

Distributed School Leadership and Its Influence on Teaching Capacity:
A Case Study from Teachers' Perspective

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ABSTRACT

Distributed School Leadership and Its Influence on Teaching Capacity:

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Current educational reforms call for higher student learning standards. The result is greater accountability for teaching and learning than ever before. School leadership mediates reform implementation so that the intent of the policy is transferred into teaching practice. I suggest that how teachers make sense of leadership reform activities affects their ability to modify teaching and learning in their classroom. Yet, management and accountability tasks consume the school administrators' time. A distribution of leadership is necessary to ensure that instructional reforms affect teaching practices in the classroom.

The distribution of leadership varies from school to school. Thus, little is known about how leadership is distributed. Even less is known about how school leadership affects teachers and their teaching practice. Through this investigation I examine school leadership's effect on dimension of teaching capacity during instructional reform. I use a mixed-method case study of one urban Middle school to understand how teachers experience, both, distributed leadership and activities related to their practice during instructional reforms. I examined: 1) what school leadership for instructional improvement looks like, 2) sources of leadership teachers look to for support, and 3) the connectivity between distributed leadership and three dimensions of teaching capacity.

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This study highlights three major findings. First, leadership is distributed formally and informally, among people and tasks. Second, teachers seek administrators and other positional leaders for communicating expectations and providing resources. They look to informal teacher leaders within their peer groups for encouragement, practical support, and resources in areas that are more closely relate to classroom instruction. A third major finding is that dimensions of teaching capacity could be identified in three dimensions (human capital, social capital and decision capital).

The enactment of distributed leadership has indirect, yet significant, effects on teachers. Dimension of teaching capacity can be manipulated by leadership to provide instructional support and increase teaching capacity during reform implementation. This suggests that school leadership could identify and refine reform activities to affect teaching and learning in the classroom.

DEDICATION

To Paulino, Liduvina and Lourdes

Who taught me to love and live for God, family, and service to others.

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No one has witnessed the incredible ride I have been on more than God. His blessings were my strength through the successes and challenges of this trip. I continue to be strengthened and humbled as I ride on with God beside me. I am Blessed.

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Teachers' Perception of How Leadership Influences Teaching Capacity:**A Case Study****CHAPTER 1: Introduction to the Study**

Current instructional reforms increase the rigor of student learning and teacher accountability for growth in student achievement. . The relationship between leadership and teaching is critical to the effectiveness of school reform, particularly those reforms intended to impact student achievement. School leadership is challenged to help teachers mediate the goals of education reform policies, and enable teachers to make instructional improvements that affect teaching and learning in the classroom. These reforms press for an examination of school leadership and its influence on teachers' ability to improve student achievement.

Background to the Problem

In 2010 a persistent absence of desired gains in student achievement throughout the United States, prompted states to adopt rigorous student learning standards, known as the Common Core State Standards (CCSS). The CCSS set high criteria for what students should know and be able to do at the end of every grade-level from kindergarten through 12. With increased demands on student learning come corresponding expectations for teaching to achieve the standards. In fact, these reforms were intensified through policies that regulate the content of teacher evaluation process and its connection to state standardized assessments.

Leadership and classroom instruction are at the top of the list of factors that contribute to student learning (Leithwood, Seashore Louis, Anderson, & Wahlstrom, 2004). Research suggests that strong principal, as identified by personal qualities and leadership

style, provides the critical bridge between education reform initiatives and their impact on student learning. Classroom instruction is the most directly related factor in improving student learning (Leithwood, et.al. 2004). Leadership is an essential mediating factor to teaching and learning in the classroom.

Historically, public schools dealt with the external influence of new policy by bending the new policy requirements into existing structures, norms and processes. New programs and training serve to refine and adapt to the existing structures, norms and processes to incorporate the new expectations. For example, when the Individuals with Disabilities Education Act (IDEA) was revised in 2004, schools added and trained staff and administrators to incorporate students with disabilities into the existing structure. Administrators and staff from special service department are responsible to ensure that accommodations take place. The implementation of the IDEA involved little or no change to the current leadership and teaching structure. However, the concept of successful school reform, guided by a strong school administrator has proven to have limited or no lasting effect on the student achievement, particularly in urban schools serving high percentages of students of low socio-economic resources (Leithwood, Seashore Louis, Anderson, and Wahlstrom, 2004).

Research in education reform has explored different perspectives on instructional leadership. Researchers identify necessary behaviors to improve instruction and areas of focus for instructional leadership; (Elmore, 2000; Leithwood, et.al. 2004; Spillane & Diamond, 2007; Spillane, Halverson, & Diamond, 2004). Effective instructional leaders monitor student progress to better manage resources and processes at the school. Understanding how leaders employ capacity-building strategies, that target school

structure and culture, enable schools are related to student achievement (Copland, 2003; Fullan, 2006; Leithwood, Louis, Anderson, & Wahlstrom, 2004). Education research has also explored teacher focused activities in the educational environment, such as professional development and the use of data driven decision making, to affect school capacity (Massell, 1998; Newmann & Associates 1996; Youngs and King, 2002; Copland, 2003). Yet, little research has provided insight to variables that link leadership practice to improvements in classroom instruction.

The Problem

The overall study problem is to understand how school leadership can influence effective teaching practices during reform implementation. During targeted reforms, school leadership is crucial in establishing and maintaining structures, norms and processes that can affect changes in teaching and learning. Yet, our knowledge of school reform lacks information on how school leadership influences teaching during a school's instructional reform. Since leadership in every school has distinct circumstances, leadership enactment of instructional reforms takes a different form at each school.

Effective reform leadership requires that administrators navigate mandates through school goals, the knowledge base, decision making and relationships in the educational organization. Under distributed leadership, school reform is likely to result from: formal roles of leadership; personal attitudes and norms related to the curriculum; and, process that help to form informal relationships among staff. Distributed leadership is consistent with the view that leadership is exercised when someone is recognized as a leader by others who consent to be lead, not simply by the identification of formal leaders (Spillane,

Halverson and Diamond's 2005). It involves many underlying relationships and interactions between formal and informal teacher leaders and non-leaders.

How the teacher perceives the leadership's implementation of the reform and how he or she makes sense of the reform activities will influence the reform's effect on teaching and learning in the classroom. Through activities and relationships, the leadership can accelerate or inadvertently defer growth in teacher effectiveness toward improving instruction and student achievement. The formal designation of teacher leaders could have a negative or positive impact on the interactions and communication between informal leaders and formal leaders, depending on the level of trust among persons in the relationships and within the organization (Cosner, 2009). Thus it is important to understand how teachers perceive different sources of leadership (administrators, formal teacher leader and informal teacher leaders) in assisting their instructional practice.

Although effective teaching and learning are embedded in the quality of classroom practice; they are a function of activities that occur beyond the classroom. Theories identify some of the dimensions that add value to teacher instruction, as: professional development activities; interactions with and between administrators and staff; and, decision making in matters that affect processes and activities within the school (Hargreaves and Fullan, 2012). However, more knowledge is needed to understand how teachers perceive school leadership in helping to improve their instructional practice.

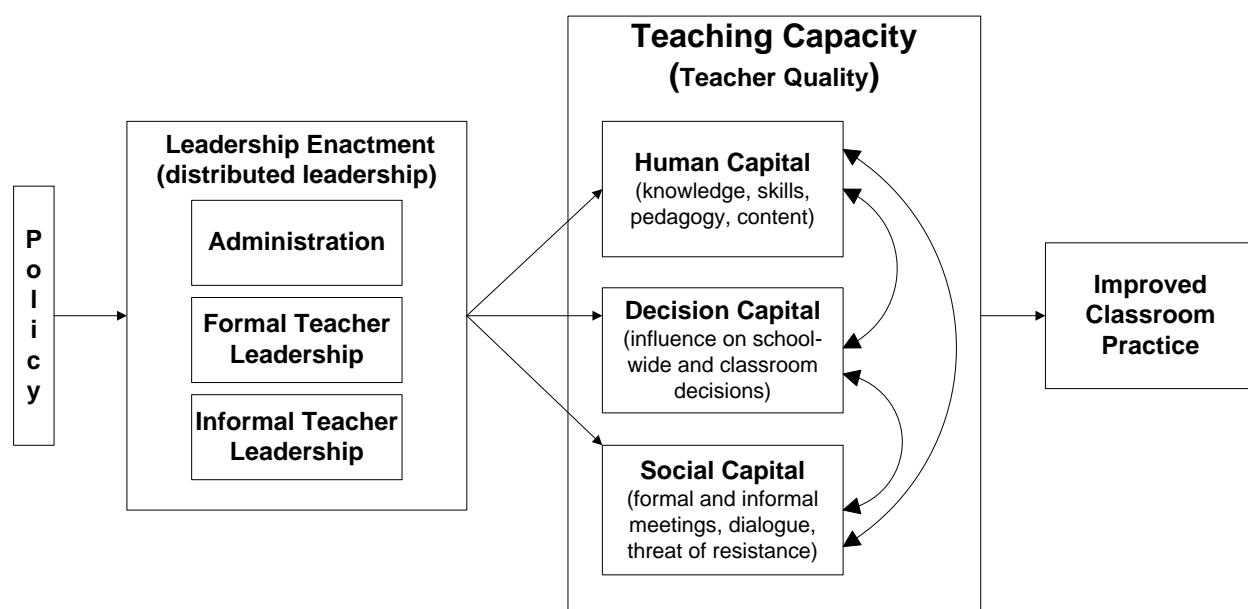
Conceptual Framework: Connecting Distributed Leadership to Teaching Capacity

Current instructional reforms hinge on the adoption of the Common Core State Standards (CCSS). The CCSS are rigorous student standards that are associated with state mandated and controlled teacher evaluations. The increased level of student expectation

requires that reforms filter through district and school leadership. School leadership is expected to guide modifications in school goals, structures, and activities. Theoretically, the teacher makes sense of the reform and modifies his or her practice to accommodate the intended changes in student learning.

With leadership as a mediating factor to improvements on teaching and learning, it is important to understand the connectivity between leadership and teaching during the implementation of school reforms. Figure 1.1 maps the conceptual model I developed for this study. It provides a flow of policies as they create reforms that filter through channels of leadership and teaching, to reach classroom practice.

Figure 1.1: Development of Teaching Capacity



This study is framed with an understanding that leadership is distributed. During reform implementation, school administration promotes a distribution of leadership as some formal teacher leaders are acknowledged in the school and assigned formal roles (e.g. team leader, instructional leader, literacy coach, etc.). At the same time tasks and norms

that are being developed generate informal leaders (some established through experience or expertise in a given subjects) in the educational environment. This is evident on the Leadership Enactment pane of the Model of the Development of Teaching Capital. The reform itself addresses “what” activities and changes are desired by leadership. Leadership enactment of instructional reforms incites discussion and interaction among the staff regarding participating in the program. In addition to addressing the explicit understanding of the written standards, leadership activities help staff develop norms that focus on the desired reform practice for improving instruction. In other words, collegial discussions and practices more deeply address the implicit changes in practice that are intended to achieve the curriculum goals.

This study is also framed in a business concept of effective capital development. It evolves from leadership’s influence on capital. It assumes capital is constructed in the enactment of education through distributed leadership. The notion of exploring teaching capacity through the construction of various dimensions of capital in the school environment has recently gained attention in literature on teacher professionalism (Hargreaves and Fullan, 2012). In this study, I assume Hargreaves and Fullan’s interpretation of professional capital as the basis for teaching capacity (TC). This view assumes good teaching is: technically sophisticated; requires high levels of education and training; is perfected through continuous improvement; and is a collective endeavor within a wider professional community. Hargreaves and Fullan construct professional capital in terms of three kinds of capital: human capital (HC), social capital (SC), and decision capital (DC).

Borrowing the definition from Neumann King and Youngs (2000), capacity refers to the “potential of material, product, person or group to fulfill a function if it is used a particular way. “ In this case capacity is based on the teacher’s ability to improve instruction. Using researched characteristics to comprise subcomponents of the three dimensions of professional teaching capacity (social, human and decision capital) I construct a general notion of teaching capacity. Thus,

$$TC = f(HC, SC, DC)$$

As the reform practice moves through development of teaching capacity, different forms of capital are solicited, utilized and developed in response to the reform implementation. Components of social, human and decision capital are not exhausted within this study. Rather, this study includes key components of each respective type of capital, discussed above.

Conceptual Underpinnings to the Framework. Theoretical foundations of this conceptual framework are found in three areas. School leadership, sources of leadership and teaching capacity are key features of the framework that work together to shed light on the connectivity between leadership and teaching quality during the implementation of school reforms.

School Leadership. A traditional lens on leadership focuses on maintenance of day-to-day teaching and learning and micro-management of the existing program. For example, under current reforms in teacher evaluation, administrators and supervisors are responsible for teacher observations and assessments. On face-value, leadership with an emphasis on this type of organizational management appears to highlight the importance of classroom instruction. However, the focus of leadership’s time and effort on the

managerial assessment of teaching, instead of on the development of teaching practice, present a challenge to modern tenets of school leadership.

Leadership motives, a heavy workload, and a lack of retention of the school administrator, have all been cited as challenges to sustained school transformations that could lead to positive educational environments and student achievement (Gronn, 2000; Elmore 2002; and Copland, 2003). Increasing student achievement by shifting to rigorous student learning standards is not likely to occur by simply bending and assimilating new policy into the existing institutional structures (Elmore 2000). School leadership structures, activities and decision making must be reviewed and modified to affect the desired teaching and learning.

Modern views of instructional leadership highlight distributed organizational leadership and contrast the traditional views that focus on a micro-management of curriculum and instruction. Viewed through a modern lens on organizational management, leadership for instructional reform improves and develops the learning program through a distribution of roles, tasks, and, norms.

A modern lens on leadership (that includes a distribution of roles, tasks and organizational norms), does not diminish administrative leadership. Literature on instructional leadership also suggests that improving student achievement depends on how well school administrators interact with, both, the social and organizational context of their school environment (Leithwood, Seashore-Louis, Anderson, & Wahlstrom, 2004). They challenge teachers to examine their work and think about their instructional process; they may establish expectations for quality pedagogy and support teachers' professional growth (Marks and Printy 2003). The school administrator is "key" in affecting the school's

capacity by distributing the roles and tasks, and by building a cultural norms and processes that affect formal and informal leadership channels at the school.

Scholars point to three broad categories as “the basics” of successful instructional leadership: 1) setting directions (or defining the school’s goal); 2) developing people and defining programs; and 3) designing the organization for a positive learning climate (Hallinger and Heck, 1999; Leithwood, 1996). Inherent in this basic framework of instructional leadership is the assumption that organizational leadership activities trickle down to teacher classroom practice and student learning (Hallinger and Heck, 2010).

Sources of Leadership Support. Increasingly, school leadership is understood to have multiple sources. Theories on effective development of instructional quality emphasize the administration’s use of roles, tasks and norms to distribute school leadership in support of teaching and learning in the classroom (Neumerski, 2012; Knapp, Copland, Ford, Markholt, McLaughlin, Milliken and Talbert 2003). Models of leadership have included distribution in: the performance of leadership tasks and roles; organization-wide interactions of authority and influence; and in relationships and interactions that construct formal and informal leadership roles among the teaching staff (Heller and Firestone, 1995; Gronn 2000; Spillane, Hallet, and Diamond 2003). Thus, a distributed lens on the implementation of school reform often highlights how leadership is shared or spread across formal and informal leadership roles, tasks and norms of interaction. Formal leadership structures are those that are identified by school and district administration. Informal leadership structures are those that arise from experiences and interactions that affect teaching and learning.

Whether formal or informal, leadership cannot be understood in isolation from the people and the objectives it is meant to affect. Consequently, the distribution of leadership is beneficial if the leadership activities assist teachers to provide more effective instruction to their students (Firestone and Riehl, 2005; Spillane & Diamond, 2007; Supovitz 2006; Neumerski, 2013). Educational reform enactment involves teachers as individuals who are situated in cultural, social, and institutional settings (Spillane *et al.* 2004). Within these settings followers interpret a situation and respond to the leadership's influence. This interaction creates norms of interaction among, both, leaders and followers.

Teaching Capacity. Student learning is most influenced by the staff that interacts with students daily. Literature on building teacher's instructional capacity highlights: teachers' knowledge and skills, technical resources, professional community, principal leadership and trust at the school level, data-based decision making, and peer assistance (Newmann, King and Youngs, 2000; Young and King 2003; Cosner 2009; Copland 200; Goldstein 2003). However, current empirical research on the relationship between of distributed leadership and building teaching capacity lacks details from the educational environment that would shed light on the construction of teaching capacity.

Inputs to teaching capacity can be viewed through forms of capital. Capital is an economic term that relates to productivity. Capital results from inputs or gains that contribute to an output; thus, it is a static entity related to the potential to improve returns to the organization. Applied in services, inputs are the potential value that contributes to improving the services or outcome. In this study dimension of capital contribute to teaching capacity, which holds the potential to add value to the learning process that results in student achievement. By identifying key dimensions, or inputs, to teaching

capacity, leadership and staff can manipulate the learning environment to affect instructional improvements.

Three forms of capital contribute to teaching capacity: human capital, decision capital and social capital. Each dimension has its own inputs and contributes differently to teaching capacity. The human capital dimension is grounded in the teacher's individual qualities and abilities. Human resources that contribute to human capital include: knowledge and skills (about your students, content and pedagogy to teach effectively), and their disposition (passion and commitment to improve teaching; high expectation for student learning). The social capital dimension is grounded in the quantity and quality of interaction and sharing that informs instructional practice. The quality and quantity of collaboration and communication teachers have with others in the educational environment (administrators, teacher and parents) accelerates learning and expertise, particularly when focused around issues of instruction. Decision capital involves the ability to make "discretionary judgements." This dimension of teaching capacity can be an individual teacher quality or a collaborative quality. Decision capital is having experience and expertise to make decisions that may contribute to more effective teaching and learning in the classroom.

