BUILDING LEADERSHIP: THE KNOWLEDGE OF PRINCIPALS IN CREATING COLLABORATIVE COMMUNITIES OF PROFESSIONAL LEARNING

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Research literature is replete with the importance of collaboration in schools, the lack of

its implementation, the centrality of the role of the principal, and the existence of a gap

between knowledge and practice—or a "Knowing-Doing Gap." In other words, there is a

set of knowledge that principals must know in order to create a collaborative workplace

environment for teachers. This study sought to describe what high school principals know

about creating such a culture of collaboration.

The researcher combed journal articles, studies and professional literature in order

to identify what principals must know in order to create a culture of collaboration. The

result was ten elements of principal knowledge: Staff involvement in important decisions,

Charismatic leadership not being necessary for success, Effective elements of teacher

teams, Administrator's modeling professional learning, The allocation of resources, Staff

meetings focused on student learning, Elements of continuous improvement, and

Principles of Adult Learning, Student Learning and Change.

From these ten elements, the researcher developed a web-based survey intended

to measure nine of those elements (Charismatic leadership was excluded). Principals of

accredited high schools in the state of Nebraska were invited to participate in this survey,

as high schools are well-known for the isolation that teachers experience—particularly as a result of departmentalization.

The results indicate that principals have knowledge of eight of the nine measured elements. The one that they lacked an understanding of was Principles of Student Learning. Given these two findings of what principals do and do not know, the researcher recommends that professional organizations, intermediate service agencies and district-level support staff engage in systematic and systemic initiatives to increase the knowledge of principals in the element of lacking knowledge. Further, given that eight of the nine elements are understood by principals, it would be wise to examine reasons for the implementation gap (Knowing-Doing Gap) and how to overcome it.

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Chapter One

Introduction to the Study

Schools will be closed, districts will face reorganization, principals will lose their positions, teachers will find other careers, and parents will be left searching for successful schools. These are real possibilities looming with the increased accountability coming from the No Child Left Behind Act (U.S. Department of Education, 2002) as the benchmark for Adequate Yearly Progress, or AYP, inches closer to 100% of students proficient by the 2013 – 14 school year (Aldridge, 2003; Darling-Hammond, 2007; Giroux & Schmidt, 2004; Meier, 2004).

A solid track record for improving student learning can be found in creating a collaborative workplace environment for teachers (Darling-Hammond & McLaughlin, 1995; Little, 1990; Lortie, 1975; McLaughlin & Talbert, 2006; Newmann & Wehlage, 1995; Slater, 2008). This track record creates a compelling need to look at what must happen in order to create that collaborative culture, and thus avoid the dooms-day scenario described above. The role of the principal, their knowledge and skills, are fundamental to implementing what works.

Statement of the Problem

Successful schools literature confirms that collaboration is an effective strategy for improving student learning (Darling-Hammond & McLaughlin, 1995; Little, 1990; Lortie, 1975; McLaughlin & Talbert, 2006; Newmann & Wehlage, 1995; Slater, 2008). Further, collaboration is not happening in many schools and districts across this country (DuFour, Eaker, & DuFour, 2005; McLaughlin & Talbert, 2006; Murphy & Lick, 2005).

What's more, the role of the principal is critical in creating a collaborative environment, as "all change flows through the principal's office" (Murphy, Smylie, Mayrowetz, & Louis, 2009, p. 181). Additionally, there is certain fundamental knowledge and skills that principals must possess and do in order to create a collaborative workplace environment for teachers (National Staff Development Council (NSDC), 2003). Finally, there is a so-called knowing-doing gap that is a widespread phenomenon (Knight et al., 2007; Pfeffer & Sutton, 1999).

But what if the problem of failure to implement collaborative cultures was not a knowing-doing problem? What if the problem was a knowing problem? In the case of a knowing-doing gap, one assumes that declarative knowledge exists—in this case, the principal knows what to do and how to create a collaborative workplace environment for teachers. Knowledge is a necessary antecedent of doing. The knowing-doing gap phenomenon focuses on a problem in *doing* what is already known. But what if the problem in creating a collaborative environment was in a lack of knowledge?

Prior to obtaining an administrative certificate enabling a person to serve as the principal of a school, one must complete certain courses at a Masters Degree level.

Classes range from school finance to curriculum design, from philosophy to psychology, from theory to practice. These courses, coupled with a couple of years of experience in the education system, are presumably adequate to at least minimally prepare a person for competence in the role of principal.

What if none of those required courses, and none of the training implicit in the day-to-day experiences of educators prior to assignment to the principalship provided the

basic know-how of creating a collaborative culture? If principals know what to do to create a collaborative culture and are not doing it (the knowing-doing gap), then the remedy can find itself in on-site training, mentoring, peer assistance, and other such venues. If, on the other hand, principals do not even have the basic declarative knowledge necessary to create a collaborative environment (a knowing gap), then the remedy is an entirely different thing—including potentially external trainings, coursework prior to certification and book studies, to name a few.

Given the importance of collaboration, the lack of its implementation, the centrality of the principal, and the foundational importance of examining the knowing gap, this descriptive quantitative study examined whether or not principals know what to do to create a culture of collaboration. In other words, the central question for this study was, "Do principals know what they must do to create a collaborative workplace environment for teachers?"

Purpose of the Study

The increased accountability coming from the No Child Left Behind Act (U.S. Department of Education, 2002), as well as the track record for improving student learning that comes from creating a collaborative workplace environment for teachers (Darling-Hammond & McLaughlin, 1995; Little, 1990; Lortie, 1975; McLaughlin & Talbert, 2006; Newmann & Wehlage, 1995; Slater, 2008) creates a compelling need to look at what must happen in order to create that collaborative culture. The role of the principal, their knowledge and skills, are fundamental to implementing what works.

Professional organizations, district-level support staff, intermediate service agencies, and institutions of higher learning all work either directly or indirectly with future or current principals. The purpose of this descriptive quantitative study was to add to the body of knowledge on creating a collaborative workplace environment for teachers by specifically identifying what principals know about creating a collaborative culture. By being clearer about what principals know—which will allow for either (a) more training on what needs to be known, or (b) a focus on doing, these support organizations will be able to better target their assistance to principals. Hence, this descriptive quantitative study aimed at finding out what principals do and do not know about creating a collaborative workplace environment for teachers.

Background

Hundreds, if not thousands of schools across this country are and/or will fail to meet Adequate Yearly Progress (AYP) as stipulated by No Child Left Behind (U.S. Department of Education, 2002) in the coming years (Aldridge, 2003; Darling-Hammond, 2007; Giroux & Schmidt, 2004; Meier, 2004). Consequences for such failure to meet AYP include sanctions leading up to potential take-over or closure of entire schools and/or districts. School leaders, and specifically principals, are in a key position to make sure that their school makes AYP.

Collaboration among teachers, when used effectively, is one strategy that has proven itself as a useful practice to improve instruction and student achievement. From instructional climate to instructional results, from staff engagement to staff improvement, the powerful effects of collaboration on creating successful schools is well-documented

(Darling-Hammond & McLaughlin, 1995; Little, 1990; Lortie, 1975; McLaughlin & Talbert, 2006; Newmann, King & Youngs, 2000; Newmann & Wehlage, 1995; Slater, 2008). Coupled with this hard evidence is the widespread recognition and almost unparalleled consensus among education experts that creating a collaborative workplace environment for teachers is the primary means for improving student learning (DuFour et al., 2005; McLaughlin & Talbert, 2006).

As the instructional leader and direct supervisor of classroom teachers, principals are in a unique position to directly influence collaboration that takes place between and among teachers. As noted by Murphy et al. in their 2009 study focused on distributed leadership, "all change flows through the principal's office" (p. 181). Combining the two notions of the importance and benefits of collaboration with that of the crux of the principal's office in creating change begs the question of what a principal can and should do to create a collaborative environment.

When considering any initiative, one must consider both knowledge and skills. Specifically in relation to creating a collaborative environment for teachers, one must consider the knowledge and skills of the principal in creating that environment. Pfeffer and Sutton (2000) refer to this as the difference between knowing and doing. As such, there is wide-spread recognition of the difference between knowing and doing in a myriad of fields (Knight et al., 2007). This gap between declarative knowledge and the implementation of that knowledge is referred to as the knowing-doing gap (Pfeffer & Sutton, 2000).

Blanchard, Meyer, and Ruhe (2007) provide a succinct distinction between knowing and doing, between declarative knowledge and procedural knowledge or skills. According to Blanchard et al. (2007, p. 2), knowing is "information [one has] picked up from books, audios, videos, and seminars." One could also add to this list of declarative knowledge sources such as mentors, significant role models, and others. Skills, on the other hand, comprise "how much [one] appl[ies] and use[s] that knowledge" (p. 2).

In order for a principal to effect change, he or she must know what they want to accomplish and how to accomplish it. Without such a basic foundation of declarative knowledge, as opposed to procedural knowledge—otherwise known as skills—desired changes will not occur. Hence, this descriptive quantitative study focused on the declarative knowledge of principals to create a collaborative workplace environment for teachers. In other words, Do principals know what they must do to create a collaborative workplace environment for teachers?

Research Questions

The primary research question was "Do principals know what they must do to create a collaborative workplace environment for teachers?" The sub-questions revolving around creating a collaborative culture were:

- 1. What declarative knowledge do principals possess?
- 2. What declarative knowledge are principals missing?

In thinking about these research questions, the first relates to the working knowledge that principals have in creating a collaborative workplace environment for teachers. In other words, what do they know, at a theoretical level, in this arena? The

second question examines what principals specifically do *not* know about creating a collaborative culture. Given that there is a set of knowledge necessary to create a collaborative culture, it is important to know what parts of that knowledge are absent from principals serving in the field.

Method

This descriptive quantitative study explored the knowledge that high school principals possess about what they must do to create a collaborative workplace environment for teachers. As such, all of the employed high school principals of accredited schools in 2009 – 2010 in the state of Nebraska, with the exception of the researcher, were surveyed to gather their knowledge.

Likert-scale and open-ended questions were asked via an on-line survey system, and the open-ended questions gathered information specifically directed towards the Elements of Principal Knowledge (Appendix A). All of the items were designed to elicit responses directed towards the Elements of Principal Knowledge identified by the researcher. The researcher reviewed the responses of the participants and used the Elements to answer the research questions.

Definition of Terms

Declarative knowledge—Blanchard et al. (2007, p. 2) describe declarative knowledge as "information [one has] picked up from books, audios, videos, and seminars." For the purposes of this study, it also included knowledge obtained from sources such as mentors, significant role models, and others. The Council of Chief State

School Officers (2008) adds to the definition abilities, awareness, information, and other accumulated knowledge based on field and classroom experience.

Procedural knowledge/skills—Building on the work of Blanchard et al. (2007), procedural knowledge, or skills, is defined as the use or application of declarative knowledge.

Collaboration—Teachers working together in the shared pursuit of improving professional practices that improve student learning.

Leadership—A thorough definition of leadership is provided under that title of The Review of Literature. In brief, Lambert's five tenets of leadership frame this definition:

- 1. Leadership is not trait theory; leadership and leader are not the same.
- 2. Leadership is about learning that leads to constructive change.
- 3. Everyone has the potential and right to work as a leader.
- 4. Leading is a shared endeavor.
- 5. Leadership requires the redistribution of power and authority. (Lambert, 1998, pp. 8-9)

In other words, the work of leadership can and should be done by the masses.

Designated leadership—Those who are invested with specific roles identified with that which is typically considered leadership responsibilities. For the purpose of this study, designated leadership referred to building principals.

Collaborative workplace environment—Closely related to the definition of collaboration, a school where teachers work together in the shared pursuit of improving professional practices that improve student learning is a collaborative workplace environment. Specifically, this involves the development of leadership skills of the entire staff, the distribution of power, and the general building of the capacity of teachers. Most

importantly, the collaborative workplace environment must be focused on improving student learning (Fullan, 2005b; Hargreaves, 2006; Hargreaves & Fink, 2006; Katz & Kahn, 1966; Lambert, 2003; McLaughlin & Talbert, 2006; Murphy et al., 2009; Spillane, 2006).

Protocols—Protocols are step-by-step procedures for engaging in work as teams.

Structures—Closely related to systems, structures are necessary for putting systems into place. Structures like department-level configurations or teams based on common students are typical structures in schools.

Systems—A system is an organized collection of parts working together to accomplish a goal or goals. Typically, educators think of schools as systems. There are also systems at the school, department and classroom level.

Processes—Process is the how of professional learning (DuFour, 2001). It involves the parameters and tools for the work of the school. Protocols are an example of a specific process.

Professional learning—Learning that teachers engage in as part of their work.

Typically, educators think of workshops as the primary mode of professional learning.

Professional learning in this study was referred to as any learning in which a teacher engages—from workshop to study group, designing lessons to analyzing assessments and their results, reading journal articles and reflecting on their practice.

Professional learning community—A community of professionals (i.e., teachers and administrators) who work together using specific structures and processes to improve the learning of all students (Hord & Sommers, 2008). Many models abound, including

Whole-Faculty Study Groups (Murphy & Lick, 2005), the DuFour model (DuFour, DuFour, Eaker, & Many, 2006), Collaborative Analysis of Student Work (Langer, Colton & Goff, 2003), and others.

Job-embedded professional learning—"Learning activities that occur during work hours and that support instructional needs" (Mullen & Hutinger, 2008).

Assumptions

As a former professional development coordinator at an intermediate service agency serving some 34 school districts with nearly 30,000 students, the researcher worked closely with administrators in multiple districts. As a current principal, he understands well the position and role of the principal in impacting the performance of teachers, and thereby the performance of students. Remember, "all change flows through the principal's office" (Murphy et al., 2009, p. 181). Hence, one critical assumption of the researcher was that the principal really does have the power and authority to impact the culture of the school.

There were two other primary assumptions at play in this descriptive quantitative study. First, the researcher assumed that it is possible, based on the review of literature, to quantify the knowledge principals must possess in order to create a collaborative workplace environment for teachers. Further, the researcher assumed that the tool used for this study accurately drew out from principals what they know in this arena.

Second, the researcher assumed that principals do not have the declarative knowledge necessary to create a collaborative workplace environment for teachers. This assumption came from his first-hand work as a secondary principal, as well as his prior

experiences in working with principals with a wide range of experiences and coming from a variety of school sizes, situations and settings.

Delimitations of the Study

In order to narrow the scope of this study, delimitations were used (Creswell, 2003). The number of participants was relatively small—particularly given the context that there are over 100,000 principals in the United States (Kelley & Peterson, 2002). As such, a delimitation for this study was that of broad generalizability to the entire principal population of the United States.

Limitations

The researcher identified limitations of this study so that potential weaknesses were enunciated from the outset (Creswell, 2003). Given that the research tool for gathering the information on the knowledge principals possess about creating a collaborative workplace environment for teachers was in-depth and required substantial thought, the web-based response rate for the survey was a limiting factor for this study. To counteract this limitation, the researcher approached the state association of administrators to gain their support for the proposed study. However, the limiting factor of response rate remained a limitation for this descriptive quantitative study.

Significance of the Study

In a meta-analysis of thousands of studies involving tens of thousands of teachers and hundreds of thousands of learners, the researchers Marzano, Pickering and Pollock (2001) at the Mid-continent Research for Education and Learning (McREL) identified the

single most important factor affecting student achievement: the quality of the teacher and the instructional strategies that he or she uses to impact student learning.

A few years later (2005), Marzano, in cooperation with other researchers at McREL, went on to complete a meta-analysis of the most important factors affecting the quality of the teacher and the instructional strategies he or she uses, not to mention the excellence of the school as an organization. Their finding: the most important factor affecting the teacher and the learning process in a school is the designated leadership within the school (Marzano, Waters & McNulty, 2005). Given these two findings, that the teacher has the greatest impact on student learning and that the principal has the greatest impact on the teacher, the development of those in positions of designated leadership, namely principals, is a key place for improving student learning.

The professional organization most directly involved with and providing leadership for professional learning, the National Staff Development Council (NSDC), states that the greatest impact on student learning occurs as a result of the daily collaboration between and amongst staff (NSDC, 2003). Further, the creation of a collaborative culture is "the single most important factor" (Eastwood & Lewis, 1992, p. 215) and "first order of business" (p. 215) for any principal wanting to improve their school. In order to go about making this happen, the principal must know what to do.

Summary

This descriptive quantitative study sought to clarify those areas on which professional organizations, district-level support staff, intermediate service agencies, and institutions of higher learning can focus to be more effective and efficient at increasing

administrators' capacity to create collaborative workplace environments for teachers. This, in turn, impacts the quality of teaching and learning and, ultimately, student learning. By being clear about what principals are lacking, these same support organizations can strategically focus resources to remedy the identified deficits, and ultimately improve student learning. The importance and role of leadership, collaboration, and knowledge and skill development will be enunciated in the second chapter of this dissertation by way of reviewing the literature on this subject. Chapter Three will then provide an in-depth description of the methodology used for completing this study.

Chapter Two

Review of the Literature

This review of the literature includes journal articles, studies, and professional literature to address the topic of study: the role of the principal in creating a collaborative environment for teachers. The narrative is divided into eight sections. The first section examines the role of the principal from a historical perspective. The second section describes the current definition of leadership in the education world, coupled with the leadership capacity of the staff, as led by the designated leadership (i.e., the principal). The third section addresses the importance, benefits, elements, and designs of a collaborative environment for teachers, all of which are again strongly influenced by designated leadership.

Leadership and collaboration, separate and by themselves, are necessary but not sufficient conditions for improving student learning. Rather, teachers and administrators must work together to improve student learning. Hence, the fourth section is devoted to the confluence of these two conditions, leadership and collaboration, as specifically related to the ability of the designated leadership to lead collaboration. The fifth section highlights the specific knowledge, skills and dispositions necessary for the building principal to effectively create a collaborative environment. The sixth section examines the Knowing-Doing Gap from the perspective of multiple fields. Each of the aforementioned sections include a summarization that identifies the essential knowledge, skills and dispositions that principals must have to successfully facilitate a collaborative professional learning environment as it relates to that section. Finally, section seven

provides a brief summary of the review of the literature, and the last section is an overview of the need for this study.

Role of the Principal

People have long been interested in the work of managers, not to mention whether or not their work makes a difference (Heck & Hallinger, 2005). In the education field, this translates into an interest in whether or not those in leadership positions, and specifically principals (Leithwood, Leonard, & Sharratt, 1998; Sergiovanni, 1998), have an impact on student learning. Hence, the study of educational leadership has evolved over the course of the last century.

Beginning in the 1930s and 1940s, unrest was growing that educational management (note: *management*, not leadership) was not keeping up with the needs of the educational community (Moore, 1964). In the words of Heck and Hallinger (2005), educational management was "faulty, unimaginative, and out of step with community desires" (Heck & Hallinger, 2005, p. 230). These concerns grew until the 1950s, when a focus on the use of scientific principles and empirical information became the modus operandi of research (Heck & Hallinger, 2005) about educational management. In other words, quantitative methods became the center of attention.

It became apparent, however, that behaviorist approaches, as embodied by quantitative analyses, were not adequate for understanding the social reality of schools (Heck & Hallinger, 2005). Erickson (1967), in a review of research from the 1950s and 1960s, found no evidence of progress on important issues. This came to a head in 1982 when Bridges updated Erickson's work and stated, "The more things change, the more

they remain the same" (1982, p. 24). He was particularly concerned on the lack of practical ability to implement the ideas gleaned from the research in this period.

Interestingly enough, in the very same issue of *Educational Administration*Quarterly, Bossert, Dwyer, Rowan, and Lee (1982) noted a shift in the field from one of exploring actions and processes of educational leaders to results (Heck & Hallinger, 2005). Namely, a focus on the impact principals have on student learning was taking place.

During this time, the 1970s through the 1990s, two main views of principal leadership became widespread. These can be considered either narrow or broad (Sheppard, 1996), instructional or transformational (Marks & Printy, 2003). The narrow view, or that of instructional leadership, focused exclusively on actions that had a measurable impact on curriculum, instruction, staff development, and supervision (Leithwood, 1994; Leithwood & Duke, 1998). This paradigm views the principal as the educational expert.

The other view was more broad and included work like school mission, climate, and goals (O'Donnell & White, 2005). Known as transformational leadership (Leithwood et al., 1998), it "focuses on problem finding, problem solving, and collaboration with stakeholders with the goal of improving organizational performance" (Marks & Printy, 2003, p. 372). The focus is on the organization, and lacks direction on curricular and instructional issues.

Despite these two differing views, an accepted definition of instructional leadership came from Hallinger and Murphy (1987, p. 55): "observable practices and

behaviors that principals can implement." As noted by O'Donnell and White (2005), this is recognized as a comprehensive definition of instructional leadership (Leithwood & Duke, 1998; Sheppard, 1996). It is interesting to note, in this regard, that it was in the late 1990s that the language shifted from "management" to "leadership" (Bush, 2008).

Maybe because of the common definition, and for sure as a result of the increased focus on results, a review of research in the mid-1990s (Hallinger & Heck, 1996) found higher quality research studies that focused on the influence of principals on not only processes, but on outcomes or products. In other words, research was now focusing on the impact the principal has on student learning (Hallinger & Heck, 1996; Leithwood, 1994; Marzano, Waters, & McNulty, 2003).

The most recent research on principals can be summarized in the following statement by Murphy et al. (2009): "At the school level all change flows through the principal's office" (p. 181). Further, the focus is on developing leadership of those within the organization, whether this is referred to as distributed leadership (Hargreaves, 2006; Hargreaves & Fink, 2006; Murphy et al., 2009; Spillane, 2006), shared instructional leadership (Marks & Printy, 2003), building capacity for leadership (Katz & Kahn, 1966; Lambert, 2003; Newmann et al., 2000; Pounder, Ogawa, & Adams, 1995; Slater, 2008), balanced leadership (Marzano et al., 2005), organizational leadership (Leithwood et al., 1998), or principal as professional developer (DuFour & Berkey, 1995; Lindstrom & Speck, 2004). A symbol of this shift can be seen in the federal No Child Left Behind Act of 2001 (U.S. Department of Education, 2002) requiring "that teachers' development be sustained through intensive training embedded in classroom practice and that teachers

and administrators develop, as well as evaluate" (Mullen & Hutinger, 2008, p. 279). In all of these paradigms, the common denominator is that leadership can rise and fall over time with the development of the capacity of the individuals within the organization: principals, teachers, staff members, parents, and students (Pounder et al., 1995).

