LEADERSHIP AND SUSTAINABLE CHANGE: THE RELATIONSHIP BETWEEN
LEADERSHIP PRACTICES OF PRINCIPALS AND RECULTURING SCHOOLS
AS PROFESSIONAL LEARNING COMMUNITIES
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This study examined the relationships between leadership practices of principals and strength of schools as sustainable professional learning communities. Strength of schools as professional learning communities was measured using the Professional Learning Communities Assessment; leadership practices were measured using the Leadership Practices Inventory both Self and Observer protocols. Findings indicated that neither principal’s self-perceptions of their leadership practices nor teachers’ assessments of their principals’ leadership practices were related to strength of schools as professional learning communities. Findings did indicate ten specific leadership behaviors of principals that appear to be more highly related to strength of schools as learning communities. Further analysis which focused on the two strongest learning community schools and the two weakest learning community schools indicated that three specific leadership behaviors within Kouzes and Posner’s practices of modeling the way and enabling others to act appear to be the most strongly related to reculturing schools as sustainable professional learning communities. Principals who set a personal example of what they expect of others are most likely to lead schools that function as strong learning communities. Additionally, principals who build consensus around a common set of values are also most likely to lead strong learning communities. Finally, principals who develop cooperative relationship with co-workers are most likely to lead schools that function as strong learning communities.
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CHAPTER 1
INTRODUCTION

This research study examines the relationship between leadership practices of principals and successful reculturing of schools as sustainable professional learning communities. Leadership practices of principals are measured using the Leadership Practices Inventory, Third Edition (Kouzes & Posner, 2003aa) both Self and Observer forms. Successful reculturing of schools as professional learning communities are measured using the Professional Learning Communities Assessment (PLCA) (Olivier, Hipp, & Huffman, 2003). Chapter 1 introduces the study and provides information related to the background, problem, purpose, and relevant theoretical perspectives. The research questions and an overview of the research methodology are presented, followed by a discussion of the significance of the study. Following information regarding delimitations, limitations, and definitions, the chapter closes with a description of the organization of the study.

Background of the Study

Literature from the fields of business management and economics (Collins, 1994, 2001; Deming, 1982; Drucker, 1980, 2004; Kouzes & Posner, 2002; Peters & Waterman, 1982; Senge, 1990) has resulted in a body of knowledge related to leadership, learning organizations, and sustainable change that has significantly impacted theory and practice within public schools. More than twenty five years ago Deming (1982) began documenting his concerns regarding fragmentation of systems in both private and public agencies. He outlined fourteen points as the basis for transformation of American industry stating: “The fourteen points apply anywhere, to small organizations as well as to large ones, to the service industry as well as to manufacturing.
They apply to a division within a company” (p. 23). Indeed a review of the points, listed in Table 1, reveals that each one has, in some form, acquired significant meaning in the current context of public education.

Table 1

Deming’s Fourteen Points

1. Create constancy of purpose for improvement of product and service.
2. Adopt the new philosophy.
3. Cease dependence on inspection to achieve quality.
4. End the practice of awarding business on the basis of price tag alone. Instead, minimize total cost by working with a single supplier. (Of the fourteen points this one arguably requires a stretch. However, Deming’s proposition that short-term profits are no index of ability can be seen to parallel educators’ discontent with decades old practices of using yearly high-stakes assessments as the index of student achievement and, more recently, of whole school success.)
5. Improve constantly and forever every process for planning, production, and service.
6. Institute training on the job.
7. Adopt and institute leadership. (Deming clarifies the contrast between supervision and leadership.)
8. Drive out fear.
9. Break down barriers between staff areas.
10. Eliminate slogans, exhortations, and targets for the work force.
11. Eliminate numerical quotas for the work force and numerical goals for management.
12. Remove barriers that rob people of pride of workmanship.
13. Institute a vigorous program of education and self-improvement for everyone.
14. Put everybody in the company to work to accomplish the transformation.
Drucker (2004), commenting on non-business management, stated “…these institutions are right in seeing business management as the prototype. Business, far from being exceptional, is simply the first of the species and the one we have studied the most intensively” (p. 19). More than twenty five years later, Fullan (2005a) also called for whole systems to be engaged, for vertical integration of those systems to be harnessed with horizontal creativity. He noted that education suffers, not from a lack of innovations, but from “…too many ad hoc, unconnected, superficial innovations” (p. 21). Fullan and others (DuFour & Eaker, 1987; DuFour & Eaker, 1998; DuFour, Eaker, DuFour, & Karhanek, 2004; Hall & Hord, 2006; Hord, 1997; Lezotte, 2005) have brought the ideas of Deming and Drucker directly to the forefront of current theory and practice in public education.

According to A Report of the Task Force on the Principalship (Institute of Educational Leadership, 2000), school leaders fail in part to fulfill their core mission of educating children because they are pulled in so many different directions. The report noted that principals’ responsibilities include creating vision, restoring mission, directing and implementing curriculum and instruction, supporting a positive climate, fostering school and community relations, and developing a financially efficient school organization. Peter Senge’s (1990) organizational learning model identified principals as leaders who are tasked to create the environment for ongoing learning. He described leaders as designers, stewards and teachers. Lashway (1995) noted the responsibility and the opportunity that principals have to create environments where teachers can meet the school district’s mission. The findings of Taylor and Tashakkori (1997) and Huffman and Jacobson (2003) highlighted the importance of a principal’s ability to promote participation by stakeholders in school improvement efforts in the ultimate success of those efforts. Mitchell and Sackney (2001) noted that effective public school
principals allow accountability for performance on high-stakes assessments to become a community experience rather than an isolated test of individual teacher performance. Molinaro and Drake (1998) explained that when decisions are made, when instruction is planned and delivered, when problems are solved, when dialogue is shared in community rather than in isolation, it is the principal who shoulders the responsibility for creating an environment that sustains a true learning community. These actions encourage leaders to replace control over with support for the teaching and learning process.

Clearly, the responsibilities of principals as leaders are incredibly complex regardless of the leadership practices or styles they demonstrate on a day to day basis. The critical nature of the principal’s leadership in guiding systemic school change is driven by the belief expressed by Lezotte (2005) and others that the focus of deep and sustainable change is at the school level, yet the findings of Ogawa and Bossert (1995) suggested that schools and their leaders continue to be mired in old hierarchical structures. Considering the complex problems and issues of the day and the imperative for systemic change that exists, traditional leadership may no longer be effective. Williams (2006) noted that leaders must be knowledgeable and skillful within the multifaceted roles of the public school principal, including knowledge and skill related to development of professional learning communities. He pointed to the characterization of the principal’s leadership by Klein-Kracht (1993) as that of a co-learner who models questioning, investigating, and solution-seeking. Tebano (2002) noted that the role of the principal as leader of a professional learning community involves envisioning, reculturing, and bringing to reality a dynamic, sustainable environment for learning. Drucker (2004) reminded us that the spirit of an organization is captured in the words inscribed on Andrew Carnegie’s tombstone, words which could be those of Senge, Fullan, Collins, and many others:
Here lies a man
Who knew how to enlist
In his service
Better men than himself.

Senge (1990) wrote that his foundational work resulted from his concern that the theory and practice of organizational learning might succumb to what he called the *fad cycle*, the initial rise and rapid growth of learning organization concepts, followed by a leveling off period, then the inevitable decline and disappearance. However, he continued: “It seemed to me that one way to influence the long-term impact of the learning organization was to establish an intellectually challenging base of ideas and tools early in the fad cycle” (p.x). Senge went on to describe his desire that his work might function as the stake that would establish systems thinking concepts as the basis for building and sustaining learning organizations. Noting that the attention span of an organization lasts at best one or two years, he focused directly on the heart of the issue of faddishness with the following question: “What if the time required to understand, apply, and eventually assimilate the new capabilities…is longer than the fad cycle itself?” (p. x).

With the publication of numerous works of theory and practice in the field of education espousing professional learning communities (PLCs), it appears that a stake similar to Senge’s has been planted. The professional learning community term evolved during the seventies, eighties, and nineties from research dealing with effective schools, organizational leadership, and school-based decision-making. Senge’s (1990) corporate management theory attracted educators seeking meaningful and sustainable reform, a perfect fit for his concepts. Excellence, whether corporate, political, economic or educational, is more likely sustained, according to Senge (1990), in organizations that aspire to continuous collaborative learning rather than in organizations where top-down management continues. The work of Senge and others (Boyer 1995; DuFour, 1987; DuFour & Eaker, 1998; Fullan, 2001a, Fullan, 2001b, Hord, 1997; Lezotte,
1985; Newmann & Wehlage, 1995) including Rosenholtz’ (1989) analysis of the social organizations of schools coincided to form a growing body of educational research and literature. Crucial to this study was Hord’s (1997) multi-year collaborative study with the Southwest Educational Development Laboratory (SEDL) which yielded descriptions of effective and successful schools and revealed existing infrastructures that were described as professional learning communities. Morrissey’s (2000) prior SEDL study had already indicated that in low-performing schools there tended to be an absence of processes supportive of effective communication and collaboration, processes that are inherent in professional learning communities. Hord (1997) used the term principal omnicompetence to contrast a traditional principal leadership model with the collaborative leadership model found in a professional learning community. Williams (2006) concurred, noting that two fundamental cornerstones of professional learning communities, sharing leadership and building leadership capacity, represent very different leadership perspectives from the technical-rational approach that continues to exist in many schools. Emihovich and Battaglia (2000) found that a pervasive perception of principals is that their jobs primarily involve building and program management rather than school-wide collaboration. Hord (1997) asserted that the organization of learning communities in which principals designed structures where teachers meet regularly to talk about teaching and learning provide a meaningful structure for doing the work of continuously improving school capacity for learning and change. She called for continuing, controlled research and measurement of schools as professional learning communities, resulting in increased credibility of the PLC concepts.

Some have expressed concerns about the fidelity of the concept of professional learning communities. Kopack-Hill (2002) noted that explicit use of the term and deep familiarity with
the identified concepts of professional learning communities are necessary in order to promote and sustain a viable community amidst changes that occur over time. In language that calls to mind Senge’s (1990) fad cycle, DuFour (2005) warned that the ubiquitous use of the term professional learning community is in danger of being used to describe almost any collection of individuals who share an interest in education. More than twenty years after the first expression of the concept as a recognizable term, he cautioned that professional learning communities have reached a critical juncture at which educators must make a choice to break the cycle of previous, however well-intentioned, school reform efforts: initial enthusiasm followed by confusion and problems of implementation and abandonment, leading to resumption of another search for the next promising initiative. At that time, DuFour said: “Another reform movement has come and gone, reinforcing the conventional education wisdom that promises, ‘This too shall pass’ ” (p. 32).

Senge, Cambron-McCabe, Lucas, Smith, Dutton, and Kleiner (2000) noted that two key components of systemic change in the school setting involve a principal who believes in the potential of a learning organization and has the skills to build a community of collaborative learners. If principals are to be leaders who reculture schools into communities where all teachers and students learn, then foremost among the style-directed, or as Kouzes and Posner (2003) might say practice-directed behaviors of principals is the capacity to collaborate (Fullan, 1993, Hord, 1997; Huffman, & Hipp, 2003). The importance of alignment between actual and expected leadership practices has been highlighted in studies that showed that principals’ leadership practices are the best predictors for the presence of either high or low participation by teachers in change efforts (Huffman & Jacobson, 2003). The authors found that successful reculturing of schools into professional learning communities is highly dependent on 1) teachers
having the perception that the principal is a collaborative decision maker; 2) principals actually practicing collaborative decision making; and 3) significant teacher participation in decision making (Huffman & Jacobson, 2003). However, defining the practices of leaders does not necessarily translate into successful reculturing of a school as a professional learning community. Examination of principals’ uses of those practices is needed. Williams (2006) noted that few studies have been conducted of actual principal practices to see how they align with those practices most critical to reculturing and sustaining a professional learning community. Perhaps before leaders can successfully sustain the momentum necessary for school reculturing, they must deeply embed in their own daily practices new skill sets, new mindsets, and new ways of being that run counter to the old.

Kouzes and Posner (2002) proposed that given the right conditions individuals can adapt their leadership practices to different situations. The authors maintained that their fundamental purpose for decades of research was to assist ordinary people in developing their own capacities to accomplish extraordinary things. Writing in the facilitator’s guide of their Leadership Practices Inventory (LPI), 3rd ed. (2003), Kouzes and Posner recounted their original intent for what has resulted in more than two decades of study of leadership practices: “We believed that the results of our research would dispel two popular myths about leadership: First, that leadership is an innate quality people are born with, and second, that only a select few can lead successfully” (p. 3). The LPI, 3rd ed. (2003) used in this study, measures those observable skills and abilities that can be developed through knowledge and practice.

Problem Statement

Educators have been engaged for decades in relentless quests for illusive school improvements (Richardson, 2003) but overwhelmingly each quest has simply added to the list of
attempts that failed to sustain coherent systemic change (Fullan, 2005). Over the last ten years, professional learning communities as a specifically defined educational concept, has become readily recognizable in international educational circles. Given the role that leadership plays, if professional learning communities are, as DuFour (2004) states, “…a grand design, a powerful new way of working together that profoundly affects the practices of schooling” (p. 6), then examination of day to day implementation of the practices of leaders that serve to embed and sustain this new way of working together is critical (Fullan, 2005). This dissertation examines those leadership practices that most effectively reculture schools into professional learning communities.

Purpose of the Study

Few studies have been undertaken to examine how specific leadership practices of principals align with those practices that promote and sustain professional learning communities. This study attempted to add to that research base. Hord (1997) asserted that the organization of learning communities in which teachers meet regularly to talk about teaching and learning provides not an improvement program or plan, but a meaningful structure for doing the work of continuously improving school capacity for learning and change. She called for continuing, controlled research and measurement of schools as professional learning communities, resulting in increased credibility of the professional learning community concepts. The use of two standardized measures of the constructs, the Leadership Practices Inventory, 3rd ed. (Kouzes & Posner, 2003b) and the Professional Learning Communities Assessment (Olivier, Hipp, & Huffman, 2003) were expected to provide a useful profile of effective leadership practices, allowing principals to more clearly recognize practices that are likely to result in successful reculturing.
Theoretical Perspectives of the Study

Solidly grounded theory is a necessary foundation for highly effective practice; therefore, in the literature review, this study benefits from a thorough investigation of existing theories related to learning communities, leadership, and change. The roots of professional learning community models of practice were revealed in both the social systems theory of Banathy and the organizational learning theory of Senge, bound directly by Hord (1997) to her identification of professional learning community dimensions. From a systems theory perspective, Senge (1990) focused educators on the relationships between increasingly complex and interconnected problems, each one a system in itself, and the ineffective, continual cycle of fragmented interventions, at best impacting symptoms more often than systems. According to Senge, systems-thinking is not enough by itself. What is required in the daily practice of educators is collective development of the art and the practice of learning.

Senge (1990), Kouzes and Posner (1997), Spillane, Halverson, and Diamond (2004), and Hargreaves and Fink (2006) interjected theories of leadership distribution and leadership reciprocity where traditional theories of the super-charismatic leader once prevailed. Leadership theory no longer espouses intellectual capital as supreme and no longer supports the power of a single executive or administrative position. Kouzes and Posner (1997) identified patterns of distinct practices that are characteristic of leaders doing their best, simultaneously participating in collective development of individuals who are leaders. The practices, according to the authors, result in successful, sustainable organizations. The legacy for 21st century leaders is the creation of valued institutions that survive over time (Kouzes & Posner, 2003a).

Ellsworth’s systemic change in education model (2000) effectively integrated six theories of organizational change that unify modern principles of change diffusion, change environments,
change agents, stages of change, the concerns of adopters of change, and resistance to change. Ellsworth encourages use of a toolbox of approaches to guide systematically the process of planned change, avoiding the mistake of the wait-and-see approach which results most often in reaction to crisis and piecemeal repair of individual components.

Research Questions

Three research questions were posed for this study.

1. Is there a relationship between strength of leaders’ perceptions of their own leadership practices and strength of teacher and principal perceptions of their schools as professional learning communities?

2. Is there a relationship between teachers’ perceptions of the strength of their principals’ leadership practices and strength of teacher and principal perceptions of their schools as professional learning communities?

3. Is strength in any single leadership practice of a principal more highly related to strength of teacher and principal perceptions of their schools as professional learning communities?

Overview of Methodology

This correlational research study examined the relationship between leadership practices of principals and successful reculturing of schools as sustainable professional learning communities in a single mid-sized school district in north Texas. Successful reculturing of schools as professional learning communities was measured using the PLCA (Olivier, Hipp, & Huffman, 2003). Leadership practices of principals were measured using the Leadership Practices Inventory (LPI), 3rd ed., (Kouzes & Posner, 2003a) both Self and Observer forms. Within the selected district, the study was conducted among teacher and principal volunteers from elementary and secondary campuses.
District approval was obtained allowing the researcher to recruit participants within the district, and the researcher was given time during a district principals’ meeting to provide a presentation explaining and clarifying the study’s purpose and the requirements for participation. A calendar of visits to participating campuses was developed determining dates when the researcher would attend each campus to conduct a single administration of the PLCA (2003) with teachers and the principal. Completed PLCA (2003) data was collected at that time. Principal and teacher participants completing the LPI-Self and -Observer forms were directed to return completed forms within a window of time. Data analysis focused on the variance between perceived strength of leadership practices and perceived strength of characteristics of professional learning communities.

Significance of the Study

Over the last ten years professional learning communities as a specifically defined educational concept has become readily recognizable in international educational circles. Spillane, Halverson, and Diamond (2004) contended that among the essential understandings of effective leadership is a rich understanding of how leadership practice is undertaken by multiple leaders in diverse contexts. That understanding, according to the authors, leads to development of a compelling framework from which to consider the why of school leadership practice. Huffman and Jacobson (2003) showed the importance of alignment between actual and expected leadership practices. Their studies indicated that principals’ leadership practices are the best predictors for either high or low teacher participation in change efforts (Huffman & Jacobson, 2003). Kouzes and Posner (1987, 2002) have dedicated their careers to convincing leaders that ordinary people can develop their own capacities to accomplish extraordinary things given the right conditions. Examination of principals’ use of specific practices is needed, hence the use of

Sustained change can be accomplished if leaders commit, as Schmoker (2005) notes, to actions and efforts most likely to improve teaching and learning. Extraordinary leadership is a matter of ordinary people practicing new ways of being. Sustained systemic change then is a matter of ordinary people resolving to replace old practices with redesigned practices of leadership that yield something far more potent: a true professional learning community. Leaders of effective professional learning communities, in their evolution toward embeddedness and sustainability, provide members with the infrastructures that facilitate positive change. McLaughlin and Talbert (1993) recognized that not all strong professional learning communities are oriented to change or concerned with improvement. DuFour (in DuFour, Eaker, & DuFour, eds., 2005) along with many others expressed concerns about the dilution of the concepts of professional learning communities as they were being implemented from school to school, even department to department within schools. Maintaining practitioners’ understanding of those necessary, core dimensions of effective and sustainable professional learning communities is imperative. Interestingly, DuFour, DuFour, Eaker, and Karhanek (2004) noted that the success or failure of effective professional learning communities depends not on the strength of PLC concepts but on the saturation of commitment, persistence, entrepreneurialism, and discipline of educators who are not averse to working hard.

Delimitations

Delimitations are the factors that prevent a researcher from claiming that findings are true for all people in all times and places (Bryant, 2004). Delimitations of this study should be noted.
1. The primary subjects of this study are K-12th grade principals serving in one mid-sized Texas school district. Certain demographics of the district contribute to its uniqueness such that the findings may not necessarily be generalizeable to other districts or educational settings.

2. Sustainability of any change demands, by definition, longitudinal evaluation of its embeddedness over years, decades, even generations. This study presents a snapshot of apparent success of leaders to reculture schools as professional learning communities.

Limitations

Limitations are the restrictions created by the researcher’s choice of methodology (Bryant, 2004). A number of limitations are presented here.

1. Inherent in correlational studies like this one is the limitation to determining cause. There may indeed be a relationship indicated between leadership practices of principals and successful reculturing of schools as sustainable professional learning communities; however, leadership practices could not be presented as a cause of successful reculturing within the scope of this study.

2. The LPI-Self protocol provides a tool for evaluating a leader’s responses regarding his or her leadership practices, and as such, may not accurately reflect the practices demonstrated by that leader.

3. The LPI-Observer protocol was completed by the leader’s subordinates at the request or directive of the leader. Observers may have been hesitant to complete the protocol with complete candor without assurance of anonymity.
4. Participation of all subjects was voluntary. A weak rate of response could have resulted in mistaken conclusions.

Definitions

Key terms used in this study may often be understood in disparate ways by readers of the dissertation. Precision of some terms necessitated the following definitions.

1. Professional learning community: A community of school professionals who come together frequently and regularly to reflect on educational practice and effectiveness, to identify areas for professional attention, and to make decisions that positively impact student success. For the purpose of this study, the five dimensions and forty-five accompanying critical attributes identified in the Professional Learning Communities Assessment (Olivier, Hipp, & Huffman, 2003) provide the defining framework of a professional learning community.

2. Leadership: According to Kouzes and Pozner (2002), leadership is observed in an individual when he or she practices a set of skills and abilities that are related to positive organizational outcomes. For the purpose of this study, the Leadership Practices Inventory, 3rd ed., both Self and Observer protocols, was administered to the selected group of public school principals and subordinates to measure perceptions of the strengths of their leadership practices. Higher scores on the LPI instruments was assumed to indicate strength of leadership practices.

3. Change: The act or process of substitution, alteration, or variation. For the purpose of this study, the process of change was observable in the on-going actions of leaders to establish professional learning communities as the framework for teaching and learning throughout the district.
4. Sustainability: Having the quality of continuous existence: “The capacity of a system to engage in the complexities of continuous improvement…” (Fullan, 2005). For the purpose of this study, the observable actions of the selected district’s leadership supported the contention that the district was two years into potentially sustainable systemic change.

5. Practices: Observable behaviors demonstrated by principals in their roles as leaders of schools. For the purpose of this study, Kouzes and Posner’s (2003b) five leadership practices provided the defining framework of effective leadership practices.

Organization of the Study

Chapter 1 provides an introduction to the research study examining the relationship between leadership practices of principals and successful reculturing of schools as sustainable professional learning communities. A brief discussion of background for this study is presented, a problem statement, research questions and overview of methodology are explained. The study’s significance, limitations and delimitations are presented, and key words and terms are specifically defined for the purpose of the study. Chapter 2 presents a review of literature. Chapter 3 presents a detailed description of the methodology for the study. Following data collection and analysis, Chapter 4 reports the results with pertinent tables and figures. A summary, discussion of the results, and suggestions for future research are examined in Chapter 5.
CHAPTER 2
REVIEW OF LITERATURE

“There has been no previous time in history when the success, indeed the survival of nations and people has been so tightly tied to their ability to learn” (National Commission of Teaching and America’s Future, 1996). The report noted that the successful citizen of the 21st century must be able to read, write and compute proficiently, find and use resources, frame and solve problems, and be a lifelong learner of new technologies, skills, and occupations.

“America’s future depends now, as never before, on our ability to teach” (NCTAF, 1996, p.3), and successful leaders of 21st century schools are required as never before to possess a better understanding of leadership for change in schools. It is of the utmost importance to the profession (Gonzalez Negrete, 2004). Leadership for the 21st century must revolve around changes in our paradigm of learning for all educators as well as all students. As Reeves (2006) stated: “Leadership is about change—how to justify it, implement it, and maintain it” (p. 158).

Chapter 2 reviews current literature that addresses theoretical and empirical scholarship regarding professional learning communities, educational leadership, and sustainable change.

Theoretical Foundations of Professional Learning Communities

The concept of professional learning communities has become established in school reform literature (Ellis, 1998; Ostemeyer, 2003; Reeves, 2006) and is solidly grounded in theory of learning organizations described by Senge (1990). Building on decades of investigation into the design of social systems, Banathy (1991) proposed that human systems design is authentic and sustainable because it is designed by those who are within the system, who use the system, and who are served by the system. “Design can not be legislated. It should not be bought from experts. If the privilege and responsibility for design is given away, others will take charge of our
lives and the shape of our future” (p. 50). Banathy (1973) proposed that sustainable systems lead people to a better understanding of the system and their role within it. Sustainable systems increase the effectiveness and depth of commitment of participants during implementation, and they generate consensus among participants.