The interaction within and among the different forms of capital builds communication, knowledge and use of the targeted practice. It is within this interaction that teachers make sense and choose among the different messages in their environment, negotiating the technical demands and the practical application of policy implementation (Coburn, 2001). Here social human, and decision capital interact and result in a cyclical effect with leadership that can stimulate:: participation in the reform process; instruction

and dialogue on instructional improvements. Leadership also reduces threats to the development of the program. Social capital in an educational setting is even more important than human capital because social capital produces more human capital than the reverse (Spillane, Halverson and Diamond, 2009). Decision capital is the development of professional judgment that results in high performance for both the teacher and that teacher's students. When decision capital is waged, the organizational culture is being ripened toward efficacy in instruction with a focus on problem solving. These organizational efficiencies affect decision capital and build school and teacher capacity toward improved instructional practices. In this way, a variety of school level factors contribute to teaching capacity,

With a large percent of most school district budgets spent on staff salaries, education is, intensely, a human-capital enterprise. However, human, social and decision capital are highly interactive. Teachers who have a strong sense of commitment help one another (SC) put new ideas to use (HC); new ideas in the content area may also inspire decision (DC) about new teaching methods (HC). Staff that meet to develop and assess the effectiveness of their curriculum based lessons (SC), will influence school decision (DC) about content, topics and skills to be taught.

Study Purpose and Questions

This investigation attempts to shed light on how leadership influences teacher's capacity (or ability). Through this study I explore teachers' perceptions of leadership and its relation to student achievement. I examine three key aspects of leadership and teaching capacity that lead me to develop a model that connects leadership to teaching capacity. The first aspect to the study problem is to understand ways in which school leadership

promotes and sustains activities that help teachers to effectively teach the depth and accuracy of skills students need to successfully achieve the standards. “What does structure and practice of instructional leadership look like, and how does it respond to increased expectations and accountability of teaching and learning in the classrooms?” Given that leadership is distributed among different sources, a second aspect to the study problem is to understand how different sources of instructional leadership support teachers in improving teaching and learning in the classroom. Finally, a third aspect to the study problem is to identify and understand dimensions of teaching capacity that are found in educational practice. I examined aspects in the educational environment that have direct links to teaching capacity.

Through this study I aim to add to the breadth of knowledge on the influence of school leadership on dimension of teaching capacity during instructional reform. I look at current leadership from the perspective of teaching capacity—the teacher’s potential to affect improvements. I examine leadership enactment to identify and understand distributed leadership practices and sources of instructional leadership during instructional reform. I also examine components of teaching capacity to better understand aspects of the educational environment that are associated with improving instruction. I begin to explore variables that link leadership practices to classroom instruction.

Since leadership and teaching capacity are situated in the people and circumstances of the school setting this study involved a case study in one Middle School. I use an in-depth analysis of qualitative and quantitative data to explore the distributed leadership experience during the implementation of curriculum reforms that align teaching and learning practices with the CCSS at one Middle School (Creswell, 2009). My investigation

examined teacher perspectives on: school leadership enactment and sources; dimensions of teaching capacity; and the relationship between leadership and teaching capacity.

By exploring the enactment of leadership in the implementation of curriculum reforms, the educational community can better identify and understand leadership practices that help or hinder teaching practices. By exploring the relationship between teacher's perceptions of the role of leadership, teaching capacity and instructional practices, this study informs administrators and leaders about design environments and practices that affect teaching and learning. Thus, this study focuses on the following questions:

1. How is leadership distributed for instructional reform?
2. How do leadership sources support teaching practice during reform implementation?
3. What is the relationship between leadership and three dimensions of teaching capacity: human capital, social capital, and decision capital?

With increased attention to student performance and quality of instruction, school decision makers will need to transform their ways of conducting and thinking about organizational leadership practice to hone in on their potential effects on teaching and learning. This shift requires a redefinition of leadership, away from role-based conceptions and toward distributive views that capitalize on the way teacher's experience leadership that inspires instructional reform.

Significance of the Study

Current research offers a limited understanding of what leaders do to enact instructional reforms and how they impact instructional behaviors of teachers. This study begins to inform our understanding of leadership and its relation to dimension of teaching

that affect instructional improvements. It links leadership behaviors with human, social and decision capital in teaching.

Definition of Terms

- *Decision capital.* A dimension of teaching capacity that involves the ability to make “discretionary judgements.” Decision capital is having experience and expertise to make decisions that may contribute to more effective teaching and learning in the classroom.
- *Formal leadership.* That which is designated by the school or district administration, and assigned specific tasks and tools that are part of the leadership practice.
- *Human capital.* A dimension of teaching capacity grounded in the teacher’s individual qualities and abilities. Human resources that contribute to human capital include: knowledge and skills (about your students, content and pedagogy to teach effectively), and their disposition (passion and commitment to improve teaching; high expectation for student learning).
- *Informal leadership.* Individuals who are sought for their experience, expertise or achievements but do not hold formal leadership positions.
- *Leadership situations.* Informal unstructured interactions where instructional leadership activities occur. For example, a confused staff member may approach a colleague to request assistance on how to use the technology component of the Math series, or how to access their students’ data for a specific learning standard.
- *Leadership task.* The work to guide instructional change. It is sometimes associated with a leadership role.

- *Leadership tools.* Structures and processes that provide mechanisms for leadership functions to occur. For example, scheduling regular meetings among teachers of a certain grade or subject area is a tool that provides routines and arenas for some of the planning and discussions that takes place regarding instruction.
- *Social capital.* A dimension of teaching capacity grounded in the quantity and quality of interaction and sharing that informs instructional practice.
- *Teaching capacity.* The ability to teach that results from value that is added from different dimension in the educational environment.

Summary

This study sheds light on caveats and prospects of distributed school leadership in major areas. It provides principals with insight into how teachers make sense and value school leadership structures, norms and processes. By understanding how teachers perceive leadership structures and activities school leaders can modify their management of the instructional program. This study also informs administrative leadership's decisions about: teacher knowledge and disposition; the influence of social and professional relationships; and teacher influence on the school and classroom. It provides insight on various items that comprise human, social and decision capital. These dimensions of teaching capital can be tweaked to strengthen teaching capacity. Ultimately, this study offers school leadership guidance on pitfalls and opportunities to increase the teaching staff's instructional value at the school.

CHAPTER 2: Literature Review

The following section reviews recent literature on theory and practice in education leadership and capacity building. In the first part of this review I explore school leadership theory and practice. I begin by making a distinction between school management and school leadership. Then I look at factors of positional and non-positional leadership that influence teacher effectiveness. Finally I view leadership through a distributive lens to understand relationships and interactions that comprise influential leadership activities within the school organization.

In the second part of this literature review, I explore theory and research on capacity building in the educational environment, specifically on building human, social, and decision capital in schools. A review of learning-focused leadership practice provides the study with a view of leadership's role in promoting human interaction in the educational setting. More recent theoretical perspectives on teaching capacity offer a formula that generates teaching capacity through various forms of teaching capital. Finally, because of a lack of research on the role and strength of leadership in improving the teacher's instructional capacity, I include research on building school capacity to understand how human and social interactions work to affect instructional improvements.

Educational Leadership: Theory to Practice

Leadership vs. management. The role of the administrator in public schools is often misunderstood. This is because administrator's activities could be viewed from two different lenses, as educational leader and as an educational manager (Tyack and Cuban, 1997). Larry Cuban (1988) provides one of the clearest distinctions between leadership

and administrative management. He links leadership with change, while administrative management is seen as a maintenance activity.

Education theorists and researchers stress the importance of, both, organizational leadership and organizational management activities, in transforming the organization through “management leadership” of individuals (Cuban, 1988; Hartly, 2004; Spillane, 2009). Management leadership highlights the effectiveness of the transformational leader in guiding its staff toward change (Marks and Printy, 2003). In this view, management is used as a leadership tool that is informed and moved (by reason) to modify processes. During instructional reform, the instructional manager is moved by reforms to modify instructional processes. For example, the instructional manager would establish and communicate organizational expectations for quality pedagogy and support teachers in professional growth activities.

Management leadership recognizes that leaders shape the goals, motivations, and actions of others. Principals have the power and authority to build the teaching capacity of their school and affect the instructional core—content, teaching and learning. Rather than act to manage maintenance activities that stabilize the school, during reform leadership principals are charged with the responsibility to reach existing and new goals using ingenuity, energy and skill (Cuban, 1988). In doing so, they provide a natural social perspective for leadership activities in the school (Scott and Davis, 2007). Management leadership hinges on the principal’s ability to view the school as a natural social organization--one that: espouses formal and informal structures of human interaction; values norms that recognize individual contributions; and emphasize structure and process that foster collaborative goals.

With the increased expectations for students and teachers, principals are increasingly called to orchestrate changes to affect the expected levels of student growth and achievement (Graczewski *et. al.* 2009). In doing so, they act as human capital managers--in effect increasing the instructional performance. Borrowing from business management strategies in the private sector, we recognize that the management of knowledge and performance requires trust in relationships, security from reprimands and confidence in the content pedagogy, (Milanowski & Kimball, 2010; Cosner, 2009). In education we reason that growth in human capital (knowledge, skills, abilities, values, and motivation an individual has to apply to organization's goals) is the single most important indicator of educational performance (Fullan, 2002; Huberman, 1985).

Educational change occurs when management leadership involves an alignment of resources and activities with reform practices that build human capital to affect the instructional core—teaching, learning and content. Thus, management leadership can affect a change in the instructional core when it emphasizes capacity building and knowledge management to mediate actions and interaction in the school setting toward focused and purposeful development of teaching capital.

Distributed leadership. School leadership is most often understood to be the school's formal administration. Studies on improving schools consistently find that effective leadership does not lie exclusively with the school administration. Nor does it lie in the amount of formal leadership positions or roles. Scholars offer views of leadership being distributed by means of: tasks rather than roles; interactive decision-making rather than individualized decision-making; and, expertise leader- follow relationships that emerge from interactions in particular situations (Heller & Firestone, 1995; Ogawa &

Bossert, 1995; Leithwood & Jantzi, 2000; Spillane et al., 2004). Distributive leadership presses beyond the source of responsibility and authority for particular functions and routines. It highlights the presence of leadership in the intersection of leaders, followers and situations within the school organization.

More recent studies on distributive leadership have gone deeper into the collaborative nature of the leadership task, rather than task responsibility (Halverson, 2006). This view offers two dimensions of the distribution of tasks, socio-cognitive distribution and situated distribution. Distributed leadership is visible in tasks (e.g. hierarchical or positional leadership), tools (including processes for meeting, systems for managing resource, etc.) and situations in the school organization. This latter notion is significant in light of the chance encounters has been widely researched with a collaborative understanding that people lead when and where they have expertise, and followers allow themselves to be guided by formal and informal sources of expertise (Smylie & Hart, 1999; Spillane, et.al. 2003). Thus, the circumstances and situations in which the expert ideas are communicated becomes an essential component of leadership that emerges from practice. It allows for different school members to take on leadership functions as the situation dictated by and their own interests and expertise. (Fullan, 2002; Gaziel, 2003; Hartley, 2004; Drago-Severson & Pinto, 2006; Harris, et al. 2006).

Situated perspective. The situated perspective on distributed leadership describes how structures are configured to shape teaching, learning and curriculum. Thus, situated lens on leadership does not highlight the management of instruction; rather, it highlights the management of the structures and processes around instruction. For example, researchers of situated-cognition find that, school leaders can promote collaboration and

reflective inquiry by allocating time for teachers to meet regularly (Harris, 2004; Bryk et al, 1993). The way school is organized and managed, influences what goes on in its educational core (teaching, learning and curriculum content). The leadership envisioned here differs from that typically described in the literature on management—leaders, or higher level managers, who exercise “control” over certain functions in the organization.

In a knowledge-intensive enterprise like teaching and learning, the challenges of performing these complex tasks of the educational core lead to widely distributing the responsibility for leadership (again, guidance and direction) among roles in the organization. With this leadership comes the task of creating a common culture by setting and managing values and norms (Lave and Wenger, 1991). Such leadership creates multiple avenues of interaction among classrooms and teachers to enhance the teaching potential, or teaching capital. The leadership’s task is, then, to organize these diverse competencies into a coherent system that works to capitalize on these differences and help to complement skills, talents and interests among staff members. However, discretion in decision-making about core issues should be, in some fundamental way, a function of demonstrated capacity and performance in managing an improvement process at the school level (Elmore 1993). That is, strategic administrators seem to have different standards for how much discretion they grant to various units in their systems, based on judgments about how well those units can manage their resources in an improvement process.

Sociocultural perspective. A sociocultural perspective of the school as a learning organization, learning and developing meaning is the result of cognition that is distributed within the organizations social and professional exchanges (Feinman-Nemser, 2001). It is

premised on understanding how leadership affects the “instructional core” of education. That is, changes in the instructional core –content, student and teacher—lie in what happens with individual teachers and class-rooms, not in the organizations that surround them. When focused on practice, evidence, and a variety of views, professional dialogue is indicative of essential sociocultural learning environments (Gronn, 2002). In developing and improving school based learning activities, resident experts come together to affect the organization’s core (teaching, learning and content). This perspective values the development of a culture that supports the reflective practices of learning communities. Reflective discourse produces a body of knowledge that is not achievable without the social interactions in the educational environment.

Distributed leadership recognizes that people who comprise any organized system, have varied and specialized competencies, interests, aptitudes, prior knowledge, skills, and specialized roles (Halverson, 2000). Educational organizations incorporate distributed cognition within the organization’s social and professional exchanges. When focused on practice, evidence, and a variety of views, professional dialogue is indicative of essential sociocultural learning environments (Feinman-Nemser, 2001). In developing and improving school based learning activities, resident experts come together to affect the organization’s core (teaching, learning and content). This perspective values the development of a culture that supports the reflective practices of learning communities.

Correspondingly, through the socio-cognitive lens on leadership, we can view how different social aspects of the organization construct leadership; more specifically, how formal and informal interactions among the members of the organization help to construct leadership. Research suggests that social factors in the educational environment affect the

type and style of leadership that is engaged within a situation (Spillane, Hallett and Diamond 2003). Thus, formal leaders adapt leadership activities, structures and behaviors, to engage and constitute leadership needed to address a given situation. Sometimes formal leaders work separately to foster supportive relationships with teachers as they work on the task of evaluating instruction. Other times the interaction among the assistant principal and teacher leaders is used to inject the curriculum development process with special skills such as: knowledge and pedagogy in specific subject areas, or, state and district curriculum and accountability measures.

Although distributed leadership provides a theoretical framework to examine leadership practice, limited empirical research constrains a more clear understanding of how leadership is stretched across an organization; moreover, a lack of empirical evidence limits our understanding of distributed leadership's effect on teaching and learning. Distributed leadership focuses on the goals of the group, rather than the actions of one individual (Copland, 2003; Gronn, 2000). Sharing goals and a purpose requires a shift in thinking where leadership is concerned. Distributed leadership must, therefore, have a clear purpose and focus. Distributed leadership engages teachers as leaders based on their collaborative professional expertise; it is the glue that helps members of the organization work in a concentrated way, to bring about whole-school improvement in learning and teaching. Under distributed leadership, the actions and interactions of adults affect, both, the membership's understanding of the school's goal and response to school goals. In this way, adult actions and interactions affect and build the organizations culture of learning. This socio-cultural context of leadership highlights leadership practice and influences interactions between leaders and followers (Spillane, et.al. 2009).

There is extensive scholarly literature about the context, structures and processes that impact school improvement. However, few studies deepen our understanding of the practical experiences and effects involved in the practice of distributive leadership in the context of policy reform. From a practical perspective, increasing the distribution of leadership is only desirable if the quality of the leadership activities contributes to assisting teachers to provide more effective instruction to their students (Timperley, 2005). This study explores how leadership practice is “stretched over” people, tools, and artifacts; who takes responsibility for a task; and how organizational routines are altered to build capacity.

Instructional Leadership. Instructional leadership and the management thereof, are critical pieces in the administration of academic gains. Administrators create the conditions for organizational change (e.g. establishing regular professional development opportunities; developing effective schedules for planning meetings, etc.). To understand mechanisms that support and sustain change on instructional practice, one must acknowledge, examine and understand interactions among the non-administrative staff. Recent scholarly work suggests that interactions with teaching colleagues in both formal and informal settings may be most important in shaping teachers’ instructional changes (Spillane, Hallet & Diamond, 2003).

The notion of informal teacher leadership emerging from teacher expertise is grounded in learning that emerges from collaborative activities in which teachers work together to solve problems of practice. Strong collegial communities can be built around collaborative practices that facilitate improvements in teaching practice and student

learning (Levine & Marcus, 2009). Collaborative discussions focus on clarifying problems and reflect on practice to improve curriculum and instruction (Little, 1990).

The concept of "collaborative schools" involves initiating new structures, norms and processes that encourage teachers to cooperate with one another and with administrators on school improvement (Little, 1990; Elmore 2000). To affect teaching and learning, the encounters could be professional (those that involve educational issues or concerns that impact ideas or activities of teaching and learning) or they could be social (those that build or strengthen professional relationships and foster more meaningful professional encounters).