Leadership

Leadership matters (Collins, 2001; Fullan, 2008; Marzano et al., 2005; Murphy et al., 2009; NAESP, 2002; NASSP, 2009; Pollock & Ford, 2009; Sparks, 2005; Wallace Foundation, 2007). And not just the work of those in designated leadership positions (e.g., the principal) (Barnard, 1968; Lambert, 1998, 2003). Sparks (2005, p. 157) contends that "by the very fact that you are reading this book [On Common Ground], you are a leader no matter what your position." Yet it is also true that designated leadership creates the conditions and environment for a collegial atmosphere that builds the leadership capacity of all individuals within the organization (Newmann & Wehlage, 1995). So what is needed to build leadership capacity?

As a structure for thinking about leadership, Lambert (1998) identifies five basic tenets. These tenets, or what I refer to as the Lambert Framework, will be used to organize this section, and these points are critical to a clearer understanding of what quality leadership means.

- 1. Leadership is not trait theory; leadership and leader are not the same.
- 2. Leadership is about learning that leads to constructive change.
- 3. Everyone has the potential and right to work as a leader.
- 4. Leading is a shared endeavor.
- 5. Leadership requires the redistribution of power and authority. (Lambert, 1998, pp. 8–9)

Consider the implications of these tenets. First, leadership is not dependent on those sitting in the office of the principal, confined to one person (Barnard, 1968; Conzemius & O'Neill, 2001; Fullan, 2005b; Lambert, 1998, 2003). "Leadership and leader are not the same" (Lambert, 1998, p. 8) means that leadership emerges from different individuals based on the situations in which they are placed (Hargreaves, 2006; Hargreaves & Fink, 2006; Murphy et al., 2009; Spillane, 2006). Known as distributed leadership, the contention is that if one does not design appropriate avenues for leadership to emerge, it will emerge on its own, in unwanted, unsolicited, and negative ways (Hargreaves, 2006; Hargreaves & Fink, 2006; Murphy et al., 2009).

An example of leadership distributing itself might be expressed as grievances to the local education association (Hargreaves, 2006; Hargreaves & Fink, 2006). If designated leaders do not appropriately address and/or accommodate these grievances, these grievances might then beget negotiation problems. Ultimately, the issue might even lead to a labor strike. In the end, power becomes distributed, and it is up to the designated leadership to either proactively and appropriately distribute that power or allow it to distribute itself in what might be destructive and inappropriate ways (Hargreaves, 2006; Hargreaves & Fink, 2006; Murphy et al., 2009). In the context of knowledge, skills and dispositions, then, the principal must purposefully distribute power so that leadership emerges in productive ways.

In terms of creating a collaborative environment, this first tenet of Lambert (1998), that leader and leadership are not the same, means that all staff must be involved in the work of leadership. Since leadership and leader are not the same, leadership

cannot wait for one person to arise to serve in the capacity of leader. Rather, the work of leadership devolves onto every staff member (Katz & Kahn, 1966; Lambert, 2003; Murphy et al., 2009; Spillane, 2006). Hence, a key focus of creating a collaborative environment must be the development of leadership skills and capacity in the entire staff (Fullan, 2005b).

Key principal attitudes for this tenet, then, are first that of believing in the capacity of all staff to serve in leadership capacities (Lambert, 2003). The designated leader must then know how to distribute leadership and have the repertoire of skills for doing it (Hargreaves, 2006; Hargreaves & Fink, 2006; Murphy et al., 2009). Specifically, he/she must know of structures, systems, and processes to distribute the work of leadership throughout the staff, and then successfully implement those structures, systems, and processes (Marzano et al., 2005; Mullen & Hutinger, 2008; Murphy et al., 2009).

Second, building capacity is about seeking answers and asking questions, as opposed to simply giving directives. "Leadership is about learning that leads to constructive change" (Lambert, 1998, p. 9) means that there are no easy answers, no silver bullet (Fullan, 2001; Sparks, 2005). Rather, leadership is about facilitating learning and seeking out adaptive solutions to adaptive problems (Heifetz, 1994). This requires humility in one's approach, and a constant striving to improve (Fullan, 2001). And these attitudes of learning and humility, coupled with the skills necessary to convey these, are foundational to the second tenet in the Lambert Framework.

Though there might be times that directives are necessary, the default leadership mode should be one of learning (Blase & Blase, 1999). For example, a bomb threat is not a time for learning from each other about possible options for moving kids to a safe environment, contacting the authorities, coordinating staff, etc. Instead, situations like this require someone to take charge and make decisions—and this falls to the designated leadership. In situations such as this, directives are absolutely necessary.

But in the day-to-day operations of running a school, where life or death emergencies are the exception rather than the rule, a posture of learning is critical to effective leadership (Lambert, 1998). For example, in conducting staff meetings, the focus should be on learning (Schmoker, 2006). In reflecting on current practice, the center of attention should be on improvement (Fullan, 2001). In considering changes to instruction, adult learning should be central (NSDC, 2003).

Deming (1986) notes that the key difference between leadership and management is how the leader responds to needs. Fundamentally, leadership is about finding and meeting the needs of everyone, whereas management is about accommodating the unique individual needs of each person. Though both are necessary, past education systems tend to have placed their focus on managing schools—smooth bus operations, substitute placement, student and staff discipline, etc. (Bush, 2008). Management, then, focuses on those specific aspects of the organization that tend toward individual issues.

On the other hand, leadership, according to Deming (1986), is more about finding and meeting the needs of everyone in the system. In other words, leadership is about working on the system. The organization itself must be modified through continuous

improvement, and this is where leadership is distinguished from management (Bush, 2008; Leithwood et al., 1998). When leadership is about learning, as stated by Lambert (1998), it is also about meeting the professional needs of everyone in the system, as delineated by Deming (1986). Leadership, then, is working *on* the system. Management is working *in* the system.

Another example of the importance of learning comes from Barth (2005). He shares a story of disengaged employees, and how leaders must re-engage these employees by asking themselves, "Under what conditions that I can devise will this person come back to life as a learner?" (Barth, 2005, p. 122). He contends that leaders must be inventive, persistent, and hold high expectations in order to answer this question. The result is "membership in good standing of a professional *learning* community" (emphasis added, Barth, 2005, p. 123). Again, the link between leadership and learning is emphasized.

To summarize the implications of Lambert's second tenet of leadership (1998), designated leadership must focus on learning (Blase & Blase, 1999). Authoritarian situations arise, but for the most part leadership requires attitudes of humility, learning, high expectations, and persistence (Blase & Blase, 1999; Fullan, 2001; NSDC, 2003; Schmoker, 2006). The principal must be knowledgeable about learning—for both adults and students—and must possess the skills necessary to create an atmosphere of learning (Schmoker, 2006). These knowledge and skills include inventiveness or innovativeness, a focus on continuous improvement of the system (Fullan, 2001), the ability to work on the system (Leithwood et al., 1998), the knowledge to distinguish between adaptive and

technical problems, and the ability to deal with those problems in the most appropriate ways (Heifetz, 1994).

Third, there are no limits to who can lead in what capacity; on the contrary, everyone will arise to lead at different times. "Everyone has the potential and right to work as a leader" (Lambert, 1998, p. 9) broadens the scope and provides for unlimited potentials. There are two critical assumptions in this statement: (a) that staff have the capacity to work as leaders (Pounder et al., 1995), and (b) they are entitled to the work of leadership (DePree, 1989). This is a quantum shift in previous thinking, as it has typically been thought that only certain folks lead, and the rest follow (Gronn, 1996). According to Lambert (1998), leadership is something everyone can and must do. And according to DePree (1989, p. 24), "everyone has the right and the duty to influence decision making and to understand the results."

One of the results of this tenet is that the leadership playing field, if you will, is leveled. To elucidate, in earlier paradigms principals were supervisors of teachers (Blase & Blase, 1999; Gronn, 1996). Principals were considered omniscient in their understanding of effective teaching and learning practices (Barth, 1986). In the new way of thinking, however, new roles are defined. Schmoker (2005, p. 147) succinctly described it this way: "The leader's function is to provide opportunities for teachers to work together in self-managing teams to improve *their own* instruction, always with the expectation for improved learning" (emphasis in original). All teachers work on improving their own instruction as they exercise their right to lead, and the designated

leader's role is to facilitate these processes (Mullen & Hutinger, 2008; Murphy et al., 2009).

In terms of creating a collaborative environment, this third tenet in the Lambert Framework, that everyone has the right to the work of leadership, has several practical implications. First, teachers must be grouped into effective teams for effective collaboration (NSDC, 2003). Second, designated leaders must believe in the inherent ability of teachers to serve in leadership capacities (Pounder et al., 1995). Third, opportunities for staff involvement in important decisions are provided, encouraged, and expected (Marks & Printy, 2003). Fourth, leadership teams are empowered to make decisions (NSDC, 2003). Fifth, risk-taking is encouraged (Marks & Printy, 2003; Marzano et al., 2005; NSDC, 2003). And finally, protocols are in place to ensure that leadership responsibilities rotate between and among staff (NSDC, 2003).

These practical implications then lead to knowledge, skills, and attitudes of principals. In terms of attitudes, the principal must place trust in teachers to behave professionally and then believe in the power of collaboration (DuFour et al., 2005). Further, he/she must believe that decisions arrived at by collaborative teams are correct, and then work to implement those decisions (NSDC, 2003). Knowledge required of the principal includes that of effective grouping of staff members and knowledge of protocols for use in specific situations (Easton, 2004; Fullan, 2005b; NSDC, 2003). Skills, then, include that of encouraging, providing, and expecting effective collaboration (NSDC, 2003). And finally, this tenet requires the ability to facilitate conversations focused on learning with staff members (Marks & Plinty, 2003).

Fourth, it's about "us," not "him" or "her." "Leading is a shared endeavor" (Lambert, 1998, p. 9) means that we are all working together. Collective work, collaborative environments, and collegiality are critical to leading in the Lambert Framework. If we are not sharing in the processes and practices of school, then it is not a shared endeavor, and it is not building capacity for leading (Leithwood et al., 1998; Youngs & King, 2002).

Considering this tenet in the context of a collaborative environment, the knowledge, skills, and dispositions necessary for a principal to facilitate this aspect of Lambert's Framework are similar to those of the third tenet (and even the fifth).

Nonetheless, a few examples from the business world prove useful in further clarifying the implications of shared endeavors.

An example of shared endeavor comes from Kouzes and Posner (1996, p. 106).

Leadership is not a solo act. In the thousands of personal-best leadership cases we studied, we have yet to encounter a single example of extraordinary achievement that occurred without the active involvement and support of many people. Fostering collaboration is the route to high performance.

In other words, the notion of a charismatic leader who comes into the school to save the day, so to speak, is not what schools need (Gronn, 1996). Rather, principals who understand the importance and need of collaboration, and who work to effectively implement the tenets of a collaborative environment, are more successful in the long-run (Murphy et al., 2009; Slater, 2008). Improving schools is about working together for success, not about individuals performing miracles (Gronn, 1996).

In another business example, Collins (2001) stated that charismatic leaders are actually the antithesis of a successful organization. Rather, it is leaders with a

combination of profound humility and intense professional will that lead to lasting greatness. They are unassuming leaders who develop others, create shared commitments, and mobilize the collective energies of the staff. In other words, they create shared endeavors, as enunciated by Lambert's fourth tenet.

To summarize this tenet in relation to creating a collaborative environment—that leadership is a shared endeavor—it is very similar to tenet three, that everyone has the right and responsibility to the work of leadership (Lambert, 1998). Specifically, designated leadership must recognize that charismatic leadership is the antithesis of a successful organization (Collins, 2001). Rather, collaboration is more effective in the long-run (Murphy et al., 2009; Slater, 2008).

Finally, the triangle of power, with leader at the top and all power flowing from them, is turned upside down. "Leadership requires the redistribution of power and authority" (Lambert, 1998, p. 9) drastically changes the working definition of leadership. The masses are now in charge—whether through formal channels or unsolicited venues (e.g., the Hargreaves and Fink example [Hargreaves, 2006; Hargreaves & Fink, 2006] regarding the distribution of power enunciated for the first tenet where power becomes inappropriately distributed to the local education association). Those who are in designated positions of leadership wishing to build the capacity of others in the organization must consider how power and authority can and should be redistributed; otherwise, it redistributes itself with typically unwanted and undesirable consequences (Murphy et al., 2009).

The researchers Marzano et al. (2005) of the Mid-continent Research for Education and Learning conducted a meta-analysis of studies on the impact of leadership on student achievement. Their work, published under the title "School leadership that works: From research to results" by the Association for Supervision and Curriculum Development (ASCD), forms a significant milestone into the roles played by school leaders in impacting student learning. Specifically, Marzano et al. identified 21 principal behaviors associated with significant gains in student achievement.

One of the principal behaviors identified by Marzano et al. (2005, p. 51) refer to this redistribution of power as "Input," or "the extent to which the school leader involves teachers in the design and implementation of important decisions and policies." Specific skills that designated leaders manifest when applying this tenet include:

- providing opportunities for staff to be involved in developing school policies,
- providing opportunities for staff input on all important decisions, and
- using leadership teams in decision making. (Marzano et al., 2005, p. 52)

In practice, DuFour et al. (2005, p. 23) enunciate this tenet by stating that "principals in PLCs are called upon to regard themselves as leaders of leaders rather than leaders of followers, and broadening teacher leadership becomes one of their priorities." Again, this is a shift in thinking from principals being instructional leaders who are experts regarding curriculum, instruction, and assessment practices (Marks & Printy, 2003). Rather, it assumes that even though principals must be grounded in sound theory and practice, teachers are the rightful instructional leaders in the building (Marks & Printy, 2003). Principals, then, are leaders of leaders.

In terms of specific knowledge, skills and attitudes of principals in effectively implementing this tenet of redistributing power and authority (Lambert, 1998), the designated leadership must first of all believe in the importance of the redistribution of power and authority in proactive and appropriate ways (Murphy et al., 2009). Further, he/she must believe that the rightful title of instructional leader belongs with the teacher, and that a principal is a leader of leaders (Marks & Printy, 2003). Once these beliefs are established, the principal must then know where to involve staff in developing school policies and in providing input to important decisions. They must then have the skills necessary to facilitate this involvement and input (Marzano et al., 2005).

In considering the implications of these five tenets from Lambert (1998), there is a clear framework for thinking about the work of leadership as it relates to building school and system capacity. These tenets frame the conversation around the ideas of intentional distribution of leadership (Tenet 1), learning as leading (Tenet 2), leadership as the privilege and responsibility of everyone (Tenet 3), leadership as us—not him or her (Tenet 4), and the triangle of power being turned upside-down (Tenet 5). Thinking of leadership in this context reframes the conversation about creating a collaborative environment and the role that the principal plays in that process.

To play that role, principals must possess specific knowledge, skills, and dispositions that are necessary to create a collaborative environment. As enunciated throughout this section, principals must purposefully distribute power so that leadership emerges in productive ways (Murphy et al., 2009). They must display attitudes of learning and humility, as well as work continuously to improve (Fullan, 2001).

Principals must group teachers into teams for effective collaboration (NSDC, 2003), develop protocols for the rotation of leadership responsibilities between and among staff (Easton, 2004; Fullan, 2005b; NSDC, 2003), believe in the inherent ability of teachers to serve in leadership capacities (DuFour et al., 2005), provide opportunities for staff involvement in important decisions (Marks & Printy, 2003; NSDC, 2003), and empower leadership teams to make decisions (NSDC, 2003).

Chart 1 summarizes the important knowledge, skills, and dispositions necessary for designated leadership in order to effectively build the leadership capacity of staff in creating a collaborative environment. Notice that there is significant overlap between tenets, particularly in relation to tenets 3 and 4.

To summarize this entire section, "school leadership is a team sport" (Fullan, 2003, p. 24).

Collaboration

Not only does leadership and the building of the leadership capacity of the staff, in and of itself, matter to school improvement, but closely related is the issue of creating an environment for effective collaboration (Blase & Blase, 1999; Leithwood et al., 1998; Marks & Printy, 2003; Newmann et al., 2000; Youngs & King, 2002). In a certain sense, collaboration, when done correctly, could almost be seen as a "silver bullet" for which schools are looking. As a specific example, Lieberman and McLaughlin (1995) noted the absolutely essential nature of collaboration in improving student learning by noting that involvement in collaborative activities "encourages exchange among the members [and]

Chart 1

Lambert's Tenets of Leadership with key Knowledge, Skills, and Dispositions

	Knowledge	Skills	Dispositions
Tenet 1: Leadership does NOT Equal Leader	Leadership distribution Structures, systems, and processes	Leadership distribution Structures, systems, and processes	Belief in capacity of staff
Tenet 2: Leadership Equals Learning	Adult Learning Student Learning Adaptive vs. Technical Problems	Inventiveness Focus on continuous improvement of the system Dealing with Adaptive and Technical Problems	Humility Learning High expectations Persistence
Tenet 3: All have the potential and right to work as leader	Effective grouping of staff Protocols	Implementation of team decisions Specific protocol use based on situation Providing time, encouraging, and expecting collaboration Facilitation of conversations	Trust of teacher Belief in power of collaboration Belief in decisions by teams
Tenet 4: Leading is a shared endeavor	Effective grouping of staff Protocols	Implementation of team decisions Specific protocol use based on situation Providing time, encouraging, and expecting collaboration Facilitation of conversations	Trust of teacher Belief in power of collaboration Belief and trust in decisions by teams
Tenet 5: Upside-down triangle of power	Where to involve staff in developing school policies and in providing input to important decisions	Facilitation of involvement and input	Belief in redistribution of power and authority Belief in teacher as instructional leader

Source: Dumas, 2009

assures teachers that their knowledge of their students and of schooling is respected.

Once they know this, they become committed to change, willing to take risks, and

dedicated to self-improvement" (p. 66). In other words, if effectiveness is what we want, then collaboration is what we need.

Clearly, designated leadership bears a good deal of the responsibility in effectively creating a collaborative culture (Blase & Blase, 1999; Leithwood et al., 1998; Marks & Plinty, 2003; Mullen & Hutinger, 2008; Murphy et al., 2009; Slater, 2008; Youngs & King, 2002). Given that, then, what are the key characteristics of a collaborative environment? This section will (a) highlight the importance of collaboration by examining the status quo, (b) establish the importance of collaboration, (c) describe the benefits of creative a collaborative environment, (d) identify important elements necessary for creating a collaborative environment, and (e) detail specific designs of collaboration.

The Status Quo

Before examining the potential, though realistic and documented, benefits of creating a collaborative culture of professional learning, let us consider the reality of continuing the status quo in many schools: privatization of classrooms (Mullen & Hutinger, 2008). The DuFour's (R. DuFour and B. DuFour, public presentation, July, 2007) refer to high schools as a collection of independent contractors connected by a common parking lot. In other words, teachers rarely see each other in professional settings, speak to each other using professional language, or interact with each other in professional ways (McLaughlin & Talbert, 2006; Mullen & Hutinger, 2008). We might see each other in the parking lot as we arrive and leave school, or even say hello in the hallway, or sit together at lunch. But the interactions are superficial, at best, as they

consist of mere "hellos" and "goodbyes." Meaningful professional dialogue, focused on improving student learning, is at a minimum in most schools (Schmoker, 2006).

Schmoker (2006) states that this teacher isolation is one of the greatest barriers to improving student learning. The consequences are colossal. For example, privatization ensures that teachers teach whatever they like and however they like. This means that the basic notion of a guaranteed curriculum for students, parents and the community becomes null and void (Marzano et al., 2005). The school board may officially approve a curriculum guide for all subject and grade levels, yet privatization of classrooms ensures that when the door to the classroom closes, the teacher has all control over what is taught (Schmoker, 2006). And in this setting, curriculum guides become, quite literally, "well-intended fiction" (Schmoker, 2006, p. 37).

A second consequence of this teacher isolation, according to Schmoker (2006), is that it results in minimal monitoring of the quality of teacher work, and ultimately impact (or lack thereof) on student learning. Unless a principal can have super vision (as implied by combining the two terms into one word, "supervision"), it is impossible to effectively monitor the quality of teacher work (Leithwood et al., 1998). The futility of one-person oversight is glaring when juxtaposed against the need to build leadership capacity of staff, as elaborated in the first section, "Leadership."

Schmoker (2005, p. 139) concludes his commentary on the importance of breaking down the walls of professional separation by summoning our sense of equity.

For if "differences in teaching [do] not matter much," and if "outcomes [are] irrelevant," then we should continue on our current course. As the former Assistant Secretary of

Education is fond of saying, "It shouldn't be the luck of the draw that my grandson receives instruction from a qualified teacher" (R. J. Simon, public presentation, April, 2004). If we stay on the current trajectory for student learning, then the quality of curricular, instructional, and assessment practices is largely dependent on random placement of a child in a classroom (Schmoker, 2005; Schmoker, 2006). If we want to guarantee the curriculum for every child, and ensure that high quality instructional and assessment practices are the norm in every classroom, then the walls of privatization must come down (Schmoker, 2005, 2006).

Continuing the status quo accommodates the least effective educational practices that result from teacher isolation (Lieberman & McLaughlin, 1995; McLaughlin & Talbert, 2006; Schmoker, 2006). First, teachers are allowed to teach what they want, when they want, and how they want, all of which lead to mediocre teacher performance. Secondly, one-person oversight is incapable of improving student learning (Leithwood et al., 1998). And finally, the principle of equity of instruction calls upon us to provide the highest possible instructional experiences for every child (Schmoker, 2005, 2006). Hence, deprivatization of the classroom is essential to improving student learning (Mullen & Hutinger, 2008).