Banathy (1991) recognized Senge as a convincing and elegant spokesperson for the purposeful design of systems from within. According to Senge (1990) an organization’s capacity for learning determines whether or not it will thrive or die. Leaders of such organizations, whether in the corporate or educational fields, must be skillful designers, stewards, and teachers leading groups of people working collaboratively and “…continually learning how to learn together” (p. 3). Senge’s (1990) concept of learning organizations incorporated disciplines, illustrated in Figure 1, that are necessary for establishment of environments where people are continually discovering “…how they create their reality…and how they can change it” (p. 12). In successful schools “a nurturing progressive community seems to be the container that holds the culture” (Senge, Cambron-McCabe, Lucas, Smith, Dutton, & Kleiner, 2000).

student learning (McLaughlin, 1993; Hord, Ed., 2004). Leithwood, Leonard, and Sharratt (1997) found that shared goals, collaborative attitudes, collegial activities, and budgetary support for

![Diagram of Senge's Five Disciplines of Learning Organizations]

*Figure 1. Five disciplines of a learning organization (Senge, 1990).*

professional growth are necessary conditions for encouraging organizational learning in schools. Measures of student learning provided evidence of the positive relationship between professional learning communities and student performance (Newmann and Wehlage, 1995; Louis and Kruse,
These authors traced the roots of better performance to the levels at which the schools demonstrated the characteristics of professional learning communities, especially to the levels at which the roles of teachers and principals in professional learning communities were redefined and schools were redesigned into communities of learners and leaders (Ostemeyer, 2003). Sergiovanni (1994a) wrote that the metaphorical change that is made as schools are transformed from organizations into communities of learners changes what is true about how schools should be organized and run, about what motivates teachers and students, about what leadership is, and how it should be practiced. In contrast to communities of learners, traditional organizations are arranged as hierarchies of expertise and superiority, enhanced by efficiency, expediency, and mutual interests. An I focus prevails. Communities of learners, however, are we focused, organized around interdependent relationships, shared ideals, and strong culture. Richardson (2003) noted that school leaders must be capable of reading school culture, and that leaders must recognize and attend to the important connection between school structure and culture in sustaining improvement over time.

In their efforts to provide clarification and consistency of the concepts of professional learning communities DuFour and Eaker (1998) defined each word in the phrase. Professional is defined as one with current expertise or advanced training in a specialized field; learning is defined as a continued action characterized by unending curiosity; the authors define community as a group of people linked by common interests. Richardson (2003) highlighted the investigative nature of learning communities in which professional educators utilize research findings to better achieve established goals. In communities of learning, everyone involved is a learner, adults and students alike (Ellis, 1998). Klein-Kracht (1993) noted the importance of a
common learning agenda, and Ostemeyer (2003) observed that the business of learning, questioning, and seeking solutions is a significant characteristic of a community of learners.

Hord’s (1997) landmark study included an exhaustive review of literature and a five-year study of individual schools, resulting in her description of a professional learning community as a school in which the educators seek to improve student learning through continuous and shared teacher learning. Analysis of the data indicated five necessary dimensions of a professional learning community, illustrated in Figure 2.

Figure 2. Five dimensions of a professional learning community (Hord, 1997).
Hord (1997) found that in schools characterized by these professional learning community dimensions students engage in highly intellectual tasks and show greater academic gains in math, science, history and reading. Students drop out of school less frequently and are absent from school less frequently than those in traditionally organized schools. Greater opportunities for professional development connect the needs of the individual with the collective mission of the school. The professional learning community model of improvement relies upon the continuous learning, inquiry, and reflection of the professionals within the school who provide opportunities to make and process change (Hall & Hord, 2001). Regardless of the number of definitions or characteristics identified by researchers, similar professional learning community themes have emerged in the literature.

Reeves (2006) wrote that teacher collaboration that focuses on assessing student work is an essential component of an effective learning community. Student learning must always be the focal point of the work of teachers in professional learning communities, though rarely does a school’s schedule indicate a culture that encourages time for teachers to engage in sustained intellectual activity (Ostmeyer, 2003). This is a constant frustration to teachers, principals, researchers, and theorists alike. However, complaints about lack of time pale considering the enormous amounts of time and energy expended when teachers fail to focus their collaboration on student performance and student achievement (Reeves, 2006). In addition, Reeves (2006) reported that when teachers collaborate as a part of the daily work of the school, the quality of collaboration increased and the actual time required for collaboration decreased.

Fullan and Stiegelbauer (1991) recognized the link between radical paradigm change and structural changes within organizations. They continue the call for a “redesign of the workplace so that innovation and improvement is built into the daily activities of teachers” (p. 353).
Gonzalez Negre (2004) and Ostemeyer (2003) also noted the linking of organizational change with radical paradigm change. Olivier (2003) recognized the necessity for reorganization within the school’s infrastructure for change to occur: “To the extent that reform creates a new culture of learners, structural changes will follow” (p. 9); however, Huffman and Hipp (2003) noted that experts such as Hord and Senge agree that it is much easier to understand and talk about contexts that nurture professional learning communities than it is to find them in practice. Reflecting decades of Banathy’s (1973) systems design research, Lambert (1999) emphasized the importance of designing the school learning organization from within, celebrating the process as an opportunity for people to design their futures by planning and deciding on their learning processes as a staff. In order for today’s leaders to meet the educational needs of our time, they must abandon the outdated educational factory model of American public school leadership which prevailed in the nineteenth and twentieth centuries and adopt a new conceptual model of schools as learning organizations (Institute for Educational Leadership, 2001). Tebanno (2002) stressed the continuous improvement cycle where vested interest and collaboration of community members indicate the value of process over product. He found in Jones (2001) the necessary processes for sustaining organizational learning within a system, illustrated in Figure 3. Reculturing schools into communities where learning for all is continuous and focused will require significant structural and strategic shifts (Richardson, 2003). Galagan (1994) suggested that survival of organizations in a constantly changing world depends on whether or not continual adaptation to change can become a way of life, whether teamwork and collaboration become the norm, and whether or not performance captures every ounce of attention within the organization. Ostemeyer (2003) stated: “Only when we give up the belief that the world consists of separate, unconnected forces can we begin building learning organizations” (p. 18).
Fullan (2001a) noted that the best defense against the relentless pace of change is to build professional learning communities that are good at sorting out the worthwhile from the non-worthwhile. He added that professional learning communities are sources of support and healing when ill-conceived or random change takes a toll. Recommending standards for school principals, the National Association of Elementary and Secondary Principals (2001) echoed that concept stating, “No one is free to avoid dealing with change or to stop the clocks to prepare for it, but a community of learners provides the…tools and resources to manage and adapt to that change” (p. 25). Citing Michael (1973), Kouzes and Posner (2003a) noted that people must find it rewarding to become learners if they are going to become an organization that responds to the future rather than one that reacts to the past.
Empirical Foundations of Professional Learning Communities

Fullan (1993), Hord (1997) and DuFour and Eaker (1998) have declared that research provides conclusive evidence that professional learning communities committed to the expansion of knowledge and the improvement of practice are the key to student growth and sustained school improvement. According to Newmann and Wehlage’s (1995) synthesis of research conducted by the Center for Organization and Restructuring of Schools (CORS), student achievement is increased through professional learning community practices.

Huffman and Hipp (2003) recognized the simplicity of Fullan’s (1985, 2000) framework of moving from concept to capability to initiation to implementation and finally to lasting sustainability. That structure was used to guide their study of six schools actively engaged in creating professional learning communities. Grounded in the Southwest Educational Development Laboratory studies led by Hord (1997, 1998) and Hord, Chapman, Hinson, Hipp, Jacoby, Huffman, Pankake, Sattes, Thomas, and Westbrook (2000), Huffman and Hipp (2003) reported results from 64 interviews of faculty and staff conducted over a three-year period in six PreK to 12th grade schools. Analysis of the interviews revealed valuable data regarding the progress of schools as they attempted to initiate and implement Hord’s structures of professional learning communities. Hord’s (1998) School Professional Staff as Learning Community (SPSLC) questionnaire, based on her five dimensions of a professional learning community, was developed to identify schools that characterized those dimensions. Using a five-point Likert scale indicating low to high levels of development, degrees of differentiation were provided that aided SEDL researchers in selecting schools for study sites, collecting baseline and subsequent data at those schools, and assessing leadership behaviors that appeared to contribute or hinder the establishment of a school as a professional learning community. The SPSLC provided valuable
data regarding teacher perceptions of stages of change occurring within the school as the process of initiation, implementation, and institutionalization evolved.

Olivier (in Huffman & Hipp, 2003) noted that although many educators identified their schools as operating as professional learning communities, rarely did the schools meet observable operational criteria, thus the need for another assessment tool, the Professional Learning Community Assessment (PLCA) (Olivier, Hipp, Huffman, 2003) which operationalized the characteristics of a professional learning community and provided descriptions of how people operated within the community (Huffman & Hipp, 2003). The PLCA (2003) not only reflected some changes to Hord’s dimensions and attributes based on subsequent research, but it corrected for misalignment between teacher perceptions and actual observations by researchers. The Professional Learning Communities Assessment (Olivier, Hipp, & Huffman, 2003) was selected for use in this study of the relationships between principal practices and the reculturing of schools as professional learning communities. Following a phenomenological study of public school districts, Watson (2000) found a high degree of interaction among each of nine themes of professional learning communities, illustrated in Figure 4. The interactions among each result in a total commitment to a coordinated process that encourages and supports the district’s efforts to establish a learning community (Tebanno, 2002).

In a study of reform in Chicago schools, Bryk, Sebring, Kerbow, Rollow, and Easton (1998) demonstrated that schools that make marked improvements in student success engage in significantly different practices internally, practices that characterize professional learning communities. Bryk, et al. (1998) noted that in schools where systemic change occurs, structures are established to allow for opportunities for teachers to interact, in turn, permitting shared decision-making and collaboration as opposed to more traditional school practices of teachers.
working autonomously. However, Darling-Hammond (1996) found that in American public schools only three to five hours a week are available to teachers for planning and collaboration, leaving little time to consult with colleagues or learn new teaching strategies.

Citing empirical research of Nye, Konstantopoulos, and Hedges (2004) on teacher effectiveness and student achievement, Fullan (in DuFour, Eaker, DuFour, eds., 2005) championed professional learning communities as the organizational structure that, if institutionalized within schools, is most likely to sustain benefits to all students. In schools where teachers observe each other’s teaching and work in pursuit of sustained improvements, consistency and quality of teaching across the whole school is increased. However, while reform of the structures of schools in support of professional learning communities is a difficult task, Louis, Kruse, and Marks (1996) warned that the same level of focus must be given to reform of the cultures, climates, and interpersonal relationships in schools in order for systemic reform to
occur. Louis, et al. (1996) emphasized that the destructive beliefs that educators sometimes hold about their own efficacy and the current nature of schools can be changed through collaborative efforts of learning communities (Richardson, 2003).

**Theoretical Foundations of Leadership**

Senge (1990) noted that traditional views of leaders are deeply rooted in an individualistic, non-systemic world view. Spillane, Halverson, and Diamond (2004) pointed out as well that the venerable *great man* theories of leadership continue unabated in much of the literature. Leadership is not simply a function of what a school principal knows and does; leadership is also a function of the activities engaged in by leaders interacting with others in particular contexts around specific tasks. School leaders of the 21st century must abandon old models in order to meet the critical educational needs of this time (Richardson, 2003) adopting a new concept of schools as learning organizations (Institute for Educational Leadership, 2000; Olivier, 2001). The old system was built upon foundations of standardization, authoritarianism, and determinism and focused on hierarchical management (Richardson, 2003). In the traditional system, one group of people made decisions for the entire organization (DuFour & Eaker, 1998).

Management and leadership are dichotomies that are often discussed in the literature. Kotter (1990) explained that management is about coping with the complexity of an organization’s routines and procedures, while leadership is about coping with change. The author noted that managers focus on planning, budgeting, organizing, staffing, and problem-solving. Leaders set directions, align staff members, motivate and inspire towards a vision (Tebbano, 2002). Spillane, Halverson, and Diamond (2004) recognized the managerial imperative that often dominates the work of school principals, leaving more important instructional leadership activities with limited attention. Interestingly, the authors pointed out that managerial tasks
designed to produce stability may be an essential component of instructional leadership. The authors stated: “Indeed, efforts to change and efforts to preserve are often blended in the practice of leaders as tasks serving multiple agendas and functions” (p. 12). Successful promotion of change may heavily depend on the successful preservation of the status quo. Hord (1992) however, noted the distinction between “…management, which educational administrators typically carry out with reasonable success, and leadership, which educational administrators do not have, but should” (p. 87). Peterson (1988) highlighted a crucial, but often missed area of managerial influence that a principal possesses: the power to recruit, select, promote, and demote staff members. By hiring and retaining teachers who highly value experimentation in their classrooms, principals create an atmosphere conducive to innovation (Ellis, 1998), but principals who operate as leaders rather than as managers powerfully influence change. “Managers get people to do, but leaders get people to want to do” (Kouzes & Posner, 1997, p. 27).

Louis and Marks (1996) call for principals to lead from the center rather than from the top, and Lieberman (1995) contends that principals must support teachers, not control them, by creating opportunities for growth and learning, thereby increasing their ability to teach effectively in 21st century schools (Ostemeyer, 2003). Deal and Peterson (1990), Leithwood and Jantzi (1990), and Patterson (1993) emphasize the necessity for principals to understand existing organizations and systems before attempting to implement changes in school culture. That understanding better equips leaders to identify norms, values, and beliefs that should be reinforced as well as those that should be altered. Fullan (in DuFour, Eaker, DuFour, eds., 2005) stated that a school leader: “…recasts leadership as part and parcel of a system transformation” (p. xii).
Johnson, Johnson, and Holubec (1989) noted the wide range of definitions for the concepts of leadership; indeed, unprecedented attention has been given to leadership in business, government, and education (Hord, 1992). Schlecty (1990) purported that the act of leadership involves efforts to impose order on chaos, to provide direction to what otherwise appears to be adrift, and to give coherence to events that appear random. Senge (1990) emphasized the role of the leader as designer, steward, and teacher, one who is responsible for setting a high standard for continuous learning. Leadership has been defined as a process of intentional influence exerted by one person over others (Yukl, 1998). Lambert (2003) defined leadership as “…reciprocal, purposeful learning in a community” (p. 2). Drucker (2004) said that leadership is “…the lifting of a man’s vision to higher sights, the raising of a man’s performance to a higher standard, the building of a man’s personality beyond its normal limitations” (p. 108). Fullan (2001a) defined leadership as helping others to confront problems that have not yet been addressed successfully. In their review of prominent leadership theorists, Marzano, Waters, and McNulty (2005) noted Burns’ (1978) definition of leadership as “…leaders inducing followers to act for certain goals that represent the values and the motivation of both leaders and followers” (p. 13). Greenleaf (1998) suggested that the clearly evident servant nature of the leader determines how strongly followers hold allegiance to the group. Those who choose to follow will not casually accept the authority of existing institutions, but will respond freely to proven and trusted servant leaders. DuFour (1999) has drawn the following recommendations about the principal’s role in a professional learning community:

1. Principals should lead through shared vision rather than rules and procedures;

2. Principals should enlist faculty members in the schools’ decision-making processes and empower individuals to act;
3. Principals should provide the staff with the information, training, and parameters to make good decisions;

4. Principals should be results oriented. (p. 13)

Through thirty years of leadership research, Kouzes and Posner have discovered and rediscovered that leadership is not the private reserve of a few charismatic men and women but a process by which ordinary people bring the best of others and themselves forward, eliminating the self-fulfilling prophecy that dooms society to having only a few good leaders. The result is a healthier, more productive model of leadership that assumes it is possible for everyone to learn to lead. The authors (2002, 2003a, 2003b) have contributed extensively to leadership and change theories grounded in the belief that practices rather than personality are the hallmark of effective leadership. According to Kouzes and Posner (1997), any leader can acquire the knowledge, skills, and expertise to become an effective leader; the best leaders are the best learners. Kouzes and Posner (2002) found that effective leadership practices account for increased employee commitment, job satisfaction, teamwork, and achievement of group goals. Leadership also accounts for decreased employee turnover. The authors (2002) proposed five practices of leadership, illustrated in Figure 5, in which leaders exhibit certain distinct practices when they were at their personal best. Their research (2003) revealed that during times when leaders are performing at their personal best, those who more frequently engage in the five practices are significantly more likely to achieve extraordinary results. To model the way effectively, leaders must first be clear about their own guiding principles. At its essence, modeling the way is about
Figure 5. Five practices of leadership (Kouzes and Posner, 2003a).

earning the credibility to lead through direct individual involvement and action. People first
follow the person, then the plan. Leaders become models for what the whole team stands for,
endeavoring to lead their constituents from what I believe to what we believe (Kouzes & Posner,
2003a). *Inspiring a shared vision* engages others in pursuit of common aspirations. All members,
leaders and followers alike, are participants in dialogue rather than monologue. “A person with no constituents is not a leader, and people will not follow until they accept a vision as their own” (p. 16). Leaders continually venture out, searching for opportunities by seeking innovative ways to change, grow, and improve, that is they challenge the process. Kouzes and Posner (2003a) found that every single case of a leader’s personal best involves some kind of challenge to the process that includes experimentation, risk, learning from errors, and generating small wins in the persistent pursuit of improvement. Kouzes and Posner (2003a) found that enabling others to act by sharing power and discretion fosters trust and collaboration. Recognition by leaders of the contributions and individual excellence created not only a spirit of community, but also created a spirit of celebration, encouraging the hearts of group members.

Addressing the credibility of leaders, Kouzes and Posner (2003a) noted that the first law of leadership is: “If you don’t believe in the messenger, you won’t believe the message” (p. 33) and that the “…truest test of credible leadership is what leaders pay attention to and what they do” (p. 93). Leaders are distinguished from other credible people by their ability to be forward-looking and to communicate clear and common visions of the future (Kouzes & Posner, 2003a). Credible leaders do not deny the reality of bad situations but they persistently deny that continuation of the bad situation is unavoidable. Rather than dwelling on threats, real or imagined, credible leaders envision opportunities for renaissance and learning; they mobilize others; they turn the tide and influence the outcome. Credibility is earned through human contact in hallways and classrooms, on shop floors and streets. Building credibility takes time to listen and learn. The ultimate test of leaders’ credibility is in the doing, for in the doing leaders prove to others that they are truly serious about quality or respect or innovation or diversity or whatever the stated value of the organization. When leaders affirm the shared values of an organization
they are promising that these values will be kept consistently, and they are saying implicitly that they will be the first to live up to these promises. The service of leaders is the basis for their credibility. Exemplary leadership and credible leaders make a difference in the world.

As stated earlier, traditional perceptions of leadership are focused on the extraordinary talents of a few individuals. Senge (1990) noted that those prevailing traditional views reinforce a focus on short-term events and charismatic heroes rather than on systemic forces and collective learning. Hargreaves and Fink (2006) wrote that theories of organizational effectiveness have long embraced the idea that leadership should not be limited to executive positions, but distributed across the organization. Effective and successful leadership, they noted, is not exclusively a downward influence, but flows and circulates throughout and up and down hierarchies. Spillane, Halverson, and Diamond (2004) note that the prevailing assumption that school leadership is synonymous with the principal resulted in researchers ignoring other sources of leadership in schools. In their distributed leadership model, leadership involves all activities undertaken by those who lead in particular contexts and in fulfillment of specific tasks. Thus, leaders, followers, and other stakeholders must be included in order to generate a comprehensive understanding of the practice of school leadership. Teacher-leaders, who often assume leadership roles, do so from a perspective that is distinctly different from the principal. The character and structure of their interactions are vital to understanding leadership practice. From Spillane’s (2004) distributed leadership perspective, collective interactions among leaders working together can serve to exponentially increase leadership practice. The authors proposed that school leadership might be best explored at the group or collective level rather than at the individual level.
Kouzes and Posner (2003a) appear to agree stating, “Grand dreams don’t become significant realities through the actions of a single person” (p. 18). “People run down. Energy runs out. Talent gets stale. Organizations get stuck. Challenges continue and threats mount” (p. 271). If educators continue to persist within old paradigms of leadership, the fresh actions, new visions, and initiative of potential leaders are lost. Forward movement that defines leadership halts. The authors insisted that it is absolutely necessary for leaders to encourage and tolerate more internal conflict than ever before, supporting the efforts of teacher leaders to find solutions to the problems that obstruct authentic teaching and learning, relaxing old expectations of abiding teacher devotion. Principals must possess the ability to develop the leader in everyone, making each person responsible for moving the organization toward sustainable success. Demonstrating an enthusiastic and genuine belief in the capacity of others, strengthening people’s will, supplying the means to achieve, and expressing optimism for the future are characteristics of true leadership for 21st century schools.

Marzano, Waters, and McNulty (2005) reviewed some of the prominent leadership theorists and theories that form the basis for their empirical study. James Burns, primarily a political leadership theorist, is generally considered the founder of modern leadership theory. Burns distinguished between transactional leadership, the trading of one thing for another, and the more effective transformational leadership, the production of results beyond expectations (Marzano, et al., 2005). Bass (1985) delineated four factors that characterize transformational leadership:

1. Individual consideration by the leader of neglected members;
2. Intellectual stimulation to rethink old problems in new ways;
3. Inspirational motivation to meet high expectations for performance; and
4. Idealized influence on members by the exemplary achievements, character, and behavior of the leader. (p. 14)

Instructional leadership was found by Leithwood, Jantzi, and Steinbach (1999) to be the most frequently cited educational leadership concept, but they noted that instructional leadership is vaguely defined. According to Marzano et al. (2005) the most prominent description of instructional leadership was that of Smith and Andrews (1989) who identified four roles of the instructional leader as resource provider, instructional resource, communicator, and visible presence. Others such as Glickman, Gordon, Ross-Gordon (1995) and Hallinger, Murphy, Weil, Mesa, and Mitman (1983) proposed similar instructional leadership constructs. The defining characteristics of instructional leadership proposed by Blasé and Blasé (1999) are identifying, encouraging, and facilitating teacher study and learning, facilitating collaboration within and among teacher groups, establishing teacher to teacher coaching relationships, making research-based decisions regarding instruction, and attending to the principles of adult learning in all teacher interactions and training.

The work of Hersey and Blanchard focused on situational or contingency leadership style, involving the synchronization of the leader’s practices with the maturity or readiness of followers. According to Marzano, et al., situational leaders who are skillful in the four styles of telling, participating, selling, and delegating, understand the importance of discerning the ability and willingness levels of followers in order to match their own behaviors to those levels. Johnson, Johnson, and Holubec (1989) outlined four theories of leadership encompassing traits, styles, influence, and position of leaders. Within the trait theory of leadership, leaders are thought to be born, not made, discovered, not developed. Style theory suggests that the actions of leaders reveal specific leadership tendencies or preferences for such tendencies that may enhance
or detract from success and sustainability. Influence theory proposes that the leader of a group is a member who exerts a much greater level of influence on others than he experiences himself. The position approach to leadership is based on the existence of a hierarchy of roles of authority among leaders and followers. The authors stated, however, that leading a school requires a more complex theory of leadership (Johnson, Johnson, and Holubec, 1989).

Tebanno (2002) addressed the research regarding concepts of leadership and followership. Followership, that necessary component that results in true synergy, is as crucial as leadership (Tebanno, 2002). Spillane, Halverson, and Diamond (2004) concurred, highlighting the necessity of *negotiated order* in the essential dependent relationship between leaders and followers. Marzano, Waters, and McNulty (2005) noted that Burns (1978) and others favored a transformational leadership style that inspires followers to become leaders and converts leaders into moral change agents. Sergiovanni (1996) stated: “The emphasis in community leadership is building a shared followership and the emphasis in building a shared followership is not on who to follow but on what to follow” (p. 83). Evans (1996) suggested that instilling clarity and consensus regarding the purpose of the organization, what he referred to as *purposing* within individuals is central to followership. Deal and Peterson (1990) noted that leadership is required of the principal, but the principal cannot be the sole source of leadership. “To sustain strong positive cultures, leadership must come from everyone” (p. 138). Senge (1990) called this the model of leadership that appeared most appropriate to the management of complex issues within complex systems (Tebanno, 2002).

Similar paradoxes of leadership are recognized by Collins (2001) who wrote about Level 5 leaders who “…build enduring greatness through a blend of personal humility and professional will” (p. 20), and Sergiovanni (1994b), who said that leaders lead by following and by serving.
“They lead by inviting others to share in the burdens of leadership” (p. xix). Transformational leadership has a reciprocal influence on leaders and followers of organizations. Sergiovanni (1996), Yukl (1998), and Hipp and Huffman (2000) noted that effective leadership is dependent on the leader’s ability to communicate, in a reciprocal relationship, to the inner understandings of each individual. Evans (1996) concurred: “The wanting is crucial to followership, and leaders of school restructuring must inspire it” (p. 173). Skillful leaders inspire followers to recognize the significant contributions that each makes, that what each individual does has meaning, that each individual is a significant part of a significant larger whole, that mastery and competence mattered (Tebanno, 2002). Kouzes and Posner (1987) suggested that the first challenge of leadership is to rid ourselves of outdated assumptions about leadership, leading by enabling people as opposed to leading by controlling and scrutinizing. Active, collaborative leadership among educators rather than passive agreement improves schooling (Johnson, 1996).