Research on education leadership offers a broader lens on leadership that goes beyond formal leadership tasks and positions of authority, to capture guidance and expertise that emerges from informal social networks across different places in the school (Gronn, 2000; Spillane & Diamond, 2007; Pitts & Spillane, 2009). Teachers typically turn to other teachers for instructional guidance and therefore, administrators need to recognize the limits of their direct influence on how teachers teach (Spillane & Diamond, 2007; Supovitz 2006).

Models in the leadership of curriculum and instruction focus on three aspects: setting directions; managing and developing people and programs; and, organizational structure and climate. The prevailing model is a framework on instructional and curriculum management derived by Hallinger and Murphy (1985). It identifies instructional leadership activities and behaviors as those which: define and communicate shared goals; monitor, coordinate and evaluate teaching and learning process; and promote the culture and climate of adult and student learning.

Hallinger and Murphy (1985) examined the instructional leadership behaviors of ten elementary principals in one school district and a reviewed school effectiveness literature. The synthesized primary quantitative data they collected from principals, school staffs and central administration supervisors, on instructional leadership behaviors, with qualitative data they collected through observations and artifacts on organizations support of curriculum and instruction in the schools. Hallinger and Murphy created a three dimensional framework of instructional management with eleven job descriptors. Their resulting framework of instructional management is illustrated in Table 2.1.

Table 2.1: Framework of Instructional Management

I. Setting the Goal	II. Manage Instructional Program	III. Promote School Climate
<ul style="list-style-type: none"> • Framing school goals • Communicating school goals 	<ul style="list-style-type: none"> • Supervising and evaluating instruction • Coordinating curriculum • Monitoring student progress 	<ul style="list-style-type: none"> • Protecting instructional time • Providing incentives for teachers and students • Promoting professional development • Maintaining high visibility • Enforcing academic standards

Source: Hallinger and Murphy, 1985

In the development of goals, the administration collaborates with staff to define, communicate, and work toward shared academic goals of the school (Hallinger and Murphy, 1985; Leithwood, et al., 2004).

Capacity Building: Theory and Research

Developing Teacher Capacity. Current learning-focused, leadership practices focus on providing collaborative learning environments. School leaders manage and sustain the process of building human capital by creating circumstances, structures and supports through which teachers can interact formally and informally. Through formal

structures and norms school leaders can scaffold the process for adult learners. School leadership can use strategic physical placement of teacher classrooms and common planning time to engage teachers departmentally. They may bring together novice and expert teachers through mentorships that allow for teachers to exchange practical experience and innovative ideas. They may provide time and space for formal professional learning communities to come together and share ideas. On a school level, school leaders communicate agendas based on prioritized target goals, such as sharing in the guided learning process of data analysis toward instructional improvements.

However, school leaders can use more loosely coupled ways to reach and build human capacity by clearly articulating and supporting instructional goals and priorities. Seeking practical application to theories on, both, professional capital and building school capacity, theorists and researchers provide insight to the connectivity in the idea of constructing professional capital through collaborative initiatives involving teachers (Newmann, King and Youngs, 2000; Copland, 2003; Goldstein, 2003; Timperley 2005; Spillane, Healy & Mesler, 2009). Teachers informally interact with their colleagues through professional dialogue that is based on, both, their innate accountability to their students and their accountability to one another.

Learning focused leadership can provide avenues for informal social networks that allow quasi-entity learners (and thus the school community) to capitalize on these “communities of practice”(Elmore, 2007). A strong learning environment acknowledges the informal nature of individual and social situations. Sense-making plays a key role in the mediation of policy reforms (Coburn, 2001). It emphasizes that nature is a social affair involving conversations and interactions among teaching and leadership staff. Research

shows that strong and suitable learning occurs in informal active context, within social school settings (Lave 1991). Teachers are more likely to learn by actively participating in their learning with tools, and tasks as opposed to listening to lecturers. Through situated learning, teachers seek one another's expertise, and work to refine their own process of teaching and learning within the context of real teaching activities.

School leadership can use strategic physical placement of teacher classrooms and common planning time to engage teachers departmentally. Moreover, leadership is most successful when and school goals and priorities are clearly articulated and supported through activities and communication. This type of managed learning-focused leadership allows the school to capitalize on informal collegiality to enhance instruction. In this way seemingly disengaged teachers inadvertently share values, norms and ideas while building a collaborative culture.

By contrast, when this individualized nature is not acknowledged or valued, capacity building is hindered as teachers may feel their professional standing and self-esteem is at risk. This sense of vulnerability may lead to their participation in the required forms of collegiality, for posterity, with a lack of substantive engagement. In other words, mandated collaboration may provide a forum for more independent teachers to engage in storytelling, isolated incidence of aid or assistance, and sharing of materials lesson and ideas (Warren-Little, 1990). As with students, this level of collaboration would fall on the lower rungs of Blooms Taxonomy (remembering, understanding and applying), instead of interdependent joint work that could fall within higher rungs (analyzing, evaluating and creating) that increase demands of collective autonomy and teacher-to-teacher initiative.

School capacity. District and state education policy assume that reform initiatives influence professional development and capacity building by strengthening teacher knowledge, skills and dispositions. However, reform initiatives, such as professional development, show little impact on program coherence; professional community; technical resources; leadership; and internal accountability (Youngs & King, 2002).

On the other hand, researchers have found that increasing school capacity increases the success of reform efforts as well as student achievement (Borko, Wolf, Simone & Uchiyama, 2003; Cosner, 2009; Newmann et al., 2000; Youngs & King, 2002). Principal leadership is the most important factor in determining the success of a school's reform efforts (Borko et al.). Promoting trust among administration and staff helps to build a shared commitment to the goals of the school. Research on distributed leadership also points to the importance of trust in an organization practicing distributed leadership. Organizational trust is the foundation for those elements necessary for successful distributed leadership; that is, collaboration, communication, joint problem solving, and honest feedback (Smylie, Mayrowetz, Murphy & Seashore-Louis, 2007).

Research on school reform and organizational change emphasizes the importance of collegial trust as a social resource and dimension of school capacity (Cosner, 2009). Trust is a necessary layer needed for reform. It is particularly important when developing professional communities among staff. Time for teacher collaborations in both formal and informal encounters provides for collegial trust building. Trust allows teachers to build value in their professional abilities, skills, and practices and is an extension of capacity building (Cosner, 2009; Smylie, et.al. 2007; Youngs & King 2002). The school capacity is strengthened when developing relationships among administration and staff involve trust,

specifically in leadership efforts, such as managing conflict proactively and effectively. Though seemingly connected through trust, the link between distributed leadership and capacity building is unclear and is explored by this study. The teaching capital of individual teachers works synergistically within the school to generate teaching capacity. That is, when nurtured through leadership enactment, the teaching capabilities of each teacher can work together in developing the school's capacity.

Teaching capacity and teaching capital. Little has been written to provide a clear understanding of what generates teaching capital. Policies intended to promote teacher effectiveness hinge on the currently popular accountability in the form of teacher evaluations. As the standards movement highlights teacher accountability, it is critical for the school organization to maintain a focus on how the reform implementation impacts instructional quality and student achievement. However, education is a highly human intensive service, and education leadership is at the helm of organizing and managing these human resources.

Theories of teaching capacity are in the nascent stages. A theoretical understanding of the technically complex composition of teaching capital has recently been formulated as professional capital theory (Hargreaves and Fullan, 2012). It includes human capital, social capital and decision capital. Research shows that social capital in an educational setting is even more important than human capital because social capital produces more human capital than the reverse (Spillane, Halverson and Diamond, 2009). Social capital exists in work places that exhibit high levels of trust, collaboration, collective responsibility, mutual assistance, professional networks and an identity that's tied to the bigger picture and vision for the work being done (Cosner, 2009). Schools with high social capital are led by

principals who set the example of high performance and provide leadership that establishes the culture of continuous improvement and professional development for the teachers in the building.

Human capital may be viewed by the value it adds to a company's net worth. A vision of human capital in teaching that relies on business concepts must be altered to account for the concept of maximizing the quality of human, as opposed to reducing the price of teaching under a bottom line business model. However, developing human capital results in the professional capital that is technically sophisticated and difficult and requires a high level of education and ongoing participation in continuous improvement. Human capital includes qualifications, knowledge, preparation, and skills.

Effective leadership practices have a goal of guiding and supporting the teaching staff through empowerment that leads to decisional capital and a strengthening of teaching practice (Firestone, Mangin, Martinez and Polovsky 2005; Marks and Printy, 2003; Nemann, King and Young 2000). Decision capital fostered through the distribution of leadership that empowers professional judgment toward high performance for both the teacher and their students. It is developed through judgment, case experience, practice, and reflection; all of which require time outside the classroom. Time outside the classroom away from students becomes vital for professional conferencing, reflecting, examining new approaches, and to acquire perspective and insight into teaching strategies. Decision capital is, thus, an ability that requires time and commitment to be developed as a professional competency.

Role of leadership in mobilizing human, social and decision capital. Human resources interact with other forms of capital to produce instructional change (Coleman

1988). Several researchers explore the dimensions of instructional leadership through human (skills knowledge and expertise), social (networks, relationships and interactions) and cultural (styles, values and ways of being) capital in education (Spillane, Hallet & Diamond, 2003; Drago-Severson & Pinto; 2006; Malinowski & Kimball, 2010) Spillane, Hallet and Diamond examine the construction of leadership in urban schools. They argue that teachers construct administrative leadership through various forms of capital. Teachers also construct other teachers as leaders on the basis of human and social capital. Adapting elements from Spillane, *et. al.*, social capital may be characterized as the value of social networks and interactions that involve trust, respect and a sense of obligation toward one another.

Social capital, in an organization, may have varying degrees of connectivity with actual instructional leadership, but it has been found to be influential in informal teacher-based instructional leadership and not influential in formal administrative leadership (Spillane, Hallet & Diamond 2003). This highlights the challenges of administrative leadership in orchestrating the development of teaching capacity.

If educational leadership is to influence and empower change in instruction, teachers must voluntarily value and validate the organization's human and cultural resources and attribute the leadership thereof onto the administrator. Though professional development plays a critical role in acquiring human capital, it is the implementation of the learned strategies and skills, by the individual or collective group, that activate the newly attained resource, giving it utility (Fullan 2002). The school can then make gains from the value added by the human resources it engages.

As previously noted, social capital includes the relations among individuals in a group or organization that develops because of trust, collaboration, and a sense of obligation. Social capital in a school is usually developed and strengthened through networks of relationships among staff. The potential for administrative capacity in building human capital is greater than the potential for administrative capacity building of social capital (Spillane, Hallet & Diamond 2003). However, educational leadership influences this social capital by being mindful of relationships within the educational environment. The organization's formal routines and informal exchanges regarding instruction are developed into a culture of learning toward effective teaching when the organization's ways of being and doing are transferred into social interactions among staff.

The model of distributed leadership in this study was used to explore the potential of leadership to influence patterns that build social, human and decision capital as it engage teachers in collaborative instructional improvement activities.

CHAPTER 3: The Methodology

This investigation employs a case study approach with qualitative and quantitative methods of data collection. The two methods are employed to explore interactions of two critical components in middle school education--school leadership and teaching capacity. School leadership and teaching capacity are examined within the context of reforms to curriculum and instruction, occurring as a result of the implementation of Common Core State Standards. Curricular and instructional reforms involve changes in current authentic teaching practice, which evolve as interactive events within a web of social, professional and cultural systems within each school (Lave, 1991).

A case study method provides in-depth analysis to understand situations and complex phenomena in a particular setting (Yin, 2009). I employed a case study methodology to explore specific aspects of school leadership enactment, during the implementation of curricular and instructional reform, from the perspective of teacher practitioners. The teacher perspective on the school leadership's management of instructional reform sheds light on the impact of leadership in mediating meaning through structures, norms and activities that impact teaching capacity, and potentially instructional improvements.

Given the limited empirical evidence on the relationship between school leadership and its impact on teaching capacity, empirical qualitative and quantitative data are crucial to explore the case and inform the research questions more comprehensively than either quantitative or qualitative methods alone (Driscoll et al., 2007). By understanding teachers' beliefs, attitudes and perceptions allowed me to access a more in depth understanding of the role of leadership in teachers' sense making process during instructional reform

(Patton, 2008). This qualitative data worked with quantitative analysis to understand how leadership sources facilitate modifications in their instructional practice. Quantitative methods were used to explore the components of teaching capacity, and to develop a construct to quantify the relationship between leadership and teaching capacity.

School Context

For this investigation, the school was chosen after a brief interview with the superintendent revealed distributive leadership practices within the school. The school emerged as a potentially rich model from which to explore processes and practices of distributed leadership because of its traditional structures of content area collaboration, its formal and informal teacher leadership roles and its school-wide goal of curriculum reforms to improve instructional practices.

Coolidge Middle School (a pseudonym) is an urban middle school serving nearly 900 urban students in grades six through eight. The student population is of mixed ethnic and racial composition with about 40% Hispanic, 21% Asian, 15% White, and 23% Black. Although 57% of the school's students received proficiency in Language Arts and 67% achieved proficiency in Math, the school did not reach its 2012 target in either category (NJ DOE, 2013). With a teacher student ratio of 12, Coolidge school includes a faculty of about 75 teachers.

To support classroom instructional improvement activities, the principal calls on a team of teacher leaders that serve as teacher leaders within the school or as district liaisons. Along with other administrators in the building, these teachers are part of the School Improvement Panel (ScIP). The formal teacher leaders represent Curriculum Resource Teams (CRT) comprised of teachers in different subjects (e.g. Math, Language

Arts, Social Studies, Science) within a grade level. These resource teams act as professional learning communities to research, discuss, and implement best practices. Additional professional development is offered to support teachers through district efforts that are delivered within the school, within the district, and occasionally beyond the district. It is intended to keep staff informed of the latest research in instructional strategies and materials.

The Coolidge Middle School has adopted a “House System” as part of the school reform. The “House System” groups students and teachers into two communities with a core team of academic teachers for each of the three grade levels within the “House.” These teachers collaboratively plan and deliver instruction. The structure is intended to promote interdisciplinary instruction with integrated units, team teaching, and positive student-teacher and teacher-teacher relationships.

Despite district-based professional development workshops, the school is autonomous in its implementation of teacher professional development regarding effective teaching practices.

Population and Sampling

The population for this study includes all teachers and administrators within the school. However, my goal was to have informal and formal leaders, as well as general staff represented in the interviews and focus groups. A total of twelve interviews were conducted: two with school administrators; two with non-administrative, formal school leaders; two with other informal leaders; two with non-leaders, and one with staff who are considered to be isolated. As such, interviews included a purposeful sample drawn from a cross section of teachers from the sixth, seventh and eighth grade staff working in the Math

and Science and Humanities disciplines. A Study Representative (SR) was designated by the building principal to mediate communication and processes between the researcher and the school staff. Interviewees and focus group participants volunteered independently or were nominated by the Study Representative and asked to participate. The voluntary school-wide survey was administered to the entire teaching staff of the school. Artifacts and notes of meetings were collected as a fourth data source.

Data Collection

Interview data provide a rich description of leadership roles, procedures and activities. Staff and administrator perceptions regarding leadership's structures, norms and activities in helping to improve instructional practices at the school were also explored through the qualitative interview process. Survey data quantifies the extent to which the qualitative interview findings are pervasive or isolated (Driscoll et al., 2007). In this way, qualitative and quantitative methods helped to develop, interpret and clarify findings of a study (Miles & Huberman, 1994). The mixed method approach strengthens the study results through triangulation of both qualitative and quantitative data. Table -1 details collection methods, participants and intended data use. The research documents one school and the perceptions of the staff and administration regarding leadership practice and its relationship to teaching capacity and instructional practice.

The study was conducted over the course of one year. Data collection includes interviews in the spring and a survey in the fall, with data analysis conducted on an on-going basis. The final three months consists of final data analysis and reporting. Protocols can be found in Appendices A, B, and C. Artifacts were collected regarding staff communications (meeting minutes, notes, etc.) on activities related to the process. The

validity of study data was achieved through triangulation among interviews, surveys and artifacts. By comparing the three data sources I was able to find commonalities and themes across the three data sources.

Table 3.1: Research Plan

STUDY QUESTION	INTERVIEWS	SURVEY	ANALYSIS
	10-12 Semi structured Face to Face or Phone (First Phase)	All Staff Second Phase	
Q1. How is leadership for instructional reform distributed? LEADERSHIP STRUCTURE & PROCESS	Administrator Interview (All questions) Teacher Interviews (Q1-8) Understand leadership goals, roles, procedures and activities	Q.9, 10, 11,	-Goals/directions -Supervise and monitor instructional programs -Learning climate
Q2. How do leadership sources support teaching practice during reform implementation?	Teacher Interviews (Q1-8) Understand leadership sources procedures and activities	Leadership Questions: Leadership Q. 10	-Descriptive Statistics -Qualitative anecdotes
Q3.What is the relationship between leadership and three dimensions of teaching capacity: human capital, social capital, and decision capital?		Independent Variable: Leadership Qs 9 Dependent Variables: Decision Cap.-Qs.2 & 3 Human Cap. -Qs.1, 4 & 5 Social Cap. -Qs.6 - 8	-Descriptive Statistics, -Factor Analysis

Interviews. Semi-structured interviews and focus groups provide qualitative data to understand the structure, process and enactment of leadership at the school. Interviews are particularly useful in gathering feedback on attitudes, opinions, and perspectives on the reform process and its interim-effectiveness. Moreover, the qualitative data from the interviews shed light on teacher understanding, perceptions, attitudes and opinions about the dynamics of distributed leadership in affecting dimensions of teaching capacity. Interviews were conducted in person. The interview protocol was derived from Youngs

and King's 2007 study on Building Teaching Capacity. The interview protocol may be found in Appendix A.

