty period.

Similar results were culled from the analysis of qualitative data at Alpha Middle School. The principal at Alpha Middle School perceived that staff members gave feedback, based on observing one another’s classroom behaviors, to increase individual and organizational capacity through both informal and formal structures that enabled teachers to work collaboratively and to share personal practice. Six teachers (100%) that were interviewed at Alpha Middle School also perceived that staff members gave feedback, based on observing one another’s classroom behaviors, to increase individual and organizational capacity through both informal and formal structures that enabled teachers to work collaboratively and to share personal practice.

Several authors (DuFour et al, 2002; Hord, 2004; Schmoker, 2006) had noted the significance of shared personal practice as an essential practice and a way to improve schools. DuFour et al. found that shared practice is effective in schools when time for shared personal practice is built into the school day and school calendar, products of shared personal practice are made explicit, team norms guide collaboration and shared practice, teams pursue specific and measurable performance goals, teams focus on key questions associated with learning, and teams have access to relevant information. Hord alleged that the review of teachers’ practices by their

colleagues should be the norm as a way of empowering teachers to enact new practices through peer coaching and feedback. Schmoker suggested that teachers should meet regularly for the examination of instructional practices and the impact of those practices (teaching) on student learning. Ultimately, according to Blankstein (2004), the aim of collaboration is to enhance teaching and learning.

Finding 5. Assistant principals', teachers', and principals' perceptions of their respective schools indicated that they were schools in which school conditions and capacities supported the development of a professional learning community.

Regarding the when, how, and where staff met, the SPSLCQ included an item that assessed the degree to which the size, structure, and arrangement of the school facilitated staff proximity and interaction. Collectively, 80% ($n = 124$) of respondents from both schools indicated that the extent to which the size, structure, and arrangement of the respective schools facilitated staff proximity and interaction lay between a belief that, considering the size, structure, and arrangement of the school, the staff were working to maximize interaction and a belief that the size, structure, and arrangement of the school facilitated staff proximity and interaction.

This result was further supported by qualitative data. For example, one respondent stated, "I think it's trust and the positive attitude on the part of administrators." Another respondent explained that the administrative presence throughout the school was positive and upbeat. In conclusion, respondents at both schools indicated that they worked around physical design barriers by deliberately arranging time to meet within and across content areas to discuss student learning.

This particular finding is validated in the literature. Louis and Kruse (1995) found that physical and structural factors such as time and the proximity of staff to one another are variables that can be manipulated to reduce teacher isolation while enhancing the opportunity for staff collaboration. Hord (2004) described structural conditions as physical factors that may impact the degree to which the school conditions support continuous learning. Similarly, Hord differentiated physical factors from what she termed “human capacities.” Human capacities in this context include attributes such as respect, trust, collegiality, and attitudes.

A number of authors cautioned that unless the culture is reshaped to build respect and collegiality, the school will never function as a professional learning organization (Blankstein, 2004; DuFour & Eaker, 1998; Fullan & Hargreaves, 1996; Hord, 2004; Newmann & Wehlage, 1995). Blankstein contended that a collaborative culture focused on teaching and learning supports regular opportunities for teachers who share the responsibility for assessing student needs and developing solutions to address students’ learning needs. Ultimately, argued Fullan and Hargreaves, building a collaborative culture takes time.

Finding 6. Assistant principals, teachers, and principals in the respective schools perceived that their schools were accurately identified as professional learning communities, regardless of their position.

The schools in this study were in the 5th year of implementation of an intensive restructuring process focused on improving student achievement; they had implemented many of the aforementioned practices during this period. The evidence gleaned from quantitative data in this study indicated that these practices had made a difference in the extent to which collaborative and collegial relationships among teachers had evolved.

Research question two was aimed at determining the effect of the independent variable position (i.e., assistant principal, teacher, or principal) on the dependent variables, each of the five dimensions of a professional learning community as defined by Hord (2004). A MANOVA was conducted to determine the effect of position on the dependent variables: supportive and shared leadership, shared values and vision, collective learning and its application, shared personal practice, and supportive conditions. Dimension scores were calculated by summing the scores for items that made up each dimension. An alpha level of .05 was used for all statistical tests. MANOVA results [Wilks' $\Lambda = .953$, $F(10, 272) = .664$, $p < .05$, ($p = .757$), $\eta^2 = .024$] indicate that position did not significantly affect the dependent variables: supportive and shared leadership dimension, shared values and vision dimension, collective learning and its application dimension, shared personal practice dimension, and supportive conditions dimension for a professional learning community. The multivariate effect sizes are large, indicating that the differences in the means between the two groups expressed in standard deviation units are the same. The effect size is interpreted as the expected differences in the means of the two independent groups expressed in standard deviation units. The results of this analysis of quantitative data indicated that there was no significant difference ($p < .05$) among the perceptions held by assistant principals, teachers, and principals in rating their respective schools on each dimension of the SPSCCLQ with regard to being a professional learning community. This finding is supported in the literature within the context of Coleman's (1990) theory of social capital. At the foundation of Coleman's theory of social capital is the concept that relationships are built on trust. For example, Coleman argued that "a singular group characterized by distrust will achieve less than a group with high levels of trust" (p. 304). Coleman asserted that, in a

professional learning community, it is critical that administrators provide significant support to ensure that trust, knowledge, and authority order the stability of relationships within the school.

Similarly, DuFour et al. (2002) contended that one of the consistent cautions of those who had studied the improvement process, both inside and outside education, is that significant and complex change requires dispersed leadership. Dispersed leadership involves how leaders and teachers are viewed.

Finding 7. Alpha High School survey respondents rated their school significantly higher ($*p = .002$) than Alpha Middle School survey respondents rated their school on the supportive and shared leadership dimension scale.

An independent samples *t*-test was conducted to compare means of two independent groups, SPSLCQ respondents at Alpha High School and SPSLCQ respondents at Alpha Middle School, to determine if the variances between the groups were similar statistically. The null hypothesis stated that the means of the two groups are the same. Using SPSS, Levene's Test for Equality of variances was conducted by combining single-item scores on the SPSLCQ to determine and compare variances for each dimension of professional learning communities. A low *p*-value ($p < .05$) indicated that there was a sufficiently large difference between the two groups to conclude that the two groups were not the same.

Analysis of the *t*-test results for the supportive and shared leadership dimension scale revealed a statistically significant difference between the scores of respondents at Alpha High School and those at Alpha Middle School, $t(153) = 3.119$, $*p < .05$ ($*p = .002$). This finding suggests that the extent to which school leaders at Alpha High School shared power, authority, and leadership democratically with teachers and staff was significantly higher ($*p = .002$) than that for Alpha Middle School.