According to the Institute for Educational Leadership (IEL) (2000), leaders are bound to a limited range of practices, behaviors, or styles as they attempt to juggle the many demands of running a school. Richardson (2003) noted that style has been defined as a distinctive pattern of behavior fundamentally grounded in the values that a leader possesses. Hall and Hord (1987) contrasted the term behavior with the term style, asserting that a particular behavior does not represent a leader’s overall style. The authors used the term behavior to describe the moment-to-moment actions of leaders (Hall & Hord, 2001). Laine (2000) developed the systems leadership model to help explain leadership styles, and defined five levels of leadership, each with potential to cultivate an environment that nurtures success and sustainability. Effectiveness and sustainability become more likely as one progresses to Laine’s (2000) validation and foundational levels, which are both characterized by leaders effectively modeling the qualities
that enhance organizations. Laine’s (2000) Level 3 is the collaborative level in which leaders
nurture team learning and open communication of essential issues. Level 4 leadership is unified,
a level where shared vision and goal-alignment are characteristic. Laine’s highest level of
leadership, Level 5, is called symphonic leadership, and is characterized by that highest level of
harmony existing among all components and all tasks (Tebanno, 2002).

Empirical Foundations of Leadership

Researching the qualities of leadership crucial to educational change has not always
yielded uniform results, and more research must be conducted on the qualities that principals
must possess in order to navigate a school through deep change (Mendez-Morse, 1992). What
data we do have indicate that characteristics of effective principals mirror those of effective
leaders who face change in a variety of other professional fields (Gonzalez Negrete, 2004). Hall
and Hord (2001) found that research has unanimously identified the principal as the primary
learning catalyst and change agent. Richardson (2003) reported that in a study of twenty seven
schools leadership was among the primary factors influencing implementation of school
improvement plans, and in each of the twenty seven schools the principal’s leadership approach
influenced the extent to which professional communities were created.

Citing five empirical studies which identified characteristics of effective leaders,
Marzano (2003) stated that “leadership could be considered the single most important aspect” in
his model for school reform. Three principles of leadership for change are proposed:

1. Leadership for change is most effective when carried out by a team of educators with the
   principal functioning as a strong cohesive force;
2. The leadership team must operate in such a way as to provide strong guidance while
demonstrating respect for those not on the team;
3. Effective leadership for change is characterized by optimism, honesty, and consideration. (Marzano, 2003)

Despite the existence of these studies and the apparent importance of leadership, Marzano, Waters, and McNulty (2005) noted the scarcity in number and equivocation of existing empirically based studies and the inaccuracy of the assumption that leadership practices in schools are based on a “clear, well-articulated body of research spanning decades” (p. 6). Marzano et al. (2005) cited examples from opposing camps including a study by Witziers, Bosker, and Kruger (2003) in which the primary finding was that the overall leadership of the principal has almost no correlation with student achievement (Marzano et al. 2005). In contrast, a study by Hargreaves and Fink (2006) recognized several issues related to the essence of distributed leadership research. First, although distributed leadership may not be sustainable, all sustainable leadership is distributed leadership. Also the available research assumes the primacy of the principal, who continues to be the focus of such research. This results in the lack of investigation of the influences of other sources of distributed leadership on student success. Another reality is that distributed leadership might not always be good leadership and in fact, might be, in Lipman-Blumen’s (2004) term, toxic leadership. Hargreaves and Fink (2006) went on to write that distributed leadership might be effective or ineffective; used for good purposes or bad; might emerge from the broad base of educators or be orchestrated from the principal’s office.

Hargreaves and Fink’s (2006) distributed leadership thermometer displayed levels of distributed leadership from too cold with distributed leadership occurring primarily through structural means such as roles, committees, and formal procedures, to too hot, where political elements and assertiveness are characteristic. The center portion of the thermometer
demonstrates distribution of leadership through communication, relationships, and group life. Citing a research report and position paper by the Hay Group Education (2004), Hargreaves and Fink (2006) noted that a school could be pulled apart when multiple sources of leadership are not bound together by clarity of vision and processes, and mutual accountability. In other words, the consequence of not distributing leadership is stagnation; the risk of distributing leadership is chaos.

Centers of empirical research such as the U.S. Department of Education’s Laboratory for Student Success (LSS) strive to determine just what effective school leaders must know (Richardson, 2003). Reeves (2006) insists that school leaders must understand not only what practices make leaders effective, but why such practices are effective. Educational research conducted by IEL as recently as 2001 indicated that most principals are still wedded to patriarchal notions of leadership (Richardson, 2003). Kouzes and Posner (1987) and Sergiovanni (2001) have found that credibility of interactions is the single most substantial determinant of whether a leader will be followed over time. The daily, deliberate, credible actions of a principal to inspire, enable, and encourage others serve as models for what followers are expected to know and do (Kouzes & Posner, 1987; DuFour & Eaker, 1998). According to Rosenholtz’s (1989) study related to the school as a workplace, teachers increase their effectiveness for meeting the needs of students when they feel supported through teacher networks, when they experience cooperation among colleagues, and when they are encouraged to expand their professional roles. Empowering others is fundamentally the process of turning followers into leaders (Kouzes & Posner, 1997). Louis and Marks (1996) called for principals to focus on developing a staff’s capacity to function as a professional learning community while leading from the center, rather than from the top. Newmann and Associates (1996) found that leaders of schools organized as
professional learning communities give up typically visible leader behaviors such as running meetings and offering solutions. They posited that these leaders do not unilaterally resolve differences but encourage and support an environment for teachers and staff to resolve issues (Richardson, 2003).

Hargreaves and Fink (2006) wrote that distributing leadership as a transformational process across schools is not only common sense, but morally responsible. Citing ten years of quantitative and qualitative research, Leithwood and Jantzi (2000) stated that not only does distributing leadership to teachers have a positive influence on teacher effectiveness and student engagement, but that after accounting for family background, leadership by teachers far outweighs principal leadership effects on student engagement. Hargreaves and Fink (2006) wrote that principals impact student learning by influencing teachers who affect that learning more directly.

Dwyer, Lee, Rowan, and Bossert (1983) found that successful principals made deliberate and conscious changes in their leadership behaviors in order to meet the needs of their schools and communities (Ellis, 1998). Deal and Peterson (1990) (from Ellis, 1998) reported that effective leaders use conflicts as opportunities to promote interaction and discussion about the vision of the school. Staessens (1991) described leaders of a change culture as well informed and well read (Ellis, 1998). Over the past decade a number of researchers have highlighted the collaborative nature of effective organizations (Buckingham & Clifton, 2001; Buckingham, 2005a; Reeves, 2006). Reeves (2006) noted the “…certain knowledge that no single leader possesses the knowledge, skills, and talent to lead an organization…” (p. 28), and he offered constructive solutions based on empirically-derived conclusions about the efficacy of leadership practices distributed throughout a school. Effective leadership is one of the forces that has a
profound and direct impact on student achievement (Reeves, 2006); the dimensions of leadership can be defined, assessed, and improved in a systematic manner. Reeves’ (2006) leadership map yielded a diagram of the variables of leadership practices and their impact on student achievement. Patterns of connectivity are systematically discernable allowing for linkages to be made between practices and effects. The process of developing a leadership map yields immediately useful information about the long-term sustainability of practices. Reeves’ described components of leadership are necessary in every leadership team though rarely found in a single leader. Reeves (2006) concluded with a synthesis of his research into five core ideas. First, he reminded educators that islands of excellence do indeed exist in schools, but they must be broadened to make the greatest systemic impact. Second, Reeves noted that what are now randomly perceived connections between leadership and student results must be recognized for their interconnectedness, that is, Reeves’ node-to-hub concept. Third, Reeves suggests that leaders must make a conscious change from frenetic, random action to a daily focus on disciplined, leveraged actions. Fourth, the daily practices of teaching, learning and leading must be made public and collaborative, not private and isolated. Finally, we must become as intolerant of the mediocrity of the middle of the bell curve for our students as we are intolerant of that standard as applied to our own progress and performance. Instead, we must generate the extraordinary from the ordinary.

Brown and Moffett (1999) emphasized that leadership can no longer be the responsibility of any one person. The authors stated: “The days of the charismatic principal who can single-handedly transform a school are gone, in part because education has had a long and sad history of initiatives and reforms which died when the person who developed and promoted them left” (p. 95). Reeves’ (2006) laser-like focus on the most important actions and roles of leaders,
distributed throughout an organization, reflects many of the same beliefs expressed by Brown and Moffett (1999). Citing Buckingham and Coffman (1999), Buckingham (2001, 2005b), Elmore (2000) and Reeves (2006) noted that a common practice among effective leaders is their distribution of leadership and the creation of a team of people who possess complementary strengths. Rather than focusing on development of the numerous abilities that are lacking in a single leader, a great leader magnifies his abilities while creating teams that provide different and equally important strengths for the organization. He proposed that the effectiveness of distributing leadership throughout the whole of the organization further de-mystifies the familiar heroic leader model, which is “…unsustainable, unsupportable, and dangerous to individual and organizational health” (p. xi). Reeves (2006) asserted that decisions entrusted to a diverse group are more accurate and less risky. Reeves did, however, recognize that one person can serve as a catalyst for an entire organization and he recounted a personal interview with Schmoker that focused on the courageous actions that leaders are duty-bound to take when student learning is jeopardized. The potential that school leaders have to impact teaching quality may leave a leader standing alone at times to take unpopular actions, ask uncomfortable questions, and confront those who are obstructing student success.

Thirty years of leadership research has led Kouzes and Posner to use the term practices in reference to a leader’s style or behavior. These researchers see leadership practices as the vehicles by which leaders create new opportunities for organizations, employees, and constituents (Tebanno, 2002). The research of Blumberg and Greenfield (cited in Whitmore, 1997) indicated key characteristics that successful and effective principals must possess. Strength of goal orientation and high tolerance for ambiguity are identified as necessary qualities, both personally and professionally, as is the courage to test the limits of the system, sensitivity to
dynamics of power, and skill in analysis of different approaches to problem-solving. The researchers found that leaders who perceived themselves to be individually secure, not pawns of the system, are more effective, as are those who are people-oriented while clearly remaining in charge. Blumberg and Greenfield’s research revealed that successful principals are proactive leaders who direct behaviors at building and articulating a vision of what the school is and can become (Richardson, 2003). Marzano et al. (2005) asked: “To what extent does leadership play a role in whether a school is effective or ineffective?” (p. 4). The authors attempted to answer that question by conducting a meta-analysis of thirty five years of school leadership research, weaving their findings into a set of twenty one principles considered to be possibly the most rigorous and comprehensive presented to date. They named, described, and provided average correlations to student achievement for each of the identified categories of responsibility. Correlations were computed by number of studies in which each responsibility was addressed and number of schools involved in computing the average (r). Three of the six descriptors are sequentially reproduced in Table 2 according to strength of correlation to student achievement.

Table 2

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Extent to which the principal…</th>
<th>Average r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situational awareness</td>
<td>…is aware of the details and undercurrents of the school and uses this information to address current &amp; potential problems.</td>
<td>.33</td>
</tr>
<tr>
<td>Flexibility</td>
<td>…adapts leadership behavior to the needs of the current situation and is comfortable with dissent.</td>
<td>.28</td>
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<thead>
<tr>
<th>Responsibility</th>
<th>Extent to which the principal…</th>
<th>Average r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline</td>
<td>…protects teachers from issues and influences that would detract from their teaching time or focus.</td>
<td>.27</td>
</tr>
<tr>
<td>Monitoring &amp; evaluating</td>
<td>…monitors the effectiveness of school practices and their impact on student learning.</td>
<td>.27</td>
</tr>
<tr>
<td>Outreach</td>
<td>…is an advocate and spokesperson for the school &amp; all stakeholders.</td>
<td>.27</td>
</tr>
<tr>
<td>Change agent</td>
<td>…is willing to challenge/actively challenges the status quo.</td>
<td>.25</td>
</tr>
<tr>
<td>Culture</td>
<td>…fosters shared beliefs and a sense of community and cooperation.</td>
<td>.25</td>
</tr>
<tr>
<td>Input</td>
<td>…involves teachers in the design &amp; implementation of important decisions and policies.</td>
<td>.25</td>
</tr>
<tr>
<td>Knowledge of curriculum, instruction, &amp; assessment</td>
<td>…is knowledgeable about current curriculum, instruction, &amp; assessment practices.</td>
<td>.25</td>
</tr>
<tr>
<td>Order</td>
<td>…establishes a set of standard operating procedures and routines.</td>
<td>.25</td>
</tr>
<tr>
<td>Resources</td>
<td>…provides teachers with materials &amp; professional development necessary for the successful execution of their jobs.</td>
<td>.25</td>
</tr>
<tr>
<td>Contingent rewards</td>
<td>…recognizes and rewards individual accomplishments.</td>
<td>.24</td>
</tr>
<tr>
<td>Focus</td>
<td>…establishes clear goals and keeps those goals in the forefront of the school’s attention.</td>
<td>.24</td>
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*(table continues)*
Table 2 (continued)

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Extent to which the principal…</th>
<th>Average r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual stimulation</td>
<td>…ensures faculty and staff are aware of the most current theories and practices and makes the discussion of these a regular aspect of the school’s culture.</td>
<td>.24</td>
</tr>
<tr>
<td>Communication</td>
<td>…establishes strong lines of communication with and among teachers and students.</td>
<td>.23</td>
</tr>
<tr>
<td>Ideals &amp; beliefs</td>
<td>…communicates and operates from strong ideals and beliefs about schooling.</td>
<td>.22</td>
</tr>
<tr>
<td>Involvement in curriculum, instruction, &amp; assessment</td>
<td>…is directly involved in the design and implementation of curriculum, instruction, &amp; assessment practices</td>
<td>.20</td>
</tr>
<tr>
<td>Optimizer</td>
<td>…inspires and leads new and challenging innovations.</td>
<td>.20</td>
</tr>
<tr>
<td>Visibility</td>
<td>…has quality contact and interactions with teachers and students.</td>
<td>.20</td>
</tr>
<tr>
<td>Affirmation</td>
<td>…recognizes and celebrates accomplishments and acknowledges failures.</td>
<td>.19</td>
</tr>
<tr>
<td>Relationships</td>
<td>…demonstrates an awareness of the personal aspects of teachers and staff.</td>
<td>.18</td>
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Marzano et al. (2005) proposed a team approach in a five step plan for effective school leadership:

1. Develop a strong school leadership team;
2. Distribute some responsibilities throughout the leadership team;
3. Select the right work;
4. Identify the order of magnitude implied by the selected work;
5. Match the management style to the order of magnitude of the change initiative.

Their conclusions supported claims that specific leadership behaviors of school principals have positive, well-documented effects on student achievement. While no single leadership practice of a principal creates an effective learning environment, the unique blend of leadership practices provided by formal leadership does make a difference in student success (Richardson, 2003). Sweeney (2000) applied Kouzes and Posner’s (1987) Five Practices research from the corporate field to a study of superintendents and principals in exemplary public school districts. Leadership practices that most contributed to the success of the district’s school-based improvement efforts were studied using the Leadership Practices Inventory (LPI) (Kouzes, Posner, 1997). In Sweeney’s (2000) study, the leader’s ability to model the way was considered by administrators in exemplary districts and schools to be the most important practice, followed by the practice of enabling others to act. These two attributes were deemed crucial for developing the kinds of processes necessary for school-based improvement (Tebanno, 2002).

A review of the literature regarding leadership during organizational or systemic change revealed the prominence of Hall and associates’ empirically researched concerns based adoption model (CBAM) (Richardson, 2003). Hall, Hord, and Griffin (1980) conducted the first major research study of change facilitator style using CBAM to assess successful implementation of an innovation (Hall, Hord, 1987; Hall, Hord & Griffin, 1980). During the year-long study researchers documented change facilitation approaches and interventions taken by principals, analyzing and interpreting both qualitative and quantitative data. Resulting data clearly supported the identification of three change facilitator styles strongly linked to the ultimate success of
change implementation: Initiator, Manager, and Responder (Hall, Hord & Griffin, 1980; Frieburg, 1999; Hall & Hord, 1987). Within the Change Facilitator Style framework, Pavan and Entrekin (1991) identified that Initiator principals were most likely to have a positive impact on program change in schools (Ellis, 1998). In subsequent studies by Shieh (1996) and Schiller (2003), the findings of Hall and associates have been consistently supported (Richardson, 2003). Ellis (1998) found that leaders who demonstrate an Initiator style of leadership were more successful in encouraging the learning organization process and its success in practice (Tebanno, 2002). Hord and Huling-Austin’s (1986) longitudinal study identified six components in a framework of actions and interventions that principals successfully used in educational change efforts:

1. Communicating the vision;
2. Creating an atmosphere and culture for change;
3. Providing logistical and organizational arrangements;
4. Providing training;
5. Monitoring and evaluating the change in process;

A study conducted by Boyd, Fuentes, Hord, Mendez-Morse, and Rodriguez (1993) of the Southwest Educational Development Laboratory further developed the previous research of Hord and Huling-Austin (1986) proposing six actions that lead to successful implementation of change by change facilitators:

1. Sharing a vision of the intended change;
2. Creating a context of support for the change;
3. Investing in learning about the change;
4. Planning for and researching the change;

5. Continuous professional assistance in pursuit of the change;

6. Checking progress toward the change.

Clearly, principals as skillful leaders of learning communities hold valuable keys to making the critical changes so necessary in 21st century schools.

**Theoretical Foundations of Change**

In 1859 Darwin declared: “It is not the strongest of the species that survive, nor the most intelligent, but the most responsive to change” (Reeves, 2006, p. 26). Periods of change and reform in education appear to evolve from societal and economic concerns which result in demands being placed on public schools to put things in order (Tyack, 1990). Fullan (1999, 2001a) writes that concerted efforts to reform public education go back only slightly more than five decades, but Ellsworth (2001) notes that even in that relatively short span of time the volume of published literature concerning educational change is staggering.

During the early years of the twentieth century, Industrial Revolution-era schools and their hierarchies evolved into a command and control style in which efficiency, control, and mass production were the norms of a successful organization (Wald & Castleberry, 2000). Schools were centrally controlled, authority was hierarchical, and management functioned from a scientific perspective (Ostmeyer, 2003). By the early 1960s changes were occurring in curriculum, school structures of time and space, methods of teaching, and budgets. Political power had shifted to groups outside of education which previously had exerted little influence over educational policies. These groups sought responses to social differences and social injustice which eventually contributed to decentralization of power (Ostmeyer, 2003).
Richardson (2003) notes that a flurry of influential federal and state commission reports in the 1980s such as A Nation at Risk (1983) called for the fundamental restructuring of the educational system. The reports revealed a need for a number of key changes including changes in organizational structure to result in school-based management involving all stakeholders. Also revealed was the need for changes in professional roles, tightening teacher preparation standards while giving teachers more responsibility in decision-making and instructional arrangements. A third area of needed change was in mandated goals, accountability, and increased involvement in determining curriculum, textbooks, and assessments of students, teachers, individual schools and districts.

The educational arena of the 1980s was also characterized by a focus on the role a principal should play in a school’s change efforts (Fullan & Stiegelbauer, 1991; Hord, 1997; Louis & Kruse, 1995). First-order change, incremental and step-by-step in practice “…fine tunes the system through a series of small steps that do not depart radically from the past” (Marzano, Waters, McNulty, 2005, p. 66). In marked contrast, second-order change involves significant change from the expected and familiar, and “…alters the system in fundamental ways, offering a dramatic shift in direction and requiring new ways of thinking and acting” (Marzano et al., 2005, p. 66). Edmonds’ (1979) research on effective schools set the prevailing educational tone for the 1980s, but too often policy makers and educators at all levels adopted fads and fragmented innovations which left schools without the capacity to put the theories of Edmonds and others into practice (Ostemeyer, 2003). Reform efforts of the 1980s were mired in first-order changes causing schools to remain ineffective in improving either instruction or student performance (Cuban, 1988). Hord (1997) maintained: “A quick-fix mentality, especially prevalent in U.S.
culture, resulted in many schools being poorly prepared for their plans for change, therefore implementing change in a superficial and less-than-high-quality way” (p.1).

As the final decade of the 20th century opened, research and practice began to complement each other resulting in some movement toward more effective schools through meaningful staff development, improved leadership, and thoughtful curriculum initiatives (Ostmeyer, 2003). However, the promise of significant school reform would again be obstructed by what Fullan and Stiegelbauer (1991) called the piecemeal, fragmentary implementation of reform efforts. A disconnect was clearly apparent between change and leadership as leaders mistakenly expected great change with little conflict. Leaders, uninformed about theory and principles of organizational change, continued to be victims of change rather than architects of it.

Despite disappointments of the past fifty years, and possibly because of the failures of a half century of struggle for meaningful reform, public school educators have been slowly moving toward a new paradigm of schooling. This new paradigm frames the institution itself as a community of learners who over time produce more learning with each entering student, with each year that passes, with each graduating class (Gonzalez Negrete, 2006). In order for today’s leaders to meet the educational needs of our time, they must abandon the outdated educational factory model of American public schooling and school leadership which has so persistently prevailed throughout the twentieth century and into the next. A rapidly changing society cannot be sustained by a static educational system despite good intentions and efforts (Jenlink, 1995). Thus, a new 21st century conceptual model of schools as learning organizations must be adopted (IEL, 2001) that educates its citizenry to continuously learn and work in diverse environments. This model is crucial to the survival of individuals and the nation in an increasingly complex global society (Fullan, 2001b). A radical paradigm change also requires organizational change.
(Gonzalez Negrete, 2006) that transforms cultures within districts, schools, and classrooms at the level of second-order change, affecting the culture and structure of schools, renewing leadership roles, and reorganizing responsibilities (Fullan, 1991). Successful and sustainable reform in the 21st century requires that schools have the capacity to continuously equip learners for a constantly changing world in which teamwork and collaboration are the norm (Galagan, 1994; Ostmeyer, 2003).

Learning to lead is learning to manage change (Bennis, 1994). Hall and Hord (2001) described change as a process through which individuals and organizations advance as they gradually come to understand and become skilled and competent in the use of change methods and change processes. Change as we are coming to know it is a systemic, cyclical process that suggests change of the system rather than change within the system (Jenlink, Reigeluth, Carr, & Nelson, 1996). Tradition-bound schools are inadequate to address the issues that present themselves in our complex society (Richardson, 2003). Burke (1987) espoused that the quality of an innovation was predictive of its success, yet history is replete with examples of innovations whose effectiveness could be soundly demonstrated but which failed to diffuse (Rogers, 2003). According to Burke and Church (1992) and Hord (1997), understanding the change process is crucial for leadership to navigate implementation of even the most sound innovation. Administrators must be leaders of learning and change (Bowsher, 2001). Precious time and scarce dollars are too often wasted on change efforts that do not have the support of top level administrators and principals. School administrators are keenly aware that the future of public education rests on their leadership, their vision, their knowledge about organizations, and their knowledge about student learning (Ostmeyer, 2003).
Ellsworth (2000) constructed a road map of six classical change theory models for educators seeking guidance from the literature. Noting that much useful knowledge of the change process has been gained in other fields such as Human Resources Development and Human Performance Technology, Ellsworth credited his own eclectic professional background in business administration, military training, and adult education with bringing him face to face with the connections likely missed had he been purely of one camp or the other. While taking a leadership role in the systemic change movement his philosophical roots remain in classical change theory, “…reconciling the old tactics with a new strategy to form a unified whole” (p. 227). Ellsworth (2000) made several implicit assumptions about the nature of change:

1. Change can be understood and managed; he refers to this as planned change.

2. The key to understanding and managing change successfully is to bring the diverse models together in a toolbox, rather than to select only one model.

3. Effective, lasting change is best facilitated by multiple, coordinated innovations addressing the priorities and concerns of multiple stakeholder groups. (p. 15)

He noted that over time the knowledge base of change research has suffered from a “…curious and counterproductive tendency…to arrive at a position, stake out our philosophical turf, and defend it stoically against all comers” (p. 21). Rogers (2003) previously used the term invisible colleges to refer to this isolationist mentality of resistance to collaboration and exchange of ideas. Practitioners of educational change were left with no strategies from inside the philosophical camps to unite their parts in service of any change model as a whole. Decades of change research had resulted in some powerful change facilitation tools, but no unifying toolbox in which they could be carried, resulting in the failure, according to Hall and Hord (2001) of most educational innovations to sustain past the implementation phase. Fullan (2001b) declared
that if schools ever learn how to learn from each other, “...their future is assured. Fortunately in recent years, recognition on all sides of the inherent value of uniting the empirical knowledge base of the classical models within the context of systemic change has increased. Ellsworth’s (2000) purpose for publication was to illustrate how the decades of knowledge accumulated by each of these invisible colleges can be integrated by the practitioner within a systemic strategy grounded in a specific context to improve education and learning. Today’s educational change research can trace its roots to two ancestral philosophies, the diffusion of innovations tradition of the 1940s, and the general systems theory of the 1950s (Ellsworth, 2000). Using the concept of change as a specialized instance of the general communications model, Rogers (2003) illustrated how the tactics represented by the classical model may be fused into a comprehensive, systemic strategy for the change process as a whole. Ellsworth (2000) explored the research using the change communication model as a framework to suggest common change questions that can best be answered from the perspective of different classical camps of change research.

Introduced as early as the mid-1950s, the second philosophical ancestor of current educational change research, general systems theory (Banathy, 1973) tended to focus on management science. However general systems theory emerged as a major focus of educational research fifteen years later, with the publication of a new work by Banathy (1988). Webster’s New World Dictionary, Second Concise Edition (1982) defines the term system as, “a group of things or parts working together or connected in some way so as to form a whole” (p. 760). Salisbury (1996) highlights three components of Webster’s definition that are relevant:

1. Each component of a system can be identified and examined separately; understanding the system does not demand that the system be seen only as the whole.
2. The components do not function in isolation. One can identify and examine the inherent interdependencies and interactions between them.