Survey. The survey was administered to all certified teaching staff through Qualtrics, an on-line survey. The survey was administered in lieu of a staff meeting; however participation was voluntary. Survey data were used to operationalize three factors with respect to teaching capacity; these are human capital, social capital, and decision capital. The survey consisted of questions toward reform climate, influence over school policy, control over decisions in the classroom, the professional development climate, the professional teaching climate, participation in formal and informal meetings with colleagues, school leadership, and impact of leadership on modifications to instruction.

The survey protocol was generated from questions or question types from previous studies. Using questions with proven reliability in previous studies increases the reliability of the survey data collection in this study. A survey protocol developed by Copland's 2003 study on leadership of inquiry was used to generate data on inquiry practices, teacher learning communities, and shared responsibilities. Survey questions from the Teacher Survey developed for the Learning from Leadership research project was used to generate data on teacher perceptions of their influence on school matters and classroom control; school as a workplace; sources of improvement, supportive environment; professional development (Schaefer, Davis and Wagner, 1997). These protocols are used because together they address aspects of leadership, human, social and decision capital.

Questions on instructional practices are adapted from an instructional practice inventory (IPI) tool developed by Bryan Painter and Jerry Valentine as a reflection and

instructional improvement, as well as to understand whether school improvement initiatives have influenced student learning (Valentine, 1997). The IPI is used for profiling student engaged learning to understand whether school improvement initiatives (in this case distributive leadership that affects teaching capacity) have influenced student learning. Three broad categories associated with student learning serve as the foundation for characterizing instructional practice; they are student-engaged instruction, teacher-directed instruction, and student disengagement. Though this tool was originally used as an observation protocol, the categories provide a useful approach to categorizing teaching practices that is linked to student learning. The survey protocol may be found in Appendix B.

Reliability. In order to assess the reliability and credibility of this survey, the survey items have been tested for analysis using the Cronbach's alpha. I also tested the internal consistency of each section on the survey using the same procedures. The survey for this study was created based on existing surveys and was intended to measure underlying constructs. All survey items were not used for analysis. The total questions used for analysis consisted of 31 survey questions. These questions had a high level of internal consistency, as determined by Cronbach's alpha between .83 and .96. See Tables 4.3 and 4.4 of this report.

Validity. To assess the validity of the analysis in this investigation I used triangulation with multiple types of data collection. Using multiple sources of evidence, and qualitative and quantitative data, provides the triangulation of the data that was crucial to the reliability of the data in this study (Creswell, 2009). I triangulated

information from surveys and interviews by exploring the relationship between responses as well as the inconsistencies among the different types of data collection.

Data Processing and Analysis

The data analysis for this study was guided by the conceptual framework of the study. Interview data were the primary basis for the exploration of distributed leadership with a qualitative lens on instructional reform. I used descriptive statistics, factor analysis and structural equation modeling of survey data to understand leadership sources that support teaching practice and to examine the connectivity between leadership and teaching capacity. The qualitative sample includes administrators and teachers in the school. The quantitative sample includes all certified teachers within the school. My research questions guide my analysis of the data. The following sections describe how the data were used to analyze the data in response to each research question.

Research question #1: How is leadership for instructional reform distributed?

Data that responds to this question comes primarily from the interviews of teachers and administrators at the school. The interview questions were based on modifications to an interview guide on professional development and school capacity, conducted by Youngs and King in 2003. Quantitative data were used to verify findings that resulted from the quantitative analysis.

I used Transcribe, an online transcription and dictation software, to transcribe the audio recording of each interview. The transcripts were reviewed and spot-checked by the interviewer for reliability of data entry. Responses were examined using inductive methods to: a) identify and describe patterns in leadership activities that impact student learning and instruction; b) understand teacher involvement in decision making at the

school; and c) identify patterns related to sources of guidance in curriculum and instruction.

Interview data were analyzed using deductive methods to understand the nature and sources of instructional leadership as distributed across people, tools and artifacts at the school. Models in the leadership of curriculum and instructions focus on three aspects: setting directions; managing and developing people and programs; and, organizational structure and climate. The three broad categories became my first layer of codes. They are: setting directions (or defining the school's mission); developing people and defining programs; and designing the organization for a positive learning climate (Hallinger and Heck, 1999; Leithwood, 1996). Thus, all transcripts were analyzed inductively with an initial layer of themes that are consistent with three broad categories that scholars point to as "the basics" of successful instructional leadership. Each of these areas became an umbrella for a second layer of inductive sub-codes (see Table 3-2 for the code book).

To add depth to the analysis on teacher experiences of leadership I utilized a framework on instructional and curriculum management derived by Hallinger and Murphy (1985). This framework added a second layer of themes to the analysis. Table 3-2 guides my analysis of the qualitative data as I explore leadership from the teacher's perspective. Second layer codes for setting direction include: helping staff develop a shared purpose and shared goals. Second layer codes for developing people and programs include: supervising instruction, coordinating curriculum and monitoring student progress. Second layer codes for creating a positive school climate include: protecting instructional time, promoting professional development, maintaining high visibility, and providing incentives for teachers and students. As patterns associated with this second layer of codes emerged, I

engaged in a deductive process to generate more refined codes grounded in the data. I used similar procedures to analyze all of the interview transcripts. The data were then used to respond to research question 1.

Table 3.2: Codebook-Interview Data
(Based on a Framework of Instructional Management)

I. Setting the Goal	II. Manage Instructional Program	III. Promote School Climate
<ul style="list-style-type: none"> • Framing school goals • Communicating school goals 	<ul style="list-style-type: none"> • Supervising and evaluating instruction • Coordinating curriculum • Monitoring student progress 	<ul style="list-style-type: none"> • Protecting instructional time • Providing incentives for teachers and students • Promoting professional development • Maintaining high visibility • Enforcing academic standards

Source: Hallinger and Murphy, 1985

Research question #2: How do leadership sources support teaching practice during reform implementation? For the quantitative data analysis, the survey was exported as an SPSS readable file and examined using SPSS. Individual responses to the survey were merged and aggregated to the school level. Descriptive statistics were reviewed. Three returned surveys were eliminated due to lack of completeness or non-teacher designation. Analysis of the data was completed on 62 surveys. I examined means and percentages by category for various sources of leadership as well as for the factor structure of the variables included in the study. These aided in: analyzing the reliability of the data; exploring patterns in leadership sources used by teachers; and in exploring patterns in factors related to teaching capacity (discussed below under Question 3 of this study).

As noted for research question number one, above, interview data were used to examine patterns in sources of leadership. Quantitative data were also used to respond to this research question. The descriptive quantitative methodology includes the computation of means, medians and standard deviations for each of the leadership questions (Q10) of the survey, where questions are accompanied by a 5-point Likert Scales indicating the teacher's level of agreement with various statements. The questions ask about Leadership climate, leadership support and leadership impact on teaching practice. These quality indicators are based on a teacher questionnaire developed by Wisconsin Center of Education Research (Shafer, Davis, Wagner, 1997).

Research question #3: What is the relationship between leadership and three dimension of teaching capacity: human capital, social capital, and decision capital?

Survey data were analyzed in response to research question #3. Both descriptive and inferential statistical methods were used. Descriptive statistics were used to compute the means, medians and standard deviations for each of the survey questions related to this study question (Items in questions 1 through 6 and Q.10). The independent variable for this research question is perceptions of leadership climate (Q.10) with the following quality indicators: a) create structure, time and resources to support adult learning; b) help teachers develop and maintain high standards; c) helps teachers use information about student achievement relative to standards in order to improve instruction; d) enable the staff to discover common ground and shared values; e) challenges others to find, clarify and solve problems; f) use authority to create ways for everyone to have voice and power (Shafer, Davis, Wagner, 1997). Dependent variables were developed as indicators of teaching capacity (TC), decision capital (DC), human capital (HC) and social capital (SC).

These quality indicators were developed based on literature on professional teaching capital, and adapted from work on teachers within the context of schools and school capacity studies (Schaefer, Davis and Wagner, 1997; Youngs and King, 2002). To establish these indicators I combined multiple questions for various components of teaching capacity. The specific components are: decision capital (survey questions 2 and 3), human capital (survey questions 4 and 5), and social capital (survey questions 6, 7, 8 and 9). The indicator for teaching capacity was developed where: $TC = (HC + SC + DC)$. Inferential statistics were used to test the model of the relationships between distributed leadership with components of teaching capacity. The magnitude, or effect size, of the impact of distributed leadership on human capital, social capital, decision capital and teaching capacity were calculated via Cohen's d .

It is important to recall here the distinction between capacity and capital, made early in Chapter One of this paper. The term "capital" is an economic term that identifies quantitative inputs to a process, in order to produce an outcome. So increasing capital is quantifiable in the amount of a input provided. In the case of education, the amount of professional development in a necessary area (e.g. developing and using critical thinking questions) is a useful input to the teacher's knowledge base. The term "capacity" is a more qualitative term that deals with the ability of the school to utilize its capital resources to affect improvements, in this case improvements that affect student learning. So capacity is the ability to move the capital from a static resource to the point of affecting the outcome, instructional improvement.

The study goal is to understand how leadership is distributed. A second research goal is to understand how teachers perceive different leadership sources in facilitating

their teaching. A third research goal is to view the relationship between leadership and teaching capacity, with a focus leadership's ability to influence instructional improvement. The study results may be of interest to school and district administrators seeking to spread leadership throughout their school organization to remedy time management challenges that compromise their ability to focus on teaching practice.

Limitations of the Research Design

This mixed methods study is intended to describe a phenomenon situated in the experiences, circumstances and perceptions of the staff and leadership of the school of study. The results are intended to evidence school leadership structures, norms and situations that influence instructional practice. Findings also provide an instructional reform context by which to test a theory on professional teaching capital. The degree to which the findings are applicable to other populations and settings will depend on the interpretations (or analytic generalizations) made by researchers and practitioners, about whether or not and how much the relevant conditions of this case can be applied to another case (Firestone, 1993).

I hope to have offered sufficient description and analysis of the leadership and teacher perceptions in this setting that will allow transferability to other settings and contribute beyond the immediate work with the leadership and staff at this school. This case study examines leadership practices within the context of curriculum reform related to the adoption of the Common Core State Standards. It considers issues surrounding distributed leadership and teaching capacity. A case-to-case transfer may be employed by someone in another setting who hopes to adopt ideas from this study (Firestone, 1993). Through in-depth discussion and feedback on teacher perceptions, I gained insights into

leadership activities that promote or challenge teaching capacity and affect instructional practice. The results are intended to be shared with leaders and educators from other middle schools to help guide their activities toward implementation of reforms that have a potential to build teaching capacity.

Confidentiality

Participant identifiers were removed from all data and pseudonyms are used for the names of the district and schools. Throughout this document pseudonyms are used for participants. Transcripts are labeled TI01, TI02, AI01, AI02, and so on, based on whether the interview is a teacher interview or an administrator interview followed by a two digit number. In a study of this size, referring to a participant as “a male elementary school principal” fails to protect that person’s identity. Therefore, no quotations or specific references are attributed to individual participants. Rather, references to participant responses are characterized by their appropriate grouping (e.g., school-based leader, classroom teacher).

CHAPTER 4: Analysis and Findings

Through this study I examine the enactment of distributed school leadership and dimensions of teaching capacity during the implementation of instructional reform. I highlight school leadership as the mediator between reform policy and reform implementation in the school environment. I also highlight teachers as mediators between reform implementation and the intended changes in teaching and learning. The findings shed light on aspects of school activities and the school environment that connect leadership to teaching.

This examination underscores various forms and layers of leadership that may be found at any school. While leadership is most often identified as a person, this study looks at tasks (or roles), tools (or mechanisms), and situations (or circumstances) that constitute leadership practice for instructional reform. Thus, throughout this manuscript I define leadership in terms of tasks, tools and situations which together establish distributed school leadership practice. Leadership tasks are understood as work to be done, which is sometimes associated with a leadership role. I refer to leadership “tools” as structures and processes that provide mechanisms for leadership functions to occur. For example, scheduling regular meetings among the humanities discipline is a tool that provides routines and arenas for some of the planning and discussions that takes place regarding instruction. These meetings provide opportunities for expected instructional guidance, which results in informal instructional leadership. I refer to leadership “situations” as informal unstructured interactions where instructional leadership activities occur. For example, a confused staff member may approach a colleague to request information or assistance on how to use the technology component of the Math series, or how to access

their students' data for a specific learning standard. This exchange is an instructional leadership behavior that can result in improved instruction.

On the surface, these tasks, tools and situations occur through formal leaders. However, leadership tasks, tools and situations can be formal or informal. A closer lens on underlying levels of informal leadership reveals situations where leadership thrives to affect teacher's instructional practice. I define formal leadership as that which is designated by the school or district administration, and assigned specific tasks and tools that are part of the leadership practice. I define informal leadership as tasks, tools and situations of individuals who are sought for their experience, expertise or achievements but do not hold formal leadership positions.

Three overarching findings coincide with the three study questions. I found that instructional leadership is distributed among tasks, tools and situations that guide teachers' instructional practices. This led me to confirm that leadership is distributed among tasks, tools and situations (Firestone and Riehl, 2005). A second overarching finding is that teachers seek different leadership sources to provide support for distinct tasks related to their instruction. They seek: (1) administrative leadership to communicate instructional expectations, talk with them about instructional practices, and communicate clear goals of the school; (2) formal teacher leaders to communicate instructional expectations and provide resources in the teacher's specific subject area, and (3) fellow teacher leaders, informally, as instructional resources that more directly impact instruction in the classroom. The third overarching finding confirms that dimensions of teaching capacity could be identified in three areas (human capital, social capital and decision capital) (Hargreaves and Fullan, 2012). These dimensions can be reinforced to provide

instructional support during reform implementation. This suggests that sources of distributed school leadership could be used to leverage different dimensions of teaching capacity and inspire instructional change.

In the sections that follow I lay out leadership tasks, tools and situations, and discuss how they are distributed at this school and. I begin with a birds-eye view of the setting of the school and the structure of leadership at the school. I then use Hallinger and Murphy's model of instructional management (described in Chapter 2) to explore how teachers experience instructional leadership behaviors and activities at the school. This second section provides a significant qualitative perspective from teacher's themselves. For the last two parts of the analysis I rely on quantitative data from a school-wide survey of teachers, and qualitative data from teacher interviews. I examine how teachers perceive formal and informal sources of leadership in supporting their instruction during the instructional reforms. Then I explore dimensions of teaching capacity and how distributed leadership influences teaching capacity--defined as the teacher's ability to affect instruction. Together, these four parts help to support a framework for distributed leadership and teaching capacity.

Birds-Eye View: Overview of Distributed Leadership at the School

The current focus on instructional reforms is the result of state policy reforms aimed at increasing the standards of student learning and teacher accountability throughout the state of New Jersey. Schools differ widely in their needs, resources and leadership. Knowing the context of leadership and reform implementation at the school begins to shed light on important dynamics that occur at one level of school leadership.

For the past three years Coolidge Middle School has been in various implementation stages of the state mandated Common Core State Standards (CCSS). A second reason for the school's focus on instructional reform is the school's current status as a "focus school," a state designation that identifies the school as "in need of improvement." Together these two motives strike a sense of urgency in instructional reform at the school.

The school leadership at Coolidge is comprised of various levels. For example, the state-mandated CCSS set learning standards at every grade level. The district determines or reviews the curriculum and materials to be used to achieve the standards. The state also interacts with each school district to maintain evaluative data on every teacher in the state. Certified administrators and supervisors interact with the data system to record observation and evaluation data for every teacher in their district.

The school administration makes decisions about the instructional goals, managing the instructional program and promoting school climate. The administration also sets the tone for the distribution of leadership. However, many of the instructional changes that are occurring at the school are the result of circumstances outside of the school. Thus, some leadership activities and goals have been pre-determined by the school's need to comply with strong state accountability mandates regarding student learning standards and teacher evaluation system.

In order to understand the context of distributed leadership at the school it is important to detail tasks, tools and situations that guide instructional leadership. At the Coolidge Middle School, the formal leadership tasks are distributed among a principal; two vice-principals; three curriculum resource teachers (CRTs) - one for the Partnership for Assessment of Readiness for College and Careers (PARCC) standardized test and one for

each discipline; one representative of the District Evaluation Advisory Committee (DEAC); four school representative to the School Improvement Panel (ScIP)—one for every grade level; and several chairs from various committees. A reading specialist and Math coach were added to the school leadership team during the latter part of the study.

CRTs apply for the position, undergo training, and receive a stipend. CRTs have teaching duties but are provided two additional preparation periods a week to provide guidance, coaching, collaboration, resource development and to attend grade level meetings. DEAC members are teachers who are relieved, as needed, for district meetings to help the district in developing guidelines for the teacher evaluations. The “ScIP” (School Improvement Panel) member is a resource person who handles SGO and SGP’s (Student Growth Objectives and Student Growth Percentiles) and acts as a liaison between teachers and administrators. They provide professional development and inform teachers on the development of their SGO and SGPs. SGOs and SGPs are based on student achievement and form vital part of teacher evaluations. Because the state’s structure and development of the student standardized assessment and teacher evaluation systems are in early stages, there is much ambiguity in the information received by the school. Everyone is learning at the same time, including the school administrators-- who rely on the DEAC and ScIP members for information.