Importance of Collaboration

If isolation, separation, and privatization are not effective at improving student learning, what is an alternative? Little (1990) calls it collective autonomy, and Darling-Hammond and McLaughlin (1995) refer to it as a collective professional learning community. Still others refer to this environment as a collaborative culture (Eastwood &

Lewis, 1992; Mullen & Hutinger, 2008; Newmann & Wehlage, 1995; Slater, 2008). Regardless of the specific title, this "collective autonomy' will always achieve better results than individuals working under close, rigid supervision" (Schmoker, 2005, p. 146).

According to Eastwood and Lewis (1992), if we want to improve student learning, then the creation of a collaborative culture is "the single most important factor" (p. 215). Consider the implications of this statement. In school improvement initiatives, not only is collaboration important, but it is "the single most important factor" (Eastwood & Lewis, 1992, p. 215). Yet schools typically focus on data, goals, plans, action steps, interventions, staff development workshops, and program evaluation. According to Eastwood and Lewis (1992), this is all for naught if a collaborative environment is not created. Not that the other aspects of school are unimportant—they are. It is just that the *most* important work, out of that which is important, is creating collective autonomy or a collaborative culture (Eastwood & Lewis, 1992). What many might consider "hoops" (i.e., using data, developing goals, creating action plans, determining evaluation methods, etc.) in a perceived bureaucratic system is still necessary (Bush, 2008). It is just not the *most* important.

Furthermore, these same researchers (Eastwood & Lewis, 1992) contend that creating a collaborative culture is "the first order of business" (p. 215) for improving the effectiveness of schools. So not only is it the most important work, but it should also be dealt with first.

In the words of Covey (1990), the phrase "first order of business" (Eastwood & Lewis, 1992, p. 215) is replaced with the word "urgent." Urgent activities are those that must be dealt with immediately. These are potentially crises or problems that must be handled right away. But they can also include telephone calls, emails, or meetings of some kind. Urgent issues must be dealt with now, first—but they may or may not be considered important.

A medical analogy might prove useful in considering the difference between important and urgent activities. Urgent activities are those in which a life-threatening situation must be avoided. Examples might include by-pass surgery, removal of cancerous tumors, or other major procedures necessary to save one's life. These are actions that one must take due to an urgent scenario in one's health.

Important activities, on the other hand, are those that typically have to do with getting results—particularly in the long-run. If an activity is considered important, it is probably one that you feel contributes significantly to your sense of mission or purpose (Covey, 1990). And it probably also lends itself to getting the work of your organization's mission accomplished (Covey, 1990). But an important activity may or may not be considered urgent.

In the medical analogy begun above, important activities are those which maintain and improve health. For instance, eating healthy, exercising, and regular medical checkups would be among important activities in which one must engage. These contribute to long-term health and are important, but none of them are urgent in terms of saving one's life.

Chart 2 provides examples of what might constitute urgent and important activities. The Time Management Matrix juxtaposes these two considerations against each other. By doing this, four quadrants are created.

Chart 2

The Time Management Matrix

	Urgent	Not Urgent
	I	П
	Activities:	Activities:
Immoutant	Crises	Prevention, PC activities
Important	Pressing problems	Relationship building
	Deadline-driven projects	Recognize new opportunities
		Planning, recreation
	III	IV
	Activities:	Activities:
	Interruptions, some calls	Trivia, busy work
Not Important	Some mail, some reports	Some mail
	Some meetings	Some phone calls
	Proximate, pressing matters	Time wasters
	Popular activities	Pleasant activities

Source: Covey, 1990

Having examined the Covey (1990) framework, let us consider the implications of the statements by Eastwood and Lewis (1992) in this context. Creating a collaborative environment should be the first order of business ("urgent"). Further, this is "the single most important factor" (Eastwood & Lewis, 1992, p. 215) contributing to school

improvement ("important"). Thus, one might place the work of creating a collaborative culture in Quadrant I. In other words, this work is both urgent *and* important.

Finally, Newmann and Wehlage (1995), in a report on the success of school restructuring efforts, spoke to this common denominator. The study examined hundreds of schools with tens of thousands of students. A key finding was that, regardless of the restructuring tools used in the restructuring movement, schools should build a collaborative culture if they want to boost student learning. "If schools want to enhance their organizational capacity to boost student learning, they should work on building professional community that is characterized by shared purpose, collaborative activity, and collective responsibility among school staff" (Newmann & Wehlage, 1995, p. 37). Once again the importance of so-called collective autonomy is confirmed in the literature.

Isolation, separation and privatization are not capable of improving student learning (Lortie, 1975; Schmoker, 2006). Rather, creating a collaborative environment is foundational to improvements in teaching and learning. It is the "single most important factor" and "first order of business" for school improvement (Eastwood & Lewis, 1992, p. 215).

Benefits of Collaboration

Having established the importance of creating a collaborative culture, Judith Warren Little (1990) identified specific benefits associated with effective collaboration. These benefits make it absolutely essential to any school improvement initiative. Among the benefits of effective collaboration between teachers, according to Little, is (a) links to gains in student achievement, (b) higher quality solutions to problems, (c) increased

self-efficacy among all staff, (d) more systematic assistance to beginning teachers, and (e) an expanded pool of ideas, methods and materials that benefited all teachers. Again, all of these benefits are attributed to effective collaboration.

Of the benefits listed by Little (1990), the improved performance of students could be considered the most important. In the same report discussed earlier, Newmann and Wehlage (1995) point to very specific links to gains in this area. Their report details student performance that is 27% higher in schools with high levels of collective autonomy as compared to those with low levels of collaboration. The researchers report that this equates to a 31 percentile point gain in student achievement. Additionally, the increases were found between socioeconomic groups, thus effectively doing both raising the bar of educational performance and closing the persistent gaps of student performance between subgroup populations (Fullan, 2003).

Briefly, the benefits of collaboration can be summarized into improvements in teaching and learning (Newmann & Wehlage, 1995). Other benefits, like increased capacity of the staff to meet student needs, in general, are also found (Slater, 2008). The ultimate benefit, however, is that teachers who engage in these activities deliver higher quality instruction than teachers who work in isolation (Newmann & Wehlage, 1995).

Elements of Collaboration

Given the importance of collective autonomy and the benefits coming from it, let us consider some of the elements necessary for building this capacity. In other words, what are some characteristics of schools that have broken down the walls of separation, isolation, and privatization of teacher practice? What are the characteristics of

collaborative professional learning communities? What role does job-embedded professional learning play? And is there a difference between collaboration that is effective and that which is less so?

Newmann and Wehlage (1995, p. 31) articulate collective autonomy as being teachers who work productively "to participate in reflective dialogue to learn more about professional issues," "observe and react to one another's teaching, curriculum, and assessment practices," and "engage in joint planning and curriculum development" (p. 31). These same researchers go on to summarize this collective autonomy into three keys areas of collaboration: "implementing curriculum, instruction, and assessment" (p. 38) When groups of teachers work together to accomplish these three tasks, the process "facilitate[s] development of shared purposes for student learning and collective responsibility to achieve it" (p. 38) The key phrase, though, is that "groups, rather than individuals, are seen as the main units" (p. 38) for doing this work. In other words, the basic elements of curriculum, instruction, and assessment must be done collaboratively with other teachers, and not in isolation, to truly develop collective autonomy. Furthermore, the word "implementing" implies that teachers are not simply grouped for the sake of grouping (NSDC, 2003; Youngs & King, 2002). Rather, there are specific actions (i.e., implementation) that are taken to improve teacher practice.

As an aside, it is important to note that teacher support for this work is critical to success (Murphy & Lick, 2005). Frameworks like the concerns-based adoption model (CBAM) can assist leaders in understanding and managing change in people (Hall,

George, & Rutherford; 1979). Additionally, Fullan (2001) discusses five aspects for leading change in his book titled, "Leading in a Culture of Change."

Reluctant teachers are a dilemma for many principals. However, Murphy and Lick (2005), in their 14 key lessons for implementing Whole-Faculty Study Groups, a specific process for creating a collaborative workplace environment, state that principals must make it "abundantly clear to teachers that it is not a choice as to whether they will collaborate with colleagues on how to improve student learning. It is an expectation of the workplace" (pp. 217 – 218).

Returning to the theme of teachers working in teams, given that Newmann and Wehlage (1995) articulate curriculum, instruction, and assessment as key areas, and given that these same three areas tend to be a central focus in professional development activities, and given the importance of collaboration, or collective autonomy, what role does professional development, in the traditional sense, play in this new paradigm? "Teachers do not learn best from outside experts or by attending conferences or implementing 'programs' installed by outsiders. Teachers learn best from other teachers, in settings where they literally teach each other the art of teaching" (Schmoker, 2005, p. 141).

Note that Schmoker (2005, p. 141) emphasizes that "teachers do not learn *best*" (emphasis added) in traditional forms of professional development. This does not mean that learning does not happen in traditional professional development. Many ideas and activities are learned and implemented at some level as a result of workshops, conferences, in-services, and trainings (a.k.a. traditional professional development)

(Joyce & Showers, 1995). However, Schmoker (2005) contends that, in comparison to traditional professional development, teachers learn best in job-embedded environments—"in settings where they literally teach each other the art of teaching" (p. 141). What's more, the process of teachers teaching each other, supplemented by external and traditional forms of professional development, has the greatest potential impact for creating a collaborative environment (Blase & Blase, 1999). In other words, the use of teams is critical in creating a collaborative environment (Youngs & King, 2002).

Schmoker (2005) speaks to the power of a new paradigm of professional development by emphasizing, quite emphatically, that the old system is outdated. "Another discovery that points to the timeliness and power of professional learning communities is the emergent realization that training, though useful, is overrated and, in some cases, even unnecessary" (Schmoker, 2005, p. 147). Putting this statement in the context of Schmoker's (2005) conclusion that teachers learn best from each other provides yet another impetus for creating collaborative cultures conducive to jobembedded professional learning.

Juxtaposing the limited usefulness of external trainings with the notion that teachers learn best from each other creates a solid foundation for the importance of jobembedded professional learning, defined as "learning activities that occur during work hours and that support instructional needs" (Mullen & Hutinger, 2008). However, Pfeffer and Sutton (2000) take this concept one step further by stating that success "depends largely on *implementing what is already known* rather than from adopting new or

previously unknown ways of doing things" (emphasis added, Pfeffer & Sutton, 1999, p. 88). So it is not that the old paradigm of professional development simply compacts itself into mini-trainings, workshops, or conferences, per se. Rather, the job-embedded paradigm focuses primarily on "implementing what is already known" (Pfeffer & Sutton, 1999, p. 88) and the best way to implement what is already known is by creating a collaborative culture (Newman & Wehlage, 1995), as enunciated earlier.

A final example provided by the business world illustrates the focus of jobembedded learning. Collins (2001) refers to a collaborative culture as one which has a simple focus on improving processes in small but innumerable and incremental ways. Job-embedded professional learning, in the context of a collaborative environment is just this: refining processes in small but innumerable ways (Collins, 2001). It is not grandiose plans, or complex strategies, or expensive consultants, or time-consuming trainings. It is improvement, plain and simple.

The elements of collaboration include teachers who work productively "to participate in reflective dialogue to learn more about professional issues," "observe and react to one another's teaching, curriculum, and assessment practices," and "engage in joint planning and curriculum development" (Newmann & Wehlage, 1995, p. 31). Further, it involves "*implementing what is already known* rather than on adopting new or previously unknown ways of doing things" (Pfeffer & Sutton, 1999, p. 88). In other words, the focus is on doing, not just knowing. Finally, collaboration involves simply focusing on refining processes in small ways (Collins, 2001).

Designs of Collaboration

Having considered the status quo, the importance of creating a collaborative culture, the benefits of collaboration, and the elements of collaboration that are necessary, let us now move to examining specific designs that build the capacity of staff to create a collaborative culture. Simply understanding the importance of creating a collaborative environment and believing in the processes outlined is one thing, knowing specific designs that one can implement for this end is yet another.

Fortunately, Easton (2004), in partnering with the National Staff Development Council and significant thinkers and practitioners in the field of staff development, identified 21 designs for powerful professional learning. They titled these "powerful designs" because of their potential for creating a collaborative culture (Easton, 2004). These designs, in alphabetical order, are:

- Accessing student voices
- Action research
- Assessment as professional development
- Case discussions
- Classroom walk-throughs
- Critical friends groups
- Curriculum designers
- Data analysis
- Immersing teachers in practice
- Journaling
- Lesson study
- Mentoring
- Peer coaching
- Portfolios for educators
- School coaching
- Shadowing students
- Standards in practice
- Study groups
- Training the trainer

- Tuning protocols
- Visual dialogue

It should be noted that none of these are one-time activities, nor are they simply behaviors to accomplish. Rather, they are categories of effective designs for professional learning that go beyond traditional "sit 'n' gits," also known as workshops, trainings, or conferences (Easton, 2004).

The foundation upon which these designs of professional learning are built are the NSDC Standards for Staff Development (NSDC, 2003). These 12 standards are grouped into three strands: Context, Process, and Content.

Context is the culture, the conditions in place for professional development.

Context "is important not only to implementing powerful professional development, but also to improving the school's capacity to function as a learning community and, therefore, to helping increase student achievement" (Easton, 2004, p. 5). Specifically, the use of the 21 designs of professional learning will: "Result in learning communities; [and] Promote shared leadership" (Easton, 2004, p. 4). In other words, Context is the environment for professional learning (DuFour, 2001), and it is the most important factor for improving student learning (Sparks, 2003).

The Processes employed for improving professional practice "depends a lot on context," (Easton, 2004, p. 5) and include the parameters and tools for appropriate processes of professional learning. Using the designs

Encourage[s] data collection and analysis; Point[s] the way toward using multiple sources of information to guide improvement and demonstrate the impact of change; Encourage[s] research-based decision making; Use[s] knowledge about how people learn; and Provide[s] educators with the skills and knowledge to collaborate. (Easton, 2004, p. 4)

In other words, Process is the how of professional learning (DuFour, 2001).

The Content standards ensure that professional learning is focused on improving student learning, and emphasizes that "the focus must be clear for progress to occur" (Easton, 2004, p. 5). Further, the designs

Help prepare educators to understand and appreciate all students, create supportive learning environments for them, and have high expectations for their achievement; Help deepen educators' content knowledge and ability to provide instruction and assessment so students can meet high academic standards; and Help provide educators with knowledge and skills to appropriately involve stakeholders outside the classroom. (Easton, 2004, p. 5)

In other words, Content can be considered the what of professional learning (DuFour, 2001).

Given that Context is the environment in which schools operate (DuFour, 2001; Hord & Sommers, 2008; WestEd, 2003), and that the creation of a collaborative environment is what Context is all about (Easton, 2004), let us take a closer look at the specific standards associated with Context: Learning Communities, Leadership, and Resources (NSDC, 2003). Elucidated further, "Staff Development that improves the learning of all students . . . organizes adults into learning communities whose goals are aligned with those of the school and district" (NSDC, 2003, p. 59), or Learning Communities; "requires skillful school and district leaders who guide continuous instructional improvement" (NSDC, 2003, p. 63), or Leadership; and "requires resources to support adult learning and collaboration" (NSDC, 2003, p. 69), or Resources.

Even more specifics for this conversation can be found in the Innovation

Configuration (IC) Maps developed by the National Staff Development Council (NSDC,

2003). The IC Maps, similar to a rubric in that a continuum of "varying degrees and/or

types of use of the innovation" (NSDC, 2003, p. 6) are specified, provide guidance about effective staff development practices. Each of the 12 staff development standards has an IC map, plus specific roles within a school system are identified. To this end, potential objectives and performance expectations are enunciated for how those individuals might respond in meeting the standards. The desired outcomes for the principal in relation to the Context standards are provided in Chart 3.

Having explored specific elements of the Context standards of staff development (NSDC, 2003), let us now return to the notion of specific designs used to implement the standards. Of these 21 designs, all are appropriate for administration (Easton, 2004). However, 11 are identified as "administrative participation is required" (Easton, 2004, p. 23). These 11 are: Assessment as professional development, Classroom walk-throughs, Curriculum designers, Data analysis, Lesson study, Mentoring, Peer coaching, School coaching, Study groups, Training the trainer, and Visual dialogue.

This list becomes further refined to seven specific designs of professional learning when the focus is on collaboration in small groups or large groups (Easton, 2004). School leaders would be well-served to start with these designs in their efforts to increase collaboration among staff. Those seven are (Easton, 2004, p. 23):

- Assessment as professional development
- Curriculum designers
- Data analysis
- Lesson study
- School coaching
- Study groups
- Visual dialogue

Chart 3

NSDC Innovation Configuration Map for role of principal (2003, p. 59 ff.)

Learning Communities	Leadership	Resources
Prepares teachers for skillful collaboration	Promotes a school culture that supports ongoing team learning and improvement	Allocates resources to support job-embedded professional development in the school
Creates an organizational structure that supports collegial learning	Creates a school culture that supports continuous improvement	Focuses resources on a small number of high-priority goals
Understands and implements an incentive system that ensures collaborative work	Creates experiences for teachers to serve as instructional leaders within the school	Allocates resources to provide for continuous improvement of school staff
Creates and maintains a learning community to support teacher and student learning	Involves the faculty in planning and implementing high-quality professional learning for the school	Allocates resources so technology supports student learning
Participates with other administrators in one or more learning communities	Models continuous improvement and professional learning	
	Articulates the intended results of school-based staff development	
_	Advocates for high-quality school-based professional learning	
	Participates in professional learning to become a more effective instructional leader	

Source: NSDC, 2003

An important consideration for these designs, as all the others, is that they are done with two or more colleagues (Blase & Blase, 1999; Mullen & Hutinger, 2008; Youngs & King, 2002). But it is not simply grouping colleagues and focusing them on aspects of their daily work that provides the power in this or any other design. As noted

by Fullan (2001), groups can be powerfully wrong. Further, "principals must not mistake congeniality with collegiality" (DuFour & Berkey, 1995). Rather it is grouping staff, combined with the environment of collegiality and desire for continuous improvement, as noted by Eastwood and Lewis (1992), and elaborated upon in the previous section of this literature review, that make for impressive improvements in student learning.

Finally, it should be noted that these designs do not simply appear from desire. Resources are clearly necessary, including time, training on protocols and procedures, administrative support, and trust between teachers (Blase & Blase, 1999; Leithwood et al., 1998; Mullen & Hutinger, 2008; NSDC, 2003; Slater, 2008; Youngs & King, 2002). The work of Marzano et al. (2005), also noted earlier, is particularly relevant as it relates to "Resources."

Schools that work to implement any one of these designs, which are foundational for building collective autonomy, will reap tremendous benefits (Slater, 2008). As stated by Little (1990), those benefits include gains in student achievement. And, as stated by Newmann and Wehlage (1995), the main implications of their findings is that "If schools want to enhance their organizational capacity to boost student learning, they should work on building professional community that is characterized by shared purpose, collaborative activity, and collective responsibility among school staff" (Newmann & Wehlage, 1995, p. 37). Once again the importance of so-called collective autonomy is confirmed in the literature.

As this section began, so too is it concluded: not only does leadership matter, but creating an environment for effective collaboration is also critical to school improvement.

In other words, collaboration matters (Newmann & Wehlage, 1995). The knowledge, skills and dispositions necessary in creating a collaborative environment include the deprivatization of classrooms, a focus on quality instructional, assessment, and curricular practices, a sense of collective autonomy, the use of specific designs for professional learning, and building a collaborative culture.

Leading Collaboration

It is clear that building leadership capacity of staff is an important role of designated leaders. It is also evident that improvement in student learning is dependent on building a collaborative culture. Now let us examine the intersection of these two ideas: the role that leaders play in building a collaborative environment. As such, this section will explore the work of leading researchers, thinkers, and practitioners, including the DuFour's and Eaker, Lezotte, Fullan, Marzano, Youngs and King, Slater, Mullen and Hutinger, Blase and Blase, Reeves, Murphy et al., the National Association of Elementary School Principals (NAESP), and the National Staff Development Council (NSDC).

There is almost unparalleled consensus in the education world about the necessity for job-embedded professional learning (DuFour et al., 2005). DuFour et al. (2005) edited a volume titled "On Common Ground: The Power of Professional Learning Communities" that included some of the leading thinkers and practitioners in today's educational environment, many of whom are cited in this review of the literature, and most of the authors cited much of the same research included herein. The message is clear: leadership is a vital necessity for changing the culture of a school from isolated,

independent contractors to a unified system of colleagues working systematically for the improvement of student learning (Blase & Blase, 1999; DuFour et al., 2005; Mullen & Hutinger, 2008; Murphy et al., 2009; NAESP, 2002; NASSP, 2009; Slater, 2008; Wallace Foundation, 2007; Youngs & King, 2002).

Included among these thinkers is Lezotte (2005) and his "Correlates of Effective Schools." One of the more consistent philosophies of educational reform, these correlates are now in their second generation and fourth decade. Even still, the first correlate identified by Lezotte is Instructional Leadership, and included within this is the need for a core leadership group. Hence, one important skill of principals is the ability to bring together a core leadership group charged with the responsibility "to initiate and sustain an ongoing conversation of school change based on the Effective Schools research" (Lezotte, 2005, p. 183). Clearly, the responsibility of leadership does not fall on one person who has the title, "principal," as also enunciated by Lambert (1998, 2003) and confirmed by others (Barnard, 1968; Conzemius & O'Neill, 2001; Fullan, 2005a, 2005b; Lambert, 1998, 2003; NAESP, 2002; NASSP, 2009; Reeves, 2009; Wallace Foundation, 2007). Rather, it belongs with a core leadership group comprised of school staff (Marzano et al., 2005).