3. The relationships between the components present synergies that cause the operation of the whole to be more effective than the operation of the parts in isolation. (pp. 9-10)

General systems theory reprises the ancient Blind Men and the Elephant story or the forest for the trees metaphor in its insistence on purposeful use of multiple theories of change. The whole is no more crucial to survival or success than individual parts, just as no individual part is more crucial than the whole. Ellsworth (2000) notes: “While it is critical to understand which of the tools in our change toolbox can best serve the practitioner under different circumstances, it is equally important not to lose sight of the systemic nature of the change effort as a whole” (p. xx).

Ellsworth’s fusion, by the early 1990s, of these two foundational, classical theories formed his own philosophy leading to a holistic perspective construct known as the systemic change in education model. Systemic change research is rooted in Banathy (1973, 1988, 1991) and greatly expanded by Reigeluth and Garfinkle (1994). Ellsworth (2000) explains:

Applied as a strategy for guiding educational change, a systemic model is required so that we can:

1. Integrate the parts of Rogers’ change communication model;
2. Select and coordinate the types of changes one makes;
3. Involve stakeholders and consider their needs and concerns;
4. Ensure that the end result of these processes constitutes a viable system in the context of its surrounding systems. (p. 29)

This review now focuses on six components synthesized by Ellsworth (2000) in the systemic change in education model. The first theory, known as the diffusion of innovations
model (Rogers, 1995) originated in the 1940s. This theory is clustered around components best recognized from any university Speech Communications course as the general communications model involving components of sender, receiver, message, medium, and interference. Rogers (1995) expanded the model to a highly specialized model in which general communication tactics may be fused into a comprehensive, systemic strategy for the change process as a whole. Just as the general communication model is understood to be a two-way process as each communicant is both sender and receiver, so too in Rogers’ specialized change communication model communication flows in both directions, and to miss that element may prove fatal to the change effort (Ellsworth, 2000). Note the disappointing sales in Spanish-speaking countries of Chevrolet’s NOVA due to the failure of innovators to recognize that *No va* in Spanish translates “doesn’t go.”

The second classical theory to be synthesized into Ellsworth’s systemic change in education model is Ely’s (1976) conditions of change model exploring the circumstances that predispose an environment toward change. At a time when earlier studies of change environments and contexts had focused heavily on quantitative data, Ely’s (1976, 1990) model provided insights into the extent to which members of a social system were psycho-socially ready to consider change. Scholars writing from the conditions of change model have produced a rich and consistent knowledge base (Ellsworth, 2000) that informs practitioners in the initial determination of whether environmental conditions surrounding the proposed change indicate likelihood of success. Ely’s model may be useful in assessing environmental and contextual conditions before implementation or assessing those components in response to developments in the progress of the innovation or the process.
Ellsworth (2000) synthesized a third model, the change agent model, presented in the work of Fullan and Stiegelbauer (1991), the only framework discussed by Ellsworth that focuses on the diverse characteristics of the people involved in seeking educational innovations, from individuals at a campus level to institutions at the state or national level. The authors propose guidelines for a variety of situations, whether dealing with resistance, coping with change, or leading change efforts. This perspective is likely to serve the practitioner best by suggesting types of change activities that are typically associated with or especially effective with change agents in particular roles. Discussion of limitations and constraints associated with practitioners’ roles may enable them to avoid activities that are unlikely to produce a positive effect. Fullan and Stiegelbauer (1991) addressed characteristics and change postures. Their framework is helpful in guiding the practitioner to understand the perspectives of others with whom collaboration is desired. The fourth model that Ellsworth (2000) synthesized into his systemic change in education model was designed especially for the practitioner of educational change. Havelock (1973) focused on the change process, stages of planned change, and guidance for structuring the change within the framework of the stages that are required to lay a solid and sustainable foundation. Using the work of Havelock (1973) and Havelock and Zlotolow (1995), change agents develop awareness of two critical topics rarely treated in the literature: 1) the process by which change agents determine when their work is done and 2) how they can guide its successful transition from implementation to institutionalization (Ellsworth, 2000).

The work of Hall, Wallace, and Dossett (1973) further expanded by others including Hall and Hord (2001, 2006) focused on the intended adopter and is the fifth model synthesized by Ellsworth (2000). Known as the concerns based adoption model, or CBAM (Hall, Hord, 2001, 2006), this model is based on the assumption that teachers are the key adopters of educational
change and that understanding and adapting the change process to their concerns must be the primary focuses of change facilitators. The most effective interventions will vary predictively or in response to adopter concerns evolving over time. CBAM has several unique strengths. Dimensions of the change process are paired with valid and reliable instruments used to diagnose the concerns of adopters and users of the innovation. Measures of stages of concern (SoC) (Fuller, 1969; Hall, George, Rutherford, 1979; Hall & Hord, 2006) and levels of use (LoU) (Loucks, Newlove, Hall, 1975; Hall, Hord, 1987; Hall, Hord, 2006) provide powerful diagnostic information regarding the progress of the implementation effort. Facilitators’ use of the Innovation Configuration (IC) Component Checklist (Hall & Hord, 2001, 2006) allows practitioners to communicate just what effective use of the innovation actually looks like and to specify what, if any, adaptations are needed to minimize obstacles to the innovation without rendering it ineffective. Development of innovations, the activity related to creating an innovation, and implementation of an innovation, the establishment of the use of the innovation by intended adopters, are according to Hall and Hord (2001) “…two sides of the same coin” (p. 6).

The sixth model synthesized by Ellsworth (2000) for his systemic change in education model focuses on resistance to change. Zaltman and Duncan (1977) presented a thorough classification of eighteen factors and four major categories of barriers that disrupt change efforts and distort adopter perceptions of innovations. From the standpoint of Roger’s change communication model, overcoming these obstacles is as necessary as any other component for the success of the change effort as a whole (Ellsworth, 2000). Zaltman and Duncan (1977) explored barriers to change so that the practitioner can recognize such obstacles as they arise, ideally, even before they arise.
Ellsworth’s model presented a new perspective that demonstrated for the practitioner how each part or philosophical model can perform a necessary function while clearly emphasizing the necessity for the system employed as a whole. By uniting the individual models in service to a guiding strategy for a particular change effort we improve our chances of effective, lasting change (Ellsworth, 2000).

Empirical Foundations of Change

Marzano, Waters, and McNulty (2005) addressed the reasons that innovations fail despite apparently well thought out, well articulated, and even well researched innovations. The primary finding from experience and from their factor analysis was that leaders’ practices fail to match the magnitude of the first- or second-order change. First-order change is incremental, a step-by-step process that “…fine tunes the system through a series of small steps that do not depart radically from the past” (Marzano, Waters, & McNulty, 2005, p. 66). Second-order change involves dramatic change from the expected and familiar. Second order change “…alters the system in fundamental ways, offering a dramatic shift in direction and requiring new ways of thinking and acting” (Marzano, et al., 2005, p. 66). Other change theorists have recognized and studied similar change phenomena. Heifetz (1994) employs the terms Type I and Type II for first-order change, and Type III in reference to second-order change. Argyris and Schon (1974, 1978) refer to the same concepts of change as single-loop and double-loop learning.

Use of Hall and Hord’s (2001) concept of concerns provides a way of understanding the highly complex states of emotion and thought that people have in relation to a given educational change or innovation (Gonzalez Negrete, 2004). Hall and Hord (2006) cite Fuller’s pioneering 1969 study of student teachers as the origin of the use of the word in reference to the changing feelings and perceptions of student teachers as they gained experience and maturity in their
student teaching. Hall, Wallace, and Dossett (1973) hypothesized about the stages of concerns of educators as they faced new or different innovations. Their hypotheses led to the construction of the concerns based adoption model (CBAM) (Hall, George, & Rutherford, 1979) an empirically-based conceptual framework that has become an established model of the developmental process that individuals experience as they implement innovations (Hall, Loucks, 1977; Hall, George, Rutherford, 1979; Hall, Hord, 1987; Hall, Hord, 2001; Hord, Huling-Austin, 1986; Hord, Rutherford, Huling-Austin, Hall, 1987; Rutherford, Hord, Huling-Austin, Hall, 1983). In 2006, Hall and Hord stated:

One important result of our long-term collaborative research agenda is that we now can draw some conclusions about what happens when people and organizations are engaged in change. A number of patterns have been observed repeatedly, and some have developed into major themes, or basic principles…As in the so-called hard sciences, there is now enough known about some aspects of the change process that we can state a series of principles that will hold true for all cases. (p. 4)

According to Hall and Hord (2006), acknowledging specific principles, as shown in Table 3, will likely result in the success of change efforts.

Table 3

<table>
<thead>
<tr>
<th>Principle of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Change is a process, not an event.</td>
</tr>
<tr>
<td>2. There are significant differences in what is entailed in development and implementation of an innovation.</td>
</tr>
</tbody>
</table>

(table continues)
Table 3 (continued)

3. An organization does not change until the individuals within it change.
4. Innovations come in different sizes.
5. Interventions are the actions and events that are key to the success of the change process.
6. There will be no change in outcomes until new practices are implemented.
7. Administrator leadership is essential to long-term change success.
8. Mandates can work.
9. The school is the primary unit for change.
10. Facilitating change is a team effort.
11. Appropriate interventions reduce resistance to change.
12. The context of the school influences the process of change.

The concerns based adoption model differs from other models in its primary focus on the front line people responsible for the implementation of the expected educational change. CBAM’s secondary focus, according to Gonzalez Negrete (2004) is on how leaders may facilitate or obstruct the desired path toward change. The term change facilitators is used to describe internal and external personnel who have responsibility for aiding those involved in learning to use the innovations. Attention to the concerns of change facilitators is important to determine how their concerns influence their actions and, ultimately, how their concerns influence the implementation of educational innovations (Gonzalez Negrete, 2004).

In a study of school readiness for change, Huffman and Hipp (2000) reported findings from a study of twenty schools that had already been identified as demonstrating commitment to
whole school reform. Data indicated that emerging integration of shared leadership, shared vision, and supportive school culture characterized the readiness for change in seven of the twenty schools. Principals in high-readiness schools were proactive and encouraged the staff to accept the responsibilities and rewards of leadership. Innovation and decision-making by teachers was encouraged and supported. Principals in high-readiness schools expressed the vision for the school in terms of student learning, they were aware of and publicly noted teachers’ actions, and teachers initiated change and implemented innovations absent any apparent imposed directive to do so. A sense of capacity building and empowered decision-making were visible signs of readiness within these schools.

Whether a school is in a state of high- or low-readiness, sustainable change must be viewed as a process that involves a multi-year task. Progress toward change is too often lost when facilitators fail to monitor progress routinely (Hall & Hord, 2006), forgetting that we are more likely to attend to that which is closely monitored. Additional obstacles recognized by Senge (1990), Ellsworth (2000), DuFour (1999) require constant attention over extended time, considering that researchers have documented that implementation of deep and sustained changes in education take three to five years (Gonzalez Negrete, 2004). Hall and Hord (2001) note that often, during the first or second year of a change effort participants perceive that the change and the effort have been ineffective when in fact there was not enough time and/or support for implementation. Ellsworth (2000) states, “We are called upon to equip the citizens and the workforce of the Information Age with the knowledge and tools they require to drive and maintain the engines of progress,” and he goes on to say that the call does not come without conflict, but “…conflict, as the Chinese know, is what we make of it. We may choose to perceive it as danger, as hidden opportunity, or more accurately, as both” (p. 246).
Summary

Chapter 2 provided a review of current literature that addresses theoretical and empirical scholarship regarding professional learning communities, educational leadership, and sustainable change. Spillane, Halverson, and Diamond (2004) have stated that a rich understanding of how leadership practice is undertaken by different leaders in different contexts is essential to the understanding of effective leadership. Huffman and Jacobson (2003) have noted that leadership practices are among the best predictors for high or low teacher participation in change efforts. Few studies have been undertaken to examine how specific leadership practices of principals align with those practices that promote and sustain professional learning communities (Williams, 2006). No study has been conducted of a school district that is actively engaged in the process of reculturing as a professional learning community. This study adds to the research base and will result in a useful profile of effective leadership practices that are likely to result in successfully recultured professional learning communities. Chapter 3 explains the methodology used to implement the correlational analysis of the two variables.
CHAPTER 3

METHODOLOGY

Sound research design employs several solidly chosen elements, such as context, selection of participants, instrumentation, and methods used for analysis of data. Chapter 3 explains the methodology used to implement this correlational study analyzing the relationship between leadership practices of principals, as measured by the Leadership Practices Inventory (LPI), 3rd ed. (Kouzes & Posner, 2003a) and successful reculturing of schools as professional learning communities (PLCs), as measured by the Professional Learning Communities Assessment (PLCA) (Olivier, Hipp, & Huffman, 2003). The chapter begins with a description of the context of the study, restatement of the research questions, and explanation of the research design, followed by an explanation of the recruitment of participants, description of the instrumentation used and procedures used for data collection and data analysis. A brief summary closes the chapter.

Context of the Study

This study was conducted in a single mid-sized public school district in Texas where the researcher is currently employed. The district is comprised of three high schools, four junior high schools, eighteen elementary schools, one stand-alone preschool/Kindergarten, three Head Start schools, one alternative education school and two secondary career centers. The population of the district is approximately 14,600 students, 1,200 teachers and 30 principals. The research context was appropriate considering the focus of this study, the relationship between leadership practices and successful, sustainable reculturing of schools. Use of this convenient sample was justified by the unique opportunity that existed to study a school district already
years into a systemic change initiative. A brief explanation of the district’s reculturing initiative follows.

For a number of years the district’s Board of Trustees had recognized that leadership development was one means of increasing student achievement. In 2005 the published work of DuFour, Eaker, DuFour, and Karhanek (2004) served as a catalyst for the Board’s commitment of a portion of the district’s time and money to the development of a district framework designed to reculture all schools within the district as professional learning communities. Initially, a cadre of leaders made up of a nucleus of campus principals and the Assistant Superintendent participated in a national professional learning communities conference. The cadre followed up with four weeks of small group study and planning for subsequent introductory presentations to all principals in the district. The framework for change evolved to include district allotments of money to each campus for purchase of multiple copies of relevant publications, presented in Table 4.

Table 4

*Publications Supporting District Framework for Change*

<table>
<thead>
<tr>
<th>Publication Title</th>
<th>Author and Publication Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Learning Communities at Work: Best Practices for Enhancing Student Achievement</td>
<td>DuFour, R., Eaker, R., 1998</td>
</tr>
<tr>
<td>Whatever It Takes: How Professional Learning Communities Respond When Kids Don’t Learn</td>
<td>DuFour, R., Eaker, R., DuFour, R., Karhanek, T., 2004</td>
</tr>
</tbody>
</table>

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Table 4 (continued)

<table>
<thead>
<tr>
<th>Publication Title</th>
<th>Author and Publication Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leading in a Culture of Change</td>
<td>Fullan, M., 2001</td>
</tr>
<tr>
<td>Professional Learning Communities: Communities of Continuous Inquiry and Improvement</td>
<td>Hord, 1997</td>
</tr>
<tr>
<td>School Leadership That Works: From Research to Results</td>
<td>Marzano, R., Waters, T., McNulty, B., 2005</td>
</tr>
<tr>
<td>The Learning Leader: How to Focus School Improvement for Better Results</td>
<td>Reeves, D., 2006</td>
</tr>
</tbody>
</table>

The Board of Trustees provided thousands of additional dollars for each campus to use for professional learning communities training and travel. The district subscribed to a professional learning communities website, further increasing faculty and staff accessibility to PLC information. District leaders also expressed expectations for use of time for collaboration focused on professional learning and growth for teachers and administrators. Beginning in August of 2006, the traditional opening of school assembly became an opportunity for district
leadership to share common vision and goals within a professional learning communities’ perspective. Monthly administrator meetings focused directly on book studies and discussion, just as teachers were actively recruited for leadership cohorts that provided volunteer teachers with a new paradigm of distributed leadership. Immersion of all new teachers in the professional learning community philosophy was implemented in May 2008 mobilizing veteran teachers and administrators as orientation team leaders. Members of the Board of Trustees continued to support this multi-year initiative, even personally attending regional PLC during the summer of 2008.

Research Questions

Three research questions were posed for this study:

1. Is there a relationship between strength of leaders’ perceptions of their own leadership practices and strength of teacher and principal perceptions of their schools as professional learning communities?

2. Is there a relationship between teachers’ perceptions of the strength of their principals’ leadership practices and strength of teacher and principal perceptions of their schools as professional learning communities?

3. Is strength in any single leadership practice of a principal more highly related to strength of teacher and principal perceptions of their schools as professional learning communities?

Instrumentation

Two instruments were used in the data collection process, the Leadership Practices Inventory (LPI), 3rd ed. (Kouzes & Posner, 2003a) and the Professional Learning Communities Assessment (PLCA) (Olivier, Hipp, & Huffman, 2003). Permission was granted for use of both
instruments. A Likert scale, used in both the LPI, 3rd ed. and the PLCA (2003), is an instrument that measures strength of agreement towards a set of clear statements. Likert scales associate ordinal values with qualitative attributes and are administered in the form of a questionnaire gauging attitudes and reactions of respondents, presented in Table 5.

Table 5

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Ordinal Value</th>
<th>Qualitative Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLCA</td>
<td>1</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Disagree</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Agree</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>LPI (Self and Observer)</td>
<td>1</td>
<td>Almost Never</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Rarely</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Seldom</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Once in a While</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Occasionally</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Sometimes</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Fairly Often</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Usually</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Very Frequently</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>Almost Always</td>
</tr>
</tbody>
</table>

A review of the validity and reliability of each instrument is presented here. Reliability refers to the extent to which an instrument contains measurement errors that cause results to differ for reasons unrelated to the respondent. Fewer internal errors results in a more reliable instrument. Validity refers to the extent to which an instrument truly measures the constructs it claims to
measure. Validity also refers to the extent to which the data yielded by the instrument has meaning for respondents.

Strength of school as a professional learning community was measured using the Professional Learning Communities Assessment (PLCA) (Olivier, Hipp, & Huffman, 2003). The PLCA yielded information regarding school characteristics in six specific dimensions: shared and supportive leadership; shared values and vision; collective learning and application; shared personal practice; supportive conditions-relationships; and supportive conditions-structures.

The Professional Learning Communities Assessment (PLCA) (Olivier, Hipp, & Huffman, 2003) extends Hord’s (1998) School Professional Staff as Learning Community (SPSLC) questionnaire, based on her extensive review of literature (Olivier, in Huffman & Hipp, eds., 2003). According to Meehan, Orletsky, and Sattes (1997), results of field tests of Hord’s SPSLC showed that the instrument did differentiate between faculties in terms of their maturity as learning communities. Field testing also determined that the instrument did in fact measure one overall construct, therefore, the data from the individual items were combined into one total scale. The more positively a school is viewed as a learning community, the higher the number on the total scale.

Olivier, Hipp, and Huffman (2003) developed the PLCA to collect and analyze data measuring characteristics of a professional learning community that are perceived by teachers and principals to be present in the schools where they work. In addition, Olivier (in Huffman & Hipp, 2003) notes that the PLCA is designed to assess perceptions about the school based on Hord’s (1997) five dimensions of a professional learning community with the addition of forty-five critical attributes added by Olivier, Hipp, and Huffman (2003), paraphrased in Table 6.
Table 6

_Hord’s (1997) Five Dimensions of Learning Communities and Olivier, Hipp, and Huffman’s (2003) Additional Critical Attributes_

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Additional Critical Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared and supportive leadership</td>
<td>Staff involved in decisions; principal incorporates advice; staff have access to key information; principal is proactive; staff initiates change; principal shares responsibility and rewards; principal shares power and authority; leadership is nurtured among staff; decisions are made across grade and subject; responsibility and accountability are shared.</td>
</tr>
<tr>
<td>Shared values &amp; vision</td>
<td>Collaborative processes exist; shared values support norms of behavior; shared vision is on learning; decisions align with values &amp; vision; vision is developed collaboratively; goals focus on student learning; policies and programs align with vision; stakeholders actively create high expectations.</td>
</tr>
<tr>
<td>Collective learning &amp; application</td>
<td>Staff collaboratively seek knowledge, skills, strategies; relationships reflect common commitment; staff collaborate to address student needs; collective learning occurs through open dialogue; dialogue leads to continued inquiry; professional development focuses on teaching &amp; learning; new learning is applied to solving problems; commitment to learning is apparent.</td>
</tr>
<tr>
<td>Shared personal practice</td>
<td>Peers observe and encourage each other; peers provide feedback related to instruction; ideas for student learning are shared; student work is collaboratively reviewed; opportunities exist for coaching and mentoring; learning is applied and results are shared.</td>
</tr>
</tbody>
</table>

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Table 6 (continued)

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Additional Critical Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supportive conditions</td>
<td>Trust &amp; respect exists; risk-taking is trusted and respected; recognition and celebration occur regularly; stakeholders are unified in efforts to change culture; time is provided for collaboration; schedules promote shared practice; funds are available for professional development; technology and materials are made available; people are expert resources; facilities are attractive; proximity allows for collaboration; communication systems are effective for staff; communication systems are effective for all.</td>
</tr>
</tbody>
</table>

Test Reliability

Internal reliability refers to the associations among individual items found within an instrument that lead to consistency of findings (Huck, 2004). For the Professional Learning Communities Assessment (Olivier, Hipp, & Huffman, 2003) internal reliability was found to be satisfactory using Cronbach’s Alpha coefficients computed for its five factored subscales. Alpha coefficients ranged from a low of .83 for two of the five dimensions, Collective Learning and Application, and Supportive Conditions, to a high of .93 for the dimension of Shared Values and Vision. Factor analyses used Varimax procedures. These analyses indicate that the PLCA is a highly credible measure of faculty perceptions of characteristic practices of professional learning communities within schools (Olivier in Huffman, Hipp, 2003, p. 74).

Leadership practices of principals were measured using the Leadership Practices Inventory, Third Edition (Kouzes & Posner, 2003b) both Self and Observer forms (LPI-Self, LPI-Observer). Based on research that spans more than two decades, the LPI, 3rd ed. provides
strong and consistent data regarding reliability of the instrument. Both LPI inventories yielded information regarding leadership practices in five specific constructs: modeling the way; inspiring shared vision; challenging the process; enabling others to act; and encouraging the heart. The thirty leadership practice statements that make up the LPI-Self and the LPI-Observer instruments mirror each other, i.e., LPI-Self Statement 1 states, “I set a personal example of what I expect of others”, while LPI-Observer Statement 1 states, “Sets a personal example of what he/she expects of others”.

Statistical measures of both internal reliability and test-retest reliability of the Leadership Practices Inventory, 3rd ed. (Kouzes & Posner, 2003b) are strong. Internal reliability for the LPI, measured by Cronbach’s Alpha, was found to be high, with all LPI-Self scales at or above the .75 level. Internal reliability was consistently above the .85 level on the LPI-Observer instrument. Test-retest reliability scores are also consistently above the .90 level. A five-factor solution for Self- and Observer- LPI instruments was generated by a factor analysis using principal component analysis with Varimax rotation and Kaiser normalization. Empirical support for the concept of the five leadership practices (Kouzes & Posner, 2003a) of modeling, inspiring, challenging, enabling, and encouraging are clearly provided by these results.

Test Validity

Huck (2004) noted that test reliability is a necessary but insufficient condition for measuring the validity of an instrument in comparison to other measures of the same constructs. Initial evidence of the construct validity of the PLCA was provided by expert evaluation, including teachers, campus and district administrators, university faculty, and educational researchers. Participants, evaluating forty-four PLCA statements regarding the relevance and importance of specific school level practices that characterize professional learning communities,
rated ninety-eight percent of the PLCA items as high in importance. Only one item received a lower (medium) rating in terms of relevance as a characteristic of a learning community. A total of forty-five items were retained following the division of one item into two statements. Expert evaluation of the original forty-four items was followed by field testing ($N=247$) under conditions similar to conditions for which the assessment was developed. Evidence of strong construct validity of the PLCA (2003) was determined by use of factor analysis. Factor analysis resulted in descriptive statistics for minimum and maximum values on a four-point Likert scale, as well as item means and standard deviations (Olivier in Huffman & Hipp, 2003, p. 69-74).

Based on research that spans more than two decades, the LPI, 3rd ed. provides strong and consistent data regarding validity of the instrument. Validity of the LPI-Self and LPI-Observer instruments for measurement of the construct of leadership was empirically analyzed. In order to minimize self-reporting bias only LPI-Observer scores were used in the correlations with other measures of the leadership construct. The LPI has been validated by correlations to employee commitment levels (Gunter, 1997) and to positive perceptions of workplace empowerment (Sproule, 1997). LPI scores have explained over 55 percent ($p < .0001$) of the variance in work group effectiveness and successful predictions of managers’ performances ($p < .0001$). These relationships have been reported across industries and disciplines, within public and nonprofit organizations as well as in private sector businesses.