About six years prior to the time of this study, the principal—who has been with the school for about 10 years, had re-organized the schools structure and schedules. Students and staff were organized into two houses, Edison and Franklin (pseudonyms). At the time of the study, each house averages six groups of 25 students at each grade level who have the same schedule. Each group moves together to the same Math class and then move on to

the same Science, Language Arts, and Social Science class. One vice principal heads each house to meet with all the team members and a guidance counselor per grade level, per house, every other week. The agenda is set by the vice principal based on teacher input. Topics include: general information sharing; feedback on various programs or initiatives; student failures; problems that teachers or the school may be having with a student, etc. These structures establish a process for addressing problems of practice and are critical to the instructional reform process at Coolidge.

During the same timeframe, the principal created a humanities cohort and a double-period block-scheduling system. The double (80-minute) period schedule allows for more in-depth teaching and learning in one day. It also allows for extensive collaborative time where teachers meet in discipline teams, once every two weeks for lesson planning and to address common core teaching issues. The humanities meetings, for example, are conducted at each grade level and include language arts, social studies, and sometimes special education teachers. The math and science teams meet on a different day.

Teacher Perceptions of Leadership: A Lens on Instructional Management

While leaders act as mediators of the reform in the school, teachers are the mediators between school leadership and learning in the classroom, in this study I seek to understand distributed leadership from the teacher's perspective. This section details the dynamics of distributed leadership during the implementation of instructional reforms. I use a conceptual framework on instructional management adapted from Hallinger and Murphy's model (1985). It allows for an in-depth examination of how teachers experience leadership in three domains known for successful leadership practices. They are: providing focus; managing and monitoring the organization's performance; and, promoting

effective communication and collaboration toward the enforcement of learning standards (Leithwood, et.al. 2004). Table 4-1 guides the analysis of the qualitative data as I explore formal and informal sources of distributed leadership.

Table 4.1: Framework of Instructional Management

I. Setting the Goals	II. Manage Instructional Program	III. Promote School Climate
<ul style="list-style-type: none"> • Frame school goals • Communicate school goals 	<ul style="list-style-type: none"> • Supervise & evaluate instruction • Coordinate curriculum • Monitor student progress 	<ul style="list-style-type: none"> • Protect instructional time • Promote professional development • Administrative visibility and staff relations

Adapted from Hallinger and Murphy, 1985

Table 4-2 presents a summary of findings through the lens of Hallinger and Murphy's framework on the management of instructional leadership. A broader analysis of the data follows the table.

Table 4.2: General Findings on Instructional Leadership

I. Setting the Goals	II. Managing the Instructional Program	III. Promoting School Climate
<ul style="list-style-type: none"> • Goal framing is strongly influenced by the initiation of multiple state mandates. • Communication of the goals is achieved through informal, as well as 	<ul style="list-style-type: none"> • Competing demands on administrative time limits instructional management but promotes leadership tools (e.g. scheduling planning time) observation and evaluation of teacher instruction. • Administration assigns formal teacher leaders the tasks of supervising instruction and coordinating curriculum; tools (e.g. structures and processes) allow informal leaders to emerge from planned and unplanned situations. • Lack of resources and insufficient data literacy limit the administrative use of data-driven reform that would 	<ul style="list-style-type: none"> • Communication continuously enforces curriculum & instruction. This is developed through leadership tools and situations • Professional development communicates priorities and increases teacher knowledge & professionalism. • Staff relations affect their disposition and character toward growth, collaboration

formal means of communication.	influence decision making. This leadership behavior is transferred to teachers and teacher leaders by de-facto.	and innovation. This is developed through leadership tasks, tools and situations.
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I. Setting the goals. A primary task of educational leadership is to build a shared vision of student academic success and well-being. Presumably, the school administration sets goals and uses them to make organizational decisions, align instructional practice, purchase curricular materials, and develop targets for progress. In establishing the goals for the school, the administration defines, communicates, and works toward establishing shared academic goals. A major task of the formal leadership is to guide instructional reforms that conform to state mandates and support the school's goals. These goals are then shared with the wider staff and students. Professional development and school wide activities become tools of distributed leadership that help to identify, communicate and prioritize goals. But, just how is leadership enactment of the school goals understood by teachers so that it affects teaching and learning in the classroom? In this first domain, I look at how teachers make sense of the school leadership through the tasks of framing or defining goals that align to the school mission, and, communicating goals that are aligned to the mission.

Key findings in defining and communicating the school's goals are:

- School goals are strongly influenced by the roll-out of multiple state mandates, which causes incoherence in the school's goal priorities and implementation.
- Absence of formally written or communicated goals causes teachers to recognize goal priorities through the school administration's endorsement of activities.

Teachers report a keen focus on activities that have direct accountability to the

state, and a reduced focus on activities that carry no direct accountability to the state. A lack of administrative presence at activities that provide strong secondary supports to instructional reforms (e.g. technology implementation, positive behavior support in schools) result in limited schoolwide support for these activities.

Framing the school goals. Teachers at Coolidge report that the current mission of the school is to increase student achievement. They note a variety of goal priorities that seem fragmented, yet related to setting instructional reforms aligned with state mandates. Most notable goal priorities conveyed were:

- implementing the Common Core Curriculum Standards in everyday practice;
- using technology in instruction with a priority on getting students technology ready for PARCC; and,
- Improving student behavior to increase academic focus.

Understanding and implementing teacher evaluations was a fourth overriding goal discussed by teachers during interviews. It is an aspect of monitoring the curriculum and is thus discussed in section II, Managing the Instructional Program.

Implementation of the Common Core State Standards (CCSS) focus on procedures.

Teachers conveyed a general consensus that the school's overriding goals were closely connected to the state's adoption of the Common Core State Standards (CCSS). They report, the full range of accountability programs, mandated by the state (such as the teacher evaluation program and the standardized tests) are currently at work to regulate overlapping, and sometimes competing, goals and activities at the school. Teachers describe limits in decision-making regarding the goals of teaching and learning for, both teachers and administrators.

Six of the ten teachers at the Coolidge school reported that current educational activities surrounding curriculum and instruction are strongly influence by recent state mandates and regulations. For example, Bart explained how state policy regulations restrict leadership decisions about curriculum and instruction.

In terms of what drives curriculum... It has been taken out of the teachers hands. Prior to last year it was about what the administration envisioned and allowed. That was taken out of their hands. ...they are here to implement it. They are not decision makers anymore. ... The politics of curriculum is dictated in Trenton.

It is evident that, in past years, school administration afforded teachers a more significant role in decision about curriculum and instruction, than they have. This teacher views that, under the reforms, the school administration's task is that of an enforcer, rather than a decision maker.

The external influence on the management of reform places a great emphasis on the reform implementation process and less on the instructional practices it is intended to effect. This creates instability and confusion in the adult learning environment and in other programs at the school. Four of the ten teacher interviewed conveyed a general understanding that curriculum and evaluation policies are being revised and developed by the state, as they are being implemented. They note a sense of frustration and uncertainty as they navigate the implementation of the current reforms related to curriculum and instructions. Ari expresses the confusion.

It is hard to separate how confusing this implementation is because I don't think anyone fully knows. ... we don't have full instructions because they are being written as they are being given. You have teachers who understand that it is learn as you go and you have others who are just fighting it along the way because it is hard to change. Everyone's not super happy with it but you know you have to accept it.

Here Ari identifies differences in the ways teachers understand and deal with the “learn as you go” implementation process that the state has adopted in rolling out the evaluation and standardized test initiatives along with the implementation of the CCSS.

Similarly, Bart explains that “the structures to Common Core, PARCC and Danielson are so new that you are learning as the bridge is being built.” He also notes that the lack of cohesion in the development and implementation has influenced professional development activities. “Anyone who has done any kind of professional development understands that [the message] is constantly changing. So it's not that the [school] leadership structure is not there. It is just a crazy time in education.”

Three teachers discussed how they made sense of reforms to connect curriculum implementation and teaching and learning in the classroom; yet, they expressed a need for instructional guidance to connect the teaching to the expected learning. Adrean, for example, conveyed that the “message and progress is on higher order thinking questions.” Emma explains, “We tried to focus on how to use higher order thinking questions [through] workshops [in order to align instruction with the CCSS rigor and expectation].” She noted the gap between instructional expectations and current student academics achievement, “You fall into a trap of just skimming the surface so ... (we need more help in) showing teachers how to scaffold and model and how to get to those ideas that we want our kids to get to.” However a greater number of teachers, seven out of ten, focused on the reform itself, rather than their intended effects on teaching and learning .

Using technology in instruction: PARCC readiness vs. improved instruction. The implementation of instructional reforms challenges the school’s mission to focus on promoting academic achievement. For example, the use of technology for assessment-

readiness overshadows the use of technology as a tool for teaching and learning. Four of the ten teachers interviewed stated that getting students technologically ready for the standardized Partnership for Assessment of Readiness for College and Careers (PARCC) is a priority. One of these noted how “[everyone] has to bend to the standardized test and give the students the tools to pass it properly.” Carl, another teacher, summarized the connection between technology readiness and the state’s curricular expectations measured through educational performance of the school.

In the last two years [technology education] has gotten so strong that it’s hard to ignore, with new standardized tests being on the computer. If students don’t have a sense of the computer, they will fail. [They won’t] know how to use it effectively.

Here, it is apparent that, although student achievement is the intended reform outcome, the discussion and implementation of instructional reform related to technology is being viewed with a lens on accountability to student performance on standardized tests.

Teachers also link student use of technology to accountability for student growth found in the new state mandated evaluation system. Some reasoned that standardized testing was how the school’s performance would be measured. Others reasoned that student growth objectives (SGOs) and student growth percentiles (SGPs) — measures that are intended to be a cornerstone in teacher evaluations-- factor into personal performance on teachers' summative evaluation.

On the other hand, three teachers described how the need for student readiness to take and perform well on the standardized test is broadening the use of technology for teaching and learning in the classroom. They note how the way students use and access to technology is affecting: the ways teachers teach; the way teachers assess; and the type of learning experiences teachers provide. One teacher noted how they are using computer

and assessment technology to diagnose reading levels with pre- and post- tests. She indicated that “knowing where each [student] is, in reading, is very, very helpful...to the teacher’s ability to differentiate lessons.” Another teacher explained how students, who are working on cross-curricular projects, could read articles on the same topic but at each student’s different level. Yet another indicated how teachers make sense and connect goals of technology to the mission of improving teaching and learning in the classroom.

I think our goal is student achievement. ...in the middle school we try to focus our teaching activities on... lessons and projects, and things of that nature, which are rich with technology. Getting teachers on board with using technology is a big part [of instructional reform]. Getting connected with the CCSS and understanding how students are going to be assessed has also been a focus.

These examples illustrate that some teachers are able to build connectivity and coherence between standardized assessments, technology readiness and classroom instruction. Teachers make sense of the goals of the CCSS by understanding how students will be assessed. Moreover, by understanding the expectations of the CCSS, teachers can modify or enhance their instruction to help students achieve the CCSS objectives. However, for other teachers, the simultaneous implementation of multiple reforms and the lack of coherence among the reform implementation cause confusion about the school’s goal priorities, with mixed effects on instruction. It should be noted that the inclusion of assessment results in teacher evaluations, is yet another newly implemented reform at the school.

Improving instructional effectiveness through Positive Behavior Support in School (PBSIS). The school is in its second year of a school-wide PBSIS program. The program is intended to “create positive, respectful, and responsive learning environments” by generating consistency in student behavioral expectations and staff response to

disciplinary infractions. Teachers recognize discipline as a challenge to the implementation of various academic programs, and more specifically to classroom instruction. Six out of ten teachers note the importance of student behavior to quality instruction. They suggest that more effort is needed to maintain consistency in student discipline, since it “definitely affects teaching and learning in the classroom.”

Classroom management in middle schools is about making sure that, “whatever is happening with the child outside the classroom, is not affecting what happens to them inside the classroom. Emma explains,

“When you are 12, 13 and 14 years old, argumentative writing may not be what you want to do that day. You can have the best lesson ever, but if you don’t have students being engaged and focused and wanting to learn, you are left with nothing.”

The PBSIS program was developed with behavioral expectations and reward systems for students and teachers alike. Its ultimate goal is to reduce discipline referrals and teacher time spent on classroom management.

The problem’s created by a lack of discipline and the administration’s limited response to disciplinary concerns is cause for great emotion among teachers. Bart expresses a sense of frustration as he explains the dilemma faced by discipline at the school.

“... Before you get the kids academically educated you have to get them under control. Discipline is something that is not yet handled well here...it would be very easy to place blame on the administrator. ...But, if you suspend kids, these reports go down to Trenton and then you get labeled a "dangerous" district. Too many of our decisions or the decisions that guide our policies are political [and regulatory], not educational. What's pulling or holding the academics back is discipline. You can have a great curriculum and great teachers but a lot has to do with a lack of control of students and you are losing the battle.”

The PBSIS was initiated by the administration and teachers and eventually led by teachers. Teachers share a general consensus that a lack of consistent disciplinary actions on student behavioral infractions results in a continuation of major classroom disruptions. Celina describes how “the PBSIS program seemed to be making an impact” but it had been “met with some resistance from [unmotivated] teachers.” She went on to explain how this resistance “won out” and the program “fizzled” in its efforts to positively impact teaching and learning. Celina explains, “There wasn’t a full buy-in from the staff and the students; to [make it successful] there needs to be more persuasion by the leadership.” Moreover, reduced presence and support of the school-wide positive behavior program compromises morale, as well as quality learning at the school.

An administrative lens. Although this study seeks to understand leaderships from the teacher’s perspective, administrators were interviewed. When asked about goals and achievements in curriculum reform, the principal emphasized scheduling and planning goals from previous years that paved the way for current collaborations among a humanities cohort, involving weekly 80 minute sessions between social studies and language arts teachers. The principal explains, “If I am teaching the Harlem Renaissance in Social studies my language arts would be doing something similar reading novels with similar themes ... creating that schedule that dialogue and that opportunity for dialogue in humanities.”

The principal describes their goals for the school as being “all around English language-arts literacy and technology.” The principal went on to explain how a lack of resources prevented the school from acquiring standardized tools that would help with student placement and benchmarking progress. “I had students who could not read in

middle school, and that was blowing my mind.” The principal has acquired an assessment tool that will standardize student placement by reading level, and provide a better “focus on improving student literacy.” The goal of Language Arts literacy was identified by four out of the ten teachers.

Communicating the school goal. A second aspect of setting the goals involves communicating school goals. This is where the leadership expresses the importance of the school goals through behaviors and activities that are concentrated around the academic curriculum and instruction. Communication of the goals is achieved through formal and informal means. School-wide activities related to the goals demonstrate the school priorities in a less formal way while staff meetings and professional development (PD) activities provide a more formal means of communicating the goals of the school.

One informal way the school communicates its goal of technological readiness is through a school wide competition on technological readiness. The school acquired licensing for a product to help students practice and gain keying skills they will need when taking the PARCC standardized test. With the assistance of the CRT, the Vice Principal set up a competition where all the teachers were supposed to use Easytech with their classrooms. The students that were able to type the best per grade level per house was able to get some time during Recess in the Wii room with three friends. The Wii room exists as remains from funds provided by a now defunct program at the school. The teacher of the winning student also wins a gift card to a local lunch eatery.

This Easytech competition exemplifies how school wide activities are used as tools to communicate the goals of the school. The voluntary nature of the activity required high levels of individual teacher interest or motivation for participation. The administrative

leadership sanctioned the activity but did not communicate its importance. A lack of communication and visible endorsement on behalf of the administration or of the event implied low levels of significance at the school. One third of the teachers participated in the competition. Emma explains that “some teachers did not compete because they did not have computers in the classroom and did not sign them out.” The organizers later learned that teachers are concerned about their SGO’s and feel the need to press on with academics. They chose not to stray from their curriculum. Emma believes that “many teachers do not make the connection between technology readiness and the SGO’s that are part of the teacher’s evolutions.” In this situation, the administration did not communicate the importance or connectivity of the event with student readiness or use of technology in classrooms.

On the other hand, formal means of communicating the school’s goals (such as during mandatory meetings and trainings) render certain activities as priorities at the school. Emma recognizes that a consistent communication of the goals is challenged by the schools multiple initiatives. She notes, “... it is hard because these Wednesdays our professional development always involves some other things like understanding the Common Core and PARCC, then QSAC (the State’s quality schools assurance committee) is coming.” The school administration prominently endorses activities that are linked to state accountability; however, secondary supports to the academic programs, such as the PBSIS and Easytech competition are not strongly endorsed and fail to provide the supports for a shared vision of improvement to teaching and learning in the classroom.

At Coolidge, setting goals is an administrative task with very limited teacher participation in the decision-making process. Priorities are aligned with current curricular

and instructional reforms. The school's professional development sessions are tools where the leadership communicates much about the implementation process. However, collaborative settings, where planning and preparation take place, are vital tools of leadership where teachers communicate and make sense of reform implementation in the classroom. The collaborative settings foster informal leadership as teachers learn from one another and leaders in the group emerge, shedding light on instructional practice for others in the group.