In addition to Lezotte (2005), Marzano et al. (2005) propose a five step plan for effective school leadership (p. 98): "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." The first two steps

of this effective school leadership plan involve the development and use of a school leadership team.

In considering specific responsibilities that principals must undertake, the National Association of Elementary School Principals (NAESP) identified six standards. These standards enunciate what principals should know and be able to do in order to be effective at their work (NAESP, 2002). The six standards are: (a) Balanced management and leadership role, (b) Set high expectations and standards, (c) Demand content and instruction that ensure student achievement, (d) Create a culture of adult learning, (e) Use multiple sources of data as diagnostic tools, and (f) Actively engage the community. Of the six standards, two deal with the importance of creating a collaborative culture: balanced management and leadership role[s] and creat[ing] a culture of adult learning.

In regard to creating a culture of adult learning (Standard 4), and the role that the designated leader plays in facilitating this, this standard includes several elements that lead directly to building the capacity of others in the organization. Specifically, a principal engaged in creating a culture of adult learning will:

- 1. Provide time for reflection as an important part of improving practice
- 2. Invest in teacher learning
- 3. Connect professional development to school learning goals
- 4. Provide opportunities for teachers to work, plan and think together
- 5. Recognize the need to continually improve principals' own professional practice. (NAESP, 2002, p. 42)

Each of these elements is vital to creating a collaborative work environment, and they are intertwined with each other. If educators are not provided opportunities to reflect on their practice (Strategy 1), including looking at evidence of student performance, we repeat the same mistakes, fail to recognize differences in student populations, and miss

opportunities to improve our practice. Whereas leaders who provide time for reflection are also able to then invest properly in teacher learning (Strategy 2) that connects to school learning goals (Strategy 3). Strategy 4 recognizes that the answers are already present within the room, so to speak, and that all we have to do is access the thinking and expertise of each other. Finally, a principal must model adult learning (Strategy 5) by engaging in practices similar to teachers but with colleagues from settings similar to their own.

Using meta-analysis, Marzano et al. (2005) identified 21 leadership responsibilities that have the greatest impact on student learning. Among these responsibilities is what they refer to as "Resources," or "the alignment of several levels of resources necessary to analyze, plan, and take action in response to opportunities and threats that the future brings" (Deering, Dilts & Russell, 2003, p. 34). Fullan (2001, pp. 64 – 65) expanded on this by saying that "instructional improvement requires additional resources in the form of materials, equipment, space, time, and access to new ideas and to expertise." In other words, the responsibility of leaders in providing resources goes beyond equipment and supplies. It includes creating an environment and culture where collaboration for the improvement of student learning is the norm, and includes "space, time, and access to new ideas and expertise" (Fullan, 2001, pp. 64 – 65) among the necessary ingredients.

In this connection, "one of the most frequently mentioned resources important to the effective functioning of a school is the professional development opportunities for teachers" (Marzano et al., 2005, p. 59). Referring back to Schmoker's (2005, 2006)

statement that traditional professional development is over-rated, one could juxtapose this thinking with the notion that the most effective form of professional learning is teachers working in teams for the improvement of student learning (NSDC, 2003). The National Staff Development Council emphasized this thinking by stating that "the most powerful forms of staff development occur in ongoing teams that meet on a regular basis . . . for the purposes of learning, joint lesson planning, and problem solving" (p. 59).

Confirming the work of Marzano et al., Newmann and Wehlage (1995) identified the principal as being key to establishing a collaborative working environment for teachers. For example, in schools that a collaborative culture existed, principals didn't just encourage collaboration, rather, they created structures and expectations to make sure that teachers worked together in teams. Even though this systematic collaboration goes against the norm of teacher isolation, as enunciated earlier in this review of the literature, teachers ultimately responded positively. When teachers were given time and support for their collaborative work, they said that collaboration was useful, stimulating, and helpful. Further, providing opportunities for teachers to network outside of their building provided even more momentum for collaboration.

In other words, teachers yearn for opportunities to collaborate. But they need more than simple encouragement—they need structures and expectations to facilitate this collaboration, designs like those mentioned by Easton (2004). And the principal plays an integral role in facilitating an environment for this job-embedded professional learning.

In sum, leading a collaborative environment is an essential responsibility of any principal (Blase & Blase, 1999; DuFour et al., 2005; Mullen & Hutinger, 2008; Murphy

et al., 2009; Slater, 2008; Youngs & King, 2002). In fulfilling this task, principals need to utilize a core leadership team designated with the responsibility of engaging in conversations around meeting the needs of all kids (Fullan, 2005a; Lambert, 1998, 2003; Lezotte, 2005; Marzano et al., 2005). Further, principals must invest in teacher learning by providing time for educators to work, plan, and think together (Deering et al., 2003; Fullan, 2001; Marzano et al., 2005; NSDC, 2003; Schmoker, 2005; Youngs & King, 2002). Additionally, principals must engage in continuous learning themselves (Blase & Blase, 1999; NSDC, 2003). Finally, they must allocate resources (materials, equipment, space, time, and access to new ideas and expertise) to support their work in leading a collaborative work environment (Marzano et al., 2005).

Knowledge, Skills and Dispositions

Previous sections have examined, at both theoretical and practical levels, the implications of effective leadership and collaboration. In doing so, the paradigm of leadership, defined as an individual person confirmed with all decision-making abilities, has been altered. Rather, leadership of the masses is the new norm, where all individuals have the right and responsibility to serve in leadership roles. Further, the importance of creating collaborative learning environments has been emphasized. Not only is this the most important task of any designated leader, but should also be the first priority if they are wishing to improve student learning.

Given the importance of designated leaders in creating a collaborative environment where job-embedded professional learning is the norm, what are the specific knowledge, skills and dispositions that principals need in order to effectively do this

work? In other words, what do principals need to know? What do principals need to be able to do? And what beliefs or attitudes must principals possess?

To begin, at a broad level, the Interstate School Leaders Licensure Consortium identified "Standards for School Leaders" in 1996, and then went through a process of revision in 2008. According to the website for the Council of Chief State School Officers (CCSSO, 1996),

The Interstate School Leaders Licensure Consortium (ISLLC) Standards for School Leaders (Council of Chief State School Officers, 1996) were written by representatives from states and professional associations in a partnership with the National Policy Board for Educational Administration in 1994-95, supported by grants from the Pew Charitable Trusts and the Danforth Foundation. The standards were published by the Council of Chief State School Officers, copyright © 1996.

Within each of the six standards, the Consortium identified specific knowledge, dispositions, and performances necessary to implement the standards. Each standard begins with the statement, "A school administrator is an educational leader who promotes the success of all students by. . . ." (CCSSO, 1996, p. 8), which is again a confirmation of the role leaders play in impacting student learning. The latest revision of these standards (CCSSO, 2008) changes the phrasing from school administrator to education leader.

It is interesting to note that all six standards have at least one specific performance that is linked with building collaboration. However, two of the standards have more significant impact on the knowledge, skills and dispositions necessary for the principal in building a collaborative environment. These standards are, (a) "Facilitating the development, articulation, implementation, and stewardship of a vision of learning that is shared and supported by the school community" (CCSSO, 1996, p. 10); and

(b) "Advocating, nurturing, and sustaining a school culture and instructional program conducive to student learning and staff professional growth" (CCSSO, 1996, p. 12).

Becoming more specific, the objectives and performance expectations enunciated in the Innovation Configuration (IC) Maps (Chart 3—p. 47 of this document) of the National Staff Development Council (NSDC, 2003) provide insight into potential knowledge, skills, and dispositions necessary for principals to effectively create a collaborative environment. One will note that the language of these objectives tends to focus on actions that principals should take. In other words, skills that they might possess. A few identify specific knowledge that is necessary, and all have underlying dispositions.

Although not explicitly stated, dispositions are embedded within every objective. And knowledge-level understanding of job-embedded professional learning can be found more specifically addressed in the desired performance expectations outlined by NSDC (2003). Even so, "the difference between more effective principals and their less effective colleagues is not what they know. It is what they do" (Whitaker, 2003). Hence, the specific skills displayed by principals become important in accurately identifying what they know and believe.

Adding to the framework outlined by NSDC (2003), Eason-Watkins (2005) pointed out a study in the Chicago Public Schools. Three main goals were identified in an effort to transform teaching and learning. Of these three goals, two directly relate to the roles leaders play in creating a collaborative atmosphere: "build instructional capacity" and

maintain schools with strong communities of learning where teams of teachers work with the principals and other school staff to create a work and school environment of problem solving, innovation, reflection on practice, and collaborative professional development to design and implement effective instructional programs. (Eason-Watkins, 2005, pp. 196 – 197)

The specific application of these goals gives some insight into potential practical applications of the NSDC framework for facilitating collaborative environments.

In addressing these goals, Chicago Public Schools identified four key areas of work (Eason-Watkins, 2005). These were coaching and mentoring, support for building PLCs, study groups, and the use of assessment data. Even though these characteristics are more district-level focused, as opposed to what a principal should specifically know and be able to do, the specifics of how this work gets done can prove illuminating.

Juxtaposing these four key areas of work over the NSDC framework (2003) provides a starting-point for thinking about the role that principals play in creating job-embedded professional learning environments at their building.

We know that school capacity is a crucial variable affecting instructional quality and, thus, student achievement. Further, at the heart of school capacity are principals focused on the development of teachers' knowledge and skills, professional community, program coherence, and technical resources (Newmann et al., 2000). The Knowledge, Skills and Disposition areas identified in previous sections of this literature review support this notion, as well as provide specifics to building this capacity.

In addition, Schmoker (2005) identified two specific types of activities in which principals must engage. First, principals must clearly and frequently talk with teachers about instruction that is focused on the attainment of explicit academic goals. Secondly,

principals must recognize and celebrate superior practices. In this regard, Lortie (1975) provides specific ways for this to occur—most notably in the form of simple compliments. Implied within these activities is the need for the principal to know what superior practices look like, as well as understand the results that teachers are getting as a result of their practice. Hence, knowing what good instruction looks like and being aware of what is happening in the school regarding excellence in this field is imperative (Marks & Printy, 2003). The follow-up comes in recognizing and celebrating this excellence (Gronn, 1996; NSDC, 2003).

There are specific activities in which principals can engage in order to create a collaborative environment, and these skills are built on a foundation of dispositions and declarative knowledge that is identified in the NSDC framework (2003). Charts 1 and 3 in this literature review provide a summary of the essential knowledge, skills and dispositions for principals to possess in order to effectively create a collaborative environment.

The Knowing-Doing Gap

"There remains a gap between the promise of theoretically informed inquiry and the execution of research in our [educational leadership] field" (Heck & Hallinger, 2005, p. 233). To translate: there is a knowing-doing gap (Pfeffer & Sutton, 1999, 2000) where the field of education "know[s] what to do—it is that we do not do what we know" (emphasis in original, Schmoker, 2005, p. 149).

The Knowing-Doing Gap is widespread (Knight et al., 2007). Whether in the field of conservation (Knight et al., 2007), financial advice (Bowen, 2007), business and other

organizations (Pfeffer & Sutton, 2000), education (Riehl, Larson, Short, & Reitzug, 2000; Schmoker, 2005; Sparks, 2007), or a multitude of other fields (Knight et al., 2007), there is a persistent gap in the ability of people or organizations to implement "theoretically informed inquiry"—or what they know (Heck & Hallinger, 2005, p. 233). Put another way, organizations seem unable to change existing knowledge, research, and advice into meaningful action (Pfeffer & Sutton, 1999, 2000).

There are a "constellation of factors" (Pfeffer & Sutton, 1999, p. 94) contributing to the knowing-doing gap. However, these same researchers have identified some "recurring themes that help us understand the source of the problem and, by extension, some ways of addressing it" (p. 95). These eight themes (Pfeffer & Sutton, 1999, pp. 95 – 105) are:

- Why before How: Philosophy is Important (Pfeffer & Sutton, 1999, pp. 95 96). It is more important for staff to have an ingrained sense of the organization's mission, beliefs, and values then to replicate detailed practices and procedures. The practices and procedures will emerge from those principles.
- 2. Knowing Comes from Doing and Teaching Others How (Pfeffer & Sutton, 1999, pp. 96 98). As the title implies, "Learning by Doing" (DuFour et al., 2006) should be the modus operandi of organizations wishing to bridge the knowing-doing gap. This work, "by definition eliminates the knowing-doing gap" (Pfeffer & Sutton, 1999, p. 98)

- 3. Action Counts More Than Elegant Plans and Concepts (Pfeffer & Sutton, 1999, pp. 98 99). Action must be valued above talk, and "analysis without action are unacceptable" (Pfeffer & Sutton, 1999, p. 98).
- 4. There Is No Doing without Mistakes. What Is the Company's Response? (Pfeffer & Sutton, 1999, p. 99). The organization must encourage risk-taking, and the response of leadership to failures sends a powerful message to staff about whether or not risks are really encouraged or not.
- 5. Fear Fosters Knowing-Doing Gaps. So Drive Out Fear (Pfeffer & Sutton, 1999, pp. 100 101). Related to the previous theme, leaders must build a "forgiveness framework and not a failure framework" (Pfeffer & Sutton, 1999, p. 100). Additionally, leaders should complement this framework by making power differences less visible in the hierarchical structure of the organization.
- 6. Beware of False Analogies: Fight the Competition, Not Each Other (Pfeffer & Sutton, 1999, pp. 101 103). Cooperation and collaboration within the organization are the name of the game in organizations closing the knowing-doing gap.
- 7. Measure What Matters and What Can Help Turn Knowledge into Action (Pfeffer & Sutton, 1999, pp. 103 – 104). Just because what gets measured gets done does not mean that leaders should measure everything. Pfeffer and Sutton (1999, p. 104) contend that if we are serious about closing the

- knowing-doing gap, then we "should measure the knowing-doing gap itself and do something about it."
- 8. What Leaders Do, How They Spend Their Time and How They Allocate Resources, Matters (Pfeffer & Sutton, 1999, pp. 104 105). Leaders create an environment (Leithwood et al., 1998; Pfeffer & Sutton, 1999). Hence, their actions speak volumes. As the old phrase goes, "Your actions speak so loudly I cannot hear the words you are saying."

In sum, Pfeffer and Sutton (1999) identified eight themes that influence one's ability to turn knowledge into action—in other words, to eliminate the knowing-doing gap. These themes revolve around the work of the leaders within the organization to create a culture whereby action is the modus operandi.

Summary of the Literature Review

Principals have a vital role to play in the leadership of the school. Further, the principal should work to build the leadership capacity of the staff. Collaboration between teachers is an effective tool with many benefits, including that of improving student learning. As such, there are specific elements and designs necessary for creating an effective collaborative workplace environment for teachers.

The work of the designated leadership within the school, coupled with the need for specific collaborative designs, brings about the importance of the work of the principal in leading collaboration. In order to lead collaboration, there are specific knowledge, skills and dispositions that those in designated leadership positions must possess. Finally, the existence of fundamental knowledge does not necessarily translate

into action. This widely recognized phenomenon is otherwise known as the Knowing-Doing Gap.

Need for Study

"Theoretically informed inquiry" (Heck & Hallinger, 2005, p. 233) in the academic field of educational leadership is abundant (Gronn, 1996). Further, there is almost unparalleled consensus in the education world about the necessity for creating collaborative workplace environments for teachers (DuFour et al., 2005).

So what is holding us back? Is there a knowing-doing gap with leadership, and specifically principals? In other words, do principals and leaders know how to create a collaborative environment for teachers, but simply do not do it? If this is the case, then the themes enunciated by Pfeffer and Sutton (1999) might provide some insights.

Or is the lack of creation of collaborative workplace environments for teachers a matter of a knowing gap? Specifically, do principals know what they need to do in order to create a collaborative environment?

This descriptive quantitative study focused on what principals do or do not know about creating collaborative workplace environments for teachers. For if principals know what to do, then we have a knowing-doing gap. And if there is a knowing-doing gap, then the themes presented by Pfeffer and Sutton (1999) can assist in implementation.

But it is more foundational to first examine knowledge—for if principals do not know what to do in order to create a collaborative environment, then there cannot be a knowing-doing gap, but rather simply a knowing gap. And if principals do not know what to do to create a collaborative environment, then there are specific organizations that can

best meet this need. For example, these needs might be met through pre-service training and education, on-site and district-led learning and application, higher-education-led continuing education, intermediate service providers, and professional organizations.

Given the importance of collaboration, the lack of its implementation, the centrality of the principal, and the foundational importance of examining the knowing gap, this study examined whether or not principals know what to do to create a culture of collaboration. In other words, the central question for this study was, "Do principals know what they must do to create a collaborative workplace environment for teachers?" In studying this question, the leadership work of the school, the collaborative environment, and the specifics of leading collaboration were examined. The third chapter of this dissertation will address the specifics of how this descriptive quantitative study was framed to address this research question.

Chapter Three

Methodology

Introduction

This study sought to examine what principals know about creating a culture of collaboration for teachers. The purpose of this descriptive quantitative study was to add to the body of knowledge on creating a collaborative workplace environment for teachers by specifically identifying what principals know about creating a collaborative culture.

The increased accountability coming from the No Child Left Behind Act (U.S. Department of Education, 2002), as well as the track record for improving student learning that comes from creating a collaborative workplace environment for teachers (Darling-Hammond & McLaughlin, 1995; Little, 1990; Lortie, 1975; McLaughlin & Talbert, 2006; Newmann & Wehlage, 1995; Slater, 2008) creates a compelling need to look at what must happen in order to create that collaborative culture. The role of the principal, their knowledge and skills, are fundamental to implementing what works.

Research Questions

The overarching research question for this study aimed at finding out what principals know about creating a collaborative workplace environment for teachers: "Do principals know what they must do to create a collaborative workplace environment for teachers?" The two sub-questions, then, were:

- 1. What declarative knowledge do principals possess?
- 2. What declarative knowledge are principals missing?

The first of these two questions relates to the working knowledge that principals have in creating a collaborative workplace environment for teachers. In other words, what do they know, at a theoretical level, in this arena? The second question examines what principals specifically do *not* know about creating a collaborative culture. Given that there is a set of knowledge necessary to create a collaborative culture, it is important to know what parts of that knowledge are absent from principals serving in the field.

Research Design

This study used a descriptive quantitative design in order to describe what principals do and do not know about what they must do to create a collaborative workplace environment for teachers. The essential knowledge that principals must possess in order to create such a culture have been identified through the Review of the Literature (Appendix A) and are described under "Survey Instrument and Procedures."

Data were collected through the use of a web-based survey titled The Creating Collaborative Schools survey, developed by the researcher (Appendix B). The use of a web-based survey allowed participants to respond at times during the response window that were convenient to them. The researcher used Survey Monkey as the web-based survey delivery engine.

Population

The survey population for this study consisted of all of the employed high school principals of accredited schools in 2009 - 2010 in the state of Nebraska who have an email address, with the exception of the researcher. These schools were identified by the

Nebraska Department of Education. The total number of 2009 – 2010 high school principals identified for this study was 323.

Participants received an email about the nature of the survey, including a direct link to the website for the survey, on January 12, 2010. The survey began with acceptance of the informed consent. Upon agreeing to the terms of the web-based survey, participants then responded to the survey items on the survey instrument.

An email invitation was sent to all principals within the population, followed by reminder emails one and two weeks after the initial email contact (January 20 and January 28, 2010). The website remained open for responses for a total of four weeks, with the site closing on February 9th.

Email addresses for the high school principals were obtained from a number of sources. These sources included the Nebraska Department of Education, the Nebraska Association of Secondary School Principals, and school district websites.

High school principals were selected because of their unique position as instructional leaders and direct supervisors of classroom teachers. As such, they are in a unique position to directly influence collaboration that takes place between and among teachers. Further, collaboration between teachers at the high school level is notoriously difficult, as the private practice of teaching in schools (Schmoker, 2006) is exacerbated by departments focused on content.

A number of factors could inhibit the ability of the researcher to make valid inferences (Creswell, 2005) from this population. One factor that could inhibit the ability of the researcher to make valid inferences was that of non-response error. A reminder

email was sent at one and two week intervals to all principals in the population.

Additionally, survey-fatigue could inhibit valid inferences due to the length of the survey.

The researcher tried to overcome this factor by creating an instrument that had a minimal number of open-ended responses.

Of the 323 potential participants, 108 high school principals started the survey. However, respondents who failed to complete 15% or more of the items were eliminated from data analysis, leaving the total survey pool at 92 respondents (27.5% of potential participants). Though this response rate is low, a low response rate is typical for a webbased survey (Nair & Adams, 2009; Shih & Fan, 2009). In a meta-analysis of several dozen large studies, Shih and Fan (2009) found that the average response rate to email surveys was 33% with a low response rate of 11% within one standard deviation of the mean.

Trouteaud (2004) found that the optimal number of reminders for a web-based survey was two, and this is the same number of reminders that were employed as part of this research study. Further, Trouteaud (2004) found that the response rate reached as high as 24% with the correct style of invitation and two reminder emails.

Finally, the high power (Beta) associated with each of the elements (Table 23) shows that a larger sample is unlikely to significantly change the outcome of the results of this study. Hence, given the nature of web-based surveys having a lower response-rate in general (Nair & Adams, 2009; Shih & Fan, 2009), the fact that I used the optimum number of reminder emails (Trouteaud, 2004), and the fact that power (Beta) remains high for each element of the study provides re-assurance that the results can be accurately

used to describe the level of knowledge that high school principals in Nebraska possess about creating a collaborative workplace environment for teachers.