Face validity, a subjective evaluation, and factor analysis of the uniqueness of each of the five measured dimensions of the LPI, 3rd ed. are strong, as are predictive and/or concurrent validity. There is considerable support for Kouzes and Posner’s five practices of exemplary leadership framework (Kouzes & Posner, 1997; Kouzes & Posner, 2003a) developed through a triangulation of qualitative and quantitative research methods and studies. Both internal and test-
retest reliability coefficients on the LPI, 3rd Ed. are very strong, with scales reported between .80 and .90. Acceptable internal reliability coefficients are usually .50 or higher. Reliability is also enhanced by more frequent response opportunities. Inclusion of thirty items on both the LPI-Self and LPI-Observer forms further strengthens reliability confidence of the instrument. The actions that make up these practices were translated into behavioral statements, and psychometric processes were repeatedly employed, resulting in the LPI, 3rd ed. used in this study.

Recruitment of Participants

The study population was made up of principals and teachers in the selected district who volunteered to participate in the study. The researcher introduced the study to all principals in the district at a monthly principals’ meeting. Requirements for participation were explained, as were procedures for assuring informed consent, anonymity, and confidentiality to all participants. The researcher then coordinated with principals to determine dates for similar presentations to be made at each participating campus. Prior to each campus visit, the researcher provided one LPI-Self protocol and eight LPI-Observer protocols (Kouzes & Posner, 2003b) to the campus principal. In accordance with recommended administration procedures (Kouzes & Posner, 2003b), principals were instructed to distribute instrument protocols to eight selected teacher participants to be completed within a specified two-week window of time. Completed LPI-Self and LPI-Observer protocols were retrieved in person by the researcher. However, in order to provide greater consistency of administration and optimal independence of participant responses, the researcher directly administered the PLCA (Olivier, Hipp & Huffman, 2003) at each campus, as seen in Figure 6, at each participating campus, at which time informed consent was thoroughly explained and documented.
Figure 6. Study participants and the assessments they completed.

Data Collection

In preparation for the collection of rich data, the researcher made an initial presentation during a monthly principals’ meeting to explain the study’s purpose and the requirements for participation. A calendar of visits to participating campuses was developed determining dates when the researcher would attend a faculty meeting at each campus to directly conduct a single administration of the PLCA (Olivier, Hipp, & Huffman, 2003) with participating teachers and the campus principal. At each campus visit the researcher explained the purpose of the study and the requirements for voluntary participation. Safeguards for anonymity and confidentiality were explained and a document of informed consent was reviewed which specified the voluntary nature of the study. Such anonymity was not possible, nor was it promised to principals. However, data was stored securely at the residence of the researcher and was at no time introduced on any campus within the district. Participants were assured that data from the surveys would be examined exclusively for research purposes by the researcher, her dissertation
committee and research associates of the committee. Principals were offered the opportunity to receive composite feedback specific to his or her individual and campus results from both the LPI, 3rd ed. and the PLCA (2003). The researcher then directly conducted a single administration of the PLCA with participating certified personnel including the campus principal. Principals completing the LPI-Self (Kouzes & Posner, 2003b) form, and teachers completing the LPI-Observer (Kouzes & Posner, 2003b) form were directed to return completed forms within a two-week window of time.

Principals at the twelve participating campuses completed the LPI-Self survey, and as specified by the LPI directions for administration, up to eight teachers were selected by the principal to complete the LPI-Observer survey. All participants were instructed not to place their names on any survey response forms. Teacher data was analyzed at the campus level, not at the individual level, and data was coded so that no information could personally identify subjects. Data from the surveys was examined exclusively for research purposes by the primary researcher, her dissertation committee, and research associates of the committee. Responses by principals and teachers on the PLCA were hand-tallied by the researcher and entered into an Excel program, as were responses by principals on the LPI-Self instrument and responses by teachers on the LPI-Observer instrument.

Data Analysis

This study was conducted from a quantitative research design perspective using both statistical and non-parametric analyses. Leadership practices of principals, as perceived by principals themselves and as perceived by observers in the workplace, constitutes the independent research variable. Strength of schools as professional learning communities constitutes the dependent research variable. Both research variables were measured using Likert-
type surveys, yielding ordinal and ranked categorical data. The study was conducted at twelve campuses in a single mid-sized public school district in Texas where the researcher is currently employed. At each campus, data was collected from three professional groups: teachers completed the Professional Learning Communities Assessment (Olivier, Hipp, & Huffman, 2003), a 4-point Likert survey; principals completed the Leadership Practices Inventory-Self instrument (Kouzes, Posner, 2003b), a 10-point Likert survey; selected sub-groups of up to eight teachers completed the LPI-Observer instrument (Kouzes & Posner, 2003b), also a 10-point Likert survey. Teacher data was collectively analyzed at the campus level, not at the individual level. Data analysis was focused on the relationship between strength of leadership practices and strength of characteristics of professional learning communities. Quantitative data gathered from all participants was electronically submitted to SPSS to determine the correlations. The Pearson $r$ was computed to establish bivariate correlation coefficient values for variables determining both the magnitude and the direction of the relationship. Procedures were used to generate frequency data and descriptive statistics for comparison and interpretation.

Summary

Chapter 3 described the design and methodology of a quantitative correlational study to examine three questions regarding the relationship between leadership practices of principals and successful reculturing of schools as sustainable professional learning communities. Participants were principals and teachers in a single public school district. The quantitative data was calculated and analyzed with the SPSS data analysis program using the Pearson $r$ to establish a correlation coefficient. Chapter 4 will present the results of the statistical data analysis of each of the methods.
CHAPTER 4
STUDY FINDINGS

This research study examines the relationship between leadership practices of principals and successful reculturing of schools as sustainable professional learning communities. Three research questions were posed for the study.

1. Is there a relationship between strength of leaders’ perceptions of their own leadership practices and strength of teacher and principal perceptions of their schools as professional learning communities?

2. Is there a relationship between teachers’ perceptions of the strength of their principals’ leadership practices and strength of teacher and principal perceptions of their own schools as professional learning communities?

3. Is strength in any single leadership practice of a principal more highly related to strength of teacher and principal perceptions of their schools as professional learning communities?

Chapter 4 describes data collection procedures and descriptive statistics of the study sample and also reports the results of analyses of the data in relation to the three research questions posed in this study, concluding with a summary of study findings.

In this study, successful reculturing of schools as professional learning communities was measured using the Professional Learning Communities Assessment (PLCA) (Olivier, Hipp, & Huffman, 2003). According to Olivier (in Huffman & Hipp, eds., 2003), identifying the complex characteristics of schools that operate as professional learning communities offers a challenge for researchers, principals, staff, parents, and other stakeholders. While reliable and valid measurement of specific school practices provides a way to determine the level of a school’s
progress toward development as a learning community, principals’ and faculties’ conceptualizations of their schools as learning communities rarely meet widely accepted operational criteria. Olivier (in Huffman & Hipp, eds., 2003) describes an assessment predecessor to the PLCA, the School Professional Staff as Learning Community (SPSLC), developed by Hord (1998). The SPSLC is comprised of five dimensions, supportive and shared leadership, shared values and vision, collective learning and application, supportive conditions, and shared personal practice. Each dimension of the SPSLC is defined by seventeen descriptors presented along a five-point Likert scale continuum from most desirable to least desirable practices. Field testing of the SPSLC resulted in indications of satisfactory reliability and validity, and the usefulness of the instrument was clearly established.

However, Olivier (in Huffman & Hipp, eds., 2003) reports that ongoing research using the SPSLC revealed “some misalignment” between the responses of faculty members in a variety of school settings on the SPSLC and the collected interview data and recorded observations of researchers. In order to correct for this misalignment Olivier, Hipp, and Huffman (2003) developed a new assessment instrument, the Professional Learning Communities Assessment (PLCA), extending Hord’s groundbreaking work. The PLCA assesses faculty perceptions of the school’s development on a continuum highly similar to Hord’s five dimensions with added critical attributes all occurring at the school level. The PLCA provides an even more descriptive instrument and more accurately represents the phases of development from initiation to implementation to institutionalization espoused by Fullan (2001a).

Descriptive Statistics

Descriptive statistics are the numerical data resulting from the sample population that describe studied phenomena, in this case, relationships between leadership practices and strength
of schools as professional learning communities. Descriptive statistics were organized in this chapter to show patterns and trends among each of the twelve participating schools on both the PLCA and the LPI-Self, and LPI-Observer instruments. The initial analysis of PLCA data will be discussed first, followed by discussion of analysis of LPI-Self and LPI-Observer data.

Likert-type scales like the PLCA and the LPI are not definitely metric, but are ordinal, therefore, the Kruskal-Wallis test provided a method of determining the strength of each school as a professional learning community, a determination critical to answering all three research questions posed in the study. Summed numeric means for all twelve schools together and means for each school for each PLC dimension were examined for indications of schools as particularly strong or particularly weak professional learning communities.

Table 7 shows the resulting ranking of schools from strongest to weakest learning community on the first PLC dimension, shared and supportive leadership.

<table>
<thead>
<tr>
<th>School</th>
<th>Mean Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 2</td>
<td>367.91</td>
</tr>
<tr>
<td>School 3</td>
<td>305.84</td>
</tr>
<tr>
<td>School 4</td>
<td>299.26</td>
</tr>
<tr>
<td>School 1</td>
<td>263.26</td>
</tr>
<tr>
<td>School 6</td>
<td>248.32</td>
</tr>
<tr>
<td>School 10</td>
<td>226.71</td>
</tr>
<tr>
<td>School 5</td>
<td>224.96</td>
</tr>
<tr>
<td>School 8</td>
<td>222.51</td>
</tr>
<tr>
<td>School 7</td>
<td>217.79</td>
</tr>
</tbody>
</table>

(table continues)
Table 7 (continued)

<table>
<thead>
<tr>
<th>School</th>
<th>Mean Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 11</td>
<td>188.70</td>
</tr>
<tr>
<td>School 12</td>
<td>188.25</td>
</tr>
<tr>
<td>School 9</td>
<td>186.15</td>
</tr>
</tbody>
</table>

Figure 7 presents a picture of the same ranking results of schools from strongest to weakest learning community on the first PLC dimension, shared and supportive leadership.

![Chart showing mean ranks for different schools](chart.png)

*Figure 7. Pictorial results of Kruskal-Wallis Test of PLC shared and supportive leadership.*

Responses from faculties at Schools 2, 3, and 4 indicated the strongest perceptions of their schools, related to shared and supportive leadership, as professional learning communities. Responses from faculties at Schools 11, 12, and 9 indicated the weakest perceptions of their schools as professional learning communities.
Table 8 shows the resulting ranking of schools from strongest to weakest learning community on the second PLC dimension, shared values and vision.

Table 8

<table>
<thead>
<tr>
<th>Shared Values and Vision</th>
<th>Mean Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 2</td>
<td>307.89</td>
</tr>
<tr>
<td>School 1</td>
<td>306.55</td>
</tr>
<tr>
<td>School 3</td>
<td>294.66</td>
</tr>
<tr>
<td>School 5</td>
<td>270.71</td>
</tr>
<tr>
<td>School 4</td>
<td>266.96</td>
</tr>
<tr>
<td>School 6</td>
<td>262.77</td>
</tr>
<tr>
<td>School 7</td>
<td>241.80</td>
</tr>
<tr>
<td>School 8</td>
<td>232.53</td>
</tr>
<tr>
<td>School 10</td>
<td>206.22</td>
</tr>
<tr>
<td>School 9</td>
<td>196.98</td>
</tr>
<tr>
<td>School 11</td>
<td>181.38</td>
</tr>
<tr>
<td>School 12</td>
<td>138.46</td>
</tr>
</tbody>
</table>

Figure 8 presents a picture of the same ranking results of schools from strongest to weakest learning community on the second PLC dimension, shared values and vision. Responses from faculties at Schools 2, 1, and 3 indicated the strongest perceptions of their schools, related to this dimension, as professional learning communities. Responses from the faculty at School 12 indicated the weakest perceptions of their school as a professional learning community.
Figure 8. Pictorial results of Kruskal-Wallis Test of PLC shared values and vision.

Table 9 shows the resulting ranking of schools from strongest to weakest learning community on the third PLC dimension, collective learning and application.

Table 9

<table>
<thead>
<tr>
<th>Collective Learning and Application</th>
<th>Mean Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 1</td>
<td>300.55</td>
</tr>
<tr>
<td>School 4</td>
<td>279.46</td>
</tr>
<tr>
<td>School 2</td>
<td>276.02</td>
</tr>
<tr>
<td>School 3</td>
<td>272.67</td>
</tr>
<tr>
<td>School 5</td>
<td>264.05</td>
</tr>
<tr>
<td>School 6</td>
<td>258.10</td>
</tr>
<tr>
<td>School 8</td>
<td>254.38</td>
</tr>
<tr>
<td>School 7</td>
<td>249.61</td>
</tr>
<tr>
<td>School 9</td>
<td>220.35</td>
</tr>
<tr>
<td>School 10</td>
<td>207.68</td>
</tr>
<tr>
<td>School 11</td>
<td>166.84</td>
</tr>
<tr>
<td>School 12</td>
<td>125.82</td>
</tr>
</tbody>
</table>
Figure 9 presents a picture of the same ranking results of schools from strongest to weakest learning community on the third PLC dimension, collective learning and application.

Responses from the faculty at School 1 indicated the strongest perceptions of their schools, related to collective learning and application, as a professional learning community. Responses from the faculty at School 12 again indicated the weakest perceptions of their school as a professional learning community.

*Figure 9. Pictorial results of Kruskal-Wallis Test of PLC collective learning and application.*
Table 10 shows the resulting ranking of schools from strongest to weakest learning community on the fourth PLC dimension, shared personal practice.

Table 10

*Numeric Results of Kruskal-Wallis Test of PLC Shared Personal Practice*

<table>
<thead>
<tr>
<th>Shared Personal Practice</th>
<th>Mean Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 1</td>
<td>333.29</td>
</tr>
<tr>
<td>School 4</td>
<td>280.07</td>
</tr>
<tr>
<td>School 2</td>
<td>268.48</td>
</tr>
<tr>
<td>School 7</td>
<td>250.74</td>
</tr>
<tr>
<td>School 5</td>
<td>249.00</td>
</tr>
<tr>
<td>School 3</td>
<td>247.61</td>
</tr>
<tr>
<td>School 6</td>
<td>237.88</td>
</tr>
<tr>
<td>School 9</td>
<td>229.22</td>
</tr>
<tr>
<td>School 8</td>
<td>228.38</td>
</tr>
<tr>
<td>School 10</td>
<td>195.03</td>
</tr>
<tr>
<td>School 11</td>
<td>185.5</td>
</tr>
<tr>
<td>School 12</td>
<td>160.86</td>
</tr>
</tbody>
</table>

Figure 10 presents a picture of the same ranking results of schools from strongest to weakest learning community on the fourth PLC dimension, shared personal practice.
Responses from the faculty at School 1 indicated the strongest perceptions of their school, related to this dimension, as a professional learning community. Responses from faculties at Schools 10, 11 and 12 again indicated the weakest perceptions of their schools as professional learning communities.

Table 11 shows the resulting ranking of schools from strongest to weakest learning community on the fifth PLC dimension, supportive conditions-relationships.

Table 11

<table>
<thead>
<tr>
<th>Supportive Conditions-Relationships</th>
<th>Mean Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 1</td>
<td>311.34</td>
</tr>
<tr>
<td>School 3</td>
<td>296.23</td>
</tr>
<tr>
<td>School 4</td>
<td>288.76</td>
</tr>
</tbody>
</table>

*(table continues)*
Table 11 (continued)

<table>
<thead>
<tr>
<th>Supportive Conditions-Relationships</th>
<th>Mean Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 5</td>
<td>271.27</td>
</tr>
<tr>
<td>School 2</td>
<td>264.09</td>
</tr>
<tr>
<td>School 6</td>
<td>243.10</td>
</tr>
<tr>
<td>School 7</td>
<td>228.36</td>
</tr>
<tr>
<td>School 10</td>
<td>227.81</td>
</tr>
<tr>
<td>School 8</td>
<td>218.28</td>
</tr>
<tr>
<td>School 9</td>
<td>190.94</td>
</tr>
<tr>
<td>School 11</td>
<td>186.32</td>
</tr>
<tr>
<td>School 12</td>
<td>139.76</td>
</tr>
</tbody>
</table>

Figure 11 on the following page presents a picture of the same ranking results of schools from strongest to weakest learning community on the fifth PLC dimension, supportive conditions-relationships.

Responses from faculties at Schools 1, 3, and 4 indicated the strongest perceptions of their schools, related to supportive conditions-relationships, as professional learning communities.
Responses from the faculty at School 12 again indicated the weakest perception of their school as a professional learning community.

Table 12 shows the resulting ranking of schools from strongest to weakest learning community on the sixth PLC dimension, supportive conditions-structures.

Table 12

*Numeric Results of Kruskal-Wallis Test of PLC Supportive Conditions-Structures*

<table>
<thead>
<tr>
<th>Supportive Conditions-Structures</th>
<th>Mean Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 1</td>
<td>307.9</td>
</tr>
<tr>
<td>School 2</td>
<td>300.70</td>
</tr>
<tr>
<td>School 3</td>
<td>299.52</td>
</tr>
<tr>
<td>School 4</td>
<td>287.13</td>
</tr>
<tr>
<td>School 5</td>
<td>287.01</td>
</tr>
<tr>
<td>School 6</td>
<td>242.18</td>
</tr>
<tr>
<td>School 10</td>
<td>218.66</td>
</tr>
<tr>
<td>School 7</td>
<td>217.52</td>
</tr>
<tr>
<td>School 8</td>
<td>215.27</td>
</tr>
<tr>
<td>School 9</td>
<td>205.65</td>
</tr>
<tr>
<td>School 12</td>
<td>203.16</td>
</tr>
<tr>
<td>School 11</td>
<td>152.82</td>
</tr>
</tbody>
</table>

Figure 12 presents a picture of the same ranking results of schools from strongest to weakest learning community on the sixth PLC dimension, supportive conditions-structures.
Figure 12. Pictorial results of Kruskal-Wallis Test of PLC supportive conditions-structures.

Responses from faculties at Schools 1, 2, 3, 4, and 5 indicated the strongest perceptions of their schools, related to supportive conditions-structures, as professional learning communities. Responses from the faculty at School 11 indicated the weakest perception of their school as a professional learning community. Kruskal-Wallis analyses of the mean ranking for each of the six dimensions measured on the PLCA consistently identified Schools 1, 2, 3, and 4 as the strongest professional learning community schools. School 11 and School 12 were consistently identified as the weakest professional learning community schools.

Median tests were next used because of their value in comparing strength of characteristics of professional learning communities for the twelve schools in the study. Significant in the analysis of median PLC dimension scores was the recognition that minimum and maximum scores across each dimension are not equal. Median test analysis of the PLCA indicated that faculties at Schools 2 and 1 consistently indicated perceptions of stronger characteristics of learning communities on their campuses. Participant responses from Schools 11 and 12 consistently indicated that faculties on those campuses reported their campuses were weaker in regards to characteristics of learning communities. Due to the large PLCA sample size
(N=466), even small discrepancies between median values of each school points to significant differences between schools, as can be seen in Table 13.

Table 13

Median Scores for the Twelve Schools Summed in Order from Total Strongest to Total Weakest

<table>
<thead>
<tr>
<th>School</th>
<th>SSL</th>
<th>SVV</th>
<th>CLA</th>
<th>SPP</th>
<th>SC-R</th>
<th>SC-S</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 2</td>
<td>35</td>
<td>25</td>
<td>25</td>
<td>18</td>
<td>13</td>
<td>28.5</td>
<td>144.5</td>
</tr>
<tr>
<td>School 1</td>
<td>31</td>
<td>26</td>
<td>26</td>
<td>19</td>
<td>13</td>
<td>28</td>
<td>143</td>
</tr>
<tr>
<td>School 4</td>
<td>34</td>
<td>24</td>
<td>25</td>
<td>18</td>
<td>13</td>
<td>27</td>
<td>141</td>
</tr>
<tr>
<td>School 3</td>
<td>32</td>
<td>26</td>
<td>25</td>
<td>17</td>
<td>13</td>
<td>27</td>
<td>140</td>
</tr>
<tr>
<td>School 6</td>
<td>32</td>
<td>25</td>
<td>25</td>
<td>17.5</td>
<td>13</td>
<td>27</td>
<td>139.5</td>
</tr>
<tr>
<td>School 5</td>
<td>30</td>
<td>24</td>
<td>24</td>
<td>17</td>
<td>13</td>
<td>27</td>
<td>135</td>
</tr>
<tr>
<td>School 8</td>
<td>30</td>
<td>24</td>
<td>24</td>
<td>17</td>
<td>12</td>
<td>26</td>
<td>133</td>
</tr>
<tr>
<td>School 10</td>
<td>31</td>
<td>24</td>
<td>24</td>
<td>16</td>
<td>12</td>
<td>25</td>
<td>132</td>
</tr>
<tr>
<td>School 7</td>
<td>29</td>
<td>24</td>
<td>24</td>
<td>17</td>
<td>12</td>
<td>25</td>
<td>131</td>
</tr>
<tr>
<td>School 9</td>
<td>28.5</td>
<td>23</td>
<td>24</td>
<td>17</td>
<td>12</td>
<td>25</td>
<td>129.5</td>
</tr>
<tr>
<td>School 11</td>
<td>29</td>
<td>22</td>
<td>22</td>
<td>16</td>
<td>12</td>
<td>23</td>
<td>124</td>
</tr>
<tr>
<td>School 12</td>
<td>28.5</td>
<td>21</td>
<td>20</td>
<td>16</td>
<td>11</td>
<td>25</td>
<td>121.5</td>
</tr>
</tbody>
</table>

Figure 13 pictures the same ranking results of schools from total strongest to total weakest learning community. As shown in the table, analysis of each school’s median rank on
the six dimensions measured on the PLCA identified Schools 2 and 1 as consistently evidencing the strongest characteristics of learning communities. Again, Schools 11 and 12 consistently evidenced the weakest characteristics of learning communities.

![Figure 13](image)

**Figure 13.** Median scores for the twelve schools summed.

The results of both the Kruskal-Wallis and statistical median analyses provided the necessary certainty for the researcher to move ahead to address and answer the research questions posed in this study. Of the twelve schools studied, Schools 2 and 1 were consistently shown to be most strongly perceived by their faculties as professional learning communities. Schools 11 and 12 were consistently shown to be least strongly perceived by their faculties as professional learning communities.

As with the PLCA, descriptive statistics were derived from responses on the Leadership Practices Inventory-Self, here a measure of the perceptions of campus principals, and the LPI-Observer, a measure of the perceptions of selected members of the faculties of the twelve
schools. Data have been organized to show patterns and trends within and among each of the twelve participating schools. Means and standard deviations for the LPI-Self are presented in Table 14.

Table 14

Means and Standard Deviations for the Leadership Practices Inventory-Self

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>MW Sum</td>
<td>12</td>
<td>39</td>
<td>58</td>
<td>48.75</td>
<td>5.833</td>
</tr>
<tr>
<td>ISV Sum</td>
<td>12</td>
<td>35</td>
<td>58</td>
<td>46.83</td>
<td>8.288</td>
</tr>
<tr>
<td>CP Sum</td>
<td>12</td>
<td>37</td>
<td>57</td>
<td>46.42</td>
<td>6.529</td>
</tr>
<tr>
<td>EOA Sum</td>
<td>12</td>
<td>45</td>
<td>60</td>
<td>52.25</td>
<td>4.575</td>
</tr>
<tr>
<td>EH Sum</td>
<td>12</td>
<td>36</td>
<td>59</td>
<td>48.50</td>
<td>7.317</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Means and standard deviations for the LPI-Observer responses from the twelve schools are presented in Table 15.