II. Management of the Instructional Program (MIP). Leadership for instructional reform involves evaluating, supervising, coordinating, and monitoring the instructional program (Hallinger, 2005). Since their work is not directly associated with classroom instruction, school administrators are limited in their ability to affect teaching and learning in direct ways. However, administrative leadership can affect teaching and learning in the classroom through management of instruction. In this section I examine distributed school leadership with a lens on leadership enactment to monitor and modify structures, programs and procedures that affect instruction. Key findings in my examination of management of the instructional program are:

- Much of the administrative time on management of instruction is consumed by mandated observations and reporting activities involved in teacher evaluation.
- State mandated teacher leaders aid the teaching staff in understanding their responsibilities in the summative evaluation process. The school administration distributes supervisory tasks to teacher leaders through internal positions, and through structures and processes that allow instructional leaders to emerge from planning groups. Teacher leaders are not surrogates for the administration.

- The school has insufficient resources and the administration has limited exposure to data literacy. These limitations restrict the school leadership's ability to gather, analyze and use schoolwide data regularly, to guide reforms. The administration provides teachers with forums to discuss academic concerns; however, it defers decisions about student needs to the teaching staff.

Supervising and evaluating instruction. In this section I distinguish activities related to evaluation or assessments of instruction from activities that are more directly related to daily leadership and supervision of curriculum and instruction. Activities related to the evaluation of instruction involve a summative process conducted by administrators. However, supervisory activities related to the implementation of the instructional program involve a formative process that focuses on collegial relationships between the school leaders.

Administrative leadership in the process of evaluation. Like many schools in New Jersey, instructional evaluations at Coolidge Middle School are currently closely regulated by the state. Only state certified school and district administrators may evaluate instruction. School and district administrators are designated by the state as evaluators and mandated to conduct three evaluations for each staff member during the school year. Thus, much of the administrative time on management of instruction involves mandated observations and reporting activities that are related to conducting teacher evaluations.

At Coolidge, four out of ten teachers acknowledge that they understand administrative limitations in the supervision of curriculum and instruction. Adrean explains how the school administrators are trying to supervise the implementation of the curriculum and instruction but lack the time. The process involves multiple evaluations for

each teacher; thus, administrators must spend a greater amount of time on evaluative observations than they in previous years. Ironically, the process “takes [administrators] out of the classrooms, stairways, and even out of the school to conduct observations of teachers throughout the school district,” making them less accessible to the teaching staff.

Formal teacher leadership in the process of evaluation. Leadership distribution is formalized by state mandated tasks in the implementation of teacher evaluation. Specifically, the District Evaluation Advisory Committee (DEAC) and the School Improvement Panel (ScIP) are comprised of teacher leaders who are not certified school and district administrators. They do not conduct teacher evaluations; however, they are part of the decision-making and reform implementation process. The DEAC and ScIP members are well positioned to facilitate information between the school and the district. As teacher leaders, they play a significant role in the task of communicating and clarifying the reform process to the teaching staff. The teacher leaders’ proximity and direct working relations to the administration buffers teachers’ meaningful access to the administrative leadership.

DEAC and ScIP members conduct numerous training workshops to assist teachers in developing the Student Growth Objectives (SGOs) and understanding the Student Growth Percentiles (SGPs) that would become part of the summative observation of their teaching practice. In addition, the administration conducts a training session to provide teachers with a detailed understanding and a checklist of the teaching and learning activities and language expected during the classroom observation. Interview data provide evidence that the formal school leadership’s efforts to streamline the evaluation process built comfort and reduced confusion about the development of SGOs and the expectations during the

observations. Seven of the ten teachers express a level of comfort or understanding about SGOs, SGPs and observations. Seven teachers express a good working knowledge about the expectations during the evaluation process. All teachers at Coolidge receive a training and checklist of what the observer is looking during the observed lesson.

Three teachers report that the components and processes of the evaluation system pose strong control in the instruction that is occurring in the classroom. One teacher is concerned about how teaching low performing students at their level may impose constraints that would reduce their SGO score. Another teacher noted how the observation tool poses limitations on school administrators and the teaching. Carl reports that administrators are unable to exercise discretion over what constitutes effective teaching.

The school absolutely respects the fact that teachers have individual gifts to put forth. What doesn't respect that is the whole [evaluation] piece. Now everybody has a blueprint...this is how you teach period. This is what we are looking for period. Well the [administration's] hands are tied.

He goes on to discuss how the evaluation tool highlights a collaborative structure as the ideal format for teaching and learning, and that this format is expected in classroom observations. The teacher pointed out how different teaching styles are discouraged by the evaluation process, regardless of the value they might bring to student learning.

Formal Teacher leadership in the process of supervision. Formal teacher leaders assist the administrative staff in the supervision of teaching practices, specifically in content areas. The administration assigns leadership tasks to CRTs and DEACs, using them as resource and information agents. The principal recounts,

"I didn't get much help from my [district] supervisors. They are widely spread throughout the district. For example, the Supervisor of Language Arts is also the supervisor for Social Studies for the entire K-12 district. So that's where the CRT

came in. They still run a regular schedule but they are like the liaison between me, the supervisor and the classroom teacher.”

When asked about how CRTs and reading specialist are selected, the school administrator reported,

“They emerge from among their peers. They will all come to the meeting and you will see the ones that are going to take charge. When we run our common planning times they are the ones that lead things. I don't micromanage, they run it. ...I had a really good CRT who is now a reading specialist. This school has been failing for years and I did not have absolutely one intervention. “

Since they are teachers themselves, teacher leaders are intimately connected to the implementation of the instructional program as well as instructional practices and lend this expertise in the day to day management of instruction. Several teachers identify the significance of the CRT's role as teacher leaders of curriculum and instruction. “The CRTs work on creating and focusing these [curriculum and instruction] initiatives because administrators don't have the time to do it.” At the school, three teacher leaders are charged with the task of serving as a point person for resources in the areas of English Language Arts, Math and PARCC. The CRT sits in on teacher discipline meetings (humanities or math by grade level) to guide and discuss issues related to curriculum and instruction.

Teachers know if they need anything with regard to curriculum (e.g. resources, materials, different strategies, etc.); they have a CRT in Language Arts, Math, Technology, and Social Studies to help fill the void. Ari explains, [the CRT] is always a valuable resource, especially for newer teachers who must navigate the norms and expectations of their teacher role. CRTs are keenly familiar with pacing guides and work with the teachers to identify topics and lessons teachers should be on in a given week of study.

Coordinating curriculum: Creating structure and process. In managing the instructional program the administrative leadership facilitates the flow of information that helps staff understand and align instruction with curriculum. It uses tools (such as, scheduling time for planning meetings and house meetings) that create structures and processes to facilitate teacher collaboration, encourage dialogue, and foster innovations that promote curricular activities focused on student achievement. In doing so, the administrative leadership builds mechanisms where informal leaders emerge within the context of formal meetings and informal exchanges among teachers.

Interactive dialogue among colleagues increases teacher: knowledge about the subject matter, the instruction and student learning in ways that are more powerful than outside or individualized professional development activities. Since the informal learning exchange is situated in the context of the teacher's immediate goals or needs for learning, the professional exchange has an immediate utility and carries a greater potential to affect instructional improvements. Conversely, the professional development activities from outside vendors provide information that requires planning and development of lessons in order to create a context for the instructional implementation and for adult learning to occur.

Facilitate the alignment and coherence of curriculum and instruction. At the Coolidge School there was no formal structure created for the implementation of the CCSS. Rather, the CCSS was overlaid on a structure and teaching practices that had been laid out five years prior. With an eye on improving language arts readiness, the principal overhauled teacher schedules to create double planning periods among content area cohorts (Science and math teachers as a STEM cohort, and language arts and social studies as a humanities

cohort). Thus, for the rollout of the CCSS, the administration refocused the content of the planning meetings to accommodate the CCSS. In addition, regularly scheduled professional development meetings were designed for staff to “unpack” the standards or try to understand the ideas and rigor behind the CCSS.

Teachers demonstrate a temperament focused on helping to identify strategies and skills in teaching and in the expected rigor of student learning. Six out of ten teachers identified leadership efforts to support the implementation of curriculum and instruction reform through: professional development workshops focused on understanding the expectations of the CCSS; the coordination of time for teacher collaboration; and the encouragement of cross-curricular instruction. One teacher emphasized a focus on efforts to improve the programs, “We lack the most in reading and language Arts so we are trying to initiate more writing in social studies and sciences to have students engage with informational text.” Another added how the school also provides for “house meetings to discuss ...modifications, mentoring, and tutoring to help with those students who are failing or on the cusp of failing;”

Teachers also noted a lack of training to assist teachers with aligning instruction to the CCSS expectations. One teacher explains, “It is important to show teachers how to scaffold and model and how to get to those ideas that we want our kids to get to.” Although, teachers were encouraged to focus on how to use higher order thinking questions, they lacked the skills and expertise to do so. Other teachers express confusion over having a lot of new programs, resources and initiatives. Betty explained how this breeds a lot of uncertainty in what to teach well and what to skim. “We just got new Math books and a

new curriculum ... people are like “what am I supposed to teach, what am I not supposed to teach, what is important, what is not important.”

Teachers make sense of curriculum expectations through knowledge of how their students will be assessed. Five teachers indicated how coordinating the curriculum emphasizes the alignment of teaching with how students are going to be assessed and how teachers must teach. Emma, for example, described a class that was developed to help students prepare for state standardized assessments. “[Students and teachers] can make the connection with [informational text] through current events and the use of technology.” Another teacher detailed how the collaboration in writing and coordinating the 8th grade curriculum has helped her to survive the CCSS implementation and is changing her practice.

In their capacity to build collaborative working relationships, a climate of trust and understating is fostered by teacher leaders. Some teachers expressed their dismay at the reduction of collaborative time for planning instruction, compared to previous years. Celina was particularly vocal about the disadvantage of having less time for collaborative discussion and planning due to increased time on needs related to the evaluation process.

“Last year we had weekly meetings of the humanities department. These meeting usually revolved around assessment and instruction. Just by talking to everyone, those meetings were fruitful, and were a way to create cohesion. We read PowerPoints on a topic of interest or need and then just worked on lessons.”

She noted how “Having the team work together, helped to [stay focused on goals].”

Organizational tools that build routines facilitate coupling of multiple education reforms dictated by the state. Thus, the task of supervising and evaluating instruction is distributed among tools throughout the school organization. By creating or sustaining

structures and procedures around the technical core of education (teaching, learning and the curriculum), the administration builds mechanisms where informal leadership can emerge, which help protect the integrity of the education in the school.

Monitoring student progress. One of the critical tasks of instructional leadership is to monitor student progress in order to modify the instructional goals and the academic program. The Coolidge Middle School has only used annual data from the state assessments to provide a snapshot of where students are, at a single point in time of the year. This data has been used to modify the program of study for the entire subsequent year. However, timely data review and use is crucial to the school, whose standardized assessments have demonstrated that the school has failed to achieve the expected student scores.

To monitor student progress and assist teachers in addressing student needs, the school administration has instituted a schoolwide tool that assesses students' reading and language skills. Four out of ten teachers discussed their enthusiasm for access to data that provides a school-wide reference point for each student's aptitude. The data help to tailor their instruction to student needs. Daryl gave his impressions of the school's new assessment program.

"We did a pre-test in December and have a reading on what level the students are on in ELA and Math. We [learned that we] have a student on 3rd grade level and a student on an 11th grade level. Now we can figure out what we can do to help the student at the 11th grade level so they are not bored; and for the student reading at the 3rd grade level, what we can do so they can improve."

Ari describes how she has learned that some of her students have trouble reading and it affects their work. "So this is important because even though, ideally, you want them to grow to their [6th] grade level, [teachers] can modify for like a 4th grade level." Even though it has given her additional work beyond her social studies area, she favors the test. So she

“picked up like four different reading books to try to figure that out how to help [her students] with basic reading needs.” She worries because if they can’t understand the basic vocabulary and what they are reading they would not be able to understand her content area teaching. The school has also acquired a few programs teachers can use to intervene with differentiated instruction. Emma explains, that last week her students were working on smoking as a cross curricular discussion. One student is reading an article on the same topic but she is able to differentiate their level by providing different articles on the same topic. The schoolwide assessment is a leadership tool that assists teachers in identifying student needs so that teachers can modify and target their instruction to more effective student learning.

Teachers expressed concern about inconsistencies in the educational programs used to help students with deficiencies in basic skills. Daryl expressed his concern that every year the school has used new intervention tools to help struggling readers improve in their achievement. He also noted that it is “difficult because the [intervention] program is not lined up so that you can assign a student specifically to help them with a certain skill...past programs [allowed you to] assign the student specific activities and skills.” Since it is a computerized test “a lot of teachers think that it’s a waste of time... to go to the computer lab again for another test when they would rather teach.” A critical aspect of data-informed leadership is the ability to make and support decisions based on data for review and analysis of instruction and student learning (Copeland 2003). At Coolidge, teachers work collegially to align formative assessments with weekly instructional goals. With the exception of annual standardized test results, the school does not have routine benchmarking assessment practices. The school recently piloted an assessment program

to diagnose student needs and track progress throughout the year. The assessment tool reveals information on specific areas of need for each student. Some teachers welcome the data tool to inform them about student needs for more targeted instruction. Other teachers are concerned about the validity of the results and the instructional time lost to assessing students. Moreover, there is discord about what to do with the information, how to use it to modify instruction and, specifically, how to modify content area instruction.

The school's principal explained that they never had this level of detail before. The school has broadened the use of the assessment tool for the entire student body and has coordinated with district and school leadership to address the student needs. As a result, some students will receive intense reading intervention and teachers involved with the intervention will receive training. For the coming year, the principal plans to add tools that will assist teachers in identifying areas where students need small group or individualized instruction.

III. Promote School Climate of Learning for All (PSC). While the first and second domains of the Instructional Management Framework involve setting the goals and managing the instructional program, the third domain encompasses leadership behaviors and activities that promote a culture and climate of continuous instructional improvement. It involves: protecting instructional time, promoting professional development, and maintaining high visibility and good staff relations in order to enforce academic standards. Through this analysis I examine what teachers express with respect to the administrative leadership's role in creating a safe and supportive culture and climate that is conducive to effective adult and student learning. I look for evidence that leadership task tools and behaviors affect dispositions and discourse toward effective teaching and learning. I also

look for evidence that the culture and climate give rise to situations in which informal leadership might emerge. Key findings related to teachers' perceptions of leadership enactment in this domain are:

- Consistency in communicating the priorities is essential to the continuous enforcement of programs that affect curriculum and instruction.
- Professional development is, both, a form of communicating priorities at the school, and a way to increase teacher knowledge and professionalism.
- Staff relations affect their disposition and character toward growth, collaboration and innovation in the implementation of curriculum and instruction.
- Administrative leadership is key in the effective distribution of formal and informal teacher leadership

Protecting and promoting effective instructional time. The leadership has the potential to protect instructional time by limiting interruptions and helping teachers control student behavior in the classroom so that the students could be more engaged in learning. During the reform at Coolidge Middle School, behavioral misconduct in and around the classroom become crucial to preserving classroom instruction. The school has a positive behavior school improvement program (PBSIS) that promotes a positive climate by generating consistency in: student behavioral expectations, staff response to student actions, and disciplinary infractions. Developed by administrators and teacher, the program involves schoolwide behavioral expectations and reward systems for students and teachers.

Disciplinary actions related to tardiness, behavioral expectations in common areas, and significant classroom disruptions are the purview of the administrative leadership at

the school. When the administrative leadership is actively involved and enforcing discipline related to behavioral expectations, teachers feel supported in their work. Francis offered an example of what can result when disciplinary actions are consistent at the school.

“[When] the two vice principals spoke to the students. They went to individual classes and spoke to teachers and they said we are going to follow rules or else... Since there is follow-up kids are coming to class on time, and they are doing what they are supposed to do”

It is evident that teachers need support with managing student behavior inside the classroom, and that behavioral management outside the classroom environment affects behaviors inside the classroom.

Teachers express a need for a culture where clear communication of expectations is valued through administrative re-enforcement of expectations and discipline. Three teachers reported that the PBSIS has provided them help with behavior and academic management inside the classroom. They note that “students are motivated to get talon tickets for positive behavior. When one student gets a talon ticket for doing their homework a student might say, I want to get one too.” The talon ticket reward system helps both teachers and students identify with the expectations of the school community.

Teachers also share a general consensus that a lack of follow through on behavioral infractions, by the school’s administrative leadership, has caused a reduction in support for the PBSIS program. Four teachers expressed how “a lack of follow through on certain [behaviors] throughout the year,” means that behavioral infractions classroom have a negative impact on instruction.” Celina explained the problem of inconsistent discipline of undesired behaviors affects teaching and learning in the classroom.

...certain behaviors in class that should result in a certain disciplinary action, results in none....A student sent to ISS for the period for cursing and threatening another student, was sent back to the classroom within that same period. ... it undermines [the teacher's authority] and interferes with our instruction and our ability to achieve our goals for the lesson.

Another teacher explained how “one to three students can [negatively affect the instruction] for the other 23 students who want to learn.” While many teachers noted that they work at behavior management in their classroom, they identify inconsistencies in behavioral expectations from class to class, as well as inconsistencies with schoolwide behaviors as challenges to their personal classroom behavior management. These inconsistencies affect instructional focus and time spent on instruction.

Providing incentives. The interview data also reveals limited use of teacher and student incentives that are directly related to academic activities that would enhance schoolwide efforts to implement curriculum and instruction. For example, as noted in Section I above, teacher leaders worked to provide incentives that promote schoolwide preparations for technology readiness for the PARCC. Some teachers felt that lack of administrative endorsement of the activity resulted in limited participation. Through a survey, the lead teachers of the activity also learned that many teachers chose not to deviate from the sense of academic press they feel due to: the implementation of CCSS, content area PARCC readiness, and successful achievement of their SGOs. Adrean explains, “[Teachers] want to do well on their SGO’s so they want to get their student to a certain point so that they do well on their SGO’s. They are concerned for their evaluation.” Finally, the school leadership learned that there is not complete training with the technology program used; there could be more training on this.