Survey Instrument and Procedures

The researcher used The Creating Collaborative Schools survey (Appendix B), a self-developed web-based survey, to collect data for this study. The survey, designed to gather knowledge-level information gleaned from the review of the literature on the subject, consisted of 88 items that were divided into five sections, the first three sections of which were on a 5-point Likert scale. The first 15 items were on a 5-point Likert scale using 1 for Strongly Disagree, 2 for Disagree, 3 for Neither Agree nor Disagree, 4 for Agree, and 5 for Strongly Agree. Each of the items has a definite right or wrong answer from the literature and the option for Don't Know/Unsure was also provided to allow principals to honestly state if they simply do not know (Dillman, 2000). Correct responses allowed the researcher to easily answer the research question about what principals know, and incorrect responses allowed the researcher to identify what principals do not know and even about which they have misconceptions.

The second section consisted of 53 items, also on a 5-point Likert scale, broken into five areas. This Likert scale used 1 for Very Unimportant, 2 for Unimportant, 3 for Don't Know/Unsure, 4 for Important, and 5 for Very Important. The option of Don't Know/Unsure allowed principals to honestly state if they simply do not know (Dillman, 2000). For each of these items, respondents rated the level of importance that they place on each element that they know is necessary for building collaborative teams. Again, these items were gleaned from the literature, and a distractor was placed in each of two of

the areas. All items should be identified as Important or Very Important if the principals know what is necessary to build a collaborative environment for teachers, with the exception of the distractors.

The third section, nine items, was also scored on a 5-point Likert scale. This time the scale was that of rating one's own level of knowledge on nine of the Elements of Principal Knowledge using 1 for No Knowledge, 2 for Some Knowledge, 3 for Beginner's Knowledge, 4 for Advanced Knowledge, and 5 for Expert Knowledge. This section was added to the survey instrument to see if principals can accurately self-assess their own level of knowledge on the nine elements in comparison to their responses throughout the rest of the survey.

The fourth section consisted of three open-ended items. These asked the principal to identify specific activities in which teachers can engage regarding curriculum, instruction, and assessment (Knowledge Element 9). These were the only items on the survey related to this knowledge element.

The fifth and final section sought demographic information from the participants. This data was collected via eight questions: the total years of service of the principal in education, the total enrollment of students in their school building, the number of years serving in the principalship, the length of time since last taking a graduate-level course, a description of the school as either private or public, whether or not the principal's school district has other high schools in it, whether or not the principal participates in a professional learning team—and if so, a description of the composition of that team, and in which Educational Service Unit the school resides. This demographic information

helped the researcher refine the data into subgroup populations and hence better understand what different populations of principals do or do not know about creating a collaborative workplace environment for teachers.

Construct Validity

The researcher sought to clearly extract from principals what they know about creating a collaborative workplace environment for teachers. Hence, he wanted the research instrument to be as clear as possible. In order to minimize measurement error occurring from ambiguity in the research instrument, the researcher sought expert advice to evaluate the instrument (Creswell, 2005).

The researcher sought the expert assistance and advice of Joellen Killion, deputy executive director of the National Staff Development Council, with whom he had previously corresponded on this and other topics. The researcher sought her feedback, as well as the names of others in the country that can provide expert advice in creating a clear research instrument. Ms. Killion's feedback was sought via email correspondence and then followed-up by a telephone conversation. Specifically, Appendix A and C were provided for her direct feedback as to whether or not each designated item measured what was intended, as well as what should be changed and how to make each item more accurately measure what was intended.

The research instrument for this study was also piloted with a selected group of individuals who are in-touch with the current research on creating a collaborative environment prior to dissemination to the high school principals. The researcher selected five colleagues in the state to take The Creating Collaborative Schools survey as a pilot.

These five individuals included a professional development director of a major metropolitan school district in Nebraska and graduate of the Nebraska Leadership for Learning Cohort of the University of Nebraska-Lincoln, the Director of Secondary Education for a different major metropolitan school district in Nebraska, two professional development specialists for intermediate service agencies serving multiple school districts of varying sizes, and a current K – 12 principal who is a graduate of the Nebraska Leadership for Learning Cohort and current doctoral student.

Upon completion of the survey, these five individuals were asked for their written and/or verbal feedback evaluating the clarity and appropriateness of each survey question. Additionally, the participants were asked for any specific or overall comments they had to further refine the research instrument. These responses, coupled with the expert feedback, were used to refine the survey instrument (Creswell, 2005) for construct validity.

Reliability

Reliability was calculated to measure the ability of the research instrument to consistently measure each element of knowledge. Upon completion of the study, the researcher calculated a Cronbach alpha for eight of the nine elements to determine internal consistency of the survey instrument (Creswell, 2005). This technique estimates the consistency of responses on items that are rated on a continuous variable scale—like the Likert-scale items used on this survey instrument. The reliability of element six was calculated using symmetric measures of reliability due to the fact that there were only two items measuring this element (see Table 1).

Table 1

Reliability by Element

	Element	Number of Items	Items Removed	Coefficient alpha/ Symmetric measures
1:	Staff Involvement	5	6, 69	.820
3:	Effective Teams	16	27, 31	.844
4:	Model Professional Learning	7	61, 71	.905
5:	Resource Allocation	8	33, 35, 72	.763
6:	Staff Meetings	2		.420*
7:	Continuous Improvement	7	43, 44, 50, 53 – 55, 74	.793
8:	Adult Learning Principles	6	8, 10, 11, 75	.788
9:	Student Learning Principles	3	76	.866
10:	Change Principles	3	15, 77	.524

^{*}Due to the nature of the element having two items, the symmetric measures value for reliability was calculated. This value is at the p < .10 level of significance.

A value of .7 is typically considered an acceptable level of consistency using the Cronbach alpha method for determining reliability. Element 10 (Change Principles) was the only element that did not have a reliability co-efficient above .7. The remaining items were well-above this required cut-score, though a few items were eliminated from each element in order to obtain a co-efficient alpha of .7 or higher. Element 6, having only two items, had a value at the p < .10 level of significance using the symmetric measures value for reliability. With the exception of Elements 3 and 6, all of the self-assessment items were removed from this calculation.

Data Analysis

This study aimed to examine what principals know about creating a culture of collaboration for teachers. The purpose of this descriptive quantitative study was to add to the body of knowledge on creating a collaborative workplace environment for teachers by specifically identifying what principals know about creating a collaborative culture. The steps that were used to conduct this study included collecting quantitative data using a web-based survey, analyzing that data to describe what principals do and do not know, and then interpreting that data to make meaning and application of it (Creswell, 2005).

The researcher used two main formats to analyze the results of the surveys. These formats were then repeated for the entire group of respondents, as well as specific subgroups as identified through the demographic questions. It should be noted that the items asked for knowledge that is either right or wrong. In addition to the calculation of mean, median, mode and standard deviation, the researcher calculated the percentage of principals who responded correctly to each item, according to the literature on this topic as enunciated in Appendix A. The five-point Likert-scale items in the first three sections were analyzed via the percentage of principals who correctly identified the necessary elements, in addition to the measures of central tendency enunciated above. The percent score allowed the researcher to specifically identify what principals do and do not know about creating a collaborative workplace environment for teachers. Additionally, each of the elements from the Elements of Principal Knowledge has multiple items on the research tool. Because of this, a breakdown by item on the tool, as well as aggregate score for the cluster of items was obtained.

The fourth section, that of self-rating one's own level of knowledge, was used for two purposes. The first was to include in the aggregate scores for the clusters of items around each element. The second was to determine a Pearson correlation between self-rating score and the actual level of principal knowledge by element.

For the open-ended questions, the researcher compared responses from participants to the Elements of Principal Knowledge (Appendix A) and then examined trends for areas of principal knowledge and absence of knowledge. A percent score by item was calculated for those that responded, as well as those that responded correctly. Finally, the researcher underwent a qualitative process for reviewing the open-ended responses. All responses for an item were read for a general understanding of responses. A second reading allowed the researcher to identify specific codes, and a third reading was used to group codes into themes for each item.

Finally, demographic questions were used to group principals into subgroups and then examine their data accordingly using inferential statistical analysis. The purpose was to find out what principals know about creating a collaborative culture, and then specifically identify what they do not know by way of comparison of their responses to the Elements. Hence, upon conclusion of the responses of the principals, all of the above-mentioned procedures were conducted for both the large group as well as subgroups identified by the researcher according to criteria necessary to generalize the data. A Pearson correlation was used to determine if there was a relationship between what principals know and the demographic questions of size of school, years in education, years in the principalship, the length of time since last taking a graduate-level course, a

description of the school as either private or public, whether or not the principal's school district has other high schools in it, whether or not the principal participates in a professional learning team—and if so, a description of the composition of that team, and in which Educational Service Unit the school resides. This analysis allowed the researcher to draw conclusions about what principals might need in terms of further assistance in developing these essential knowledge-level areas by demographic group.

In order to disaggregate the data and have enough responses in each of the demographic areas (school size, years in education, years in the principalship, length of time since last taking a graduate-level course, private or public school, whether or not there are more than one high schools in the district, whether or not the principal participates in a professional learning team—and if so, a description of the composition of that team, and in which Educational Service Unit the school resides), some grouping of demographic responses was necessary. Groupings were necessary to provide a more succinct look at the data, as well as allow for generalizability.

Summary

In sum, the analysis of what principals do and do not know about creating a collaborative culture for teachers was conducted via looking at the percentage of principals who responded correctly to each item as identified by the review of the literature, in addition to calculating mean, median, mode and standard deviation. A summary score for each element, as well as each item on the survey instrument, was obtained. The demographic information was then used to identify subgroup populations of principals, and then a Pearson correlation found to see if there were correlations

between the demographic information provided and the knowledge-level responses of the principals.

Given the importance of collaboration, the lack of its implementation, the centrality of the principal, and the foundational importance of examining the knowing gap, this descriptive quantitative study aimed to examine whether or not principals know what to do to create a culture of collaboration for teachers. A web-based survey was sent to the principals of all accredited high schools in the state of Nebraska during a fourweek period in the 2009 – 2010 school year. The analysis provided specific information on what principals do and do not know about creating a collaborative environment for teachers. These clarifying descriptions can then be useful for professional organizations, district-level support staff, intermediate service agencies, and institutions of higher learning to focus to be more effective and efficient at building administrators' capacity to create collaborative workplace environments for teachers. Further, this principal development impacts the quality of teaching and learning and, ultimately, student learning. By being clear about what principals are lacking, these same support organizations can strategically focus resources to remedy the identified deficits, and ultimately improve student learning.

Chapter Four

Results

Purpose

The purpose of this descriptive quantitative study was to contribute to the body of knowledge on creating a collaborative workplace environment for teachers by specifically identifying what principals know about creating a collaborative culture. Principals of accredited high schools in the state of Nebraska for the 2009 – 2010 school year were surveyed using an instrument developed by the researcher from a review of the literature. Hence, this descriptive quantitative study aimed at finding out what principals do and do not know about creating a collaborative workplace environment for teachers.

Research Questions

One primary research question guided this study: "Do principals know what they must do to create a collaborative workplace environment for teachers?" The two subquestions, then, were:

- 1. What declarative knowledge do principals possess?
- 2. What declarative knowledge are principals missing?

The first of these two questions relates to the working knowledge that principals have in creating a collaborative workplace environment for teachers. In other words, what do they know, at a theoretical level, in this arena? The second question examines what principals specifically do *not* know about creating a collaborative culture. Given that there is a set of knowledge necessary to create a collaborative culture, it is important to know what parts of that knowledge are absent from principals serving in the field.

Participants

The survey population for this study consisted of all of the employed high school principals of accredited schools in the 2009 – 2010 school year in the state of Nebraska who have an email address, with the exception of the researcher. These schools were identified by the Nebraska Department of Education. The total number of 2009 – 2010 high school principals identified for this study was 323. Participants received an email about the nature of the survey, including a direct link to the website for the survey, on January 12, 2010.

Of the 323 potential participants, 108 high school principals started the survey. However, respondents who failed to complete 15% or more of the items were eliminated from data analysis, leaving the total survey pool at 92 respondents (27.5% of potential participants). The final section of the survey included demographic questions about the study participants, and a breakdown of this information is provided.

Though the response rate of 27.5% is low, a low response rate is typical for a web-based survey (Nair & Adams, 2009; Shih & Fan, 2009). In a meta-analysis of several dozen large studies, Shih and Fan (2009) found that that average response rate to email surveys was 33%. The standard deviation for this meta-analysis was 22%. In other words, Shih and Fan found studies with response rates as low as 11% that were still within one standard deviation of the mean.

Trouteaud (2004) studied methods for improving response rates to web-based surveys. That study found that the style and number of invitation and reminder emails were critical to successful response rates. The optimal number of reminders was two, and

this is the same number of reminders that I employed as part of this research study. Further, Trouteaud (2004) found that the response rate reached as high as 24% with the correct style of invitation and two reminder emails. As a point of comparison, this study had a response rate of 27.5%.

Finally, the high power (Beta) associated with each of the elements (Table 23) shows that a larger sample is unlikely to significantly change the outcome of the results of this study. Hence, given the nature of web-based surveys having a lower response-rate in general (Nair & Adams, 2009; Shih & Fan, 2009), the fact that I used the optimum number of reminder emails (Trouteaud, 2004), and the fact that power (Beta) remains high for each element of the study provides re-assurance that the results can be accurately used to describe the level of knowledge that high school principals in Nebraska possess about creating a collaborative workplace environment for teachers.

The pool of high school principals was quite experienced with over half of the respondents indicating experience in education being 24 years or more. Less than one-fourth of the respondents have been in education for 16 years or fewer. When asked about the specific number of years in the principalship, 22% responded with 1-3 years, 26% indicated 4-7 years, 27% stated that they had been a principal for 8-15 years, and one-fourth of the principals have been principals for 16 years or longer. Finally, one-fourth of the participants are currently taking a graduate course or it has been less than a year since the last course. For 25%, it has been eight years or more. And for half of the respondents it has been between one and seven years since their last graduate course. The principals

were split almost evenly with 48% participating in a professional learning community and 52% not.

Table 2

Number of Years in Education

0 – 16 Years	17 – 23 Years	24 – 30 Years	31 – 42 Years	
22%	28%	26%	24%	

Table 3

Number of Years as a Principal

1 – 3	4 – 7	8 – 15	16 or more
22%	26%	27%	25%

Table 4

Number of Years Since Last Graduate Course

0	1-2	3 – 7	8 or more
24%	25%	26%	26%

Table 5

Participant in Professional Learning Team

Yes	No
48%	52%

The majority, 83% of the principals, serve in public schools. Further, 75% of the respondents have less than 400 students in their building. Finally, the state was divided into geographic regions by ESU for analysis with 33% of the principals in the Eastern/Southeastern part of the state, 25% from the North/Northeast, 28% from the Central regions, and 14% from the Western part of Nebraska.

Table 6

Private or Public School

Private	Public
17%	83%

Table 7

Number of Students in School

1 – 199	200 - 269	270 – 399	400 or more	
26%	25%	25%	25%	

Table 8

Region of the State

East/Southeast	North/Northeast	Central	Western
33%	25%	28%	14%

Pilot Procedures

Following the confirmation of construct validity from Joellen Killion, deputy executive director of the National Staff Development Council, the researcher piloted the

research instrument with a selected group of individuals who are in-touch with the current research on creating a collaborative environment. The researcher selected five colleagues in the state to take The Creating Collaborative Schools survey as a pilot. These five individuals included a professional development director of a major metropolitan school district in Nebraska and graduate of the Nebraska Leadership for Learning Cohort of the University of Nebraska-Lincoln, the Director of Secondary Education for a different major metropolitan school district in Nebraska, two professional development specialists for intermediate service agencies serving multiple school districts of varying sizes, and a current K – 12 principal who is a graduate of the Nebraska Leadership for Learning Cohort and current doctoral student.

Upon completion of the survey, these five individuals were asked for their written and/or verbal feedback evaluating the clarity and appropriateness of each survey question. Additionally, the participants were asked for any specific or overall comments they had to further refine the research instrument. A few clarifications were suggested in changes to wording and consistency of language between items. These responses, coupled with the expert feedback, were used to refine the survey instrument (Creswell, 2005) for construct validity.

Findings by Element and Item

The purpose of this descriptive quantitative study was to contribute to the body of knowledge on creating a collaborative workplace environment for teachers by specifically identifying what principals know about creating a collaborative culture.

Principals of accredited high schools in the state of Nebraska for the 2009 – 2010 school

year were surveyed using an instrument developed by the researcher from a review of the literature. Hence, this descriptive quantitative study aimed at finding out what principals do and do not know about creating a collaborative workplace environment for teachers.

The Elements of Principal Knowledge (Appendix A) was used to organize the content of The Creating Collaborative Schools Survey (Appendix B) into ten elements. Given that the second element, the charisma of a leader, has multiple connotations for different people, it was decided, in consultation with the doctoral committee, that this study would not examine the complexities associated with charismatic leadership. Hence, this study focused on the remaining nine elements.

The results of the study are reported via two main formats. These formats were completed for the entire group of respondents, as well as specific subgroups as identified through the demographic questions where a significant relationship (p < .05) was found. It should be noted that the items asked for knowledge that is either right (coded as one for analysis), or wrong (coded as zero for analysis). In addition to the calculation of mean, median, mode and standard deviation as obtained through coding responses on a zero to five scale, the researcher calculated the percentage of principals who responded correctly to each item, according to the literature on this topic as enunciated in Appendix A. The percent score allowed the researcher to specifically identify what principals do and do not know about creating a collaborative workplace environment for teachers—by item and by element. The scores for each element are presented in Table 9.

Element 9, Student Learning Principles, was composed of three open-ended questions for principals to identify specific instruction-, curriculum-, and assessment-

related activities in which teachers can engage. Any job-embedded-type response was considered a correct response, and thus coded as a one. In other words, a response of "workshop" was not considered correct and therefore coded as a zero. Additionally, the researcher underwent a qualitative process for reviewing the open-ended responses. All responses for an item were read for a general understanding of responses. A second reading allowed the researcher to identify specific codes, and a third reading was used to group codes into themes for each question. The themes are reported in tables showing the percent of responses indicating each type of activity in which teachers can engage as part of their professional learning.

The primary research question, "Do principals know what they must do to create a collaborative workplace environment for teachers," will be addressed by element, item and demographics. Specifically, the sub-questions of what they know and what is missing will be addressed in the narrative of each section detailing the elements of principal knowledge.

Results by Element

A ranking of those elements where principals have the highest level of knowledge down to those where they have the least, according to the percent of principals answering correctly, is as follows: 1) Staff Involvement in decision-making, 2) Resource Allocation, 3) Continuous Improvement principles, 4) Staff Meetings as learning meetings focused on student learning, 5) Characteristics of Effective Teams, 6) Adult Learning Principles, 7) Modeling Professional Learning as Administrators, 8) Principles of Change, and 9) Student Learning Principles.

On the surface, four or more out of five principals have knowledge about Elements 1) Staff Involvement in decision-making, 5) Resource Allocation, 7) Continuous Improvement principles, 6) Staff Meetings as learning meetings focused on student learning, 3) Characteristics of Effective Teams, and 8) Adult Learning Principles. Modeling Professional Learning as Administrators (Element 4) and Change Principles (Element 10) have between three and four out of five principals responding correctly, in general. Element 9, Student Learning Principles has the fewest percent of correct responses.

Table 9

Results by Element

	Element	Percent Correct**	Mean	Median	Mode	Standard Deviation
1:	Staff Involvement	89.3	4.274	4.200	4.00	.4913
3:	Effective Teams	82.0	4.068	4.062	4.19	.4259
4:	Model Professional Learning	73.2	3.935	4.000	4.00	.595
5:	Resource Allocation	88.6	4.285	4.250	4.38	.387
6:	Staff Meetings	82.4	3.983	4.000	4.00	.656
7:	Continuous Improvement	88.2	4.223	4.143	4.00,4.29***	.440
8:	Adult Learning Principles	80.4	4.114	4.167	4.00	.534
9:	Student Learning Principles	50.4	.496*	.667*	.00*	.446*
10:	Change Principles	72.7	3.780	4.000	4.00	.6671

^{*}Calculations were based on 0 as incorrect and 1 as correct.

^{**}Percent correct refers to appropriate responses based on the literature review.

^{***}The element is bimodal, indicating that both values had the same high frequency and equal number of responses.

Hence, it would appear that Element 9, Student learning principles, is an area where principal knowledge is missing. Additionally, specific items within each element showcase specific aspects of each element where principal knowledge is missing.

Items 69 – 77 of the survey asked principals to self-assess their own level of knowledge on each of the elements. Response choices included No Knowledge, Some Knowledge, Beginner's Knowledge, Advanced Knowledge, and Expert Knowledge.

Table 10

Correlation between Self-Assessment and Actual Knowledge

	Element	Spearman's rho Correlation		
1:	Staff Involvement	.201	(n=91)	
3:	Effective Teams	.438**	(n=91)	
4:	Model Professional Learning	.063	(n=88)	
5:	Resource Allocation	.213*	(n=92)	
6:	Staff Meetings	.840**	(n=91)	
7:	Continuous Improvement	.238*	(n=91)	
8:	Adult Learning Principles	.198	(n=87)	
9:	Student Learning Principles	.167	(n=90)	
10:	Change Principles	.173	(n=92)	

^{*}Correlation is significant at the .05 level (2-tailed)

Table 10 displays the correlation between the actual knowledge of the principals and their self-reported level of knowledge on each of the elements. Two elements, resource allocation and continuous improvement have a significant Spearman's rho

^{**}Correlation is significant at the .01 level (2-tailed)

correlation at the .05 level when using a two-tailed test. Two other elements, effective teams and using staff meetings as student learning meetings have a correlation at the .01 level.

Results by Item

The presentation of the results of each element of principal knowledge is arranged in order from greatest percent of principals answering correctly to least percent of principals answering correctly. Hence, the order of the presentation of the findings by item for each element is: 1) Staff Involvement in decision-making, 2) Resource Allocation, 3) Continuous Improvement principles, 4) Staff Meetings as learning meetings focused on student learning, 5) Characteristics of Effective Teams, 6) Adult Learning Principles, 7) Modeling Professional Learning as Administrators, 8) Principles of Change, and 9) Student Learning Principles.