Table 15

Means and Standard Deviations for the Leadership Practices Inventory-Observer

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>MW Sum</td>
<td>86</td>
<td>23</td>
<td>67</td>
<td>50.10</td>
<td>9.999</td>
</tr>
<tr>
<td>ISV Sum</td>
<td>86</td>
<td>10</td>
<td>60</td>
<td>46.95</td>
<td>10.070</td>
</tr>
<tr>
<td>CP Sum</td>
<td>86</td>
<td>13</td>
<td>60</td>
<td>46.58</td>
<td>9.998</td>
</tr>
<tr>
<td>EOA Sum</td>
<td>86</td>
<td>27</td>
<td>60</td>
<td>50.02</td>
<td>8.404</td>
</tr>
<tr>
<td>EH Sum</td>
<td>86</td>
<td>7</td>
<td>60</td>
<td>46.83</td>
<td>12.154</td>
</tr>
</tbody>
</table>
Research Question 1

The first research question in this study asked, “Is there a relationship between strength of leaders’ perceptions of their own leadership practices and strength of faculty perceptions of their schools as professional learning communities?” Having accomplished the necessary determination of the strength of each school as a professional learning community, acceptance or rejection of the null hypothesis for Research Question 1 was based on analysis of summed data from the PLCA (N=486) completed by faculty members at each of the twelve schools, and the LPI-Self (N=12) completed by each principal at those twelve schools. No individual school data was used in analysis of Research Question 1. Table 16 shows the absence of significant relationships revealed following analysis of principals’ perceptions of their own leadership practices in relation to faculties’ perceptions of their schools as learning communities. This summed correlational analysis indicated appropriate acceptance of the null hypothesis that there appears to be no relationship between principal perceptions of their own leadership practices and perceptions of their faculties regarding strength of school as professional learning communities.
### Table 16

**Absence of Correlations Between LPI-Self and PLCA Summed Across All Twelve Campuses**

<table>
<thead>
<tr>
<th></th>
<th>SSL Sum</th>
<th>SVV Sum</th>
<th>CLA Sum</th>
<th>SPP Sum</th>
<th>SCR Sum</th>
<th>SCS Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Modeling the Way</strong></td>
<td>-0.296</td>
<td>-0.264</td>
<td>-0.048</td>
<td>-0.164</td>
<td>-0.115</td>
<td>0.148</td>
</tr>
<tr>
<td>Sum Correlation Coefficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.35</td>
<td>0.407</td>
<td>0.883</td>
<td>0.61</td>
<td>0.737</td>
<td>0.664</td>
</tr>
<tr>
<td>N</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

| **Inspiring Shared Vision** | -0.329  | -0.253  | -0.048  | -0.225  | -0.06   | 0.111   |
| Sum Correlation Coefficient |         |         |         |         |         |         |
| Sig. (2-tailed)          | 0.296   | 0.428   | 0.883   | 0.481   | 0.862   | 0.746   |
| N                       | 12      | 12      | 12      | 12      | 12      | 12      |

| **Challenging the Process** | -0.32   | -0.295  | -0.071  | -0.166  | -0.283  | -0.092  |
| Sum Correlation Coefficient |         |         |         |         |         |         |
| Sig. (2-tailed)            | 0.311   | 0.352   | 0.827   | 0.607   | 0.399   | 0.788   |
| N                          | 12      | 12      | 12      | 12      | 12      | 12      |

| **Enabling Others to Act** | -0.349  | -0.263  | -0.377  | 0.159   | -0.124  | 0.138   |
| Sum Correlation Coefficient |         |         |         |         |         |         |
| Sig. (2-tailed)             | 0.267   | 0.408   | 0.227   | 0.622   | 0.716   | 0.685   |
| N                          | 12      | 12      | 12      | 12      | 12      | 12      |

| **Encouraging the Heart**  | -0.32   | -0.08   | 0.166   | -0.076  | -0.002  | 0.088   |
| Sum Correlation Coefficient |         |         |         |         |         |         |
| Sig. (2-tailed)             | 0.31    | 0.805   | 0.605   | 0.815   | 0.994   | 0.797   |
| N                          | 12      | 12      | 12      | 12      | 12      | 12      |

**Research Question 2**

The second research question in this study asked, “Is there a relationship between strength of teachers’ perceptions of their principals’ practices and strength of faculty perceptions of their schools as professional learning communities?” Table 17 shows the result of the PLCA and LPI-Observer correlational analysis for scores summed across the twelve campuses.
As the table reflects, fifteen of the thirty paired relationships in this analysis of the twelve schools summed were characterized by significant evidence that the null hypothesis can be rejected. Within the LPI practice of modeling the way, significant positive relationships were found across all PLC dimensions of shared and supportive leadership, shared vision and values, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures. Relationships were also found to exist between the LPI
practices of inspiring shared vision and enabling others to act and the PLC dimensions of shared and supportive leadership, shared vision and values, collective learning and application, and supportive conditions-relationships. Correlation was found to exist between the LPI practice of encouraging the heart and the PLC dimension of shared and supportive leadership. In contrast, no significant relationship was found between the LPI practice of challenging the process and any of the PLC dimensions.

Results of the PLCA and LPI-Observer correlational analyses for the two strongest and the two weakest learning community schools highlight fewer significant relationships, as seen in Table 18, and in fact, no significant correlations were found to exist for School 1 or School 12.

Table 18

*Significant Correlations for Schools 2 and 11*

<table>
<thead>
<tr>
<th>School 2</th>
<th>SSL</th>
<th>SVV</th>
<th>CLA</th>
<th>SPP</th>
<th>SCR</th>
<th>SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MW Sum Correlation Coefficient</td>
<td>0.382</td>
<td>0.784</td>
<td>0.324</td>
<td>0.835</td>
<td>0.505</td>
<td>0.755</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.398</td>
<td><strong>0.037</strong></td>
<td>0.478</td>
<td><strong>0.019</strong></td>
<td>0.248</td>
<td><strong>0.05</strong></td>
</tr>
<tr>
<td>N</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School 11</th>
<th>SSL</th>
<th>SVV</th>
<th>CLA</th>
<th>SPP</th>
<th>SCR</th>
<th>SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISV Sum Correlation Coefficient</td>
<td>0.486</td>
<td>0.754</td>
<td>0.441</td>
<td>0.53</td>
<td><strong>0.986</strong></td>
<td>0.486</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.329</td>
<td>0.084</td>
<td>0.381</td>
<td>0.28</td>
<td><strong>0.00</strong></td>
<td>0.329</td>
</tr>
<tr>
<td>N</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School 11</th>
<th>SSL</th>
<th>SVV</th>
<th>CLA</th>
<th>SPP</th>
<th>SCR</th>
<th>SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EOA Sum Correlation Coefficient</td>
<td>0.6</td>
<td>.812</td>
<td>0.53</td>
<td>0.412</td>
<td><strong>0.928</strong></td>
<td>0.6</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.208</td>
<td><strong>0.05</strong></td>
<td>0.28</td>
<td>0.417</td>
<td><strong>0.008</strong></td>
<td>0.208</td>
</tr>
<tr>
<td>N</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>
For School 1 and School 12, the null hypothesis, that there is no relationship between teachers’ perceptions of principals’ leadership and strength of schools as professional learning communities, appears to be accepted across all leadership practices and learning community dimensions. However, at School 2 there did appear to be several significant relationships between the leadership practice of modeling the way and three dimensions of a learning community, shared vision and values, shared personal practice, and supportive conditions-structures. At School 11, a school determined to be one of the two weakest PLC schools, a significant positive relationship was found between the leadership practice of inspiring shared vision the learning community dimension of supportive conditions-relationships. Also found at School 11 were significant relationships between the leadership practice of encouraging the heart and learning community dimensions of shared values and vision, and supportive conditions-relationships.

Research Question 3

The final research question in this study asks, “Is strength in any single leadership practice of a principal more highly related to strength of teacher and principal perceptions of their schools as professional learning communities?” Initial analysis of relationships was conducted using summed scores from all twelve campuses for each of the thirty individual leadership behavior statements on the LPI-Observer and summed scores across all dimensions of the PLCA. Analysis then focused on relationships between each specific leadership behavior and scores from the schools determined to be the strongest and the weakest learning community schools. Shown first in Table 19 are the significant relationships resulting from analysis of summed scores.
Statement 17 reflects the leadership practice of inspiring shared vision and reads, “Shows others how their long-term interests can be realized by enlisting in a common vision.” Statement 21 reflects the leadership practice of modeling the way and reads, “Builds consensus around a common set of values for running our organization.” Statement 16 reflects again the leadership practice of modeling the way and reads, “Asks for feedback on how his/her actions affect other people’s performance.” Of the thirty leadership practice statements that make up the LPI-Observer instrument, inspiring shared vision Statement 17 indicated a significant relationship...
across all six dimensions of the PLCA. LPI-Observer modeling the way Statements 21 and 16 indicated significant relationships on five of the six PLC dimensions.

Further analysis was focused on those schools determined to be the two strongest professional learning communities, School 2 and School 1. Analysis of data yielded indication that three of the five leadership practices measured by the LPI-Observer instrument may be more strongly related to strength of school as a professional learning community. Table 20 shows correlational data from Schools 2 and 1 that indicates possible relationships between the leadership practice of modeling the way and strength of school as a professional learning community within several dimensions.

Table 20

*Positive Correlations Between LPI-Observer Modeling the Way and PLC Dimensions at Schools 2 and 1*

<table>
<thead>
<tr>
<th>LPI-Observer Statement 1: Sets a personal example of what he/she expects of others.</th>
<th>Modeling the Way and Supportive Conditions-Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation Coefficient</td>
<td>0.802</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td><strong>0.016</strong></td>
</tr>
<tr>
<td>N</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LPI-Observer Statement 6: Spends time and energy making certain that the people he/she works with adhere to the principles and standards that we have agreed on.</th>
<th>Modeling the Way and Shared Personal Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation Coefficient</td>
<td>0.805</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td><strong>0.028</strong></td>
</tr>
<tr>
<td>N</td>
<td>7</td>
</tr>
</tbody>
</table>

*(table continues)*
Table 20 (continued)

LPI-Observer Statement 21: Builds consensus around a common set of values for running our organization.

Modeling the Way and Shared Personal Practice
Correlation
Coefficient 0.888
Sig. (2-tailed) 0.007
N 7

LPI-Observer Statement 26: Is clear about his/her philosophy of leadership.
Modeling the Way and Supportive Conditions-Structures
Correlation
Coefficient 0.786
Sig. (2-tailed) 0.02
N 8

Table 21 shows correlational data from Schools 2 and 1 that indicates several significant relationships between the leadership practice of challenging the process and strength of school as a professional learning community.

Table 21

Positive Correlations Between LPI-Observer Challenging the Process and PLC Dimensions at Schools 2 and 1

LPI-Observer Statement 3: Seeks out challenging opportunities that test his/her own skills and abilities.
Challenging the Process and Collective Learning and Application
Correlation
Coefficient 0.733
Sig. (2-tailed) 0.038
N 8

(table continues)
LPI-Observer Statement 8: Challenges people to try out new and innovative ways to do their work.
   Challenging the Process and Shared Vision and Values
   Correlation
   Coefficient   0.862
   Sig. (2-tailed)  **0.012**
   \( N \)    7

LPI-Observer Statement 18: Asks “What can we learn?” when things don’t go as expected.
   Challenging the Process and Shared Vision and Values
   Correlation
   Coefficient   0.79
   Sig. (2-tailed)  **0.034**
   \( N \)    7

LPI-Observer Statement 23: Makes certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on.
   Challenging the Process and Shared Vision and Values
   Correlation
   Coefficient   0.862
   Sig. (2-tailed)  **0.012**
   \( N \)    7

Table 22 shows correlational data from Schools 2 and 1 that indicates several significant relationships between the leadership practice of enabling others to act and strength of school as professional learning community.

Table 22

*Positive Correlations Between LPI-Observer Enabling Others to Act and PLC Dimensions at Schools 2 and 1*

LPI-Observer Statement 19: Supports the decisions that people make on their own.
   Enabling Others to Act and Shared Vision and Values
   Correlation
   Coefficient   0.907
   Sig. (2-tailed)  **0.004**
   \( N \)    7
LPI-Observer Statement 19: Supports the decisions that people make on their own.
Enabling Others to Act and Supportive Conditions-Structures
Correlation
Coefficient 0.873
Sig. (2-tailed) 0.01
N 7

LPI Observer Statement 24: Gives people a great deal of freedom and choice in deciding how to do their work.
Enabling Others to Act and Collective Learning and Application
Correlation
Coefficient 0.846
Sig. (2-tailed) 0.008
N 8

LPI Observer Statement 29: Ensures that people grow in their jobs by learning new skills and developing themselves.
Enabling Others to Act and Shared Vision and Values
Correlation
Coefficient 0.854
Sig. (2-tailed) 0.014
N 7

Only one negative correlation was found to exist for either School 2 or School 1 across all leadership practices and learning community dimensions. That strong negative correlation, significant at the 0.01 level, was found to exist for School 2 between the leadership practice of modeling the way by building consensus around a common set of values and the professional learning community dimension of shared personal practice.
Continued analysis focused on those schools determined to be perceived as the weakest professional learning communities, School 11 and School 12. No significant relationships were found to exist at School 12. At School 11 more similarities to Schools 1 and 2 were noted regarding the number and pattern of positive relationships. Two negative correlations appeared within the PLC dimension of modeling the way. These correlations are shown in Tables 23 through 27 following.

Table 23

*Correlations Between LPI-Observer Modeling the Way and PLC Dimensions at School 11*

LPI-Observer Statement 1: Sets a personal example of what he/she expects of others. Modeling the Way and Supportive Conditions-Relationships

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Coefficient</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.94</td>
<td>0.005</td>
</tr>
<tr>
<td>N</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

LPI-Observer Statement 11: Follows through on promises and commitments he/she makes. Modeling the Way and Supportive Conditions-Relationships

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Coefficient</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.985</td>
<td>0</td>
</tr>
<tr>
<td>N</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

LPI-Observer Statement 16: Asks for feedback on how his/her actions affect other people’s performance. Modeling the Way and Supportive Conditions-Relationships

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Coefficient</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.985</td>
<td>0</td>
</tr>
<tr>
<td>N</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

*(table continues)*
Table 23 (continued)

*Correlations Between LPI-Observer Modeling the Way and PLC Dimensions at School 11*

LPI-Observer Statement 21: Builds consensus around a common set of values for running our organization.

Modeling the Way and Shared and Supportive Leadership

<table>
<thead>
<tr>
<th>Correlation Coefficient</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.819</td>
<td>0.045</td>
<td>6</td>
</tr>
</tbody>
</table>

LPI-Observer Statement 21

Modeling the Way and Supportive Conditions-Structures

<table>
<thead>
<tr>
<th>Correlation Coefficient</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.819</td>
<td>0.045</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 24 shows correlational data from School 11 that indicates possible relationships between the leadership practice of inspiring shared vision and strength of school as a professional learning community.

Table 24

*Correlations Between LPI-Observer Inspiring Shared Vision and PLC Dimensions at School 11*

LPI-Observer Statement 12: Appeals to others to share an exciting dream of the future.

Inspiring Shared Vision and Supportive Conditions-Relationships

<table>
<thead>
<tr>
<th>Correlation Coefficient</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.857</td>
<td>0.029</td>
<td>6</td>
</tr>
</tbody>
</table>

*(table continues)*
Table 24 (continued)

*Correlations Between LPI-Observer Inspiring Shared Vision and PLC Dimensions at School 11*

LPI-Observer Statement 17: Shows others how their long-term interests can be realized by enlisting in a common vision.

<table>
<thead>
<tr>
<th>Correlation Coefficient</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.838</td>
<td>0.037</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 25 shows correlational data from School 11 that indicates possible relationships between the leadership practice of enabling others to act and strength of school as a professional learning community.

Table 25

*Correlations Between LPI-Observer Enabling Others to Act and PLC Dimensions at School 11*

LPI-Observer Statement 14: Treats others with dignity and respect.

Enabling Others to Act and Supportive Conditions-Relationships

<table>
<thead>
<tr>
<th>Correlation Coefficient</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.940</td>
<td>0.005</td>
<td>6</td>
</tr>
</tbody>
</table>

LPI-Observer Statement 24: Gives people a great deal of freedom and choice in deciding how to do their work.

Enabling others to Act and Shared Vision and Values

<table>
<thead>
<tr>
<th>Correlation Coefficient</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.939</td>
<td>0.005</td>
<td>6</td>
</tr>
</tbody>
</table>

*(table continues)*
Table 25 (continued)

*Correlations Between LPI-Observer Enabling Others to Act and PLC Dimensions at School 11*

<table>
<thead>
<tr>
<th>Correlation Coefficient</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPI-Observer Statement 24: Gives people a great deal of freedom and choice in deciding how to do their work.</td>
<td>0.939</td>
<td>6</td>
</tr>
<tr>
<td>Enabling others to Act and Supportive Conditions-Relationships</td>
<td>0.005</td>
<td></td>
</tr>
</tbody>
</table>

Table 26 shows correlational data from School 11 that indicates possible relationships between the leadership practice of encouraging the heart and strength of school as a professional learning community.

Table 26

*Correlation Between LPI-Observer Encouraging the Heart and PLC Dimensions at School 11*

<table>
<thead>
<tr>
<th>Correlation Coefficient</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPI-Observer Statement 5: Praises people for a job well done.</td>
<td>0.835</td>
<td>6</td>
</tr>
<tr>
<td>Encouraging the Heart and Collective Learning and Application</td>
<td>0.038</td>
<td></td>
</tr>
</tbody>
</table>

Finally, specific analysis of data for School 12, the school determined to have the weakest characteristics of a professional learning community, is necessary in order to adequately answer the third research question in this study. Whether or not strength in any single leadership
practice of a principal is more highly related to strength of a school as a PLC may be most apparent through contrasts that appear upon analysis of School 12. And in fact, results of correlational analyses did yield more negative correlations occurring at that school. Table 27 shows negative correlations between leadership practices and dimensions of professional learning communities from School 12.

Table 27

Negative Correlations Between LPI-Observer Practices and PLC Dimensions at School 12

<table>
<thead>
<tr>
<th>LPI-Observer Modeling the Way Statement 1, “Sets a personal example of what he/she expects of others” and Shared and Supportive Leadership School 12</th>
<th>Correlation Coefficient</th>
<th>0.897</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0.002</td>
<td></td>
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<th>LPI-Observer Modeling the Way Statement 1, “Sets a personal example of what he/she expects of others” and Supportive Conditions-Relationships School 12</th>
<th>Correlation Coefficient</th>
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Summary

Chapter 4 presented the findings of the study in discussion, table, and figure forms.

Correlational analyses of the relationships between leadership practices of principals and
strength as professional learning communities were presented. Chapter 5 synthesizes the researcher’s data into a discussion regarding interpretations, significance, and recommendations.
CHAPTER 5
SUMMARY, DISCUSSION, SIGNIFICANCE AND RECOMMENDATIONS

Chapter 5 begins with a restatement of the purpose of the study and the three research questions posed. The chapter continues with a brief review of the theoretical foundations that undergird this study and the methodology selected for use in answering the research questions. The review is followed by discussion of interpretations of the findings and discussion of the study’s significance. Recommendations for future study and a summary conclude this chapter.

Review of Study

This research study examined the relationship between leadership practices of principals and successful reculturing of schools as sustainable professional learning communities. Three research questions were posed for this study.

1. Is there a relationship between strength of leaders’ perceptions of their own leadership practices and strength of teacher and principal perceptions of their schools as professional learning communities?
2. Is there a relationship between teachers’ perceptions of the strength of their principals’ leadership practices and strength of teacher and principal perceptions of their schools as professional learning communities?
3. Is strength in any single leadership practice of a principal more highly related to strength of teacher and principal perceptions of their schools as professional learning communities?

The study adds to the research base examining relationships between leadership practices of principals and sustainable reculturing of schools as professional learning communities.
Senge’s (1990) systems theory provides a powerful model for design of sustainable systems from within, a model that paved the way for subsequent development of concepts of sustainable professional learning communities. Senge’s five disciplines of learning organizations, shared vision, mental models, team learning, personal mastery, and systems thinking, were groundbreaking from the outset and served as foundations for researchers and practitioners including Hord (1997a, 1997b, 2004), DuFour and Eaker (1998), Fullan (1993, 1999, 2001a, 2005), Huffman and Hipp, (2003), and Sergiovanni (1994a, 1994b). Senge proposed that an organization’s capacity for learning determines not only whether it will survive, but whether or not it will thrive. The work of Newmann and Wehlage (1995) and Louis and Kruse (1995) demonstrated that high levels of sustainable student achievement are rooted in schools which demonstrated characteristics of sustained professional learning communities (Ostmeyer, 2003). Central to their study were the five dimensions of professional learning communities identified by Hord (1997) and expanded by Olivier, Hipp, and Huffman (2003): shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, and supportive conditions related both to relationships and structures.

Leadership research has been influenced by Senge’s organizational systems theory, evident in the work of Kouzes and Posner (1987, 1997, 2000, 2003), Reeves (2006), Collins (2001), Fullan (2001a, 2005), Schlecty (1990) and Marzano, et al., (2005). In successful, sustainable 21st century schools leaders provide vision and direction as well as continuous coherent adult learning opportunities. Leadership is not the private reserve of a few charismatic men, a circumstance that Senge says obstructs the focus on systemic forces and collective learning. True leadership is based on a set of skills and practices that can be attained within a distributed model of leadership avoiding the great man obstacle to sustainable change. Kouzes
and Posner’s (2003a) five practices of exemplary leaders, modeling the way, inspiring shared vision, challenging the process, enabling others to act, and encouraging the heart, are also central to this study.

Ellsworth’s (2000) model for change in organizations parallels Senge’s model for learning in organizations. Ellsworth illustrated how decades of knowledge related to change accumulated from unique perspectives can be integrated by the practitioner into a single systemic perspective. Rather than piecemeal, fragmented efforts toward change recognized years earlier by Fullan and Stiegelbauer (1991), Ellsworth unified six models into a guiding organizational change strategy that result in sustainable outcomes. This unified strategy brings together the models for diffusion of innovations (Rogers, 1995), conditions of change (Ely, 1976), agents of change (Fullan & Stiegelbauer, 1991), change processes (Havelock, 1973, Havelock & Zlotolow, 1995) intended adopters (Hall & Hord, 2001), and resistance to change (Zaltman & Duncan, 1977). Huffman and Hipp’s (2000) study of school readiness for change and Marzano, Waters, and McNulty’s (2005) analysis of failed innovations contributed additional empirically based knowledge that served to drive organizations toward progress in the face of obstacles and conflict. Reeves (2006) reminded us that leadership is about justifying, implementing, and maintaining change, just as Ellsworth reminded us of the combination of danger and opportunity involved in changing organizations.

This study was conducted from a quantitative research design perspective using both statistical and non-parametric analyses. Leadership practices of principals, as perceived by principals themselves and as perceived by observers in the workplace, constitute the independent research variable. Strength of schools as professional learning communities constitutes the dependent research variable. Both research variables were measured using Likert-type surveys,
yielding ordinal and ranked categorical data. Use of two Likert-type measurement instruments, Olivier, Hipp, and Huffman’s (2003) Professional Learning Communities Assessment, and Kouzes and Posner’s (2003b) Leadership Practices Inventory, both Self and Observer protocols, were selected for use in the study. Together the two instruments yielded information regarding specific leadership practices of principals which align with characteristics of schools functioning as strong, sustainable professional learning communities.

The PLCA is a highly credible measure of faculty perceptions of characteristics of professional learning communities within schools (Olivier in Huffman & Hipp, 2003). Strong internal reliability is evident based on Cronbach’s Alpha coefficients and factor analyses using Varimax procedures. Evidence of strong construct validity of the PLCA was provided by initial expert evaluation and field testing of items followed by factor analysis resulting in Likert point values and item means and standard deviations (Olivier in Huffman & Hipp, 2003).

Strong internal reliability is indicated by Cronbach’s Alpha coefficients on all LPI-Self and Observer scales. Test-retest reliability was also consistently strong. Reliability and validity of the measures of Kouzes and Posner’s five leadership practices, modeling the way, inspiring shared vision, challenging the process, enabling others to act, and encouraging the heart (Kouzes & Posner, 2003a) are clearly supported by these results.

The study was conducted within a volunteer population of principals and teachers in single public school district. Following an introduction of the study to all principals within the district, the researcher was invited to attend faculty meetings at twelve campuses to explain requirements for participation and procedures for ensuring anonymity and confidentiality to all participants. Informed consent was thoroughly explained and documentation of such was obtained. The researcher then arranged meeting times to directly administer the PLCA (Olivier,
Hipp & Huffman, 2003) to all voluntary certified personnel. One LPI-Self protocol and eight LPI-Observer protocols (Kouzes & Posner, 2003a) were provided to each of the twelve campus principals. In accordance with recommended administration procedures (Kouzes & Posner, 2003b), principals were instructed to complete the LPI-Self protocol and to distribute LPI-Observer protocols to eight selected teacher participants to be completed within a specified two-week window of time. Completed LPI-Self and LPI-Observer protocols were retrieved in person by the researcher. The researcher hand-tallied responses on both the PLCA and the LPI-Self and LPI-Observer surveys, then entered the data into an Excel program. Statistical Package for the Social Services (SPSS) was used to determine correlations with Pearson $r$ computed to establish significant bivariate correlation coefficient values. Procedures were used to generate frequency data and descriptive statistics for comparison and interpretation.

Discussion of Findings Regarding PLC Strength in Schools

Critical to answering all three research questions posed in this study was the initial determination of the strength of each of the twelve schools as professional learning communities. Olivier (in Huffman & Hipp, 2003) states that a “clear vision of what a community looks like and how people operate within this community must be established” (p. 67), and clearly, analysis of responses regarding learning community dimensions and specific critical attributes from the PLCA (Olivier, Hipp, & Huffman, 2003) revealed valid and reliable portraits of each school.

As described in Chapter 4, the Kruskal-Wallis One-Way ANOVA of Ranks test is a nonparametric statistical test used to compare the twelve independent samples in the study. It was especially useful for making an initial finding that there were, in fact, differences between the twelve schools in strength of learning community characteristics indicated by analysis of responses on the PLCA. This determination was made separately for each of the dimensions of
the PLCA using summed numeric means from each school. Chapter 4 provided content and graphic analysis of schools on each of the dimensions of the PLCA. Discussion here narrows the focus on the schools that appeared significantly strong and significantly weak regarding characteristics of professional learning communities.