These examples evidence the importance of two-way communication between the school leadership and the teaching staff for protecting instructional time and providing incentives toward schoolwide goals. Teacher feedback is critical to understand the needs and concerns teachers are experiencing. Understanding teacher's concerns during the reform implementation process is vital to improving the process. When schoolwide efforts are not re-enforced by the administrative leadership, instructional effectiveness and trust in the leadership are compromised. Consistency in communicating the priorities is essential to the continuous enforcement of programs that affect curriculum and instruction. When the formal teacher leadership's efforts to promote the implementation of curriculum and instruction are weak the potential effects of the efforts are compromised.

Professional development: Increases teacher professionalism and communicates priorities. Effective instructional leadership works to ensure success for all students by stimulating staff development and school improvement. Teachers work more effectively when they have support and the professional development they need to implement curricular and instructional goals that are tailored to the school's academic goals and students' needs.

Increasing teacher professionalism. The school's administrative leadership has influenced social capital by providing time for meetings and dialogue that are centered on curricular and instructional reforms. By doing so the administrative leadership generates a positive learning environment among the staff. Seven teachers describe activities that resemble the type of informal PD activities, such as those of professional learning communities. Teachers interact to build knowledge and strategies that enhance their instruction. Betty highlights how every year teachers develop a grade level list of best

practices that they share (via email) with the rest of the school. She explains that “having vertical articulation is wonderful. People who wouldn’t usually interact are able to share our and learn new ideas.” Simple ideas, such as using a small basket in the middle of student groups, become an efficient way to minimize student interruptions.

Teachers identify how articulation meetings provide collaborative professional development. They express that this collaborative time helps teachers find ways to “increase student attention and excitement over an assignment.” It also provides teachers with time for curriculum mapping and gets them to think differently about how they are teaching a certain subject. Because, much of the dedicated formal teacher PD meetings are consumed by policy implementation processes, this collaborative articulation time is vital to promoting PD on instructional content and strategies has directly impact teaching and learning in the classroom.

Since the current policy demands were overlaid on the school’s existing structures and processes, the staff was able to use its norms and collaborative structure to discuss skills and strategies that would help to teacher instruction transition to CCSS. Beyond formal teacher observations and a schedule design that allows for teacher collaboration, evidence of leadership monitoring teacher implementation of the CCSS curriculum is limited.

Communicating priorities and effects on reform climate. Teachers report that state reform policy implementation overrides some of the local initiatives that teachers feel are essential to more immediate improvements in their instructional practice. Much of the dedicated formal teacher PD meetings at Coolidge are consumed by the school goals of implementing the CCSS, PARCC, and the new teacher evaluation system. As detailed in the

Creating Structure and Process of section II above, much of this professional development has been on developing structures and procedures, not on the implementation of reforms in classroom instruction.

The school has experienced only limited success in building coherence between state reform implementation and some school based initiatives, such as: using new programs that are aligned with the CCSSs, improving high order thinking skills, and school climate building activities. Celina explained that this year all grade levels were streamlined to use one Math program because it is aligned to the common core. It was important for all grades to use the same program and that the program is aligned to the common core. Yet, teachers received no formal training. They only received new books so the books are more tightly aligned to the standards. Teachers require consistent exposure and access to resources in order to continue to carry out the goals and priorities of the school. A school goal that lacks presence or resources stands with limited importance with respect to other school goals that resonate with the administrative leadership.

Staff relations affect their disposition and character toward growth. When interactions among teachers are strong the staff has greater opportunities for informal sharing and learning situations to arise. When the sharing process assists a teacher to develop professionally leadership behavior has occurred. That is, high social capital will promote incidents of informal leadership. Administrative leadership is also strong when there is a high incidence of administration-teacher interaction. However, interactions among administration and staff at Coolidge are weakened by the amount of administrative tasks that are not directly related to teachers or teacher instruction.

There is consensus among the teachers that the school has a phenomenal staff.

Teachers noted interactive situations that had social and professional benefits, as well as the benefit in school climate. One teacher explained,

“Our staff is, I think, the best in the district. They are willing to work, collaborate, and share. It makes life so much easier that we are a strong community. So I have had only positive experiences in terms of turnkey, formal and informal discussion. I have given workshops, our after school academy with no problem. I'm very comfortable with my colleagues. I have turn-keyed at other schools and have not had a positive experience. ..That is one of our highest qualities.

Beyond the normal interactions among content area discipline and house meetings, irregular informal interactions allow the staff to collaborate in a non-threatening environment. One teacher told of grade level lists of best practices that are shared via email. Emma adds, the “opportunity to shine a bit... helps with moral.” Teachers who tend to be less engaged in collaborative situations—for whatever reason--have the opportunity to contribute as they highlight strengths in their practice. The non-threatening low-pressure situations appear to be ideal for fostering professional learning interactions that build social and professional capital among teachers. Betty details another collaborative situation that gave rise to informal leadership resulting in improved classroom practice.

“There is a special education teacher who I don't work with normally. ... She asked me about how I communicate with my parents. I helped her set up a group Outlook so that she could email her parents all in one shot ...she came back to me and was like, ‘I see more homework coming back from kids because now parents are informed.’ It had this positive domino effect because she was able to share this with her colleagues. In turn, that motivated me to make sure I send out my email every Friday.

The school administrative leadership is aware of the strong sense of community among the teaching staff and relies on the culture and climate they have established. The administrative leadership defers the enforcement of the implementation of the standards

to the teacher's sense of sense of community and professionalism, as well as to teachers' need to perform well in their evaluations and SGOs.

It is also evident that the administrative staff depends heavily on teacher leaders to communicate and train staff on the new initiatives. For example, two teachers who had a good relationship with the CRT stated that the administrator was accessible, if not to themselves, then, at least through the CRT. Emma confirmed that "as a CRT [she has] people come up to [her] to relay their concerns [to the administration]. However, another teacher expressed the lack of normal access to administrators during staff meetings, which hinders interactions between the administrator and teacher.

"The problem is when you don't have time to meet because all the Wednesdays are filled up with this that and the other. And when you want to meet with the administrators they are out of the building for meetings or out of the building or office for observations."

Teachers at Coolidge are sympathetic about the limitation on their administrators' time, but they also recognize that, the lack of administrative interaction presents a "school leadership issue." Many teachers feel that the administrative staff is accessible to them. Five of the ten teachers interviewed seem to feel comfortable talking to their administrators. These appeared to be the teacher leaders and more assertive teachers. However, three teachers expressed that either they, or others, are "leery" or nervous about speaking to a school administrator about issues or concerns that may contradict the administrator's views. Some teachers expressed greater comfort with the vice principals, since they have regular contact with them during team meetings.

In this study, a distributed perspective on leadership practice for instructional reform involves a lens on tasks, norms and behaviors that enhance the teacher's

instruction. Distributed leadership from this perspective involves “stretching” leadership to less formal and more subtle pathways of instructional influence where dimension of teaching capacity are harnessed.

Traditional hierarchies of leadership underlie the school leadership at Coolidge. However, an expectation of the school administrator as evaluators of instruction highlights their managerial tasks and limits their time and ability to guide reforms as instructional leaders. Teachers perceive administrative leadership as responsible for goal setting and monitoring the staff through instructional reforms. Instructional leadership is deferred to formal teacher leaders through their roles and tasks as subject area mentor and as instructional agents on new information and procedures. A lack of resources and time limit leadership of school-wide efforts gather and analyze student academic information to guide reforms. However, the administration intentionally defers decisions about student needs to the teaching staff and provides teachers with forums to discuss academic concerns. Leadership tools give rise to a collegial culture of small group adult learning. Through climate of teacher empowerment teachers have a positive disposition toward growth in the implementation of curriculum and instruction.

Teacher Perceptions of Support from Leadership Sources

To better understand of distributed leadership I wanted to know how teachers at the Coolidge School perceive different sources of leadership in supporting their teaching. More specifically, I wanted to understand the potential role of distributed instructional leadership in supporting changes in instructional practice. This section describes how teachers perceive formal and informal sources of instructional leadership in supporting

them through the current instructional reforms. Table 4.3 presents the results of descriptive statistics from my staff-wide school survey.

Table 4.3: Number and Percent of Respondents Who Said Yes to Leadership Activity

Leadership Activity (Q.10) (Q. Consider each statement with regard to each school leaders listed. Mark all those that apply.)	Admin	SLIC/CRT/ Math/ Reading Specialist	Other Colleague
<i>Communicates instructional expectations</i>	41 (66%)	38 (61%)	22 (35%)
<i>Encourages me to try out new ideas in teaching</i>	27 (44%)	27 (44%)	42 (68%)
<i>Occasionally talks with me about my instructional practices</i>	30 (48%)	26 (42%)	41 (66%)
<i>Enhances my teaching by providing resources in my subject area</i>	19 (31%)	32 (52%)	41 (66%)
<i>Communicates a clear vision for the school to the staff.</i>	45 (73%)	28 (45%)	19 (31%)
<i>Enhances my teaching by helping me solve instructional problems (e.g. .clarify pedagogy, CCSS, etc.)</i>	21 (34%)	25 (40%)	44 (71%)
<i>Helps me improve my teaching by helping me solve class management problems</i>	27(44%)	14 (23%)	41 (66%)

**Source: 2015 Survey of Teachers at the Coolidge School
(Cronbach's alpha = .94)**

Teachers were asked to consider each statement, listed on Table 4.3, with regard to the type of school leadership listed. They were allowed to make multiple choices for each leadership activity. A total of 66% and 73% of the 62 teachers that completed the questionnaire indicated that the administrative leadership communicates instructional expectations and communicates a clear vision for the school, respectively. These results are consistent with the finding from the qualitative analysis of interviews, discussed above, indicating that the school vision is framed and communicated by the administrative leadership of the school. On the other hand, teachers said they seek administrative leadership least to enhance teaching by providing resources in the subject area (31%) and by helping teachers to solve instructional problems (31%).

As with the administrative leadership, 61% of teachers said that teacher leaders (such as School Leadership Improvement Committee members, Curriculum Resource Teachers and Math and Reading Specialists) help to communicate instructional expectations at the school. However, 52% of the teachers felt that teacher leaders also enhance teaching by providing resources in teachers' specific subject area. The leadership source and activity the teachers found least favorable was formal teacher leaders in the area of helping to solve classroom management problems. These formal teacher leaders are least sought to help teachers solve class management problems (23%). They are moderately sought by teachers for support in all other areas. Interview data, discussed in the previous sections, revealed that while instructional leadership is deferred to formal teacher leaders through their roles and tasks as subject area mentor and as instructional agents on new information and procedures. A lack of resources and time limit leadership of school-wide efforts gather and analyze student academic information to guide reforms. Since the teacher leaders lack this data they are limited in their ability to make school-wide decisions that affect instruction.

The most salient finding of the battery of survey questions is that, for five of the seven instructional leadership activities listed, teachers overwhelmingly seek out fellow teacher leaders, informally. They seek their peers as leaders to: encourage them to try new ideas (68%); discussing their instructional practices (66%); providing resources that enhance their teaching in their subject area (66%); helping them solve instructional problems (71%); and helping me solve class management problems (66%). These leadership activities are significant in that they can directly impact teaching and learning in the classroom. However, teachers seek peer leaders least for leadership in in

communicating, both, instructional expectations (35%) and the vision for the school (31%). As noted above, these two are leadership tasks for which teachers seek the school administration.

At Coolidge the school Administration has made clear efforts to provide time and structure for peer interaction through shared planning. This means that the school affords a good amount of time for teachers to interact and establish informal leadership interactions, where one teacher seeks out another for their expertise in a certain area. Teachers noted interactive situations that had social and professional benefits, as well as the benefit in school climate. Through climate of teacher empowerment teachers have a positive disposition toward growth in the implementation of curriculum and instruction.

The school administrative leadership value on the strong sense of community they have among the teaching staff and rely on the culture and climate they have established. The administrative leadership defers the enforcement of the implementation of the standards to the teacher's sense of sense of community and professionalism, as well as to teachers' need to perform well in their evaluations and SGOs.

Teacher Perceptions of Instructional Leadership and Teaching

In this fourth part of the study, I explored factors that comprise teaching capacity. First, I wanted to identify dimensions of teaching capacity. I used various items from question nine of the survey to construct a leadership variable. I used factor analyses to find out how 30 items in the survey were statistically interrelated within three dimensions. This allowed me to confirm three factors that comprise teaching capacity. Thus, I constructed instructional leadership and teaching capacity from a composite of items on the study's teacher survey instrument. The first two sections that follow discuss the

development of constructs, or variables I developed for: leadership, human capital, social capital, decision capital and teaching capacity.

Then, I wanted to see if distributed school leadership could be linked to these dimensions of teaching capacity. I used structural equation modeling techniques to estimate the indirect effects of distributed instructional leadership on teaching capacity. The results confirmed that the items fit well enough to be an approximation to reality and a reasonable explanation of trends in the data. A third subsection, below, shows the results of structural equation modeling used to understand the strength of the relationship of distributed instructional leadership and teaching capacity.

Instructional Leadership Construct. Question nine of the survey instrument was used to measure the variable for Leadership, more specifically, distributed instructional leadership. It is comprised of six Likert-type items that ask about leadership: support of adult learning; development and maintenance of high standards; helping teachers use data to improve instruction; enabling staff to discover common ground and shared values; challenging others to problem-solve; and, creating ways for staff to have voice and power. Items were measured collectively to test their reliability in determining leadership support. The Cronbach's Alpha coefficient was .94, indicating a high level of reliability among the grouped items measuring distributed instructional leadership.

Teaching Capacity Constructs Since there are no research based models on teaching capacity I used factor analysis to develop a construct for teaching capacity that is statistically sound. Underlying relational patterns, for thirty items in six subcategories of the survey instrument, enabled me to identify items that load, or weight, strongly on three

factors (Brown, 2001, p. 184). The teaching capacity construct was developed using aggregate of all of the questions itemized on Table 4.4 .

Human Capital, Social Capital, Decision Capital Constructs. Guided by Hargreaves and Fullan's (2012) theoretical model of professional teaching capital, I identified three dimensions that construct teaching capacity: human capital, social capital and decision capital. Thus, I identify Hargreaves and Fullan's professional teaching capital through a statistical lens on what I call, teaching capacity. Using factor analysis I was able to account for non-trivial variance in each survey item as it relates to the three factors. Through the analysis I identify specific survey items that relate highly to each factor. The identification of anomalies in the interrelationships of items allowed me to exclude certain items from the three factors, The results of the initial principal component factor analyses are displayed in Appendix D.

The final factor analysis identified 24 Likert-type items as they relate to the three factors. The 24-Likert items were used to construct the variables for human capital, social capital, decision capital and teaching capacity. Table 4.4 presents the final results of the factor analysis. Survey items are strongly interconnected for each of the three factors. This is confirmed by reliability coefficients: human capital (alpha .88); decision capital (alpha .83); and social capital (alpha .96). Moreover, the three factors result from a good number of relationships among the survey items, as indicated by eigenvalues between 3.4 and 5.0. The three factors explain 55 percent of the connectivity among the survey items and negate the null hypotheses—that there is no relationship among the survey items. Factors that account for interrelationships among the items outside the 55% are beyond the scope of this investigation.

Table 4.4: Summary of Principal Axis Factoring, 24 Significant Items

ROTATED COMPONENT MATRIX	Factors		
	Human Capital	Decision Capital	Social Capital
(Q.1) REFORM CLIMATE	HC=9	SC=9	DC=6
c-Teachers in this school regularly examine student performance on CCSS	0.46	0.11	0.25
d-Teachers in this school collect and use student performance data on the common core curriculum to improve their teaching	0.40	0.15	0.31
(Q.2) INFLUENCE OVER SCHOOL POLICY IN...			
a. Setting discipline policy	0.27	0.53	0.24
b. Establishing curriculum (strategies, skills and resources)	0.19	0.73	0.24
(Q.3) CONTROL IN YOUR CLASSROOM OVER			
a. Selecting textbooks and other instructional materials	0.11	0.68	0.05
b. Selecting content, topics, strategies and skills to be taught	-0.03	0.61	0.09
c. Selecting teaching methods	-0.04	0.41	0.06
e. Disciplining students	.00	.42	-.22
(Q.4) PROFESSIONAL DEVELOPMENT CLIMATE			
a. When my school decides upon a change, the change is supported with professional development opportunities.	.20	.58	.20
b. Most professional development at this school enables us to build on our current teaching experience.	.10	.59	.29
c. This school draws on the current base of teacher knowledge and practical experience as resources for professional development.	.03	.59	.24
d. Teachers in this school help one another put new ideas, from professional development activities, to use.	.57	.20	.16
(Q.5) PROFESSIONAL TEACHING CLIMATE			
a. Teachers are continually learning & seeking ideas to improve instruction	.69	.05	.23
b. Teachers maintain high standards of performance for themselves.	.72	.00	.19
c. Teachers exhibit a focused commitment to student learning.	.76	-.02	.13
d. Teachers ... solve problems, they don't just talk about them	.85	.00	.21
e. Teachers feel responsible to help each other do their best	.78	.12	.14
f. Teachers in my department trust each other	.67	.11	.04
(Q.6) FREQUENCY OF FORMAL MEETINGS			
a. Understanding and addressing Common Core State Standards	.26	.28	.68
b. Identifying skills students need to achieve curriculum goals	.26	.17	.81
c. Developing and accessing materials and lessons needed to address the curriculum	.27	.07	.88
d. Teaching techniques and student activities to address curriculum	.23	.13	.90
e. Reviewing ideas to assess student learning	.20	.09	.89
f. Reflection of your instructional practice and/or setting professional goals	.27	.11	.90
EIGENVALUES	4.60	3.35	5.02
PERCENT OF VARIANCE	19.16	13.95	20.94
CUMULATIVE VARIANCE	19.16	33.10	54.04
RELIABILITY (Cronbach's Alpha)	.88	.83	.96

The combined influence of strong loadings (interrelationships among the question item and respondents) and the theoretical foundations underlying the concept of teaching capacity supports the validity of the construct; the items and factors are strong enough to comprise teaching capacity in the model. I deem the three factors as dimensions of teaching capacity. Thus, I use the terms factors and dimensions synonymously throughout this manuscript.