In the context of practice, this finding suggests that the principal at Alpha High School had employed practices to increase staff capacities for continuous learning, such as developing collegial relationships with staff, focusing staff on student success, making opportunities for teachers to learn, inviting teachers into decision making and implementation, and nurturing new ways of operating (Hord, 2004), to a greater extent, statistically, than had the principal at Alpha Middle School. It is interesting to note that at the time of this study, the principal at Alpha High School had completed his 3rd year at the school, whereas the principal at Alpha Middle School had completed his 6th year. The results of this analysis indicate that the principal at Alpha High School had achieved greater success in implementing practices associated with shared and supportive leadership with greater maturity than had his counterpart at the middle school, within a shorter period of time.

Finding 8. Alpha High School survey respondents rated their school significantly higher ($*p = .022$) than Alpha Middle School survey respondents rated their school on the shared values and vision dimension scale. Analysis of the *t*-test results for the SPSLCQ shared values and vision dimension scale revealed a statistically significant difference between the scores of respondents at Alpha High School and those at Alpha Middle School, $t(151) = 2.319$, $*p < .05$ ($*p = .022$). The results of this analysis indicate that the principal and staff at Alpha High School had instituted practices associated with the construct of shared vision and values with greater maturity than had the principal and staff at Alpha Middle School.

As indicated in this literature (DuFour et al., 2008; Fullan, 2001; Morrissey, 2000; Senge, 1990), this finding may be interpreted to mean that the members of the Alpha High School community had affirmed the expectations of and for each other through their language, actions, common beliefs, values, and underlying assumptions about children and learning as well as

teaching and teachers' roles to a greater degree statistically than had the principal and staff at Alpha Middle School. As indicated previously, this finding is remarkable considering that, at the time of this study, the principal at Alpha High School had completed his 3rd year at the school, whereas the principal at Alpha Middle School had completed his 6th year.

The process of developing a shared mission and vision is widely promoted in the literature (Blankstein, 2004; DuFour et al.; Fullan, 2000; 2008; Hord, 1997, 2004; Hord & Sommers, 2008; Leithwood et al., 1998; Schmoker, 2006) as a fundamental and foundational process of learning organizations. It is of importance for schools in that mission and vision serve as the basis upon which a learning organization exists and functions.

Finding 9. Alpha High School survey respondents rated their school significantly higher ($*p = .000$) than Alpha Middle School survey respondents rated their school on the collective learning and application dimension scale.

Analysis of the *t*-test results for the SPSLCQ collective learning and its application dimension scale revealed a statistically significant difference between the scores of respondents at Alpha High School and those at Alpha Middle School, $t(150) = 3.596$, $*p < .05$ ($*p = .000$). The results of this analysis indicated that the principal and staff at Alpha High School had instituted practices associated with the construct of collective learning and its application with significantly greater maturity than had the principal and staff at Alpha Middle School. As previously stated, this finding is especially remarkable considering that, at the time of this study, the principal at Alpha High School had completed his 3rd year at the school, whereas the principal at Alpha Middle School had completed his 6th year.

Within the context of Senge's (1990) description of collective learning and its application, this finding may be interpreted as meaning that the process of team learning was

being utilized more effectively at Alpha High School than at its feeder school, Alpha Middle School. That is, collaborative and continual learning through reflective dialogue as a practice was statistically more effective at Alpha High School (Hord, 2004). This result, according to DuFour (2004), indicates that educators in a professional learning community who engage in collective inquiry discover the best practices about teaching and learning, identify a candid clarification of their current practice, and gain an honest assessment of their students' current levels of learning. In conclusion, this finding suggests that in practice, the staff at Alpha High School staff may have had a clearer picture of how their students were performing and what to do about it than did the staff at Alpha Middle School.

In describing the impact of collegial relationships, Little (2002) affirmed that when collegial relationships among staff members are at their strongest, teachers are professionally interdependent and conceive of their work as a joint enterprise. The ultimate byproducts of collaboration, as described in the literature, are shared reflections, conversations, ideas, and information, as well as their application to student learning, thereby resulting in greater teacher and staff efficacy in improving student learning (DuFour et al., 2008; Hord, 2004). The challenge for schools and school leaders is to use these resources in a continuous, ongoing, and effective manner that improves student learning.

Finding 10. Alpha High School survey respondents rated their school significantly higher ($*p = .008$) than Alpha Middle School survey respondents rated their school on the shared personal practice dimension scale.

Analysis of the *t*-test results for the SPSLCQ shared personal practice dimension scale revealed a statistically significant difference between the scores of respondents at Alpha High School and those at Alpha Middle School, $t(149) = 2.702$, $*p < .05$ ($*p = .008$). The results of

this analysis indicated that the principal and staff at Alpha High School had instituted practices associated with the construct of shared personal practice with significantly greater maturity than had the principal and staff at Alpha Middle School.

This finding confirms the assertion that a focus on learning and on assessment results can become the leverage for improvement in teaching, which is only as effective as its impact on learning (Schmoker, 2006). According to Schmoker, when leadership focuses on results and urges a formal and frequent review of the impact of instruction, teaching improves as indicated by DuFour et al. (2008), teachers in a professional learning community understand that the most powerful learning occurs in a context of taking action, and they value the opportunity for engagement in shared personal practice.

In addition, schools and school leaders who desire to improve teachers' instructional practices need to provide appropriate opportunities for teachers to observe each other's practice, engage in meaningful dialogue, and take the necessary steps to act in their own learning for the purpose of improving instructional effectiveness.

Hord (2004) asserted that in a professional learning community, review of teachers' practices and behaviors should be the norm. Hord cautioned, however, that this practice should not be evaluative but should consist of peers' helping peers, with teachers' visiting each other's classrooms on a regular basis to observe, dialogue, and provide feedback on their observations. As espoused by Senge (1990), the purpose of sharing personal practice in a learning organization is based on the premise that such an organization will produce dramatically improved results.

Finding 11. Two schools that shared the same professional development training, with identical timelines and the same trainers, did not move along the maturity continuum at the same rate. Alpha High School survey respondents rated their school significantly higher ($*p = .000$)

than Alpha Middle School survey respondents rated their school on the supportive conditions dimension scale.