Table 11

Results by Item for Element 1: Staff should be involved in important decisions

	Item	Percent Correct*	Mean	Median	Mode	Standard Deviation
Ove	rall	89.3	4.274	4.200	4.00	.4913
1:	Involvement	94.6	4.32	4.00	4	.610
2:	Opportunities	100	4.54	5.00	5	.501
3:	Encouragement	98.9	4.49	5.00	5	.524
4:	Expectation	80.4	4.13	4.00	4	.773
5:	Implementation	72.8	3.90	4.00	4	.757

^{*}Percent correct refers to appropriate responses based on the literature review.

Involving staff in decision-making is the highest rated element. It had one of the three items with 100% correct response rate (Opportunities to be involved in important decisions). High percentages of principals answered correctly when it comes to involving staff, providing opportunities, and encouraging staff in decision-making processes. Higher levels of engagement (i.e., expecting and implementing decisions based on staff input) had much lower percentages of correct responses. Engaging all staff in the work of leadership and the self-assessment item were items removed from analyses.

Table 12

Results by Item for Element 5: Resource Allocation

Item	Percent Correct*	Mean	Median	Mode	Standard Deviation
Overall	88.6	4.285	4.250	4.38	.387
34: Materials	89.1	4.23	4.00	4	.665
36: Space	83.7	4.05	4.00	4	.717
37: Training in using protocols	70.7	3.92	4.00	4	.745
38: Training in procedures	76.1	3.99	4.00	4	.719
39: Administrative support	100	4.67	5.00	5	.471
40: Trust between teachers	97.8	4.63	5.00	5	.529
41: Access to new ideas	95.7	4.37	4.00	4	.569
42: Access to expertise	95.7	4.41	4.00	4	.577

^{*}Percent correct refers to appropriate responses based on the literature review.

The allocation of resources in the pursuit of creating a collaborative culture for teachers is the element with the second-highest percent of correct responses. Items related

to two resources, time and equipment were removed to improve reliability, as well as the self-assessment item. Only two items, training in protocols and procedures, received less than 80% correct responses. One of three items on the survey where 100% of the respondents answered appropriately (Opportunities for involvement in important decisions—Element 1, Administrative Support—Element 5, and High expectations for student learning—Element 7), was for this element: Administrative Support.

Table 13

Results by Item for Element 7: Continuous Improvement

Item	Percent Correct*	Mean	Median	Mode	Standard Deviation
Overall	88.2	4.223	4.143	4.00,4.29	.440
45: Using multiple data sources	91.3	4.25	4.00	4	.640
46: Research-based decision making	94.6	4.35	4.00	4	.582
47: Refining process in small ways	80.4	3.96	4.00	4	.627
48: Clear, frequent talk about teaching	85.9	4.23	4.00	4	.743
49: Clear, frequent talk about learning	91.2	4.42	5.00	5	.684
51: Inventiveness/Innovativeness	88.0	4.17	4.00	4	.622
52: Risk-taking	85.9	4.20	4.00	4	.699

^{*}Percent correct refers to appropriate responses based on the literature review.

The overall percent of principals responding correctly to Element 7 is 88%, which places it along-side the highest ranked elements of Staff Involvement and Resource Allocation. In other words, principals understand the elements of continuous improvement. Six items, plus the self-assessment, were removed from analyses on

Element 7: Continuous Improvement. These items related to focusing resources on a small number of goals, collecting and analyzing data, recognizing superior results, having high expectations, using groups as the main way for improvement, and the distractor item focused on using the work of continuous improvement in the evaluation of teaching staff.

Table 14

Results by Item for Element 6: Staff meetings should focus on learning

	Item	Percent Correct*	Mean	Median	Mode	Standard Deviation
Ove	erall	82.4	3.983	4.000	4.00	.656
7:	Staff meetings focused on student learning	82.4	4.18	4.00	4	.769
73:	Self-Assessment	NA	3.79	4.00	4	.833

^{*}Percent correct refers to appropriate responses based on the literature review.

Note: The self-assessment item does not include a percent correct score because it is not applicable.

The median element of principal knowledge was that of staff meetings focused on student learning. Approximately four out of five principals understand the need for staff meetings to focus on student learning.

Effective elements of teams had an average of 82% of principals responding correctly to the items of this element. Multiple items had more than 90% of the principals responding correctly: 17) Focus on instruction, 18) Teachers working together, 19) Teachers planning together, 20) Teachers thinking together, 21) Talking about professional issues, 22) Observing teaching, 23) Observing curriculum, 24) Observing assessment, and 26) Curriculum development. On the other hand, a number of items had the minority of principals responding correctly: 25) Joint lesson plan development, 27)

Principal evaluation of teachers based on team work (eliminated from analysis to improve reliability), and 30) Incentive system usage. Protocol usage (item 28) had just over half of the principals respond correctly to that item. Item 31, removing barriers to the privatization of practice, was also eliminated to improve reliability.

Table 15

Results by Item for Element 3: Effective elements of teams

Item	Percent Correct*	Mean	Median	Mode	Standard Deviation
Overall	82.0	4.068	4.062	4.19	.4259
16: Specific grouping strategies	73.9	3.72	4.00	4	1.020
17: Focus on instruction	93.5	4.43	4.50	5	.617
18: Teachers working together	97.8	4.51	5.00	5	.545
19: Teachers planning together	92.4	4.34	4.00	4	.616
20: Teachers thinking together	94.6	4.38	4.00	4	.739
21: Talking about professional issues	96.7	4.46	4.00	5	.563
22: Observing teaching	90.2	4.21	4.00	4	.778
23: Observing curriculum	95.7	4.28	4.00	4	.700
24: Observing assessment	93.5	4.33	4.00	4	.595
25: Joint lesson plan development	47.8	3.48	3.00	3	.955
26: Curriculum development	93.5	4.35	4.00	4	.637
28: Protocol usage	57.6	3.53	4.00	4	.931
29: Training in collaboration	85.9	4.05	4.00	4	.652
30: Incentive system	33.7	2.99	3.00	3	1.200
32: Networking in other buildings	83.5	4.11	4.00	4	.849
70: Self-Assessment	NA	3.75	4.00	4	.872

^{*}Percent correct refers to appropriate responses based on the literature review.

Note: The self-assessment item does not include a percent correct score because it is not applicable.

Using curriculum, data, and lesson study as professional development as part of Element 8 (Adult learning principles) is known by principals, and so is the knowledge that teachers working in teams is the best way to improve student learning. However, principals do not understand that assessment can be used as professional development. Items eliminated to improve reliability for this element included using workshops as the best way to improve practice, having teachers work by themselves to improve practice, and principal's engaging teachers daily as the best way to improve teacher practice that impacts student learning, in addition to the self-assessment item.

Table 16

Results by Item for Element 8: Adult Learning

	Item	Percent Correct*	Mean	Median	Mode	Standard Deviation
Ove	rall	80.4	4.114	4.167	4.00	.534
9:	Teachers in teams as best way	81.3	4.08	4.00	4	.778
56:	Assessment as professional development	45.6	4.17	4.00	4	.779
57:	Curriculum as professional development	89.1	4.37	4.00	4	.549
58:	Using data as professional development	96.7	4.40	4.00	4	.555
59:	Lesson study as professional development	96.7	3.83	4.00	4	.979
60:	Study groups as professional development	72.8	3.89	4.00	4	.836

^{*}Percent correct refers to appropriate responses based on the literature review.

Principals understand the need to plan and think with other principals and to focus on instruction with other principals (Element 4: Modeling professional learning).

Observing teaching and assessment with other principals, as well as using protocols in their own professional learning, are areas where fewer principals know. Items related to the self-assessment of knowledge as well as "learning along-side my staff" were eliminated to improve reliability.

Table 17

Results by Item for Element 4: Modeling professional learning

	Item	Percent Correct*	Mean	Median	Mode	Standard Deviation
Ove	rall	73.2	3.935	4.000	4.00	.595
62:	Learn from a mentor	79.3	4.03	4.00	4	.733
63:	Plan with other principals	80.4	4.10	4.00	4	.757
64:	Think with other principals	84.8	4.13	4.00	4	.714
65:	Observe teaching with principals	65.2	3.76	4.00	4	.761
66:	Observe assessment with other principals	68.5	3.85	4.00	4	.769
67:	Focus on instruction with other principals	80.4	4.12	4.00	4	.709
68:	Use protocols with other principals	53.9	3.65	4.00	3	.770

^{*}Percent correct refers to appropriate responses based on the literature review.

Regarding Element 10, Principles of Change, the final element where principals demonstrated knowledge, 72.7% of principals responded correctly. As such, principals recognize the need to build consensus and tell the difference between simple and

complex problems. However, they do not know that persistence is needed (54.3% correct). The items regarding meaningful change and self-assessment were eliminated to improve reliability. However, even with these two items removed, the co-efficient alpha for this element was low at .524.

Table 18

Results by Item for Element 10: Change

Item	Percent Correct*	Mean	Median	Mode	Standard Deviation
Overall	72.7	3.780	4.000	4.00	.6671
12: Build consensus	82.4	4.00	4.00	4	.789
13: Persist in the face of obstacles	54.3	3.40	4.00	4	1.120
14: Recognize complexity	81.5	3.92	4.00	4	.855

^{*}Percent correct refers to appropriate responses based on the literature review.

Table 19

Results by Item for Element 9: Student Learning

Item	Percent Responding	Percent Correct*
Overall	59.1	50.4
78: Assessment-related	63.0	51.1
79: Curriculum-related	57.6	52.2
80: Instruction-related	56.5	47.8
76: Self-Assessment	NA	NA

^{*}Percent correct refers to appropriate responses based on the literature review.

Element 9, Student Learning Principles, was composed of three open-ended questions for principals to identify specific instruction-, curriculum-, and assessment-related activities in which teachers can engage. Any job-embedded-type response was considered a correct response, and thus coded as a one. In other words, a response of "workshop" was not considered correct and therefore coded as a zero. A percent score by item on the Elements was calculated for those that responded, as well as those that responded correctly.

A little over half of the building principals even responded to questions 78 - 80. When removing incorrect responses from those respondents, around half of the total pool of 92 principals responded correctly to identifying activities associated with student learning in which teachers can engage. Additionally, the researcher underwent a qualitative process for reviewing the open-ended responses. All responses for an item were read for a general understanding of responses. A second reading allowed the researcher to identify specific codes, and a third reading was used to group codes into themes for each question. The themes are presented in Tables 20 - 22.

Table 20

Results for Item 78 for Element 9: Student Learning: Assessment-related activities

Item 78	Percent
Using Data	56.3
Assessment development and alignment	25.1
Professional Learning Communities	18.8

Over half of the principals who responded to the item, "Please identify specific assessment-related activities that teachers can engage in as part of their professional learning" identified the use of data. Further, the combination of assessment development and alignment comprises one-fourth of the respondents.

Table 21

Results for Item 79 for Element 9: Student Learning: Curriculum-related activities

Item 79	Percent
Alignment/Articulation/Curriculum Writing	64.4
Professional Learning Communities/Essential Outcome Development	17.8
Other	17.7

Almost two-thirds of the principals who responded to the item, "Please identify specific *curriculum*-related activities that teachers can engage in as part of their professional learning" identified alignment, articulation, and curriculum writing. Professional Learning Communities and Essential Outcome Development were identified by 17.8% of the principals. A wide range of other activities, including on-site staff development, webcasts, conducting research, and engaging students comprised the remaining 17.7% of responses.

Two-fifths of the principals who responded to the item, "Please identify specific *instruction*-related activities that teachers can engage in as part of their professional learning" identified instructional strategy study and usage. Peer observation and Professional Learning Community work were identified by the same number of

responses, with 22.9% each. The remainder of the responses, grouped under the title "Other," included using teachers to lead professional development, student involvement, on-site staff development, improving school climate, and assessment development. The percent of responses categorized as "Other" is 14.6%.

Table 22

Results for Item 80 for Element 9: Student Learning: Instruction-related activities

Item 80	Percent
Instructional Strategy Study and Usage	39.6
Professional Learning Community/Book Study	22.9
Peer Observation	22.9
Other	14.6

Demographic Breakdown

For each demographic area, the researcher conducted a Chi-Square Test of Independence to determine whether or not there was a significant relationship between each of the demographic groupings and the level of knowledge that that demographic group displayed. Item 86 was not a tenable variable because of the small number of respondents who indicated that there was more than one high school in their district. For the remaining demographic items, the researcher found a significant relationship (p < .05 or better) between some items and demographic areas, as well as between some elements and demographics.

Table 23

Tests of Independence Results for Demographic Areas, Items (Chi-Square) and Elements

(t-Test) with accompanying Wilks' Lambda Power Results

	Demographic Area	Significant Relationships (p < .05)	Wilks' Lambda
81:	Years in Education	Item 1	.783
82:	Students in Building	Items 17, 18, 19, 24	.833
83:	Years as a Principal	Item 30	.713
84:	Years since last Graduate-level Course	Item 62	.659
85:	Private or Public School	Item 2, 32, 38, 57, 67 Elements 4 & 6	NA
86:	Number of High Schools in District	Not Enough Responses	NA
87:	Participation in Professional Learning Team	Items 45, 59, 66, 67 Elements 8 & 9	NA
88:	Region of State	Items 23, 45, 60	.920

Item 81, Years in education, showed a significant relationship with item 1. The number of students in the building, item 82, showed a significant relationship with items 17, 18, 19 and 24. For item 83, number of years in the principalship, item 30 showed a relationship. The number of years since the last graduate-level course, item 84, showed a significant relationship with item 62. Item 85, public or private school, displayed multipled relationships with items 2, 32, 38, 57 and 67. Further, an independent samples t-test showed that for element 4 and 6 there was a significant difference (p < .05) between the level of knowledge between public and private school principals. Specifically, public school principals score significantly higher on these elements (Modeling of professional learning and Focusing staff meetings on student learning) than private school principals.

Whether or not a principal participates in a professional learning team, Item 87, showed a significant relationship with items 45, 59, 66 and 67, as well as a significant difference (p < .05) for Elements 8 and 9 (Adult learning and Student learning principles). Item 88, region of the state as grouped by ESU, shows a significant relationship for items 23, 45 and 60.

Due to the nature of items 85 and 87 having only two possible responses (Private or Public and Yes or No), Power is not applicable—though effect size is (reported in Tables 29 and 31). However, on the remaining analyzed demographic responses, power was significant on two areas (Beta > .80). In other words, the multivariate tests (MANOVA) have the power to detect if there was a difference between subgroups. Further, this provides grounds for the notion that, even if there were more participants in the study, the results would not be different. This is particularly true for the demographic items with very high power: students in the building and region of the state.

Table 24

Relationship between Years in Education (Item 81) and Item

	Item	Pearson Chi-Square
1:	Involve staff in decisions	16.996**

^{**}Significant at the .05 level (two-sided test)

The more years in education, the higher the level of agreement that principals had on the involvement of staff in decisions. The level of significance on this item related to years in education is at the .05 level.

Table 25

Relationships between Students in the Building (Item 82) and Items

Item	Pearson Chi-Square
17: Focus on improving instruction	12.856**
18: Teachers working together	13.014**
19: Teachers planning together	13.826**
24: Teachers observing and responding to assessment	17.139*

^{*}Significant at the .01 level (two-sided test)

The greater the number of students in the building, the higher the level of agreement that principals had on these items. Three items have a level of significance at the p < .05 level, and one item is at the p < .01 level.

Table 26

Relationship between Years as Principal (Item 83) and Item

	Item	Pearson Chi-Square
30: Using an incentive system		25.491**

^{**}Significant at the .05 level (two-sided test)

The greater the number of years as a principal, the higher the level of agreement that the principal had on the use of an incentive system. The level of significance of their difference is at the .05 level.

^{**}Significant at the .05 level (two-sided test)

Table 27

Relationship between Years Since Last Graduate Course (Item 84) and Item

	Item	Pearson Chi-Square
62: Learning from a mentor		17.722**

^{**}Significant at the .05 level (two-sided test)

The more time that a principal has had since their last graduate course, the higher their level of agreement on the need for learning from a mentor.

The demographic area that had the greatest number of correlations was between the level of principal knowledge and whether the principal served in a public or private school. The relationship was significant for both Elements 4 and 6 as well as five items (2, 32, 38, 57 and 67). For four of the five items the level of significance was at the p < .05 level.

Element 4, the modeling of professional learning by the administrator, and element 6, focusing staff meetings on student learning, had a significant relationship with the private or public school status of the high school principal. In other words, principals in private schools have less knowledge about these elements than principals in public schools with a moderate effect size for each element. It should be noted, however, that there was a small sample of private principals (n = 15) who participated in this study.

Table 28

Relationships between Private (n = 15) or Public (n = 74) School (Item 85) and Items

	Item	Pearson Chi-Square
2:	Provide opportunities for input on decisions	4.536**
32:	Networking with teachers in other buildings	11.977**
38:	Training in specific procedures	8.945**
57:	Designing, implementing, reflecting on, and revising curriculum as professional development	7.301**
67:	Focus on improving instruction with other principals	9.597*

^{*}Significant at the .01 level (two-sided test)

Table 29 $\textit{Relationships between Private } (n=15) \ \textit{or Public } (n=74) \ \textit{School (Item 85)} \ \textit{and}$ Elements 4 and 6

	Element	t-test	Cohen's d effect size
Element 4:	Principals should model professional learning by participating in administrator learning communities	.023**	.51
Element 6:	Staff meetings should focus on learning	.034**	.46

^{**}Significant at the .05 level (two-sided test)

Principals who participate in a professional learning team have a stronger level of agreement with four items, as well as Elements 8 and 9. The effect sizes are moderate in terms of a difference between principals who participate in a professional learning team

^{**}Significant at the .05 level (two-sided test)

and those who do not. Principals who participate in a professional learning team have a better understanding of adult and student learning principles than those who do not participate in a professional learning team.

Table 30

Relationships between Participation in a Professional Learning Team (Item 87) and

Items

	Item	Pearson Chi-Square
45:	Use of multiple information sources	7.819**
59:	Engaging in lesson study as professional development	13.358*
66:	Observe and respond to assessment	7.845**
67:	Focus on improving instruction with other principals	11.942*

^{*}Significant at the .01 level (two-sided test)

Table 31

Relationships between Participation in a Professional Learning Team (Item 87) and

Elements 8 and 9

	Element	t-test Significance	Cohen's d effect size
Element 8:	Adult learning principles	.029**	.48
Element 9:	Student learning principles	.010*	.57

^{*}Significant at the .01 level (two-sided test)

^{**}Significant at the .05 level (two-sided test)

^{**}Significant at the .05 level (two-sided test)

Regarding differences in demographic regions and levels of knowledge, there was a significant difference for three items. On all three items, principals in the Eastern/Southeastern part of the state were more likely to answer with a stronger level of agreement than other regions. It should be noted, however, that the small number of respondents from the Western part of the state (n=11) could be a contributing variable to the apparent correlation. The levels of significance are at the p < .05 level for two items, and p < .01 level for item 60.

Table 32

Relationships between Region of State (Item 88) and Items

	Item	Pearson Chi-Square
23:	Teachers observing and responding to curriculum	17.130**
45:	The use of multiple information sources	19.314**
60:	Engaging in faculty study groups	21.184*

^{*}Significant at the .01 level (two-sided test)

Summary

This chapter presented data from The Collaborative Schools Survey (Appendix B), a self-developed survey based on the Elements of Principal Knowledge (Appendix A) gathered from a review of the literature. The data was from high school principals in the state of Nebraska who were invited via email to take the survey. It was distributed to the

^{**}Significant at the .05 level (two-sided test)

323 principals of accredited high schools in the state of Nebraska in the 2009 – 10 school year. Of that pool, 92 principals completed the survey for a response rate of 27.5%.

The Collaborative Schools Survey was designed as part of a descriptive quantitative study where the researcher analyzed the responses of principals regarding their knowledge of the elements necessary to create a collaborative workplace environment for teachers. The study showed that principals have an overall knowledge of eight of the measured elements, and that one of the elements shows a lack of knowledge.

Element 1, Staff involvement in important decisions, demonstrated the highest ranking of correct responses with 89.3% correct. Five items measured this element with three items generating a percent-correct rate of 94% or higher. In other words, principals know that they must involve staff in making important decisions.

Element 3, Effective elements of teams, was the element with the median level of percent correct responses—82% overall. Nine of the 16 items—more than half—had a response-correct rate of 90% of higher. These items included focusing on instruction where teachers are working, planning, and thinking together, as well as talking about professional issues together. Further, principals understand that teachers should observe teaching, curriculum and assessment with other teachers, and that curriculum development is an essential aspect of effective teaming. Finally, principals know that teachers need training in collaboration and the opportunity to network with teachers in other buildings.

Element 4, the Modeling of professional learning by administrators, had an overall percent-correct rate of 73.2%. Of the seven items, four had more than 75% correct

responses. These included learning from a mentor, and planning, thinking, and focusing on instruction with other principals.

Element 5, Resource allocation, is also an Element that principals know. With the second-highest overall percent correct (88.6%), seven out of eight items demonstrated that more than three out of four principals understand this element. Resources that principals understand are necessary include materials, space, training in procedures, administrative support, trust between teachers, and access to new ideas and expertise.

Element 6, staff meetings focused on learning, had only one item. The majority of principals (82.4%) know that staff meetings should focus on student learning.

Element 7, Elements of continuous improvement, had 88.2% of principals respond correctly. All seven items were answered correctly by more than 75% of the principals. These include using data and research, focusing resources and refining processes in small ways, clear and frequent talk about teaching and learning, and creating an atmosphere of risk-taking and inventiveness.

For Element 8, Adult learning principles, high school principals understood that teachers working in teams is the best way to improve practice, that inventiveness/innovativeness is necessary, and that professional development can consist of curriculum, data use, and lesson study. Four of the six items on this element had more than 75% of principals respond correctly with a total percent correct of 80.4.