The first PLC dimension, shared and supportive leadership, measures the extent to which a school leader shares power, authority, and decision making opportunities and the extent to which he or she promotes and nurtures leadership among staff. Figure 14 presents data from the first PLC dimension, shared and supportive leadership. The Kruskal-Wallis One-Way ANOVA

![Mean Rank](chart.png)

*Figure 14. Highest and lowest mean ranked scores Kruskal-Wallis Test of PLC shared and supportive leadership.*

of Ranks indicated that of the twelve schools, the mean rank score of School 2 was significantly higher than all others in this dimension, fifty-two points higher than its closest rivals. Mean rank scores for Schools 11, 12, and 9 were the lowest of all twelve schools, with one hundred eighty
mean rank points spanning the difference between the highest, School 2, and the lowest, School 9.

The second PLC dimension of shared values and vision measures the extent to which a core of shared values exists within the school about learning, about teacher and student behaviors, and about shared aims to maintain community. Again, mean ranked score for School 2 was the highest, closely followed by mean ranked scores for School 1 and School 3. Lowest mean ranked scores within the shared values and vision dimension occurred for School 12, more than forty three points lower than the next lowest ranked school. A difference of one hundred sixty seven points separated the highest mean ranked school, School 2, from the lowest mean ranked school, School 12. Again, the numeric difference between Schools 2, 1, and 3 with the highest ranked means and School 12 with the lowest ranked mean are significant. Figure 15 presents focused data from the second PLC dimension, shared values and vision.

![Bar Chart]

*Figure 15. Highest and lowest mean ranked scores Kruskal-Wallis Test of PLC shared values and vision.*
The third PLC dimension of collective learning and application measures the extent to which information, planning, and problem solving are collaboratively shared, and the extent to which the school works together to acquire new knowledge, skills, and strategies. The mean ranked score for School 1 was significantly higher than all others, twenty one points higher than the nearest ranked school. Mean ranked scores of nine of the twelve schools were somewhat similar, but again, School 12 exhibited the lowest mean ranked score, more than forty one points lower than School 11, which was itself more than forty one points lower than School 10. One hundred seventy five points separated the schools with the highest and lowest mean ranks. The possibility of a pattern of strongest learning community schools and weakest learning community schools began to emerge. Figure 16 presents focused data from the third PLC dimension, collective learning and application.

Figure 16. Highest and lowest mean ranked scores Kruskal-Wallis Test of PLC collective learning and application.
The fourth PLC dimension of shared personal practice measures the extent to which peers in a school observe and constructively critique each other’s teaching practice, share outcomes of instructional practice, and serve as coaches and mentors for each other. The ranked mean of School 1 was significantly higher than others within this dimension, more than fifty three points higher than the next highest school, School 4. Mean scores of Schools 10 and 11 were significantly lower than all other schools except School 12, again the lowest mean ranked school of the twelve. A difference of one hundred seventy three points separated the school with the highest mean rank score, School 1, from the school with the lowest mean rank score, again School 12. Figure 17 presents the focused data from the fourth PLC dimension, shared personal practice.

Figure 17. Highest and lowest mean scaled scores Kruskal-Wallis Test of PLC shared personal practice.
The PLC dimension of supportive conditions-relationships measures the extent to which school personnel respect, trust, and acknowledge each other. This dimension also measures the extent to which change is a part of the school’s culture. School 1 again exhibited the highest mean rank score, but noteworthy was the similarity among the mean rank scores of five schools, Schools 1, 3, 4, 5, and 2 in this PLC dimension. Once again, School 12 fell to the lowest rank, more than forty six points lower than the next lowest, School 11. The difference between the highest mean rank score of School 1 and the lowest mean rank score of School 12 was more than one hundred seventy one points. Figure 18 presents the data from the fifth PLC dimension, supportive conditions-relationships.

![Mean Rank](image)

*Figure 18. Highest and lowest mean ranked scores Kruskal-Wallis Test of PLC supportive conditions-relationships.*

On the dimension of supportive conditions-structures, the same schools were ranked highest, Schools 1, 2, 3, 4, and 5, although their order was slightly changed. This PLC dimension
measures the extent to which school size, proximity of staff to one another, and systems of communication and collaboration support the learning community. With the relative similarity of mean scores for five of the twelve schools as noted above, significantly lower mean scores were noted within the remaining schools. Most significant in the measure of this dimension is the fifty one point drop from School 12 to the lowest mean score of School 11. One hundred fifty five points separated the highest mean score for School 1 from the lowest mean score for School 11. Figure 19 presents the data from the last PLC dimension, supportive conditions-structures.

![Mean Rank](image_url)

*Figure 19. Highest and lowest mean ranked scores Kruskal-Wallis Test of PLC supportive conditions-structures.*

Overall patterns revealed from use of the Kruskal-Wallis One-Way ANOVA of Rank indicated that School 2 and School 1 were consistently perceived as schools that exhibited the strongest characteristics of a professional learning community in comparison to the other ten schools in the study. Even more consistently, the Kruskal-Wallis test indicated that School 11
and School 12 were consistently perceived as schools that exhibited the weakest characteristics of a professional learning community in comparison to all other schools in the study. In total, the Kruskal-Wallis test revealed significant differences between the twelve schools in regards to characteristics of a learning community that provided the researcher with critical information necessary for answering each of the three research questions.

Subsequent examination of the twelve schools using the median tests, as presented in Chapter 4, served to confirm the Kruskal-Wallis results for identification of School 2 and School 1 as exhibiting the strongest characteristics of a professional learning community. Also confirmed by the median test was that School 11 and School 12 appeared to be the two schools exhibiting the weakest characteristics of a professional learning community. As noted in Chapter 4, the results of both analyses provided the necessary certainty for the researcher to move ahead to address and answer the research questions posed in this study.

Research Question 1

The first research question asks, “Is there a relationship between strength of leaders’ perceptions of their own leadership practices and strength of teacher and principal perceptions of their schools as professional learning communities?” Acceptance or rejection of the null hypothesis for Research Question 1 was based on analysis of summed data from the PLCA (N=486) and the LPI-Self (N=12) instruments. No individual school data was used in analysis of Research Question 1. One cautionary note about the LPI-Self analysis must be made related to the small sample size (N=12) in this study which has the potential to result in the researcher making Type I or Type II errors. Kouzes and Posner (2000) reported that their extensive empirical research involved thousands of subjects in the LPI-Self assessments alone, however the study population for Research Question 1 was significantly smaller. The possibility of Type I
and Type II errors must be carefully considered before determining whether or not the null hypothesis of Research Question 1 can be accepted or rejected.

Discussion of Summed School Data for Research Question 1

Analysis of summed school data for Research Question 1 revealed two findings. First, the twelve principals’ self-perceptions of their own practices of leadership as reflected by the LPI-Self instrument were essentially the same. Principals appeared to either hold very similar self-perceptions or were unresponsive as to their own leadership strengths and weaknesses that might have been revealed by the LPI-Self instrument.

A second finding was also revealed and was less surprising given the similarity of principals’ self-assessments. That finding was that no significant correlations appeared to exist between any of the five leadership practices measured by the LPI-Self instrument and the six learning community dimensions measured by the PLCA. Both these findings indicated appropriate acceptance of the null hypothesis and provided an answer to the first research question. There appeared to be no relationship between principal perceptions of their own leadership practices and perceptions of their faculties regarding strength of the school as a professional learning community.

Research Question 2

The second research question asked, “Is there a relationship between teachers’ perceptions of the strength of their principals’ leadership practices and strength of teacher and principal perceptions of their schools as professional learning communities?” Acceptance or rejection of the null hypothesis for Research Question 2 was based on results of SPSS analyses of summed and individual school data from the PLCA (N=486) and the LPI-Observer (N=84) instruments. The focus of Research Question 2 shifted from an evaluation of twelve principals’
perceptions of their own practices as leaders to a focus on the perceptions of groups of teachers from each of the twelve participating campuses regarding the leadership practices of their principals.

To answer Research Question 2 an initial analysis was conducted using summed scores across all twelve schools on both the PLCA and the LPI-Observer instruments. Following discussion of the analysis of that summed data, discussion will turn to analysis of pertinent data from the four schools in the study that have been determined to exhibit the strongest and the weakest characteristics of a professional learning community.

Discussion of Summed School Data for Research Question 2

Summed PLCA and LPI-Observer scores across all twelve schools revealed the existence of significant correlations among fifteen of the thirty possible paired relationships. Six of those fifteen significant relationships occurred within the leadership practice of modeling the way across all six dimensions of a professional learning community, shared and supportive leadership, shared vision and values, collective learning and application, shared personal practice, supportive conditions-relationships, and supportive conditions-structures. Kouzes and Posner’s (2003b) modeling the way statements reflect the importance of a leader’s credibility. LPI-Observer respondents considered the following statements related to modeling the way:

“Sets a personal example of what he/she expects of others.”

“Spends time and energy making certain that the people he/she works with adhere to the principles and standards that we have agreed on.”

“Follows through on promises and commitments he/she makes.

“Asks for feedback on how his/her actions affect other people’s performance.”

“Builds consensus around a common set of values for running our organization.”
“Is clear about his/her philosophy of leadership.”

The significant positive correlation between the leadership practice of modeling the way across all six dimensions of professional learning communities provided a strong initial indication of the influence of modeling the way on a principal’s efforts toward reculturing and sustaining a school as a professional learning community.

Significant positive correlations were also found to exist in summed school data between the leadership practice of inspiring shared vision and four of the six PLC dimensions, shared and supportive leadership, shared vision and values, collective learning and application, and supportive conditions-relationships. The inspiring shared vision statements reflect the value of leaders who look to the future and successfully enlist others in a common vision of that future (Kouzes & Posner, 2003c). LPI-Observer respondents considered the following statements within the practice of inspiring shared vision:

“Talks about future trends that will influence how our work gets done.”

“Describes a compelling image of what our future could be like.”

“Appeals to others to share an exciting dream of the future.”

“Shows others how their long-term interests can be realized by enlisting in a common vision.”

“Paints the ‘big picture’ of what we aspire to accomplish.”

“Speaks with genuine conviction about the higher meaning and purpose of our work.”

Again, summed data initially indicates that engaging in practices that inspire shared vision may significantly influence a principal’s successful efforts to reculture and sustain a school as a professional learning community.
Significant positive correlations were found to exist between the leadership practice of enabling others to act and the same four PLC dimensions, shared and supportive leadership, shared vision and values, collective learning and application, and supportive conditions-relationships. According to Kouzes and Posner (2003c), leaders who enable others to act are much more likely to use the word “we” than the word “I”. The leader is skillful in building a trusting and trustworthy team of empowered people who recognize and realize the capacity of the group to succeed (Kouzes & Posner, 2003). Within the LPI-Observer practice of enabling others to act, respondents considered the following statements:

“Develops cooperative relationships among the people he/she works with.”

“Actively listens to diverse points of view.”

“Treats others with dignity and respect.”

“Supports the decisions that people make on their own.”

“Gives people a great deal of freedom and choice in deciding how to do their work.”

“Ensures that people grow in their jobs by learning new skills and developing themselves.”

Once again, and this time very closely mirroring the relationships found to exist for inspiring shared vision, initial indication exists from summed school data that leaders who engage in specific practices that enable others to act may be more successful in their efforts to reculture and sustain a school as a professional learning community.

A single significant relationship appeared to exist for summed school data between the leadership practice of encouraging the heart and the PLC dimension of shared and supportive leadership. The exemplars of encouraging the heart focus on recognition of the contributions of team members and the celebration of shared values and victories (Kouzes & Posner, 2003c).
LPI-Observer respondents reflected on the following statements within the practice of encouraging the heart:

“Praises people for a job well done.”

“Makes it a point to let people know about his/her confidence in their abilities.”

“Makes sure that people are creatively rewarded for their contributions to the success of projects.”

“Publicly recognizes people who exemplify commitment to shared values.”

“Finds ways to celebrate accomplishments.”

“Gives the members of the team lots of appreciation and support for their contributions.”

The existence of only a single significant correlation between the LPI practice of encouraging the heart and the PLC dimension of shared and supportive leadership appears to less clearly demonstrate that engaging in specific practices that encourage the hearts of teachers is linked to a principal’s successful efforts to reculture and sustain a school as a professional learning community.

Notably, no significant correlations were found to exist in the summed data between the leadership practice of challenging the process and any of the six learning community dimensions. LPI-Observer respondents reflected on the following statements within the practice of challenging the process:

“Seeks out challenging opportunities that test his/her skills and abilities.”

“Challenges people to try out new and innovative ways to do their work.”

“Searches outside the formal boundaries of his/her organization for innovative ways to improve what we do.”

“Asks, ‘What can we learn?’ when things don’t go as expected.”
“Makes certain that we set achievable goals, make concrete plans, and establishes measurable milestones for the projects and programs that we work on.”

“Experiments and takes risks, even when there is a chance of failure.”

At this point the null hypothesis for Research Question 2, that there are no significant statistical relationships between teachers’ perceptions of the strength of their principals’ leadership practices and strength of perceptions of their schools as professional learning communities, may be appropriately rejected by the analysis of summed school data. However, more precise analysis was warranted and the focus was narrowed from use of data summed across all twelve schools to use of data analyzed from the schools that were determined to exhibit the strongest and weakest attributes of a professional learning community.

Discussion of Individual School Data for Research Question 2

Review of the findings reported in Chapter 4 revealed that this narrowing of focus from summed data across twelve schools to data from only the two schools determined to be the strongest learning community schools, Schools 2 and 1, and the two schools determined to be the weakest learning community schools, Schools 11 and 12, reduced the number of significant relationships found. Discussion of analyses of significant correlations between PLCA and LPI-Observer data will begin with School 2 followed by discussion regarding School 11. It is important to note that no significant correlations were found to exist in the data for either School 1 or School 12.

At School 2, one of the two strongest learning communities, significant positive relationships were found to exist between the LPI-Observer practice of modeling the way and three of the six PLC dimensions, shared values and vision, shared personal practice, and
supportive conditions-structures. Again, LPI-Observer respondents considered the following statements related to modeling the way:

“Sets a personal example of what he/she expects of others.”

“Spends time and energy making certain that the people he/she works with adhere to the principles and standards that we have agreed on.”

“Follows through on promises and commitments he/she makes.

“Asks for feedback on how his/her actions affect other people’s performance.”

“Builds consensus around a common set of values for running our organization.”

“Is clear about his/her philosophy of leadership.”

The PLC dimension of shared values and vision measures the extent to which a core of shared values exists within the school about learning, about effective teacher and student behaviors, and about shared aims to maintain a learning community (Hipp & Huffman, 2000). The PLC dimension of shared personal practice measures the extent to which peers in a school observe and constructively critique each other’s teaching practice, share outcomes of instructional practice, and serve as coaches and mentors for each other (Huffman & Hipp, 2003). The PLC dimension of supportive conditions-structures is measured according to the extent to which school size, proximity of staff to one another, and systems of communication and collaboration support the learning community (Huffman & Hipp, 2003). At School 2, one of two schools that exhibited the strongest characteristics of a learning community, it appears that teacher perceptions of their principals’ leadership practices were related to strength as a learning community.

Discussion will now focus on School 11, one of two schools determined to exhibit the weakest characteristics of a professional learning community. A total of three significant positive
correlations were found to exist for School 11. The LPI-Observer practice of inspiring shared vision was positively correlated with the PLC dimension of supportive conditions-relationships. Again, LPI-Observer respondents considered the following statements within the practice of inspiring shared vision:

- “Talks about future trends that will influence how our work gets done.”
- “Describes a compelling image of what our future could be like.”
- “Appeals to others to share an exciting dream of the future.”
- “Shows others how their long-term interests can be realized by enlisting in a common vision.”
- “Paints the ‘big picture’ of what we aspire to accomplish.”
- “Speaks with genuine conviction about the higher meaning and purpose of our work.”

The PLC dimension of supportive conditions-relationships measures the extent to which school personnel respect, trust, and acknowledge each other, and the extent to which change is a part of the school’s culture.

The second and third significant correlations were found to exist at School 11 between the LPI-Observer practice of enabling others to act and the PLC dimensions of shared values and vision and again, supportive conditions-relationships. Recall that the leadership practice of enabling others to act is exemplified by the following statements:

- “Develops cooperative relationships among the people he/she works with.”
- “Actively listens to diverse points of view.”
- “Treats others with dignity and respect.”
- “Supports the decisions that people make on their own.”
- “Gives people a great deal of freedom and choice in deciding how to do their work.”
“Ensures that people grow in their jobs by learning new skills and developing themselves.”

The PLC dimension of shared values and vision measures the extent to which a core of shared values exists within the school about learning, about effective teacher and student behaviors, and about shared aims to maintain a learning community (Huffman & Hipp, 2003). The PLC dimension of supportive conditions-relationships measures the extent to which school personnel respect, trust, and acknowledge each other, and the extent to which change is a part of the school’s culture (Huffman & Hipp, 2003). In the case of School 11, significant correlations could be viewed in light of the fact that in comparison to ten of the twelve schools in this study, School 11 was determined to exhibit very weak characteristics of a professional learning community. In fact, review of this study’s earlier determination of mean ranks for the PLC dimension of supportive conditions-relationships confirmed that School 11 ranked next to the lowest for all twelve schools. Correlations then could indicate relationships between leadership practices that enable others to act ineffectively and professional relationships that support those ineffective actions. However, based on the finding that School 11 yielded an equal number of positive correlations to those at School 2, and correlations for Schools 1 and 12 did not indicate any significant relationships between teacher perceptions of their principals’ leadership and the strength of schools as professional learning communities, the researcher must accept the null hypothesis for Research Question 2

Research Question 3

The final research question in this study asks, “Is strength in any single leadership practice of a principal more highly related to strength of teacher and principal perceptions of their schools as professional learning communities?” Response to Research Question 3 focused
on data regarding the thirty specific statements assessing the practices of leaders taken from the Leadership Practices Inventory-Observer instrument. Again initial analysis of relationships was conducted using summed scores from all twelve campuses (N=84) for each of the thirty LPI individual statements of practices and summed scores across all dimensions of the PLCA (N=486). Acceptance or rejection of the null hypothesis for Research Question 3 focused first on analysis of data from schools summed and then from those schools determined to exhibit the strongest and the weakest characteristics of a professional learning community.

Discussion of Summed School Data for Research Question 3

Analysis of summed school data revealed that ten of the thirty specific leadership behaviors assessed by the LPI-Observer instrument were significantly correlated to dimensions of professional learning communities. The strongest significant positive correlation existed within the leadership practice of inspiring shared vision across all six PLCA dimensions for Statement 17, which reads, “Shows others how their long-term interests can be realized by enlisting in a common vision”. Three additional inspiring shared vision leadership practice statements were found to have significant correlations across PLC dimensions. ISV Statement 7, “Describes a compelling image of what our future could be like”, ISV Statement 12, “Appeals to others to share an exciting dream of the future”, and ISV Statement 22, “Paints the ‘big picture’ of what we aspire to accomplish” correlated with three of the six PLC dimensions. DuFour’s (1999) call for principals to lead through shared vision rather than rules and procedures is pertinent here, confirmed by the responses of teachers participating in this study.

Two modeling the way statements, MW Statement 16 and MW Statement 21, yielded significant positive correlations across five of the six PLC dimensions. MW Statement 16 reads, “Asks for feedback on how his/her actions affect other people’s performance”. MW Statement
21 reads, “Builds consensus around a common set of values for running our organization.” MW Statement 1, which reads, “Sets a personal example of what he/she expects of others” was found to be significant across four of the six PLC dimensions for the twelve schools summed. If this interpretation is indeed valid it confirms Sergiovanni’s (2001) finding that credibility of a leader’s interactions strongly determines whether a leader will be followed over time. Further confirmation of the necessity for leaders to model the way is found in DuFour and Eaker’s (1998) information regarding the daily, deliberate, credible actions of a principal serve as models for what followers are expected to know and do. The practice of modeling the way is reflected in at least four of Reeves’ (2006) seven components of leadership. Modeling the way is clearly implicated in more than half of the twenty one leadership responsibilities found to significantly impact student achievement (Marzano, Waters, & McNulty, 2005).

Two LPI-Observer statements related to challenging the process and enabling others to act yielded significant positive correlations for all twelve schools’ data summed. CP Statement 28, which reads, “Experiments and takes risks, even when there is a chance of failure” was found to be significantly positively correlated to four of the six PLC dimensions, while CP Statement 23, “Makes certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on” was found to significantly positively correlate to three of the six PLC dimensions. Within the leadership practice of enabling others to act Statement 4, which reads, “Develops cooperative relationship among the people he/she works with”, was found to positively correlate across four of six PLC dimensions.

Summed data indicates that strength in at least ten specific leadership behaviors appeared most highly related to strength of schools as professional learning communities. Four of those specific behaviors occurred within the leadership practice of inspiring shared vision, while three
modeling the way behaviors appeared most related, and two challenging the process behaviors appeared most strongly related to strength as a learning community. One specific behavior within the practice of enabling others to act appeared most strongly related to strength of schools as learning communities, while no behaviors within the practice of encouraging the heart appeared most strongly related to strength of a school as a learning community. The ten behavior statements are presented here.

Inspiring Shared Vision Statement 17: “Shows others how their long-term interests can be realized by enlisting in a common vision.”

Inspiring Shared Vision Statement 7: “Describes a compelling image of what our future could be like.”

Inspiring Shared Vision Statement 12: “Appeals to others to share an exciting dream of the future.”

Inspiring Shared Vision Statement 22: “Paints the ‘big picture’ of what we aspire to accomplish.”

Modeling the Way Statement 16: “Asks for feedback on how his/her actions affect other people’s performance.”

Modeling the Way Statement 21: “Builds consensus around a common set of values for running our organization.”

Modeling the Way Statement 1: “Sets a personal example of what he/she expects of others.”

Challenging the Process Statement 28: “Experiments and takes risks, even when there is a chance of failure.”

Challenging the Process Statement 23: “Makes certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on.”

Enabling Others to Act Statement 4: “Develops cooperative relationships among the people he/she works with.”

Analysis for summed school data indicates that these ten specific leadership behaviors assessed by the LPI-Observer instrument may be more highly related to strength of a school as a
professional learning community. The null hypothesis for Research Question 3 may at this point be appropriately rejected, however, further analysis of individual school data will provide more focused analysis.

Discussion of Individual School Data for Research Question 3

Discussion now turns to analysis of individual school data from the two schools determined to be the strongest learning communities, Schools 2 and 1, and the two schools determined to be the weakest learning communities, Schools 11 and 12. Again the narrowing of focus from using summed data for twelve schools to using individual school data decreased the number of significant correlations that existed across all LPI-Observer practices and all PLCA dimensions. However, this narrowing of focus allows the researcher to discriminate existing patterns which provide contrasts between the strongest and the weakest learning community schools. Notable at the outset of this analysis was that significant relationships were found to exist at each of the four schools within two leadership practices, modeling the way and enabling others to act.

Significant contrasts in correlations were found for the specific modeling the way behavior described by Statement 1, which reads, “Sets a personal example of what he/she expects of others.” At School 1, a strong PLC school, this statement yielded significant positive correlations with the PLC dimension of supportive conditions-structures. The PLC supportive conditions-structures dimension involves the extent to which school size, proximity of staff to one another, and systems of communication and collaboration support the learning community (Huffman & Hipp, 2003). At School 12, a weak PLC school, this statement yielded significant negative correlations with the PLC dimensions of shared and supportive leadership and supportive conditions-relationships. The PLC dimension of shared and supportive leadership
measures the extent to which a school leader shares power, authority, and decision making opportunities and the extent to which he or she promotes and nurtures leadership among staff (Huffman & Hipp, 2003). The PLC dimension of supportive conditions-relationships measures the extent to which school personnel respect, trust, and acknowledge each other. This dimension also measures the extent to which change is a part of the school’s culture (Huffman & Hipp, 2003).

These contrasting correlations appear to indicate that at School 1, the strong learning community school, the principal is consistently viewed as a credible leader who has demonstrated that credibility, at least in part, by steadfastly developing structures within the school that increase teachers’ capacity for professional communication and collaboration. In contrast, at School 12, the weak learning community school, the principal’s personal example of persistence, attention to detail, and collegiality with colleagues and subordinates appears to have little or no impact on teachers’ perceptions of shared power and shared decision-making, and most alarmingly, on teachers’ perceptions of their school’s ability to continually change and adapt. The strength of the principal’s personal example of the expectations he or she has for others, as reflected in modeling the way Statement 1, appears to be more highly related to strength of school as a professional learning community.