Analysis of the *t*-test results for the SPSLCQ supportive conditions dimension scale revealed a statistically significant difference between the scores of respondents at Alpha High School and those at Alpha Middle School, $t(148) = 4.776$, $*p < .05$ ($*p = .000$). The results of this analysis indicated that the principal and staff at Alpha High School had instituted practices associated with the construct of supportive conditions with greater maturity than had the principal and staff at Alpha Middle School.

As noted with the various analyses of *t*-test data, this finding was unanticipated due to the fact that the principal at Alpha High School had completed his 3rd year at the school, whereas the principal at Alpha Middle School had completed his 6th year, at the time of this study.

As defined in the literature, supportive conditions are factors that determine when, where, and how staff regularly come together to participate in learning, decision making, and problem solving within the context of a learning organization (Hord, 2004). In addition, DuFour et al. (2002) suggested that the degree to which schools can function as a team focused toward a particular goal or challenge and the way in which they respond to accomplishing that challenge may serve as indicators of the level of supportive conditions present in the school culture.

Finding 12. Overall, the independent samples *t*-test analysis revealed that Alpha High School survey respondents rated their school significantly higher than Alpha Middle School survey respondents rated their school in the maturity of the professional learning community as measured by each dimension scale of the SPSLCQ.

In summation, schools need to examine such factors as time for staff to meet and talk, the physical proximity of staff to one another, the degree to which teacher roles are interdependent,

and the system of both formal and informal communication (Hord, 2004). In addition, human factors that extensively impact school culture include (a) positive teachers' attitudes toward schooling, students, and change; (b) students' heightened interest in and engagement with learning; (c) norms of continuous inquiry and continuous improvement; (d) widely shared vision or sense of purpose; (e) the norm of involvement in decision making; (f) collegial relationships; and (g) a sense of community in the school (Boyd, 1992). The extent to which these characteristics of school culture are nurtured, maintained, and present determines the extent to which a professional learning community exists within the context of the school climate and culture.

Implications of Findings for Practitioners

Based on the results of this study derived from both quantitative and qualitative data and the analysis of research findings on professional learning communities, described in Chapter Two, the following recommendations should be considered by schools when developing a professional learning community.

Recommendation 1. School administrators in similar settings who wish to promote professional learning communities in their schools through sharing power, authority, and decision making should consider operating as coprofessionals by working on the operational side of an issue or problem and the people side of collegiality and relationship building.

Recommendation 2. School administrators in similar settings who wish to create conditions that result in a universal focus on improving student learning through the development of shared values and vision need to find ways to use resources that enable the staff to have the opportunity, time, training, and relationships to develop and operationalize a ubiquitous and measurable vision for student improvement.

Recommendation 3. Principals in similar settings who want to create conditions that enable their schools to function as professional learning communities should consider structuring professional development for teachers such that it includes both formal and immediate arrangements for teachers to translate and transform collective learning into actual lessons or units whose impact is assessed and used as the basis for ongoing improvement.

Recommendation 4. Principals who create opportunities for teacher to observe each other teaching and provide feedback need to find ways to help teachers use these interactions effectively to improve both instructional practices and student learning. Although the schools in this study clearly demonstrated a deliberate effort to enhance teacher collaboration, the use of time and resources to expand opportunities for effective teacher collaboration remain formidable challenges for schools and school leaders.

Recommendation 5. Principals in similar settings who wish to create ideal conditions for teachers to build collaborative and collegial relationships need to find opportunities for teachers to meet during the school day. In addition, the effectiveness of these efforts must be continually refined; this process will take time.

Recommendation 6. Principals in similar settings who desire to improve the capacity for student learning must employ deliberate strategies to build a school culture that fosters trust, collaboration, and distributed leadership.

Recommendation 7. School leaders in similar settings who wish to develop their schools into professional learning communities must understand that the change process may be difficult and slow and that it does not always follow a prescribed timeline.

Recommendation 8. School leaders who wish to develop their schools into professional learning communities need to dedicate considerable time, energy, and resources initially to the

process of developing a clear and compelling vision of what their school must become to help all students learn.

Recommendation 9. Principals in similar settings who wish to improve student learning should develop an effective process for utilizing the expertise of their faculty and staff to identify the learning needs of teachers and students based upon examination of school data.

Recommendation 10. A principal in a similar setting who wishes his or her school to become a professional learning community should carefully examine and assess the extent to which its physical and structural factors cultivate or deter opportunities for faculty and staff interactions.

Suggestions for Further Research Related to Professional Learning Communities

Suggestion 1. Further research is needed to support or refute the validity of practices associated with professional learning communities and their impact on student learning and teacher efficacy.

Suggestion 2. Further research may be narrowed to include an investigation of a particular trait, action, or process used by school leaders or staff that may directly or indirectly affect or influence student learning or teacher and staff efficacy.

Suggestion 3. A similar investigative approach may be applied to other school processes and practices as well as the behaviors of school staff, specifically as they relate to a potential impact on student learning.

Suggestion 4. Future studies may be directed at examining or following a particular group of teachers for a period of time to determine the extent to which improvement practices have been maintained with fidelity and the impact these practices may have had on teacher efficacy and student performance.

Suggestion 5. Future researchers should consider investigating the impact of school constructs such as collegiality and establishing greater distributed leadership on teacher efficacy.

Suggestion 6. Future researchers interested in studying learning organization should consider examining the extent to which an organization's or a school's acts of improvement are aligned with its mission and vision so as to determine its overall efficiency in reaching its stated goals, mission, and vision. A study with this intended design may assist in examining the impact the process of collective work and its application may have on improving student learning in a particular school or set of schools.

Reflections and Conclusions

The schools that were the subjects of this study were in the 5th year of implementation of an intensive school improvement process aimed at enhancing, sustaining, and improving student learning. As indicated by both quantitative and qualitative data analysis, each school had instituted with fidelity practices described in the literature as being associated with the five constructs or dimensions of professional learning communities: supportive and shared leadership, shared values and vision, collective learning and its application, shared personal practice, and supportive conditions.

As indicated by the analyses of various *t*-tests, Alpha High School had implemented each dimension to a greater extent statistically than had its feeder school, Alpha Middle School, although the principal at Alpha High School had been in his position for only 3 years whereas his counterpart had been in his position for 6 years. Collectively, the results of this study and analysis of the findings of this study, when compared to the research culled from the review of literature related to professional learning communities, suggest that professional learning

communities may indeed impact teachers', assistant principals', and principals' efficacy regarding the degree to which they are empowered to improve student learning.