Element 10, Change principles, had three items to gain the maximum coefficient alpha, yet reliability was still only .524. Even so, the items on building consensus and

recognizing complexity are understood by principals, with 72.7% of principals responding correctly.

The second sub-question of the overall research question of, "Do principals know what they must do to create a collaborative workplace environment for teachers?" was, "What declarative knowledge are principals missing?" This study found that there was one element where fewer than three out of four principals answered correctly. This was Element 9: Student learning principles. Additionally, there were specific items on the other Elements that had knowledge missing.

Element 9, Principles of student learning, was the open-ended portion of the survey. Only Fifty-nine percent of principals even responded to these items, and barely half had a correct response. In other words, principals do not know the element of student learning principles—particularly as they are related to activities in which teachers can engage that are assessment-, curriculum-, or instruction-related.

Because this was a descriptive quantitative study, it is important that the results of this study be used appropriately. It was limited to principals of accredited high schools in one state. This study describes what this population knows about creating a collaborative workplace environment for teachers, as well as what knowledge is missing. Chapter Five presents a summary of the findings, discussion, and interpretation of the results by way of specific recommendations and thoughts for future research.

Chapter Five

Summary, Discussion, and Recommendations

Summary

One primary research question drove this study as it aimed to find out what principals know about creating a collaborative workplace environment for teachers: "Do principals know what they must do to create a collaborative workplace environment for teachers?" The two sub-questions, then, were:

- 1. What declarative knowledge do principals possess?
- 2. What declarative knowledge are principals missing?

The population for this study was all principals in accredited high schools in the state of Nebraska during the 2009 – 10 school year. High school principals were selected because of the unique isolation that teachers experience as a result of typically departmentalized structures. The participants were invited via email to complete the Creating Collaborative Schools Survey (Appendix B), which consisted of 88 items. The first 68 items were on a five-point Likert-scale with participants rating their level of agreement on items drawn from the literature. A set of similarly Likert-scale items (nine in total) asked participants to rate their own level of knowledge on each of the elements of building a collaborative culture. Three items were open-ended relating to Student Learning Principles (Element 9), and eight items closed out the survey drawing on the demographic experiences of the participants. The survey had a response rate of 27.5%.

Discussion

The data from this study provided insight into the knowledge that Nebraska high school principals possess about creating a collaborative workplace environment for

teachers. Current literature conveys the importance of collaboration, the lack of its implementation, the centrality of the role of the principal, and the foundational importance of the existence of a knowing-doing gap. With the exception of one element (Student Learning), this study demonstrated that the great majority of high school principals know what they must do to create a collaborative workplace environment for teachers. Additionally, the element of understanding change needs further research.

Element 1, Staff involvement in important decisions, demonstrated the highest ranking of correct responses with 89.3% correct. In other words, principals know that they must involve staff in making important decisions. This finding matches nicely with the notion that the population of principals is quite experienced. It could be due to the experience of the principals—both in education and in the specific role of the principalship—that they have learned that it is important to involve staff in making important decisions.

Element 3, Effective elements of teams, was the element with the median level of percent correct responses—82% overall. This level of knowledge goes hand-in-hand with Elements 8 and 10: Adult Learning Principles and Change Principles (Fullan, 2001)—and high school principals displayed a similar level of knowledge in those elements. In other words, principals not only understand effective elements of teams, but they also understand how to effectively utilize those teams to impact adult learning and change.

Element 4, the Modeling of professional learning by administrators, had an overall percent-correct rate of 73.2%. It seems fairly straight-forward that principals should model professional learning with their staff, however, the specifics of observing

teaching and assessment and utilizing protocols with other principals were specific items within this element that were lacking knowledge. These specifics of modeling professional learning are absent in principal knowledge, and this could be due to the sense that principals are many times viewed as "instructional leaders" of the school and, as such, viewed as experts (Leithwood, 1994; Leithwood & Duke, 1998). This mind-set could directly influence the willingness of the building principal to engage in their own professional learning.

Element 5, Resource allocation, is also an Element that principals know. With the second-highest overall percent correct (88.6%), seven out of eight items demonstrated that more than three out of four principals understand this element. In hind-site, this finding makes complete sense, as it is the building principal who has access to and directly allocates resources of which building principals were asked to rate on the webbased survey. In other words, principals know that their job involves the allocation of resources. It is interesting to note, however, that the item related to the allocation of time had to be eliminated because of the failure to provide reliable results for this element.

Element 6, staff meetings focused on learning, had only one item. The majority of principals (82.4%) know that staff meetings should focus on student learning. The question of this researcher, then, is, "Are they doing it?" Another way of wording the musing of this researcher is to consider an examination of the existence of a Knowing-Doing Gap.

Element 7, Elements of continuous improvement had a couple of interesting aspects to it. First, is that the distractor item had to be removed due to a lack of reliability.

The ongoing evaluative nature of the role of the principal comes in to play in this regard, and hence shows the potentially natural tendency of principals to gravitate towards evaluation. Nonetheless, principals understand the elements of continuous improvement, and this finding makes sense in light of recent attention being focused on continuous improvement throughout the state. From state-meetings to the re-design of the Nebraska Department of Education website (2010) focused on the Continuous Improvement Process Toolkit, the importance of continuous improvement continues to be emphasized throughout Nebraska.

Element 8, Principles of adult learning, had an overall percent of 80.4% of principals who answered this item correctly. This element gets to the crux of this study: if principals understand what it takes to effectively engage adults (i.e., teachers) in learning, then the work of creating a collaborative workplace environment for teachers becomes natural. In essence, the entire purpose of creating this environment for teachers is for improving teacher practice that impacts student learning. Improving practice is predicated on changing practice; changing practice is predicated on learning—and specifically, adult learning.

Finally, Element 10, Principles of change, had an overall percent correct score of 72.7. Principals are expected to be instructional leaders (Leithwood, 1994; Leithwood & Duke, 1998), yet are not trained in the intricacies of leading change (Fullan, 2001). As such, it is not surprising that high school principals show the least amount of knowledge on this element—even though a majority of principals understand change.

However, regarding Element 10, the researcher considers it important to keep in mind that reliability for this element was not above the acceptable coefficient alpha level of .7. As such, the findings from this element are suspect. Change is complex (Fullan, 2001), and trying to capture what high school principals know about change through three items is not adequate from which to draw conclusions.

The second sub-question of the overall research question was, "What declarative knowledge are principals missing?" This study found that there was one element with fewer than seven out of ten principals answering appropriately: Element 9 (Student Learning).

Element 9, Principles of student learning, was the open-ended portion of the survey and had a little more than half of the principals respond to these items. It is interesting to this researcher to draw a parallel between administrative preparation programs and this element. Specifically, student learning has a limited amount of attention in these programs. Hence, it is not surprising to the researcher that principals displayed a limited knowledge-set regarding this element.

In all fairness, the researcher believes that this element should more accurately be titled, "Methods for improving instructional practices." This is because the principles associated with student learning from which the items on the web-based survey were drawn are more focused on ways to improve instructional practices. These methods are focused on the three areas of curriculum, instruction and assessment (Blase & Blase, 1999; Schmoker, 2006).

It is encouraging that eight of the nine Elements of Principal Knowledge are more or less known by current high school principals in the state of Nebraska. Further, a cluster of items on those elements where principal knowledge was lacking can be grouped into the following: (a) Protocol training and usage, (b) Grouping strategies for teachers, (c) Using an incentive system, (d) Modeling professional learning by observing teaching and assessment with other principals, (e) Using study groups and joint lesson planning, (f) Persisting in the face of obstacles, and (g) Implementing decisions based on staff input. These seven broad areas, drawn from 12 items out of 52 in the Elements understood by principals, provide guidance as to specific areas that could be improved to increase principal knowledge of creating a collaborative environment among the elements already noted as strong.

In addition to the outright knowledge of the Elements of Principal Knowledge that were measured in this study, the researcher also had principals self-assess their level of knowledge for each of the elements. As such, two of the elements had correlations at the p < .01 level of significance on a two-tailed test (Effective teams and Staff meetings), and two had a correlation at the p < .05 level of significance (Resource allocation and Continuous improvement). The remaining five items did not have a significant correlation between the principal's self-reported level of knowledge and their actual level of knowledge as measured by the web-based survey instrument. In other words, on some elements principals were able to accurately self-assess their own level of knowledge.

There were significant demographic relationships between all areas (except size of school district) for some items on the survey. However, demographics of

public/private school and participation in a professional learning team had significant relationships with elements. The small population (n = 15) of private school principals could explain this relationship. However, participation in a professional learning team noted significant relationships for both Element 8 and 9 (Adult and Student learning principles).

This finding is particularly interesting as Element 9, Student learning principles, was shown to have a lack of knowledge by high school principals. However, those who participate in a professional learning team show a significantly different and better understanding of Student learning (Element 9) than those who do not participate in a professional learning team. In the context of the discussion regarding a more accurate title for Element 9, high school principals who participate in a professional learning team have a better understanding of methods for improving instructional practice.

Recommendations

The purpose of this descriptive quantitative study was to add to the body of knowledge on creating a collaborative workplace environment for teachers by specifically identifying what principals know about creating a collaborative workplace environment for teachers. There are many groups, including professional organizations, district-level support staff, intermediate service agencies, and institutions of higher learning, who work either directly or indirectly with future or current principals who may find the results of this study to be of value in guiding their work.

The findings from this study suggest two possible recommendations for practice.

The first recommendation involves the knowledge that principals are missing—and hence

addresses the Knowing Gap that this researcher was seeking to describe. The other recommendation revolves around the knowledge that principals already have but are potentially not doing, otherwise known as the Knowing-Doing Gap (Pfeffer & Sutton, 1999).

Recommendation One

The finding that the one element associated with Student learning (Element 9) was lacking in principal knowledge, coupled with the extent of the lack of that knowledge, is startling. Given that the work of education is that of student learning, the finding that principals in general do not understand this Element is of concern. Given this Knowing Gap, immediate and systematic attention should be directed to it. This work could come from professional organizations, intermediate service agencies, district-level support staff, and institutions of higher learning as these entities work with principals to improve student learning by way of creating collaborative workplace environments for teachers.

The specific aspects of this element that need to be taught to current and aspiring principals are centered around the notion that principals must understand effective methods for improving curricular, instructional and assessment practices. Hence, as noted, this element could more accurately be titled, "Methods for improving instructional practices."

Recommendation Two

Research literature is replete with the Knowing-Doing Gap phenomenon (Knight et al., 2007). In other words, there is a persistent gap or difference in the ability of people

or organizations to implement "theoretically informed inquiry"—or what they know (Heck & Hallinger, 2005, p. 233). Put another way, organizations seem unable to change existing knowledge, research, and advice into meaningful action (Pfeffer & Sutton, 1999, 2000). In many ways this research study confirms the notion of a Knowing-Doing Gap with principals and the creation of collaborative workplace environments for teachers.

Specifically, principals know Elements 1 – 8 and 10 (excluding Element 2, as it was not a part of this study): Involving staff in important decisions, Effective elements of using teacher teams, Modeling of professional learning, Resource allocation, Focusing staff meetings on student learning, Elements of continuous improvement, Principles of adult learning and Change principles. Given the premise of a Knowing-Doing Gap (Pfeffer & Sutton, 1999) in these eight areas, those that serve principals can focus on the doing, or implementation, of these elements to create a collaborative workplace environment for teachers. Specifically, professional learning activities such as coaching, job-shadowing, and other job-embedded support strategies should be employed to improve the level of implementation, or doing, of these eight elements (Easton, 2004).

Future Research

This descriptive quantitative study focused on the knowledge of high school principals in Nebraska. As such, an obvious place for continuing research is in the realm of elementary principals. Further, studies of a similar nature in other states will provide a more general sense of the knowledge of principals in creating collaborative workplace environments for teachers in other regions of the country.

One of the most significant differences in knowledge between demographic populations were between private and public school principals. This difference in knowledge, and the possible reasons for such differences, could be interesting areas for further research—particularly given some of the national conversations regarding vouchers, charter schools, and other ways to improve student learning by way of student choice.

A third potential area for future research is in regards to the high correlations between self-assessment of principal knowledge on four of the elements and their actual knowledge. This finding indicates that principals are well-aware of their own level of knowledge in creating a collaborative workplace environment for teachers. Questions for future research, then, could include why this is true, as well as investigating correlations with other groups of educators and their self-assessment of knowledge in given areas.

A fourth source for future research is in the area of principal knowledge of change. This study had a low coefficient alpha on this item, and thus requires further study. Further, Fullan (2001) describes change as complex, and to try to capture a principal's knowledge of change within a few items is not possible. Hence, an area for future research is the knowledge that principals possess about facilitating change in schools.

Fifth, the idea of charismatic leadership was eliminated from this study. This is because it was decided that there are numerous perceptions of what is involved in charisma, and thus too difficult to capture within this study when also measuring the

multiple components of principal knowledge related to building a collaborative workplace for teachers. Still, this is an interesting area for further study.

Finally, the researcher was interested in finding out if there was a Knowing Gap in relation to principal knowledge about creating a collaborative workplace environment for teachers, or if there was a Knowing-Doing Gap. The results of this study suggest that only one element indicates a Knowing Gap, while the remaining elements demonstrate solid knowledge by principals. A point for further research, then, is where and why a Knowing-Doing Gap exists. Further, there are no doubt schools where the Knowing-Doing Gap has been minimized, and research into this phenomenon for replication and scalability would provide insight into remedies for closing that gap.

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Appendix A

Elements of Principal Knowledge

Elements of Principal Knowledge

in Creating a Collaborative Workplace Environment for Teachers

(Numbered for the sake of ease of reference, Not ranked due to importance)

To build a collaborative culture, principals know that:

- 1. Staff should be involved in important decisions (e.g. the use of a leadership team—Lezotte, 2005; Marzano et al, 2005; NSDC, 2003)
 - a. Opportunity for input is provided, encouraged, expected, implemented (Marks & Printy, 2003; NSDC, 2003)
- 2. Charismatic leadership is not necessary for long-term success (Collins, 2001)
- 3. Teachers should work in teams. Effective elements include:
 - a. Effective grouping (Easton, 2004; Fullan, 2005; NSDC, 2003)
 - b. A focus on improving instruction/teaching each other by: (DuFour, 2006; NSDC, 2003; Schmoker, 2005, 2006)
 - Working, planning and thinking together (Deering, Dilts and Russell, 2003; Fullan, 2001; Marzano et al, 2005; NSDC, 2003; Schmoker, 2005; Youngs & King, 2002)
 - Reflecting via dialogue re: professional issues (Newmann & Wehlage, 1995)
 - Observing and reacting to teaching, curriculum and assessment (Newmann & Wehlage, 1995)
 - Joint lesson planning and curriculum development (Newmann & Wehlage, 1995)
 - c. The use of protocols (NSDC, 2003)
 - d. The training of teachers in the skills and knowledge to collaborate (Easton, 2004)
 - e. An incentive system (NSDC, 2003)
 - f. The deprivatization of classroom (Schmoker, 2005, 2006)
 - g. Networking with teachers in other buildings (Newmann & Wehlage, 1995)
- 4. They should model professional learning by participating in administrator learning communities (Murphy & Lick, 2005; NSDC, 2003)
- 5. Resources should be allocated to improve student learning (Blase & Blase, 1999; Fullan, 2001; Marzano et al, 2005; Mullen & Hutinger, 2008; Leithwood et al., 1998; NAESP, 2002; NSDC, 2003; Slater, 2008; Youngs & King, 2002). Resources include: Time, Materials, Equipment, Space, Training on protocols and procedures, Administrative support, Trust between teachers, and Access to new ideas and expertise
- 6. Staff meetings should focus on learning (NSDC, 2003; Schmoker, 2006) and improvement (Fullan, 2001)
- 7. Continuous improvement is necessary. Effective elements include:
 - a. Focusing resources on a small number of goals (NSDC, 2003)
 - b. Data collection and analysis (Easton, 2004)
 - c. The use of multiple sources to guide and demonstrate improvement (Easton, 2004)
 - d. Research-based decision making (Easton, 2004)

- e. A simple focus on refining processes in small ways (Collins, 2001)
- f. Clear, frequent talk about instruction (Schmoker, 2005)
- g. Recognition and celebration for superior practices and results (Gronn, 1996; NSDC, 2003; Schmoker, 2005)
- h. Inventiveness/Innovativeness (Fullan, 2001) where risk-taking is encouraged (Marks & Printy, 2003; Marzano et al, 2005; NSDC, 2003)
- i. High expectations for learning(CCSSO, 2008; ETS, 2009; Fullan, 2003)
- j. Using groups as the main units for improvement (Newmann & Wehlage, 1995)

Additionally, principals creating a collaborative culture understand:

- 8. Adult learning (NSDC, 2003; Schmoker, 2006)
 - a. External trainings are of limited usefulness (Schmoker, 2006; Sparks, 2007) because the challenge is to implement what is already known (Pfeffer & Sutton, 1999)
 - b. Professional learning designs (Easton, 2004)
 - i. Assessment as professional development
 - ii. Curriculum designers
 - iii. Data analysis
 - iv. Lesson study
 - v. School coaching
 - vi. Study groups
 - vii. Visual dialogue
 - c. Job-embedded professional learning (CCSSO, 2008; ETS, 2009; NSDC, 2003)
- 9. Student learning (Blase & Blase, 1999; Schmoker, 2006)
 - a. Curriculum
 - b. Instruction
 - c. Assessment
- 10. Change (Fullan, 2001; Hall et al, 1979; Murphy & Lick, 2005)
 - a. Consensus should be built (CCSSO, 2008; ETS, 2009)
 - b. Persistence is needed (Barth, 2005)
 - c. Meaningful change is extremely hard (Fullan, 2001; Schmoker, 2006)
 - d. There is a difference between adaptive and technical barriers (CCSSO, 2008; ETS, 2009; Heifetz, 1994)

Appendix B

Survey Instrument:

Creating Collaborative Schools

Informed Consent



COLLEGE OF EDUCATION AND HUMAN SCIENCES
Department of Educational Admin Interton

IRB#20091210463 EX

Title of the Dissertation:

Building Leadership: The Knowledge of Principals in Creating Collaborative Communities of Professional Learning

Purpose of the Research:

The purpose of this project is to identify what principals "know" about creating a collaborative workplace environment for teachers. Collaboration is defined as teachers working together in the shared pursuit of improving professional practices that improve student learning. So the project aims to identify what knowledge high school principals have in creating a culture of collaboration.

Teachers who engage in continuous learning become better teachers. Hence, improving student achievement is conditional upon teacher learning. And given the nature of the global economy that we live in, it is imperative for our education system to continually improve. Collaboration is one effective strategy for improving professional practice. Therefore, a collaborative culture becomes foundational to improving student learning and best preparing the next generation for a global economy.

This study, part of the doctoral requirements through the University of Nebraska-Lincoln, will help clarify areas on which professional organizations, institutions of higher learning, ESUs and central office personnel can focus to be more effective and efficient at building administrators' capacity to create collaborative workplace environments for teachers.

Procedures:

All high school principals in Nebraska are invited to participate in a brief, 10 to 15 minute on-line survey.

Bloke:

There are no known risks or discomforts associated with this research.

Benefits:

Participants in this study do not receive direct individual benefit. However, participants do indirectly accrue professional benefit in that participation in this research study will help professional organizations, institutions of higher learning, ESUs and central office personnel to develop principal capacity to create collaborative workplace environments for teachers. Results of this study will help these individuals and organizations provide current and future principals with better quality professional development and focused learning based on identified needs that will ultimately improve teacher practice and student learning.

Confidentiality:

Your participation and responses to my questions are confidential. Data used in reports will be presented in a manner that prevents identification of individuals and schools.

Opportunity to Ask Questions:

You are encouraged to ask questions concerning this research before or after agreeing to participate in this research study. Please contact me at (308)468-5503 or cdumas@esu10.org or my advisor, Jody Isernhagen, at (402) 472-1088 or jisernhagen3@unl.edu with any questions you have regarding my study. Questions concerning your rights as a research participant or your concerns about the study should be addressed to the University of Nebraska-Lincoln Institutional Review Board at (402) 472-6965.

Freedom to Withdraw:

Your participation in this study is voluntary. You are free to decide not to participate in this study or to withdraw from this study at any time without adversely impacting your relationship with your district, the researchers, or the University of Nebraska-Lincoln. Your decision will not result in any loss of benefits to which you are otherwise entitled.

Consent, Right to Receive a Copy:

You are voluntarily making a decision whether or not to participate in this research study. Your acceptance certifies that you have decided to participate having read and understood the information presented. Please print a copy of this informed consent for your records.

Please accept my sincere thanks for your help with this important project.

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Chad Dumas Jody C. Isernhagen, Ed.D.
307 Court St. Educational Administration
PO Box 838 University of Nebraska - Lincoln

Gibbon, NE (402) 472-1088 (308) 468-5503 jisernhagen3@unl.edu

cdumas@esu10.org

Creating Collaborative Schools Survey Creating Collaborative Schools Survey Survey Purpose The purpose of this project is to identify what principals "know" about creating a collaborative workplace environment for teachers. Thank you for your time! 5-Point Likert-Scale Items Please respond to the following items using this scale: Use DK = Don't Know or Unsure 1 = Strongly Disagree 2 = Disagree 3 = Neither Agree nor Disagree 4 = Agree 5 = Strongly Agree. Principals must: 00000000 00000000 00000000 00000000 1. involve staff in making important decisions. 2. provide opportunities for staff input on important decisions. 3. encourage staff input on important decisions. 4. expect staff input on important decisions. 5. implement decisions based on staff input. 6. engage all teachers in leadership roles. 7. focus staff meetings on student learning. 8. use workshops as the best way to improve teacher practice that impacts student learning. 9. have teachers work together in teams as the best way to improve student learning. 10. have teachers work by themselves as the best way to improve student learning more than by working in teams. 11. engage teachers in daily professional learning as the best way to improve student learning. 12. build consensus in order to facilitate change. 13, persist in the face of all obstacles in order to implement change. 14. recognize whether solution(s) to problems are either simple or complex.