Another significant contrast in correlations was found for the specific modeling the way behavior described by Statement 21, which reads, “Builds consensus around a common set of values for running our organization.” At School 2, a strong PLC school, modeling the way Statement 21 yielded significant positive correlations with the PLC dimension of shared personal practice. Shared personal practice within a school occurs when teachers observe and constructively critique each other’s teaching practice, sharing outcomes of their practice, and
serve as coaches and mentors for each other (Huffman & Hipp, 2003). At School 11, a weak PLC school, this statement yielded significant negative correlations with the PLC dimensions of shared and supportive leadership and supportive conditions-structures. Again at a weak learning community school, marked deficits are apparent in shared and supportive leadership and supportive conditions, whether for relationships or for structures. Recall that for School 1, respondents indicated that a strength of their school was perceived in the supportive conditions related to structures.

These contrasting correlations appear to indicate that at School 2 one of the most difficult dimensions of a learning community, shared personal practice, was reported to be thriving, likely because both principal and teachers have come to consensus regarding the value of true collaboration in a professional learning community. Recall that Senge (1990) insisted that an organization’s capacity for learning, for “…continually learning how to learn together”, determines whether or not it will thrive or die. At School 2 teachers reported having opportunities to observe and provide constructive feedback to peers and they reported sharing ideas and reviewing student work to improve instruction. Again, contrasts are notable at School 11 in relation to modeling the way Statement 21. If the principal and teachers at School 11 have indeed come to consensus regarding a “…common set of values for running the organization”, possibly their common values serve to obstruct the very elements that must be nurtured in a strong professional learning community, the shared and supportive leadership and supportive conditions that enhance learning community structures.

The existence of positive correlations for modeling the way Statements 1 and 21 that were revealed for Schools 2 and 1, and negative correlations for Schools 11 and 12 may be the best indicators of leadership practices that are more highly related to strong learning community
schools. One leadership behavior statement from the practice of enabling others to act appeared to also be significantly related to strength of schools as learning communities. EOA Statement 4 reads, “Develops cooperative relationships among the people I work with” At School 12, a weak learning community school, this statement yielded two significant negative correlations, and once again the negative correlations occurred with PLC dimensions related to supportive structures and supportive relationships. As noted throughout this study, effective sustainable learning communities continually overcome structural obstacles related to size and proximity that obstruct the work of collaboration. Structures for efficient and effective communication consistently support teacher collaboration. Effective, sustainable learning communities also overcome relationship obstacles by making respect, trust, and acknowledgement part of the culture of the school. No school ever “arrives”; the relationships characteristic of learning communities are strengthened, not threatened, by continual growth and change. Negative correlations at School 12, a weak learning community, may indicate that principal and teachers are indeed engaged in cooperative relationships, but in ways that mutually obstruct the change and growth of the school. Cooperative relationships, in the case of School 12, may serve to stunt the growth of the school as a learning community.

A review of the leadership practice statements that appear to be most highly related to strength of school as a learning community is useful here.

MW Statement 1: “Sets a personal example of what he/she expects of others.”

MW Statement 21: “Builds consensus around a common set of values for running our organization.”

EOA Statement 4: “Develops cooperative relationships among the people he/she works with.”

The null hypothesis for this question may be appropriately rejected.
Significance of the Findings of the Study

The findings of this study are primarily in response to the call from Kouzes and Posner (2003b), Spillane, Halverson, and Diamond (2004), Mendez-Morse (1992) and others for additional research into the qualities that principals must possess in order to lead schools in the 21st century. Williams (2006) notes that few studies of actual principal practices have been conducted to see how they align with those practices most critical to reculturing and sustaining a professional learning community. This study attempts to add to that research base.

In this study the most significant findings appeared in relation to Research Question 3, “Is strength in any single leadership practice of a principal more highly related to strength of teacher and principal perceptions of their schools as professional learning communities?” As reported in Chapter 4 and discussed in this chapter, not only do a number of specific leadership behaviors emerge, but three specific behaviors appear to be most strongly related to strength of learning community:

Modeling the way Statement 1: Sets a personal example of what he/she expects of others;

Modeling the way Statement 21: Builds consensus around a common set of values for running our organization;

Enabling others to act Statement 4: Develops cooperative relationships with people he/she works with.

The findings of this study clearly return us to our prior discussion about the nature of learning communities and the leaders who persistently commit to constructing them. The change of course from traditionally structured schools to schools as learning communities depends in part on our understanding of, as Galagan (1994) says, “what leadership is, and how it should be practiced.” Williams’ (2006) fundamentals of learning communities, sharing leadership and building leadership capacity, are directly reflected in all three of the specific leadership behaviors...
identified in this study. Senge (1990), Fullan (1999, 2001a), Huffman and Hipp (2003), and Huffman and Jacobson (2003) have spotlighted the crucial nature of the leader’s ability to build a community of collaborators in the ultimate success of any change efforts, abilities that are at the heart of each of the three specific behaviors identified in this study. Hord’s (1997) call for principals to continually improve the capacity of teachers to learn and change is directly answered in the practice of these three behaviors. Leadership by personal example, leadership based on shared organizational values, and leadership by collaboration have been identified in this study as the best among a collection of excellent practices.

In the discussion here of significance of findings we especially return to conversations about change and sustainability. Leadership, according to Kotter (1990) is about coping with change. Schmoker (2005) noted that sustained change in schools can be accomplished by commitment of leaders to the actions most likely to improve teaching and learning. Molinaro and Drake (1998) explained that it is the principal who shoulders the responsibility for creating an environment that sustains a true learning community. This study has resulted in the identification of a number of possible leader actions, and has specifically identified three that appear to be most related to strength of school as a learning community. The three specific behaviors identified in this study have the potential to powerfully impact development of environments where learning communities thrive. Leaders who practice setting personal examples, gaining consensus around common values, and establishing cooperative relationships within the organization will embed and sustain those elements necessary for vital learning communities.

Recommendations for Further Study

There exists a reasonable expectation on the part of readers of a dissertation that the progression of the study would lead to additional valuable questions for further study and
Several ideas are presented here. Certainly replication of any study deepens the understanding of the findings of all related studies.

This study of the relationship between leadership practices as measured by the Leadership Practices Inventory (Kouzes & Posner, 2003), both Self and Observer instruments, and strength of a school as a professional learning community as measured by the Professional Learning Communities Assessment (Olivier, Hipp, & Huffman, 2003) provided highly interesting and valuable data. Further use of the two instruments by other researchers may result in a base of knowledge of the best methods for scoring both Likert-type scales and for comparing and contrasting the results of the instruments.

As noted in Chapter 5, how the exemplars of each of the leadership practices are related to attributes of each dimension of a learning community was not empirically clear during the course of this study. Deeper analysis of statements from the LPI and PLCA instruments may reveal parallel themes. Further study of inverse correlations that occur between the leadership practices measured on the LPI and the attributes of professional learning communities measured on the PLCA could be valuable. Additionally, further analysis of patterns that occur within any relationships found between LPI practices PLC would be interesting and provide practical ramifications. Finally, sustainability of learning community strength would certainly have been more thorough in a study that employed two or even three measures over time.

Summary

Chapter 5 presented a discussion of the findings of this study which examined the relationship between leadership practices of principals and successful reculturing of schools as sustainable professional learning communities. The first research question asked, “Is there a relationship between strength of leaders’ perceptions of their own leadership practices and
strength of teacher and principal perceptions of their schools as professional learning communities?” Two findings are noted here. First, all twelve principals appeared to hold essentially identical perceptions of their own leadership practices as measured by the Leadership Practices Inventory-Self instrument. Second, no significant correlations appeared to exist between principals’ perceptions of their own leadership practices and strength of schools as professional learning communities.

The second research question asked, “Is there a relationship between teachers’ perceptions of the strength of their principals’ leadership practices and strength of teacher and principal perceptions of their schools as professional learning communities?” Although analysis of summed school data indicated that there may be such a relationship, further scrutiny revealed that an equal number of positive correlations were found to exist among the two strongest learning communities and the two weakest learning communities. There did not appear to be a relationship between teacher perceptions of principal leadership practices and strength of schools as professional learning communities.

The third research question asked, “Is strength in any single leadership practice of a principal more highly related to strength of teacher and principal perceptions of their schools as professional learning communities?” Initial analysis of summed school data for Research Question 3 indicated ten specific leadership behaviors that appeared to be more highly related to strength of schools as learning communities. Those ten behaviors occurred within the leadership practices of inspiring shared vision, modeling the way, challenging the process, and enabling others to act. Based on summed school data the null hypothesis appeared to be appropriately rejected. There did appear to be a number of specific leadership practices of principals that more highly related to strength of schools as learning communities. Further analysis of the two
strongest learning community schools and the two weakest learning community schools confirmed the appropriate rejection of the null hypothesis, this time narrowing the specific leadership behaviors to just three. The null hypothesis, that no leadership behavior is more highly related to the existence of strong and sustainable learning communities may be appropriately rejected. Based on the analysis of data, three leadership behaviors are most likely to result in the reculturing of schools as sustainable professional learning communities. Principals who set a personal example of what they expect of others, who build consensus around a common set of values, and who develop cooperative relationship with co-workers are more likely to lead strong and sustainable learning communities.

Drucker (2004) asserted that a leader’s most important work is to identify the future that has already happened and to seize opportunities to shape the form of change and to guide its direction. This researcher has attempted to contribute to that end, providing new information to what educators already know about leadership, change, and the power of professional learning communities.
APPENDIX A
INFORMED CONSENT FORM
University of North Texas
Institutional Review Board

Informed Consent Form

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose and benefits of the study and how it will be conducted.

The study is being conducted by Shannon Hill, a doctoral student in the University of North Texas, College of Education. The study is titled “Leadership, change, and sustainability: A study of the relationship between leadership practices of principals and successful re-culturing of schools as sustainable professional learning communities”. This study will attempt to add to the limited research base regarding specific leadership practices of principals that promote and sustain effective change. Use of the two selected instruments is expected to provide a useful profile of effective leadership practices.

No foreseeable risks are involved in this study.

Any information obtained through this study that could identify individuals will remain strictly confidential and will be disclosed only with the permission of the participant or as required by law. Be assured that the confidentiality of your individual information will be maintained in all publications, presentations, and verbal and/or written communications regarding this study.

Teachers and the principal are asked to complete the Professional Learning Communities Assessment-Revised assessing your perceptions regarding five dimensions of a professional learning community. Your candid responses are critical to the integrity of this study. Total time necessary for completion of the PLCA-R is estimated to be 25 minutes. Following completion of the PLCA-R most participants’ commitment to this study will be fulfilled.

A small group of teachers on your campus are also identified to complete the Leadership Practices Inventory-Observer Form. Again, your candid responses are critical to the integrity of this study. Be assured that the confidentiality of your individual information will be maintained in all publications, presentations, and verbal and/or written communications regarding this study. Total time necessary for completion of the LPI-Observer form is estimated to be 20 minutes. Following completion of both PLCA-R and LPI-Observer instruments your commitment will be fulfilled.

Principals are asked to complete the Leadership Practices Inventory-Self form. Be assured that the confidentiality of your individual information will be maintained in all publications, presentations, and verbal and/or written communications regarding this study. Total time necessary for completion of the LPI-Self form is estimated to be 20 minutes. Following completion of both the PLCA-R and LPI-Self instruments your commitment will be fulfilled.

Participants in the study may benefit as they review and reflect on the dimensions of professional learning communities identified in the PLCA-R and/or the practices of leadership described in
the LPI-Self and Observer forms. The study will also add to the existing knowledge and practice of leadership practices that have the potential to enhance sustained school change.

If you have questions or concerns regarding this study please contact Shannon Hill at shill8@sw.rr.com or 940-766-4176, or Dr. Jane B. Huffman, UNT College of Education faculty adviser at huffman@unt.edu or 940-565-2175.

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- The researcher, Shannon Hill, has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You understand that you will receive a copy of this form.

________________________________________               ___________
Signature of Principal Investigator                     Date
APPENDIX B
PROFESSIONAL LEARNING COMMUNITIES ASSESSMENT INSTRUMENT
**Professional Learning Communities Assessment**

**Directions:**
This questionnaire assesses your perceptions about your principal, staff, and stakeholders based on the five dimensions of a professional learning community (PLC) and related attributes. There are no right or wrong responses. This questionnaire contains a number of statements about practices, which occur in some schools. Read each statement and then use the scale below to select the scale point that best reflects your personal degree of agreement with the statement. Shade the appropriate oval provided to the right of each statement. Be certain to select only one response for each statement.

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

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

<table>
<thead>
<tr>
<th>STATEMENTS</th>
<th>SCALE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shared and Supportive Leadership</strong></td>
<td>SD</td>
</tr>
<tr>
<td>1. The staff is consistently involved in discussing and making decisions about most school issues.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>2. The principal incorporates advice from staff to make decisions.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>3. The staff have accessibility to key information.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>4. The principal is proactive and addresses areas where support is needed.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>5. Opportunities are provided for staff to initiate change.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>6. The principal shares responsibility and rewards for innovative actions.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>7. The principal participates democratically with staff sharing power and authority.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>8. Leadership is promoted and nurtured among staff.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>9. Decision-making takes place through committees and communication across grade and subject areas.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>10. Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>STATEMENTS</td>
<td>SCALE</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td><strong>Shared Values and Vision</strong></td>
<td></td>
</tr>
<tr>
<td>11. A collaborative process exists for developing a shared sense of values among staff.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>12. Shared values support norms of behavior that guide decisions about teaching and learning.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>13. The staff share visions for school improvement that have an undeviating focus on student learning.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>14. Decisions are made in alignment with the school=s values and vision.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>15. A collaborative process exists for developing a shared vision among staff.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>16. School goals focus on student learning beyond test scores and grades.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>17. Policies and programs are aligned to the school=s vision.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>18. Stakeholders are actively involved in creating high expectations that serve to increase student achievement.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td><strong>Collective Learning and Application</strong></td>
<td></td>
</tr>
<tr>
<td>19. The staff work together to seek knowledge, skills and strategies and apply this new learning to their work.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>20. Collegial relationships exist among staff that reflect commitment to school improvement efforts.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>21. The staff plan and work together to search for solutions to address diverse student needs.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>22. A variety of opportunities and structures exist for collective learning through open dialogue.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>23. The staff engage in dialogue that reflects a respect for diverse ideas that lead to continued inquiry.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>24. Professional development focuses on teaching and learning.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>25. School staff and stakeholders learn together and apply new knowledge to solve problems.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>26. School staff is committed to programs that enhance learning.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td><strong>Shared Personal Practice</strong></td>
<td></td>
</tr>
<tr>
<td>27. Opportunities exist for staff to observe peers and offer encouragement.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>28. The staff provide feedback to peers related to instructional practices.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>29. The staff informally share ideas and suggestions for improving student learning.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>STATEMENTS</td>
<td>SCALE</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>30. The staff collaboratively review student work to share and improve</td>
<td>0</td>
</tr>
<tr>
<td>instructional practices.</td>
<td></td>
</tr>
<tr>
<td>31. Opportunities exist for coaching and mentoring.</td>
<td>0</td>
</tr>
<tr>
<td>32. Individuals and teams have the opportunity to apply learning and</td>
<td>0</td>
</tr>
<tr>
<td>share the results of their practices.</td>
<td></td>
</tr>
<tr>
<td><strong>Supportive Conditions - Relationships</strong></td>
<td></td>
</tr>
<tr>
<td>33. Caring relationships exist among staff and students that are built</td>
<td>0</td>
</tr>
<tr>
<td>on trust and respect.</td>
<td></td>
</tr>
<tr>
<td>34. A culture of trust and respect exists for taking risks.</td>
<td>0</td>
</tr>
<tr>
<td>35. Outstanding achievement is recognized and celebrated regularly in our</td>
<td>0</td>
</tr>
<tr>
<td>school.</td>
<td></td>
</tr>
<tr>
<td>36. School staff and stakeholders exhibit a sustained and unified</td>
<td>0</td>
</tr>
<tr>
<td>effort to embed change into the culture of the school.</td>
<td></td>
</tr>
<tr>
<td><strong>Supportive Conditions - Structures</strong></td>
<td></td>
</tr>
<tr>
<td>37. Time is provided to facilitate collaborative work.</td>
<td>0</td>
</tr>
<tr>
<td>38. The school schedule promotes collective learning and shared practice.</td>
<td>0</td>
</tr>
<tr>
<td>39. Fiscal resources are available for professional development.</td>
<td>0</td>
</tr>
<tr>
<td>40. Appropriate technology and instructional materials are available to</td>
<td>0</td>
</tr>
<tr>
<td>staff.</td>
<td></td>
</tr>
<tr>
<td>41. Resource people provide expertise and support for continuous learning.</td>
<td>0</td>
</tr>
<tr>
<td>42. The school facility is clean, attractive and inviting.</td>
<td>0</td>
</tr>
<tr>
<td>43. The proximity of grade level and department personnel allows for</td>
<td>0</td>
</tr>
<tr>
<td>ease in collaborating with colleagues.</td>
<td></td>
</tr>
<tr>
<td>44. Communication systems promote a flow of information among staff.</td>
<td>0</td>
</tr>
<tr>
<td>45. Communication systems promote a flow of information across the entire</td>
<td>0</td>
</tr>
<tr>
<td>school community including: central office personnel, parents, and</td>
<td></td>
</tr>
<tr>
<td>community members.</td>
<td></td>
</tr>
</tbody>
</table>

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APPENDIX C
LETTER OF PERMISSION – KOUZES & POSNER INTERNATIONAL
December 5, 2007

Ms. Shannon Hill
1627 Hursh Avenue
Wichita Falls, Texas 76302

Dear Shannon:

Thank you for your request to use the Leadership Practices Inventory (LPI) in your dissertation. We are willing to allow you to reproduce the instrument as outlined in your letter, at no charge, with the following understandings:

(1) That the LPI is used only for research purposes and is not sold or used in conjunction with any compensated management development activities;
(2) That copyright of the LPI, or any derivation of the instrument, is retained by Kouzes Posner International, and that the following copyright statement is included on all copies of the instrument: "Copyright © 2003 James M. Kouzes and Barry Z. Posner. All rights reserved. Used with permission."
(3) That one (1) electronic copy of your dissertation and one (1) copy of all papers, reports, articles, and the like which make use of the LPI data be sent promptly to our attention; and,
(4) That you agree to allow us to include an abstract of your study and any other published papers utilizing the LPI on our various websites.

If the terms outlined above are acceptable, would you indicate so by signing one (1) copy of this letter and returning it to us. Best wishes for every success with your research project.

Cordially,

Barry Z. Posner, Ph.D.
Managing Partner

I understand and agree to abide by these conditions:

(Signed) Shannon Hill Date: December 31

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Copy of email text sent to Dr. Barry Posner, Santa Clara University on Wednesday, March 4, 2009

This email confirms the voicemail message I received on or about Tuesday, Feb. 10, 2009, granting me permission to reproduce the Leadership Practices Inventory-Self and Leadership Practices Inventory-Observer documents in my dissertation titled, "Leadership and sustainable change...".

Many thanks,
Shannon D. Hill
Doctoral student
University of North Texas
shill8@sw.rr.com
APPENDIX E
LEADERSHIP PRACTICES INVENTORIES – OBSERVER & SELF
INSTRUCTIONS

You are being asked by the person whose name appears at the top of the next page to assess his or her leadership behaviors. Below the person’s name you will find thirty statements describing various leadership behaviors. Please read each statement carefully, and using the RATING SCALE on the right, ask yourself:

“How frequently does this person engage in the behavior described?”

When answering your responses to each statement:

• Be realistic about the extent to which this person actually engages in the behavior.
• Be as honest and accurate as you can be.
• Be honest and do not answer in terms of how you would like to see the person behave or in terms of how you think he or she should behave.
• Do answer in terms of how this person typically behaves on most days, on most projects, and with most people.
• Be thoughtful about your responses. For example, giving the person lots on all items is most likely not an accurate description of his or her behavior. Similarly, giving someone a 1 on all items is most likely not an accurate description either. Most people will do some things more or less often than they do other things.
• If you feel that a statement does not apply, it’s probably because you don’t see or experience the behavior. That means this person does not frequently engage in the behavior, at least around you. In that case, assign a rating of 3 or lower.

For each statement, decide on a response and then record the corresponding number in the square to the right of the statement. After you have responded to all thirty statements, go back through the LPI one more time to make sure you have responded to each statement. Every statement must have a rating.

The RATING SCALE runs from 1 to 10. Choose the number that best applies to each statement.

1 = Almost Never
2 = Rarely
3 = Seldom
4 = Once in a While
5 = Occasionally
6 = Sometimes
7 = Fairly Often
8 = Usually
9 = Very Frequently
10 = Almost Always

When you have completed the LPI-Observer, please return it to:

Thank you.
INSTRUCTIONS

Write your name in the space provided at the top of the next page. Below your name, you will find thirty statements describing various leadership behaviors. Please read each statement carefully, and using the RATING SCALE on the right, ask yourself:

“How frequently do I engage in the behavior described?”

- Be realistic about the extent to which you actually engage in the behavior.
- Be as honest and accurate as you can be.
- DO NOT answer in terms of how you would like to behave or in terms of how you think you should behave.
- DO answer in terms of how you typically behave most days on most projects and with most people.
- Be thoughtful about your responses. For example, giving yourself 10s on all items is most likely not an accurate description of your behavior. Similarly, giving yourself all 1s or all 5s is most likely not an accurate description either. Most people will do some things more or less often than they do other things.
- If you feel that a statement does not apply to you, it is probably because you don’t frequently engage in the behavior. In that case, assign a rating of 3 or lower.

For each statement, decide on a response and then record the corresponding number in the box to the right of the statement. After you have responded to all thirty statements, go back through the LPI and make sure you have responded to each statement. Every statement must have a rating.

The RATING SCALE runs from 1 to 10. Choose the number that best applies to each statement.

1 = Almost Never
2 = Rarely
3 = Seldom
4 = Once in a While
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7 = Fairly Often
8 = Usually
9 = Very Frequently
10 = Almost Always

When you have completed the LPI-Set, please return it to:


Thank you.

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<table>
<thead>
<tr>
<th></th>
<th>Your Name: ____________________________</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>I set a personal example of what I expect of others.</td>
</tr>
<tr>
<td>2.</td>
<td>I talk about future trends that will influence how our work gets done.</td>
</tr>
<tr>
<td>3.</td>
<td>I seek out challenging opportunities that test my own skills and abilities.</td>
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<td>4.</td>
<td>I develop cooperative relationships among the people I work with.</td>
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<tr>
<td>5.</td>
<td>I praise people for a job well done.</td>
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<tr>
<td>6.</td>
<td>I spend time and energy making certain that the people I work with adhere to the principles and standards we have agreed on.</td>
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<tr>
<td>7.</td>
<td>I describe a compelling image of what our future could be like.</td>
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<tr>
<td>8.</td>
<td>I challenge people to try out new and innovative ways to do their work.</td>
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<tr>
<td>9.</td>
<td>I actively listen to diverse points of view.</td>
</tr>
<tr>
<td>10.</td>
<td>I make it a point to let people know about my confidence in their abilities.</td>
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<tr>
<td>11.</td>
<td>I follow through on the promises and commitments that I make.</td>
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<tr>
<td>12.</td>
<td>I appeal to others to share an exciting dream of the future.</td>
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<tr>
<td>13.</td>
<td>I search outside the formal boundaries of my organization for innovative ways to improve what we do.</td>
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<tr>
<td>14.</td>
<td>I treat others with dignity and respect.</td>
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<tr>
<td>15.</td>
<td>I make sure that people are creatively rewarded for their contributions to the success of our projects.</td>
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<tr>
<td>16.</td>
<td>I seek feedback on how my actions affect others' performance.</td>
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<tr>
<td>17.</td>
<td>I show others how their long-term interests can be realized by enlisting in a common vision.</td>
</tr>
<tr>
<td>18.</td>
<td>I ask “What can we learn?” when things don't go as expected.</td>
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<tr>
<td>19.</td>
<td>I support the decisions that people make on their own.</td>
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<tr>
<td>20.</td>
<td>I publicly recognize people who exemplify commitment to shared values.</td>
</tr>
<tr>
<td>21.</td>
<td>I build consensus around a common set of values for running our organization.</td>
</tr>
<tr>
<td>22.</td>
<td>I paint the “big picture” of what we aspire to accomplish.</td>
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<tr>
<td>23.</td>
<td>I make certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on.</td>
</tr>
<tr>
<td>24.</td>
<td>I give people a great deal of freedom and choice in deciding how to do their work.</td>
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<tr>
<td>25.</td>
<td>I find ways to celebrate accomplishments.</td>
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<tr>
<td>26.</td>
<td>I am clear about my philosophy of leadership.</td>
</tr>
<tr>
<td>27.</td>
<td>I speak with genuine conviction about the higher meaning and purpose of our work.</td>
</tr>
<tr>
<td>28.</td>
<td>I experiment and take risks, even when there is a chance of failure.</td>
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<tr>
<td>29.</td>
<td>I ensure that people grow in their jobs by learning new skills and developing themselves.</td>
</tr>
<tr>
<td>30.</td>
<td>I give the members of the team lots of appreciation and support for their contributions.</td>
</tr>
</tbody>
</table>

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REFERENCES


Loucks, S. F., Newlove, B. W., & Hall, G. E. (1975). Measuring levels of use of the innovation: A manual for trainers, interviewers, and raters. The University of Texas at Austin, Research and Development Center for Teacher Education.