Although it is clear that subjects of this study perceived that the process of implementing an intensive school improvement process aimed at improving student learning had been implemented with fidelity, the results of this study are limited specifically to the schools that were the subjects of the study. Nevertheless, the findings of this study, as noted previously, are widely supported in the literature and may be applicable to other research related to professional learning communities.

In conclusion, the need to continue to examine human behavior within the context of learning may be determined only within the parameters of a particular theory or concept. This study was aimed at enhancing current research related to the phenomenon of learning organizations for the purpose of examining the interactions between theory and practice and ultimately drawing conclusions and recommendations about how to improve practice. Because learning is perhaps one of the greatest challenges, if not the greatest challenge, for all organizations, it is imperative that it continue to be examined, investigated, and researched for its betterment.

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Appendix A: Informed Consent Notification

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY Informed Consent for Participants in Research Projects Involving Human Subjects - SPSLCQ

Title of Project:

AN INVESTIGATION OF ASSISTANT PRINCIPALS', TEACHERS', AND PRINCIPALS' PERCEPTIONS OF THEIR SCHOOLS AS PROFESSIONAL LEARNING COMMUNITIES

Purpose:

The purpose of this study is to investigate the extent to which administrators perceive their schools to be organized as professional learning communities. For this study, a professional learning community is defined as a school that exhibits the following characteristics: (a) shared and supportive leadership, (b) shared values and vision, (c) collective learning and the application of that learning, (d) shared professional practice, and (e) supportive conditions for the sustainability of the learning community.

Informed Consent Notification:

1. Participation in the interview is **voluntary**.
2. There are no more than minimal risks to you for participating in this interview.
3. You may withdraw from this study at any time without jeopardizing your relationship with Virginia Tech.
4. You may choose to terminate the interview at any time.
5. To ensure anonymity, please do not write your name on this document.
6. Your name will not be associated with your responses.
7. All of your responses will be grouped with the responses from other teachers in your school.
8. You will not be compensated for your participation in this survey.
9. There are no right or wrong answers and your opinions are important.
10. The interview will last approximately 45 minutes.
11. The interview will be audio taped from which a verbatim transcript of the interview will be created.
12. If you would like to review the transcript of the interview, please contact the researcher at the address or telephone number shown below.
13. Questions about your rights as a research subject should be directed to the investigator at the address, number, or e-mail listed below or to the Virginia Polytechnic Institute and State University, Virginia Tech Institutional Review Board for the Protection of Human Subjects, Office of Research Compliance, 2000 Kraft Drive, Suite 2000 (0497) Blacksburg, Virginia 24060. Telephone: (540) 231-4991.

Thank you for participating. If you have any questions about this interview, you may contact:

<p>Stanley B. Jones Investigator E-mail: sbj3@vt.edu Phone: (804) 301-2935</p>	<p>Dr. Carol Cash, Ed.D Dissertation Committee Chair ccash48@vt.edu Phone: (757) 363-3930</p>
--	--

Please sign to indicate that you have read and understand this informed consent:

Signature

Printed Name

Date

Appendix B: Demographic Survey

Demographic Informational Survey

Please respond to the following questions by checking the appropriate response in the box.

1. **Gender:** Male: Female:
2. **Race:** White: Non-White:
3. **Current Position:** Teacher: Assistant Principal: Principal:
4. **How many years have you been in the teaching profession (including this year)?**
 1 to 5 years: 6 to 10 years: 11 to 15 years:
 16 to 20 years: 21 to 25 years: 26 years or more:
5. **How many years have you been at your present school?**
 1 to 5 years: 6 to 10 years: 11 to 15 years:
 16 to 20 years: 21 to 25 years: 26 years or more:
6. **How many years have you participated with the School Improvement Team for your school?**
 1 to 5 years: 6 to 10 years: 11 to 15 years:
 16 to 20 years: 21 to 25 years: 26 years or more:
7. **How many years have you worked with the current principal?**
 1 to 5 years: 6 to 10 years: 11 to 15 years:
 16 to 20 years: 21 to 25 years: 26 years or more:
5. **How many years have you worked with the current assistant principal?**
 1 to 5 years: 6 to 10 years: 11 to 15 years:
 16 to 20 years: 21 to 25 years: 26 years or more:

Thank you for completing this questionnaire. Your cooperation is greatly appreciated.

Appendix C: School Professional Staff as Learning Community Questionnaire (SPSLCQ)



SEDL License Agreement

To: Stanley B. Jones (Licensee)
3205 Merritt Place
Glen Allen, VA 23060

From: Nancy Reynolds
Information Associate
SEDL
Information Resource Center—Copyright Permissions
4700 Mueller Blvd.
Austin, TX 78723

Subject: Permission to reprint and distribute SEDL materials

Date: July 15, 2009

Thank you for your interest in using SEDL's **School Professional Staff as Learning Community Questionnaire (SPSLCQ)** developed by Shirley Hord in 1996. This questionnaire will be referred to as the "work" in this License Agreement.

SEDL is pleased to grant permission for the use of the material cited above by the Licensee, a doctoral student at Virginia Tech in Blacksburg, VA, to survey four schools in Virginia that have been involved in intensive professional development designed to improve literacy. The Licensee will examine the degree to which the selected schools are considered professional learning communities. The following are the terms, conditions, and limitations governing this limited permission to reproduce the work:

1. All reprinting and distribution activities shall be solely in the medium in which the work has been made available for the Licensee's use *from a PDF version of the work* and shall be solely for educational use only. Precise compliance with the following terms and conditions shall be required for any permitted reproduction of the work described above.
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www.sedl.org

4700 MUELLER BLVD., AUSTIN, TX 78723

School Professional Staff as Learning Community Questionnaire

Directions: This questionnaire concerns your perceptions about your school staff as a learning organization. There are no right or wrong responses. Please consider where you believe your school is in its development of each of the five numbered descriptors shown in bold-faced type on the left. Each sub-item has a five-point scale. On each scale, circle the number that best represents the degree to which you feel your school has developed.

Date: _____

School: _____

1. School administrators participate democratically with teachers sharing power, authority, and decision making.

1a. 5 _____ 4 _____ 3 _____ 2 _____ 1 _____

Although there are some legal and fiscal decisions required of the principal, school administrators consistently involve the staff in discussing and making decisions about school issues.

Administrators invite advice and counsel from staff and then make decisions themselves.

Administrators never share information with the staff nor provide opportunities to be involved in decision making.