15. recognize that meaningful change can be easy.

Creating	Colla	borative	Schoo	s Survey
Control of the last				

Elements

Of the following items, please identify the level of importance that you place on each <u>element</u> needed for building effective teams.

Use

DK = Don't Know or Unsure

1 = Very Unimportant

2 = Unimportant

3 = Neutral

4 = Important

5 = Very Important.

To build effective teams, how important is:

	DK 1 2 3 4 5
16. Specific grouping strategies for teachers	000000
17. A focus on improving instruction	000000
18. Teachers working together	000000
19. Teachers planning together	000000
20. Teachers thinking together	000000
21. Teachers talking about professional issues together	000000
22. Teachers observing and responding to teaching	000000
23. Teachers observing and responding to curriculum	000000
24. Teachers observing and responding to assessment	000000
25. Teachers developing joint lesson plans	000000
26. Teachers developing curriculum	000000
27. Principal evaluation of teachers based on the work of the team	000000
28. The use of protocols (step-by-step procedures for teams)	000000
29. Training teachers in the skills and knowledge of collaboration	000000
30. Using an incentive system for high teacher performance	000000
31. Eliminating the isolation of individual classrooms	000000
32. Networking with teachers in other buildings	

Creating Collaborative Schools Survey	
Resources	
Of the following items, please identify the level of on each <u>resource</u> for building a collaborative envi	
Use DK = Don't Know or Unsure 1 = Very Unimportant 2 = Unimportant 3 = Neutral 4 = Important 5 = Very Important.	
How important is it for principals to find, provide o	
33. Time	000000
34. Materials	000000
35. Equipment	00000
36. Space	000000
37. Training in the use of protocols (step-by-step procedures for teams)	000000
38. Training in specific procedures	000000
39. Administrative support	000000
40. Trust between teachers	000000
41. Access to new ideas	000000
42. Access to expertise	000000

Continuous Improvement

Of the following items, please identify the level of importance that you, as building principal, place on each element you know is necessary for continuous improvement.

Use

DK = Don't Know or Unsure

1 = Very Unimportant

2 = Unimportant

3 = Neutral

4 = Important

5 = Very Important.

As principal, how important is:

	DK 1 2 3 4 5
43. Focused resources on a small number of goals	000000
44. Data collection and analysis	000000
45. The use of multiple information sources to guide and demonstrate improvement	000000
46. Research-based decision making	000000
47. A simple focus on refining processes in small ways	000000
48. Clear, frequent talk about teaching	000000
49. Clear, frequent talk about learning	000000
50. Recognition and celebration for superior practices and results	000000
51. Inventiveness/Innovativeness	000000
52. Risk-taking on the part of teachers	000000
53. High expectations for student learning	000000
 The inclusion of continuous improvement work in teacher evaluation procedures 	000000
55. Using groups of teachers as the main way for improving student learning	00000

Cre	ating	Colla	bora	ative	Schoo	ols Survey
_			-			

Designs of Professional Learning

Of the following items, please identify the level of importance that you place on each <u>design of professional learning</u> that you know will improve student learning.

Use

DK = Don't Know or Unsure

- 1 = Very Unimportant
- 2 = Unimportant
- 3 = Neutral
- 4 = Important
- 5 = Very Important.

In improving student learning, how important is:

	DK	1	2	3	4	5
 Developing, scoring, interpreting, and acting on assessments as professional development 	0	0	0	0	0	0
 Designing, implementing, reflecting on, and revising curriculum as professional development 	0	0	0	0	0	0
58. Analyzing and acting on data as professional development					0	
59. Engaging in lesson study as professional development	_	_	_	_	0	_
60. Engaging in faculty study groups as professional development	0	0	0	0	0	0

Correlation to Student Learning

Of the following items, please identify the level of importance that you place on each as it relates to your own work and its <u>correlation to student</u> <u>learning</u>.

Use

DK = Don't Know or Unsure

- 1 = Very Unimportant
- 2 = Unimportant
- 3 = Neutral
- 4 = Important
- 5 = Very Important.

As principal, I must:

	DK	1	2	3	4	5
61. Learn along-side my staff	0	0	0	0	0	0
62. Learn from a mentor	0	0	0	0	\circ	0
63. Plan together with other principals about professional issues	0	0	0	0	0	0
64. Think together with other principals	0	\circ	0	0	\circ	\circ
65. Observe and respond to teaching with other principals	0	0	0	0	0	0
66. Observe and respond to assessment with other principals	0	\circ	0	0	\circ	\circ
67. Focus on improving instruction with other principals	0	0	0	0	0	0
68. Use protocols (step-by-step procedures for teams) with other principals	0	\circ	\circ	\circ	\circ	\circ

Creating Collaborative Schools Survey Your own level of knowledge

5-Point Likert-Scale Self-rating Items

Please rate your own level of knowledge by responding to the following items using this scale:

- 1 = No Knowledge
- 2 = Some Knowledge
- 3 = Beginner's Knowledge
- 4 = Advanced Knowledge
- 5 = Expert Knowledge.

Please self-assess your own level of knowledge on each of these areas:

	1	2	3	4	5
69. Staff involvement in important decisions.	0	0	0	0	0
70. Teachers working in teams.	0	0	0	0	0
71. Modeling professional learning with/for staff.	0	0	0	0	0
72. Allocating resources to improve student learning.	\circ	0	0	0	0
73. Focusing staff meetings on student learning and improvement.	0	0	0	0	0
74. Continuous improvement of student learning.	0	0	0	0	0
75. Adult learning principles.	0	0	0	0	0
76. Student learning principles.	0	0	0	0	0
77. Principles of change.	0	0	0	0	0

	en-Ended		
79. Please identify specific curriculum-related activities that teachers can engage in as part of their professional learning: 80. Please identify specific instruction-related activities that teachers can engage in as part of their professional learning:			ivities that teachers can
79. Please identify specific curriculum-related activities that teachers can engage in as part of their professional learning: 80. Please identify specific instruction-related activities that teachers can engage in as part of their professional learning:		۵	
engage in as part of their professional learning: 80. Please identify specific instruction-related activities that teachers can engage in as part of their professional learning:		w	
80. Please identify specific instruction-related activities that teachers can engage in as part of their professional learning:			ities that teachers can
80. Please identify specific instruction-related activities that teachers can engage in as part of their professional learning:		A	
engage in as part of their professional learning:			
		-	
		 nstruction-related activ	ities that teachers can
		 nstruction-related activ	ities that teachers can
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		 nstruction-related activofessional learning:	ities that teachers can
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		 nstruction-related activofessional learning:	ities that teachers can
		 nstruction-related activofessional learning:	ities that teachers can

re	ating Collaborative Schools Survey
eı	nographics
D	emographic Items
PI	ease fill in the blank or mark the correct response for each item.
	31. Total years in education (including this year)
	32. Total students in your building
	33. Total years as a principal (including this year)
	84. Total years since your last graduate-level course
(35. Describe your school. Private Public
d	86. Total number of comprehensive, 9 - 12 high school buildings in your listrict
8	37. Do you participate in a professional learning team?
(○ No
	If yes, please describe the composition of the professional learning team:
	88. Please identify which ESU you are part of:

Creating Collaborative Schools Survey
Thank you!
Thank you for your participation in this important survey!

Appendix C

Tables of Elements and Items

Summary Table of Elements and Items

To build a collaborative culture, principals know that:

Element	Item #	Type*		33	5
	1			34	5
	2	5		35	5
	2 3	5		36	5
1		5		37	5
	4 5	5	5	38	5
	6	5		39	5
	69	5 5 5 5 5 5 5		40	5 5 5 5 5 5 5 5 5
	16			41	5
		5		42	5
	17 18	5		72	5
	19	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		7	5
	20	5	6	73	5
		5			5
	21	5		43	5 5 5 5 5 5 5 5 5 5
	22	5		44	5
	23	5		45	5
3	24	5		46	5
	25	5		47	5
	26	5		48	5
	27	5	7	49	5
	28	5	/	50	5
	29	5		51	5
	30	5		52	5
	31	5		53	5
	32	5		54	5 5
	70	5		55	5
	61	5		74	5
4	62	5			
	63	5 5 5 5 5 5 5			
	64	5			
	65	5			
	66	5			
	67	5			
	I _	1			

Additionally, principals creating a collaborative culture understand:

	T 4	TD
Element	Item #	Type
8	8 9 10 11 56 57 58 59 60 75	5 5 5 5 5 5 5 5 5 5
9	78 79 80 76	O O O 5
10	12 13 14 15 77	5 5 5 5 5

5

68 71

^{*} Type: 5 = 5-point Likert scale; O = Open-ended

Detailed Table of Elements and Items

To build a collaborative culture, principals know that:

Element	Item #	Item	Type
1) Staff should be involved in important decisions (e.g. the	1	Principals must <i>involve</i> staff in making important decisions	5
use of a leadership team— Lezotte, 2005; Marzano et al,	2	Principals must <i>provide opportunities</i> for staff input on important decisions	5
2005; NSDC, 2003) • Opportunity for input is	3	Principals must <i>encourage</i> staff input on important decisions	5
provided, encouraged, expected, implemented	4	Principals must <i>expect</i> staff input on important decisions	5
(Marks & Printy, 2003; NSDC, 2003)	5	Principals must <i>implement</i> decisions based on staff input	5
	6	Principals must engage all teachers in leadership roles	5
	69	Please self-assess your own level of knowledge on each of these areas: Staff involvement in important decisions.	5
3) Teachers should work in teams. Effective elements include:		Of the following items, please identify the level of importance that you place on each element needed for building effective teams:	
Effective grouping (Easton, 2004; Fullan, 2005; NSDC, 2003)	16	Specific grouping strategies for teachers	5
A focus on improving instruction/teaching each other	17	A focus on improving instruction	5
by: (DuFour, 2006; NSDC, 2003; Schmoker, 2005, 2006)	18	Teachers working together	5
 Working, planning and thinking together (Deering, 	19	Teachers <i>planning</i> together	5
Dilts and Russell, 2003; Fullan, 2001; Fullan, 2001;	20	Teachers <i>thinking</i> together	5
Marzano et al, 2005; NSDC, 2003; Schmoker,	21	Teachers talking about professional issues together	5
2005; Youngs & King, 2002)	22	Teachers observing and responding to <i>teaching</i>	5
• Reflecting via dialogue re: professional issues	23	Teachers observing and responding to <i>curriculum</i>	5

(Newmann & Wehlage,	24	Teachers observing and responding to	5
1995)		assessment	
Observing and reacting to teaching, curriculum and	25	Teachers developing <i>joint lesson plans</i>	5
 assessment (Newmann & Wehlage, 1995) Joint lesson planning and curriculum development (Newmann & Wehlage, 1995) 	26	Teachers developing <i>curriculum</i>	5
Distractor (not supported by research)	27	Principal evaluation of teachers based on the work of the team	5
The use of protocols (NSDC, 2003)	28	The use of protocols (step-by-step procedures for teams)	5
The training of teachers in the skills and knowledge to collaborate (Easton, 2004)	29	Training teachers in the skills and knowledge of collaboration	5
An incentive system (NSDC, 2003)	30	Using an incentive system for high teacher performance	5
The deprivatization of classroom (Schmoker, 2005, 2006)	31	Eliminating the isolation of individual classrooms	5
Networking with teachers in other buildings (Newmann & Wehlage, 1995)	32	Networking with teachers in other buildings	5
	70	Please self-assess your own level of knowledge on each of these areas:: Teachers working in teams.	5
4) They should model professional learning by participating in administrator learning communities (Murphy & Lick, 2005; NSDC, 2003)		Of the following items, please identify the level of importance that you place on each as it relates to your own work and its correlation to student learning. As principal, I must:	
	61	Learn along-side my staff	5
	62	Learn from a mentor	5
	63	Plan together with other principals about professional issues	5
	64	Think together with other principals	5
	65	Observe and respond to teaching with other principals	5
	66	Observe and respond to assessment with other principals	5
	67	Focus on improving instruction with other principals	5

	68	Use protocols (step-by-step procedures for teams) with other principals	5
	71	Please self-assess your own level of knowledge on each of these areas: Modeling professional learning with/for staff.	5
5) Resources should be allocated to improve student learning (Blase & Blase, 1999; Fullan, 2001; Marzano et al, 2005; Mullen & Hutinger, 2008; Leithwood et al., 1998; NAESP, 2002; NSDC, 2003; Slater, 2008; Youngs & King, 2002).		Of the following items, please identify the level of importance that you place on each <i>resource</i> for building a collaborative environment for teachers. How important is it for principals to fine, provide or develop:	
Resources include: Time, Materials, Equipment, Space, Training on protocols and procedures, Administrative support, Trust between teachers, and Access to new ideas and expertise	33 34 35 36 37 38 39 40 41 42 72	Time Materials Equipment Space Training in the use of protocols (step-by-step procedures for teams) Training in specific procedures Administrative support Trust between teachers Access to new ideas Access to expertise Please self-assess your own level of knowledge on each of these areas: Allocating resources to improve student	5 5 5 5 5 5 5 5 5
6) Staff meetings should focus	7	learning. Principals must focus staff meetings on	5
on learning (NSDC, 2003; Schmoker, 2006) and improvement (Fullan, 2001)	73	Please self-assess your own level of knowledge on each of these areas: Focusing staff meetings on student learning and improvement.	5
7) Continuous improvement is necessary. Effective elements include:		Of the following items, please identify the level of importance that you, as building principal, place on each element you know is necessary for <i>continuous improvement</i> :	
Focusing resources on a small number of goals (NSDC, 2003)	43	Focusing resources on a small number of goals	5

Data collection and analysis (Easton, 2004)	44	Data collection and analysis	5
The use of multiple sources to guide and demonstrate improvement (Easton, 2004)	45	The use of multiple information sources to guide and demonstrate improvement	5
Research-based decision making (Easton, 2004)	46	Research-based decision making	5
A simple focus on refining processes in small ways (Collins, 2001)	47	A simple focus on refining processes in small ways	5
Clear, frequent talk about teaching and learning (Schmoker, 2005)	48	Clear, frequent talk about teaching	5
Clear, frequent talk about teaching and learning (Schmoker, 2005)	49	Clear, frequent talk about learning	5
Recognition and celebration for superior practices and results (Gronn, 1996; NSDC, 2003; Schmoker, 2005)	50	Recognition and celebration for superior practices and results	5
Inventiveness/Innovativeness	51	Inventiveness/Innovativeness	5
(Fullan, 2001) where risk- taking is encouraged (Marks & Printy, 2003; Marzano et al, 2005; NSDC, 2003)	52	Risk-taking on the part of teachers	5
High expectations for learning(CCSSO, 2008; ETS, 2009; Fullan, 2003)	53	High expectations for student learning	5
Distractor (not supported by research)	54	The inclusion of continuous improvement work in teacher evaluation procedures	5
Using groups as the main units for improvement (Newmann & Wehlage, 1995)	55	Using groups of teachers as the main way for improving student learning	5
	74	Please self-assess your own level of knowledge on each of these areas: Continuous improvement of student learning	5

$Additionally, \ principals \ creating \ a \ collaborative \ culture \ understand:$

Element	Item #	Item	Type
8) Adult learning (NSDC,	11		
2003; Schmoker, 2006)			
External trainings are of	8	Principals must use workshops as the	5
limited usefulness (Schmoker,		best way to improve teacher practice	
2006; Sparks, 2007) because		that impacts student learning.	
the challenge is to implement	9	Principals must have teachers work	5
what is already known (Pfeffer		together in teams as the best way to	
& Sutton, 1999)		improve student learning.	
	10	Principals must have teachers work by	5
		themselves as the best way to improve	
		student learning more than by working	
		in teams.	
Professional learning designs		Of the following items, please identify	
(Easton, 2004)		the level of importance that you place	
a. Assessment as		on each design of professional learning	
professional		that you know will improve student	
development		learning:	_
b. Curriculum designers	56	Developing, scoring, interpreting, and	5
c. Data analysis		acting on <i>assessments</i> as professional	
d. Lesson study	5.7	development	-
e. School coaching	57	Designing, implementing, reflecting on,	5
f. Study groups		and revising <i>curriculum</i> as professional	
g. Visual dialogue	50	development	_
	58	Analyzing and acting on <i>data</i> as	5
	50	professional development	5
	59	Engaging in <i>lesson study</i> as	3
	60	professional development Engaging in faculty <i>study groups</i> as	5
	00	professional development	3
Job-embedded professional		Principals must engage teachers in daily	
learning (CCSSO, 2008; ETS,	11	professional learning as the best way to	5
2009; NSDC, 2003)	11	improve student learning.	
2007, 11020, 2003)		Please self-assess your own level of	
	75	knowledge on each of these areas:	5
	,3	Adult learning principles.	
G. 1 .1	70		-
Student learning (Blase &	78	Please identify specific assessment-	О
Blase, 1999; Schmoker, 2006)		related activities that teachers can	
a. Curriculum		engage in as part of their professional	
b. Instruction	70	learning.	
c. Assessment	79	Please identify specific curriculum-	O

	80	related activities that teachers can engage in as part of their professional learning. Please identify specific instruction-related activities that teachers can engage in as part of their professional learning.	O
	76	How would you rate your own level of knowledge in: Student learning principles.	5
10) Change (Fullan, 2001; Hall et al, 1979; Murphy & Lick, 2005)			
Consensus should be built (CCSSO, 2008; ETS, 2009)	12	Principals must build consensus in order to facilitate change.	5
Persistence is needed (Barth, 2005)	13	Principals must persist in the face of all obstacles in order to implement change.	5
There is a difference between adaptive and technical barriers (CCSSO, 2008; ETS, 2009; Heifetz, 1994)	14	Principals must recognize whether solution(s) to problems are either simple or complex.	5
Meaningful change is extremely hard (Fullan, 2001; Schmoker, 2006)	15	Principals must recognize that meaningful change can be easy.	5
	77	How would you rate your own level of knowledge in: Principles of change.	5

^{*} Type: 5 = 5-point Likert scale; O = Open-ended

Appendix D

Email Invitation to Principals

Invitation Email to High School Principals:

Dear Nebraska Principal:

What does it take to create a collaborative workplace environment for teachers? I'm asking for your help in telling me what you know about this subject.

As a doctoral student at the University of Nebraska-Lincoln, I am investigating what principals "know" about creating a collaborative workplace environment for teachers. As a fellow high school principal, your views on this important subject are extremely valuable. Please take the 10 to 15 minutes needed to complete an online survey exploring your views.

All high school principals in the state of Nebraska are invited to take this online survey. As a small token of appreciation for your help, I will make copies of the results available to you upon request. Additionally, I will seek to present the results at Administrator Days this summer.

The survey website will provide you with an informed consent that explains my research, your rights as a research participant, and the survey. Please read the informed consent thoroughly before deciding to take the survey. If you have questions concerning this research, please feel free to contact me at cdumas@esu10.org or (308) 468-5721 or my advisor, Jody Isernhagen, at jisernhagen3@unl.edu or (402) 472-1088. Please accept my sincere thanks for your help with this important project.

☐ Click here to access the informed consent and survey website.

Chad Dumas High School Principal Gibbon High School PO Box 790 Gibbon, NE 68840 (308) 468-5721 (308) 468-5164 (fax) cdumas@esu10.org Jody C. Isernhagen, Ed.D. Educational Administration University of Nebraska-Lincoln (402) 472-1088 jisernhagen3@unl.edu

Appendix E

Email Reminder to Principals

Follow-up reminder email:

Dear Nebraska Principal:

Your responses are important!! If you have not already done so, please click on the link below to access the survey measuring what you "know" about creating a collaborative workplace environment for teachers. Your responses will help professional organizations, institutions of higher learning, ESUs and central office personnel better meet your needs as a principal.

The survey should take between 10 and 15 minutes to complete, and your responses are completely anonymous. I ask that you please complete the survey prior to (three/two weeks from the date of this email).

Click here to access the informed consent and survey website.

Thanks for your help with this important project.

Chad Dumas High School Principal Gibbon High School PO Box 790 Gibbon, NE 68840 (308) 468-5721 (308) 468-5164 (fax) cdumas@esu10.org Jody C. Isernhagen, Ed.D. Educational Administration University of Nebraska-Lincoln (402) 472-1088 jisernhagen3@unl.edu

Appendix F

Institutional Review Board Approval



December 22, 2009

Chad Dumas Department of Educational Administration PO Box 838 Gibbon, NE 68840-0838

Jody Isernhagen Department of Educational Administration 132 TEAC UNL 68588-0360

IRB Number: 20091210463 EX

Project ID: 10463

Project Title: Building Leadership: The Knowledge of Principals in Creating Collaborative Communities of Professional Learning

Dear Chad:

This letter is to officially notify you of the approval of your project by the Institutional Review Board (IRB) for the Protection of Human Subjects. It is the Board's opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study based on the information provided. Your proposal is in compliance with this institution's Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46) and has been classified as exempt.

You are authorized to implement this study as of the Date of Final Approval: 12/22/2009. This approval is Valid Until: 07/31/2010.

1. Please include your IRB approval number (IRB#20091210463 EX) on the on-line informed consent page. Please email a copy of the page to irb@unl.edu, with the number included, for IRB records. If you need to make changes to the page please submit the revised page to the IRB for review and approval prior to using it.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

- Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
- Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
- Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
- Any breach in confidentiality or compromise in data privacy related to the subject or others; or
- · Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

This project should be conducted in full accordance with all applicable sections of the IRB Guidelines and you should notify the IRB immediately of any proposed changes that may affect the exempt status of your research project. You should report any unanticipated problems involving risks to the participants or others to the Board.

If you have any questions, please contact the IRB office at 472-6965.

Sincerely,

Mario Scalora, Ph.D. Chair for the IRB