1b. 5 _____ 4 _____ 3 _____ 2 _____ 1 _____

Administrators involve the entire staff.

Administrators involve a small committee, council, or team of staff.

Administrators do not involve any staff.

2. The staff shares visions for school improvement that have an undeviating focus on student learning, and these visions are consistently referenced in the staff's work.

2a. 5 _____ 4 _____ 3 _____ 2 _____ 1 _____

Visions for improvement are discussed by the entire staff such that consensus and a shared vision result.

Visions for improvement are not thoroughly explored; some staff members agree and others do not.

Visions for improvement held by the staff members are widely divergent.

2b. 5 _____ 4 _____ 3 _____ 2 _____ 1 _____

Visions for improvement are always focused on students, teaching, and learning.

Visions for improvement are sometimes focused on students, teaching, and learning.

Visions for improvement do not target students, teaching, and learning.

2c. 5 _____ 4 _____ 3 _____ 2 _____ 1 _____

Visions for improvement target high-quality learning experiences for all students.

Visions for improvement address quality learning experiences in terms of students' abilities.

Visions for improvement do not include concerns about the quality of learning experiences.

3. The staff's collective learning and application of the learnings (taking action) create high intellectual learning tasks and solutions to address student needs.	3a.	5 _____ 4 _____ 3 _____ 2 _____ 1	The entire staff meet to discuss issues, share information, and learn with and from one another.	Subgroups of the staff meet to discuss issues, share information, and learn with and from one another.	Individuals randomly discuss issues, share information, and learn with and from one another.
	3b.	5 _____ 4 _____ 3 _____ 2 _____ 1	The staff meet regularly and frequently on substantive student-centered educational issues.	The staff meet occasionally on substantive student-centered educational issues.	The staff never meet to consider substantive educational issues.
	3c.	5 _____ 4 _____ 3 _____ 2 _____ 1	The staff discuss the quality of their teaching and students' learning.	The staff does not often discuss their instructional practices nor its influence on student learning.	The staff basically discuss non-teaching and non-learning issues.
	3d.	5 _____ 4 _____ 3 _____ 2 _____ 1	The staff, based on their learnings, make and implement plans that address students' needs, more effective teaching, and more successful student learning.	The staff occasionally act on their learnings and make and implement plans to improve teaching and learning.	The staff do not act on their learnings.
	3e.	5 _____ 4 _____ 3 _____ 2 _____ 1	The staff debrief and assess the impact of their actions and make revisions.	The staff infrequently assess their actions and seldom make revisions based on the results.	The staff do not assess their work.
<hr style="border-top: 1px dashed black;"/>					
4. Peers review and give feedback based on observing one another's classroom behaviors in order to increase individual and organizational capacity.	4a.	5 _____ 4 _____ 3 _____ 2 _____ 1	Staff members regularly and frequently visit and observe one another's classroom teaching.	Staff members occasionally visit and observe one another's teaching.	Staff members never visit their peers' classrooms.
	4b.	5 _____ 4 _____ 3 _____ 2 _____ 1	Staff members provide feedback to one another about teaching and learning based on their classroom	Staff members discuss non-teaching issues after classroom observations.	Staff members do not interact after classroom observations.

observations.

5. School conditions and capacities support the staff's arrangement as a professional learning organization.

5a.	5	4	3	2	1
	Time is arranged and committed for whole staff interactions.		Time is arranged but frequently the staff fail to meet.		Staff cannot arrange time for interacting.
5b.	5	4	3	2	1
	The size, structure, and arrangements of the school facilitate staff proximity and interaction.		Considering the size, structure, and arrangements of the school, the staff are working to maximize interaction.		The staff take no action to manage the facility and personnel for interaction.
5c.	5	4	3	2	1
	A variety of processes and procedures are used to encourage staff communication.		A single communication method exists and is sometimes used to share information.		Communication devices are not given attention.
5d.	5	4	3	2	1
	Trust and openness characterize all of the staff members.		Some of the staff members are trusting and open.		Trust and openness do not exist among the staff members.
5e.	5	4	3	2	1
	Caring, collaborative, and productive relationships exist among all staff members.		Caring and collaboration are inconsistently demonstrated among the staff members.		Staff members are isolated and work alone at their task.

Hord, Shirley M. (1996). *School Professional Staff as Learning Community Questionnaire*.

Austin, TX: Southwest Educational Development Laboratory.

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Appendix D: Administrative Interview Protocol

Scripted Procedures, Questions, and Prompts

Thank you for setting aside time to participate in this interview and for completing the School Professional Staff as Learning Community Questionnaire (SPSLCQ). Before we proceed any further, please review the informed consent document carefully to review your rights related to this research investigation. [PAUSE] Having reviewed the informed consent form, do you have any questions? [PAUSE]

This interview should take about 45 minutes. Please be reminded that you may choose to stop at any time. The purpose of this interview is to learn more about the extent to which a professional learning community exists in your school. I am especially interested in learning about how you involve teachers in decision making and how you share leadership with others throughout the organization. I am interested in the ways in which your work and the work of others throughout the school support the school's vision, its decision-making structures, the opportunities for teacher learning, and other opportunities for teachers to collaborate for student achievement. I would like to audiotape this session. May I turn on the audiotape now? [TAPE ON]

Thank you for volunteering to participate in this interview. Have you reviewed the informed consent? Do you have any questions or concerns? Would you like to have an opportunity to review your interview transcript for accuracy?

Dimension 1: Supportive and Shared Leadership - School administrators participate democratically with teachers sharing power, authority, and decision making.

1. Tell me about the decision-making process in this school.
 - 1.1. Prompt for involvement of how teachers participate in decision making.
 - 1.2. Prompt for the structures in place for sharing decision making.
 - 1.3. Prompt for training provided for involvement in decision making.

Dimension 2: Shared Values and Vision - Staff shares visions for school improvement that have an undeviating focus on student learning and that are consistently referenced for the staff's work.

1. Who was or is involved in the creation and maintenance of the school's vision and values?
 - 1.1. Prompt for the process and structures for creation and maintenance of vision.
2. How do the vision and values of the school manifest themselves in the daily work of teachers?

- 2.1 How do you monitor teachers' work to ensure that teachers' practices reflect the values and vision?
 - 2.2 How do teachers use the vision as a guide to development of instruction?
 - 2.3 How is the vision reflected in decision making?
3. How are the school's vision and values communicated to the community?

Dimension 3: Collective Learning and Its Application - Staff's collective learning and application of that learning (taking action) create high intellectual learning tasks and solutions to address student needs.

1. How do you determine the learning needs of the staff?
 - 1.1. What role do teachers play in the determination of learning needs?
2. How are school performance data used in making decisions about teachers' learning?
 - 2.1. Prompt for use of meeting time for data analysis and discussion.
 - 2.2. Prompt for discussions of best practices.
3. How do you monitor and assess the implementation of what teachers and staff have learned?
 - 3.1. Prompt for an explanation of how new learning is assessed.
 - 3.2. Prompt for use of meeting time to discuss implementation.
 - 3.3. Prompt for predetermined evaluation criteria.
 - 3.4. Prompt for strategies to assess implementation.
4. What structures exist to facilitate teacher learning?
 - 4.1. Prompt for time provided for faculty learning.
 - 4.2. Prompt for teacher study groups, action research teams, and informal structures.

Dimension 4: Shared Personal Practice - Peers review and give feedback based on observing each other's classroom behaviors to increase individual and organizational capacity.

1. What structures, both formal and informal, are in place in this school to allow and encourage teachers to work collaboratively and to share personal practice?
 - 1.1. Prompt for time allotted for peer coaching or peer observations of each other.
 - 1.2. Prompt for training in collaboration or peer coaching.

Dimensions 5: Supportive Conditions - School conditions and capacities support the staff's arrangement as a professional learning organization.

1. What structures and conditions are in place to support the existence and sustainability of the school's arrangement as a professional learning community?
 - 1.1. Prompt for specific structures and practices that are considered supportive.
 - 1.2. Prompt for physical structures, physical design features, or facility usage practices that are considered supportive.

Appendix E: Teacher Focus Group Interview Protocol

Scripted Procedures, Questions, and Prompts

Thank you for setting aside time to participate in this focus group interview and for completing the School Professional Staff as Learning Community Questionnaire (SPSLCQ). Before we precede any further, please review the informed consent document carefully to review your rights related to this research investigation. [PAUSE] Having reviewed the informed consent form, do you have any questions? [PAUSE]

This interview should take about approximately one hour. Please be reminded that you may choose to stop at any time. The purpose of this interview is to learn more about the extent to which a professional learning community exists in your school. I am especially interested in learning about how you, as teachers, are involved in decision making and how you share leadership with others throughout the organization. I am interested in the ways in which your work and the work of others throughout the school support the school's vision, its decision-making structures, the opportunities for teacher learning, and other opportunities for teachers to collaborate for student achievement. I would like to audiotape this session. May I turn on the audiotape now?

[TAPE ON]

Thank you for volunteering to participate in this interview. Have you reviewed the informed consent? Do you have any questions or concerns? Would you like to have an opportunity to review your interview transcript for accuracy?

Dimension 1: Supportive and Shared Leadership - School administrators participate democratically with teachers sharing power, authority, and decision making.

1. Tell me about the decision-making process in this school.
 - 1.1 Prompt for involvement of how teachers participate in decision making.
 - 1.2 Prompt for the structures in place for sharing decision making.

Dimension 2: Shared Values and Vision - Staff shares visions for school improvement that have an undeviating focus on student learning and that are consistently referenced for the staff's work.

1. Who was or is involved in the creation and maintenance of the school's vision and values?
 - 1.1 Prompt for the process and structures for creating and maintaining the vision.
2. How do the vision and values of the school manifest themselves in the daily work of teachers?

- a. As teachers, how do you monitor your work to ensure that your practice reflects the values and vision?
 - b. How do the schools' vision and mission serve as a guide to the development of instruction?
 - c. How is the vision reflected in decision making?
3. How are the school's vision and values communicated to the community?

Dimension 3: Collective learning and Its Application - Staff's collective learning and application of that learning (taking action) create high intellectual learning tasks and solutions to address student needs.

1. How are the learning needs of teachers and staff determined?
 - 1.1. What role do teachers play in the determination of learning needs?
2. How are school performance data used in making decisions about teachers' learning needs?
 - 2.1. Prompt for use of meeting time for data analysis and discussion.
 - 2.2. Prompt for discussions of best practices.
3. How is teacher learning monitored and assessed?
 - 3.1. Prompt for an explanation of how new learning is assessed.
 - 3.2. Prompt for use of meeting time to discuss implementation.
 - 3.3. Prompt for predetermined evaluation criteria.
 - 3.4. Prompt for strategies to assess implementation.
4. What structures exist to facilitate teacher learning?
 - 4.1. Prompt for time provided for faculty learning.
 - 4.2. Prompt for teacher study groups, action research teams, and informal structures.

Dimension 4: Shared Personal Practice - Peers review and give feedback based on observing each other's classroom behaviors to increase individual and organizational capacity.

1. What structures, both formal and informal, are in place in this school to allow and encourage teachers to work collaboratively and to share practice?
 - 1.1. Prompt for time allotted for peer coaching or peer observations of each other.
 - 1.2. Prompt for training in collaboration or peer coaching.

Dimensions 5: Supportive Conditions - School conditions and capacities support the staff's arrangement as a professional learning organization.

2. What structures or conditions are in place to support the existence and sustainability of the schools arrangement as a professional learning community?
 - 2.1. Prompt for specific structures and practices that are considered supportive.
 - 2.2. Prompt for physical structures, physical design features, or facility usage practices that are considered supportive.

Appendix F: E-Mail Message to Superintendents Requesting Permission to Conduct Study

April 2010

Dear Dr. _____

I am currently doing research in cooperation with the Division of Educational Leadership and Policy Studies at Virginia Polytechnic Institute and State University. My research will investigate the relationship among assistant principals', teachers', and principals' perceptions of their schools as professional learning communities, as defined by Jones (2011). This study will involve two schools in your division, a high school and its feeder middle school. All of the schools in this study are located in the Commonwealth of Virginia.

The purpose of this study is to investigate assistant principals', teachers', and principals' perceptions of their schools as professional learning communities, as defined by Jones (2011), in two schools. Each of the schools selected for this study has implemented an intensive school improvement process aimed at enhancing, sustaining, and improving student learning. The schools included in this study are in the 5th year of implementation.

To complete this research, four instruments will be used to collect data. First, a demographic survey created by the researcher will be used to gather data related to all participants and to provide descriptive information related to possible explanatory variables. The demographic information includes questions related to participant gender, ethnicity, title (assistant principal, teacher, principal), number of years in current position, number of years in the education profession, number of years present at the current school site, and number of years of involvement with the school improvement team). Second, the School Professional Staff as Learning Community Questionnaire (SPSLCQ) (Hord, 1996), an existing instrument, will be used with the permission of the Southwest Educational Development Laboratory (SEDL). The SPSLCQ will be administered to assistant principals, teachers, and principals at each of the schools selected for this study.

Third, the principal at each school will be interviewed to extract information about the practices, processes, and conditions that promote the learning community at his or her school. Fourth, at each school site, faculty who served as instructional staff during the 5 years of the intensive school improvement process will be asked to participate in a focus group interview to provide qualitative data for this study. Teachers that were hired after the intensive school improvement began, or who left the school for any reason during the implementation of the program, will not be included in the focus groups.

The names of the participating schools will not be identified in this study. The intent of this report is not to compare schools, but rather to look at the targeted relationship.

To grant permission for this study to be conducted in your school division, simply reply, "Permission Granted" or "Yes" to this e-mail request. Your cooperation is greatly appreciated. The demographic survey consists of 6 questions, and the Professional Learning Community Survey includes 17 questions; they should take approximately 15-20 minutes to complete. If you have any questions or require clarification, please call me at (804) 301-2935.

Sincerely,

Stanley B. Jones
Candidate for Doctoral Degree
Virginia Polytechnic University and State University

Appendix G: Letter to Participants Requesting Permission and Cooperation for Conducting the Study

April 2010

Dear Principal/Assistant Principal, Teacher

Please allow me the opportunity to respectfully request your assistance and participation in a research study on professional learning communities. I am currently a doctoral student at Virginia Tech, and I have served as a principal, assistant principal, and professional educator for the past 25 years in Virginia's Public Schools. Permission for your school and staff to participate in this study was granted by your Superintendent, Dr. _____ (Please see attached).

The purpose of this study is to investigate the extent to which teachers perceive their schools to be organized as professional learning communities. For this study, a professional learning community is defined as a school that exhibits the following characteristics: (a) shared and supportive leadership, (b) shared values and vision, (c) collective learning and the application of that learning, (d) shared professional practice, and (e) supportive conditions for the maintenance of the learning community.

The study will involve the principals, assistant principals, and teachers in each school. The participants selected should have experience with and involvement in the school improvement team. All participants will complete a Demographic Informational Survey and the School Professional Staff as Learning Community Questionnaire (Hord, 1996). The instruments used for this study are used in numerous empirical research studies that are based on the theoretical and conceptual constructs of leadership, school restructuring, and professional learning communities.

This study will contribute to the body of knowledge related to professional learning communities as a viable process for improving student achievement in schools. This research also will provide a better understanding of the relationship for school-level administrators' leadership interaction with professional learning communities as a school improvement initiative.

All information obtained will be strictly confidential. Participants, schools, or school districts will not be identified. No survey data will contain names of any participants or their schools. All data will be disposed of upon the completion of the research. Schools or participants will not be required to bear the expenses for postage and copies for all documents. Self-addressed, return-postage envelopes and copies of documents will be provided at no cost to the participants.

I will serve as the point person for the study for all communications and documentations. In an effort to maximize participation in the survey and minimize the time required to collect completed surveys, I am requesting your permission to administer the survey to your staff at a faculty meeting. The surveys and questionnaires will take a short amount of time and participation in the study is entirely voluntary. Participants can terminate participation at any time without consequence.

Included in this packet are the following:

- A copy of the Demographic Informational Survey with six (6) questions concerning information related to your years of service as a teacher and demographic information that will be used only for statistical analysis.
- A request that the principal identify the assistant principal to complete the survey and notify teachers of the date and time that the survey will be administered in a faculty meeting.
- The School Professional Staff as Learning Community Questionnaire for you to complete on your school's professional learning community, divided into five (5) dimensions and 17 responses, as identified by Hord (1997), to be completed in approximately 5 minutes.
- A self-addressed, return-postage envelope for participants to return via the mail at no cost to the participant, if they prefer to complete the survey at a later date. The total time required to complete all information requested is approximately 20 minutes. All participants will seal and return responses using the documents enclosed in their packets.

Your input will provide additional knowledge used to improve the educational environment for all professionals. For those teachers who are absent from the faculty meeting, please have them complete and mail all information within one week of receipt using the return postage. If you have any questions or need additional information, please contact me directly via e-mail at sbj3@vt.edu or by phone at (804) 301-2935.

Your completion and return of the enclosed surveys and questionnaires will indicate your consent to participate in the study. You may contact me directly via e-mail at sbj3@vt.edu or by phone at (804) 301-2935 if questions arise. Your cooperation is genuinely appreciated!

In addition, I would like to schedule a separate individual interview with you to discuss your perceptions of the existence of a professional learning community in your school as well as a focus group interview with a small group of teachers in your school. The interviews may be held on the same day or consecutive days to minimize travel time for the researcher and utilize your time and the time of your faculty efficiently and effectively. To acknowledge your receipt of this request and to confirm your willingness to participate in this study, please respond to this request by contacting me by e-mail at sbj3@vt.edu or by phone at (804) 365-4511.

Respectfully,

Stanley B. Jones
Candidate for Doctoral Degree
Virginia Polytechnic Institute and State University

Appendix H: Virginia Tech Institutional Review Board Approval Letter



VirginiaTech

Office of Research Compliance
 Institutional Review Board
 2000 Kraft Drive, Suite 2000 (0497)
 Blacksburg, Virginia 24060
 540/231-4606 Fax 540/231-0959
 e-mail irb@vt.edu
 Website: www.irb.vt.edu

MEMORANDUM

DATE: May 7, 2010

TO: Carol Cash, Stanley Jones

FROM: Virginia Tech Institutional Review Board (FWA00000572, expires June 13, 2011)

PROTOCOL TITLE: An Investigation of Assistant Principals', Teachers' and Principals' Perceptions of their Schools as Professional Learning Communities

IRB NUMBER: 10-019

As of May 7, 2010, the Virginia Tech IRB Chair, Dr. David M. Moore, approved the new protocol for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report promptly to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at <http://www.irb.vt.edu/pages/responsibilities.htm> (please review before the commencement of your research).

PROTOCOL INFORMATION:

Approved as: **Expedited, under 45 CFR 46.110 category(ies) 6, 7**

Protocol Approval Date: **5/7/2010**

Protocol Expiration Date: **5/6/2011**

Continuing Review Due Date*: **4/22/2011**

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals / work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

Invent the Future

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

An equal opportunity, affirmative action institution

Appendix I: Email Correspondence Documenting Permission to Use Copyrighted

Materials

Permission to Use Solution Tree Publications

From: Sarah Payne-Mills [mailto:sarah.payne-mills@solution-tree.com]
Sent: Tuesday, February 23, 2010 1:41 PM
To: Stan B. Jones
Subject: RE: Solution Tree Permission Request Form

Hi, Mr. Jones,

Thank you for your interest in using Solution Tree materials in your prospectus and dissertation for Virginia Polytechnic Institute and State University. We have reviewed your request to use pages 9-10 of *Reculturing Schools to Become Professional Learning Communities* by Robert Eaker, Richard DuFour, and Rebecca DuFour. We are pleased to grant permission for the use of this material, provided that the following guidelines are respected:

1.) The material is used in the same manner described in your Permission Request Form dated February 20, 2010, specifically, 5 copies will be reprinted in your in your prospectus and dissertation titled "An Investigation of Assistant Principals, Teachers and Principals Perceptions of Their School as Professional Learning Communities" between February and December 2010.

2.) Solution Tree copyright information is included at the bottom of each page. It should read:

Used with permission. From *Reculturing Schools to Become Professional Learning Communities* by Robert Eaker, Richard DuFour, and Rebecca DuFour. Copyright 2002 by Solution Tree Press, 555 North Morton Street, Bloomington, IN 47404, 800.733.6786, solution-tree.com. All rights reserved.

3.) The material may not be emailed or posted electronically. Any other uses must be approve by Solution Tree first.

For future requests, please continue to use our "Permission Request Form" accessible via www.solution-tree.com. You may access the form by clicking on "Contact Us" and then "Permission Request Form" located under "Solution Tree Press."

We appreciate your interest in Solution Tree Press!

Regards,

Sarah Payne-Mills

Sarah Payne-Mills
Editorial Assistant
Solution Tree Press
800.733.6786 (ext. 251)
812.336.7700 (ext. 251)

Permission to Use: *Teachers' perceptions of administrative leadership styles and schools as professional learning communities* (Doctoral dissertation). Retrieved from <http://louisdl.louislibraries.org/u/?NOD,231>

 You replied on 3/17/2011 9:45 PM.
This message was sent with high importance.

Stan B. Jones

From: Clive Coleman [ccoleman@rgsd.k12.mo.us] **Sent:** Thu 3/17/2011 9:25 PM
To: Stan B. Jones
Cc:
Subject: Re: Permission to Reference Certain Segments of Your Study entitled: Teachers' perceptions of administrative leadership styles and schools as professional learning communities

Attachments:

Thank you for using my graduate work.

Please use the information referenced in your email.

I will contact you to discuss your interest in my dissertation.

Clive H. Coleman, Ph.D.
Superintendent
Riverview Gardens School District

From: "Stan B. Jones" <sbjones@hcps4.hanover.k12.va.us>
Date: Thu, 17 Mar 2011 20:55:21 -0400
To: Clive Coleman <ccoleman@rgsd.k12.mo.us>
Subject: Permission to Reference Certain Segments of Your Study entitled: Teachers' perceptions of administrative leadership styles and schools as professional learning communities

Dear Dr. Coleman,

I am writing to request permission to reference your study entitled:
Teachers' perceptions of administrative leadership styles and schools as professional learning communities
 (Doctoral dissertation). Retrieved from <http://louisdl.louislibraries.org/u/?NOD,231>.

I am completing the final stages of my dissertation entitled, *An Investigation of Assistant Principals', Teachers', and Principals' Perceptions of Their Schools as Professional Learning Communities*, through Virginia Tech and humbly request permission to reference a certain segment of your study. Specifically, I request your permission to reference and include a copy of your table entitled, Fig. 8 Coleman's School Leadership Model. A copy of Fig. 8 is attached.

An affirmative response to this request is greatly appreciated. I may be reached at the phone numbers included in the signature section of this message if questions arise regarding this request.

Your cooperation is greatly appreciated.

Respectfully!

Stanley B. Jones
 Director of Student Safety and Discipline Hearing/Review Officer
 Hanover County Public Schools
 200 Berkley Street
 Ashland, Virginia 23005
 Phone: (804) 365-4511
 Cell: (804) 301-2935
 Email: sbjones@hanover.k12.va.us

From: Jenny Chan-Remka [mailto:jchanremka@mail.cps.k12.ri.us]

Sent: Thu 3/17/2011 9:58 PM

To: Stan B. Jones

Subject: Re: Permission to Reference Certain Segments of Your Study entitled: The perceptions of teachers and administrators in relation to the implementation of professional learning communities

Hi Mr. Jones,

It's my pleasure to give you the permission to reference my study. Good luck! I would love to read some of your results.

Mrs. Jenny Chan-Remka, Ed.D
Assistant Principal
Hugh B. Bain Middle School

-----Original Message-----

From: "Stan B. Jones" <sbjones@hcps4.hanover.k12.va.us>

Sent 3/17/2011 7:58:03 PM

To: jchanremka@cpsed.net

Subject: Permission to Reference Certain Segments of Your Study entitled: The perceptions of teachers and administrators in relation to the implementation of professional learning communities

Ms. Chan-Remka,

I am writing to request permission to reference your study entitled, *The perceptions of teachers and administrators in relation to the implementation of professional learning communities* (Unpublished doctoral dissertation). Johnson and Wales University, Providence, RI. I am completing the final stages of my dissertation entitled, *An Investigation of Assistant Principals', Teachers', and Principals' Perceptions of Their Schools as Professional Learning Communities*, through Virginia Tech and humbly request permission to reference certain segments of your study. Specifically, I request your permission to reference the following tables.

Teachers' Perceptions of Their School as a Professional Learning Community (Chan-Remka, 2007)

Professional Learning Community Dimension Ratings (Chan-Remka, 2007)

Barriers to the Implementation of a Professional Learning Community (Chan-Remka, 2007)

Teachers' Recommendations for Improving the Existing Professional Learning Community (Chan-Remka, 2007)

A response in the affirmative would be greatly appreciated. You may reach me at the phone numbers included in the signature of this email message if questions regarding this request should arise.

Your cooperation is greatly appreciated.

Respectfully!

Stanley B. Jones
Director of Student Safety and Discipline Hearing/Review Officer
Hanover County Public Schools
200 Berkley Street
Ashland, Virginia 23005
Phone: (804) 365-4511
Cell: (804) 301-2935
Email: sbjones@hanover.k12.va.us