The first dimensions of teaching capacity, human capital, is characterized by behaviors that promote teacher professional development, professional climate, teacher knowledge and disposition. The second dimension, social capital, is characterized by the extent to which teachers meet to discuss curriculum, students or instruction. The third dimension, decision capital, is characterized by development and use of professional judgment.

The role of human resources as a form of capital is not a widely understood concept in education. In fact, human capital is an economic concept used to explain “the rise in the economic value of man.” Thus, investment theories that analyze the formation of human capital highlight the rise of human capital as it is associated with the time used by human agents (Schultz, T. W. 19). Economic theories have long understood the value added by human capital to returns on the investment, as a critical contributor to the organizations product. In education, human capital consists of the accumulation of all prior investments in education, on-the-job training, health, migration, and other factors that increase the individual teacher’s productivity. Teachers were asked questions that measured the extent to which reforms; professional development and professional climate affect teacher knowledge and disposition. These nine survey items under the human capital factor carried

loadings between .57 and .84. The eigenvalue for the human capital dimension was 4.6, indicating a good number of interrelationships among the items.

As noted in Chapter two, above, decision capital is the ability to make professional judgment that results in high performance for both the teacher and the teacher's students. As decision capital is waged, the school gains efficiencies in instructional practices and problem solving. These efficiencies improve overall teacher capacity, teacher instruction and student learning. To assess decision capital, teachers were asked questions that viewed the extent to which teachers felt they had influence over school policy and control in their classroom. Nine items that remained in the decision capital construct carried loadings between .77 and .83. The eigenvalue for the decision capital dimension was 3.35, indicating a good number of relationships among the items.

Social capital may be understood as an intangible resource embedded within interpersonal exchanges. This dimension provides a lens on interpersonal relationships that foster improvements in teaching and learning strategies. It can promote a learning climate that values rigor in teaching and learning. The exchanges help to shape a shared value that enable higher levels of learning among students. For example, when teachers come together to discuss the type of questions to use during lessons and assessments, they are sharing their understanding and professional decision making that can improve their teaching and affect student learning.

To assess social capital, teachers were asked questions that assessed the extent to which teachers met to discuss curriculum, students or teaching. Six items that remained in the social capital construct carried loadings between .68 and .90. The eigenvalue for the

decision capital dimension was 5.02, indicating a good number of relationships among the items and respondents.

A review of correlations among the variables constructed in this study (leadership, human capital, decision capital, social capital and teaching capacity) indicates that the relationship between the instructional leadership variable and the variables that comprise teaching capacity are linear. The results of the Pearson correlations test are shown on Table 4.5.

Table 4.5: Pearson Correlations of Leadership with Human Capital, Social Capital, Decision Capital and Teaching Capacity

	Instructional Leadership Support
Distributed Instructional Leadership	1.00
Human Capital	.49
Decision Capital	.56
Social Capital	.53
Teaching Capacity	.69

Correlations (2-tailed) $r(61) = .49, p < .01; N = 63$

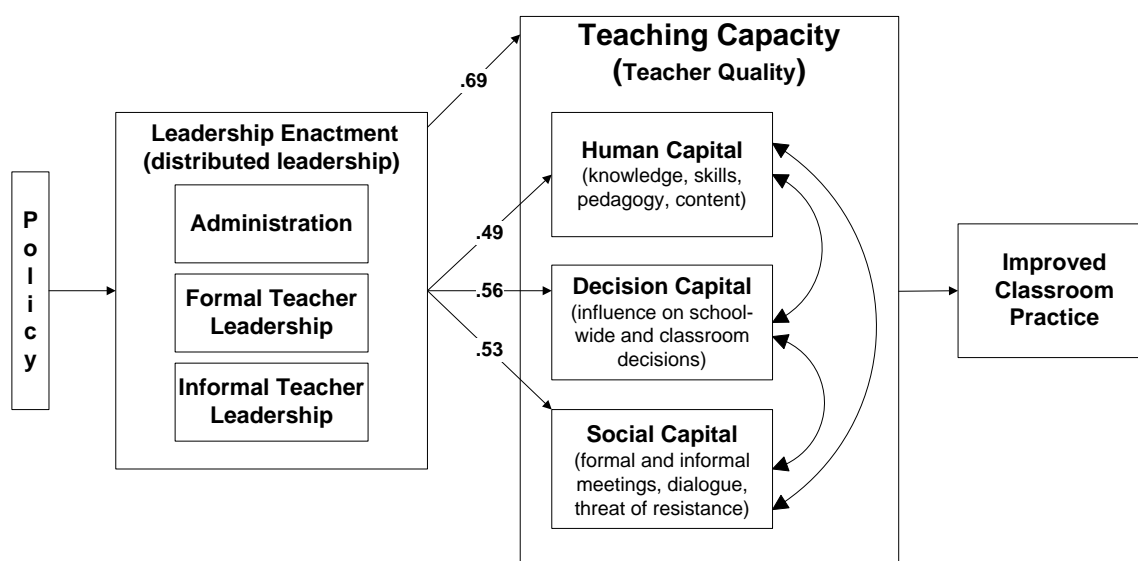
The three factors showed a moderate correlation with distributed instructional leadership, .49, .56, and .53. However, human capital, decision capital and social capital are aspects of a more general construct of teaching capacity. Thus, when taken as a composite, teaching capacity correlates more strongly with distributed instructional leadership (.69) than with any one of the factors that comprise teaching capacity.

Structural Equation Modeling. The factor analysis of the survey data confirmed that teaching capacity is composed of three highly correlated reliable factors: human

capital, social capital, and decision capital. The factor structure tested behaviors under instructional reform climate. I used a correlation analysis to evidence that there is a relationship between distributed leadership and the factors that comprise teaching capacity.

Thus, the factor analysis and correlation analysis provide the basis for structural equation modeling and supports the conceptual model I proposed in Chapter 1. The factor analysis confirms the three factors. Pearson correlations confirm the relationship between distributed leadership and the three factors. Figure 4.1 details the conceptual model supported by this study.

Figure 4.1:
Distributed Leadership and Teaching Capacity Model Supported by the Study



The double headed arrow between the factors indicates covariance among the factors. The single headed arrows from leadership to the factors represent correlation coefficients between the leadership climate support construct and each of the factors. I do not assume that the observed factors completely explain teaching capacity; rather each factor represents items tested in the survey. The correlations are significant at the .01 level.

Conclusion

This chapter presented my analysis of instructional leadership using an organizational approach which captures leadership that is distributed throughout levels of administrative leadership, formal teacher leadership and informal teacher leadership. With a lens on three areas of instructional leadership (setting direction; developing people and defining programs; and designing the organization for a positive learning climate), I explored how leadership enacts instructional reform through tasks, tools and situations within the school environment. I examined relationships between distributed school leadership and aspects of teaching that are associated with improving instruction. In the next chapter I elaborate on the findings with respect to research and practice on school leadership and teaching capacity that can affect classroom practice.

CHAPTER 5: Interpretation of Findings

Current state policies call for higher student learning standards. The result is greater accountability for teaching and learning than ever before. School leadership mediates reform implementation so that the intent of the policy is transferred into teaching practice. I suggest that how teachers make sense of leadership reform activities affects their ability to modify teaching and learning in their classroom. Yet, management and accountability tasks consume the school administrators' time. A distribution of leadership is necessary to ensure that instructional reforms affect teaching practices in the classroom.

However, little is known about how leadership is distributed. Even less is known about how school leadership affects teachers and their teaching practice. Through this investigation I examine school leadership's effect on dimension of teaching capacity during instructional reform. I use a mixed-method case study of one urban Middle school to understand how teachers experience distributed leadership and activities related to their practice during instructional reform implementation. I examined: 1) what school leadership for instructional improvement looks like, 2) sources of leadership teachers look to for support, and 3) the connectivity between distributed leadership and three dimensions of teaching capacity.

In this chapter I elaborate on these findings with a lens on my initial conceptual framework, which bridges distributed leadership and teaching capacity. I focus on relevant research and practice. A summary of findings precedes a more in-depth four-part discussion of the overarching findings of the study. A first part of the discussion describes how leadership is distributed. In a second part, I focus on leadership sources and their association with aiding instructional reform in the classroom. A third part hones in on the

interrelated nature of distributed leadership (as a whole) and the three dimensions of teaching capacity. In it, I depict how leadership broadens the teacher's capacity to inject instructional reforms in the classroom. In the final section I discuss constraints and implications of this study on education practice and on research.

Discussion of Findings

Leadership for instructional reform is distributed among administrative leadership, formal teacher leaders and informal teacher leaders through tasks, tools and situations. Scholars offer views of leadership as being distributed by means of: tasks rather than roles; tools and artifacts; interactive decision-making rather than individualized decision-making; and, leader-follower relationships that emerge from interactions in particular situations where followers seek expertise (Heller & Firestone, 1995; Ogawa & Bossert, 1995; Leithwood & Jantzi, 2000; Spillane et al., 2004).

Administrative leadership uses tools (processes and systems) to increase social interaction among the teaching staff, and to build a positive learning climate in the school. These tools generate channels that generate teaching capacity. For example, by creating curriculum resource positions, the administration provides access to formal teacher leadership for instructional improvements; this task helps to build human capital (teacher knowledge and skills). In addition, by scheduling common meeting times among staff, the administrative leadership provides opportunities for teachers to interact with a focus on instruction; these leadership tools helped to build social capital (interactions based on instructional improvement) and human capital. Through this lens it is evident that teachers have opportunities to seek help from formal teacher leaders, as well as from informal teacher leaders within their network of peers.

This study values the distribution of leadership in situations where teachers directly seek nuggets of knowledge from their colleagues (e.g., an exchange where one teacher learns from another about how to retrieve data for a specific class by student standard). It builds on research that recognizes the value of distributing the responsibility for leadership functions among formal teacher leaders (Camburn et al., 2003; Mangin, 2006; Murphy, 2005). It confirms that, to stimulate the school reform climate, distributed leadership tasks must be decisively concentrated around the academic curriculum and instruction.

However, this study also sheds light on variations in the perceived value and roles of formal and informal teacher leaders. I extend the lens on distributed leadership to capture leadership that occurs through informal socio-professional exchanges among the teaching staff. In doing so I offer a new and deeper understanding of how leadership is distributed in situations involving followers seeking leadership expertise in content areas. This is significant because, more experienced teachers are more likely to improve their teaching capacity by informally seeking their peers for their expertise in instructional matters. Newer teachers improved their teaching capacity through the expertise of formally designated curriculum resource teachers and content area specialists.

With a focus on high social capital, this study highlights sources of leadership found informally among peers. Teacher to teacher interactions are situated in close proximity to teaching and learning. The proximity of these interactions to the classroom facilitates the content and nature of these interactions such that problems of practice of individual or small groups of teachers can be addressed. When one or more individuals in the pair or group lend expertise to the discussion, they are leaders with high influence on improvements in classroom practice.

This finding has implications for the assigned tasks of formal teacher leaders and the identification of circumstances that build informal teacher leadership. It is particularly significant as principals seek distributed leadership designs to affect instructional improvements through dimensions of teaching capacity. Moreover, endorsing and increasing the decision making power of formal leaders may increase the value and access to internal expertise that will more readily improve teaching capacity through, human capital, social capital and decision capital.

Teachers seek formal and informal leadership sources to provide support for distinct tasks related to their instruction. Research suggests that the influence of formal school leaders has an indirect effect on teaching and learning (Hallinger and Heck, 2010; Leithwood et al., 2004; Leithwood, 2005). Through this study I show that to stimulate the school reform climate, leadership tasks and tools are decisively concentrated around the academic curriculum and instruction. Organizational and cultural factors, managed by the school administrators, help to mediate the effects of reforms in classroom instruction. School leaders influence priorities in instructional reform when they are talking directly with the teachers or through their presence at events that indirectly affect classroom instruction. Thus, this study also supports prior research that evidences how school leaders mediate district policy (Coburn, 2001; Goldstein 2005).

Distributed leadership is significantly beneficial when leadership activities help support teachers in developing and maintaining more effective instruction to their students (Firestone and Riehl, 2005; Spillane & Diamond, 2007; Supovitz 2006; Neumerski, 2013). In order for the leadership to affect student learning, it must have an impact on teachers. Consistent communication from the administrative leadership, affects how teachers

implement the reforms in their classroom. This study emphasizes that leadership cannot be understood in isolation from the staff and the objectives it is meant to affect. Effective instructional reform leadership, values the leadership's time and effort on activities that promote the instructional program and ways to increase the effectiveness of the teaching practice.

Administrative leadership. The study confirms previous research which suggests that goal communication is essential to influence teachers' behaviors within the classroom (Blasé & Blasé, 1999). The survey results show that teachers seek administrative leadership to: communicate instructional expectations, talk with them about instructional practices and communicate a clear vision for the school. The frequency and consistency with which the school's administrative leadership communicates reform goals influences the staff's attention to the intended reform. A lack of clear and consistent communication of goals suggests ambiguity about priorities and objectives toward achieving the goals. Ultimately, the reforms that receive visible support from the administration seem to be the reform priority. Vague or conflicting goals challenge the implementation of instructional reform. Moreover, when the processes of reform implementation, instead of the targeted reforms, become the focus of reform implementation, the goals of the reform are blurred.

This study adds to the knowledge of the principal's role in establishing priorities for instructional reform. It emphasizes the principal's role in identifying and communicating goal priorities. Studies suggest that principal leadership impacts teaching when the leadership is focused on teaching and learning, meaningful professional development, and curriculum implementation in ways that build trust (Leithwood, 1995; Leithwood & Jantzi, 1990). This study illustrated how the administrators' time needed for conducting

evaluative observations (related strictly to teacher evaluations) reduces their time and focus on supervising and monitor the actual instructional programs and their targeted effects. Teachers feel that administrative limitations on instructional initiatives communicates that some initiatives are of less value than other goals at the school. The way teachers interpret a situation and respond to the leadership influences their perceptions of reform activities and thus teaching and learning in the classroom.

Similarly, communication from the administrative leadership is essential to re-enforcing curriculum and instruction through a focus on related curricular and extracurricular activities that can influence student's academic achievement. Thus, school leaders can influence teacher knowledge and interaction through their support of activities that impact instruction, directly or indirectly. For example, administrative presence at a school activity, aimed at increasing the use of technology for teaching and learning, helps the school community identify the importance of technology in the classroom. By contrast, if the activity lacks administrative presence and support, the activity may have limited participation by staff. In other words, lack of administrative presence conveys a message that the activity is a low priority; and, widespread effectiveness of the targeted reform is compromised.

There is a growing body of research informing the educational community of the complex process that teachers undergo as they try to make sense of educational reforms and understand what is required of them (Coburn, 2001; Honig, 2006; Tyack & Cuban 1997). The school leadership implements reform policies by either fitting them into their preexisting structure and process, or by creating new structures and systems to accommodate the reform. This case suggests that pre-existing structures of collaborative

practice support teachers in making sense of information during the reform implementation process. When structures and processes focus on instructional planning, administrative efforts to maintain continuity in these structures and processes for information sharing can work to support reform implementation activities.

Formal teacher leadership. The nuances of middle school management add to the need for, both, formal and informal teacher leadership in the middle school. Coordinating the curriculum is critical because middle schools have specialized content area-based curriculum; there are various academic areas of study for each subject (e.g. algebra, algebra II, geometry, etc.). Administrators do not have the instructional expertise needed to hone in on the instructional needs of each academic field of study. Moreover, school administrators lack the time and knowledge to effectively coordinate the level of curricular and instructional engagement needed to affect the rigor expected by the CCSS teaching and learning in the classrooms.

Thus, administrative efforts increase instructional assistance through the development of formal teacher leadership tasks that provide teachers access to instructional expertise and help guide major educational improvements (Camburn et al., 2003; Mangin, 2006). As with the administrative leadership, formal teacher leaders help to communicate instructional expectations at the school. In creating formal teacher leadership positions the intent is, precisely, to relieve the administrative leadership from such tasks and make them more readily available for other administrative tasks (e.g. teacher evaluations, parent communications, meetings with state personnel, etc.).

However, I found that the administration's dependence on formal teacher leaders resulted in reduced administrative presence in the leadership of the instructional program.

The effect is to create distance between the administration and teaching staff at the school. I found that as teacher leaders aid in mediating reform implementation between the administration and the staff, a barrier is being created between teachers and the administration. Thus, ironically, teacher access to formal teacher leaders limits administrative accessibility and visibility in the instructional leadership process. This gap decreases opportunities for the administrative staff to build trust with the teaching staff.

Research on the role of trust in the teacher-principal relationship has deemed teacher trust in the principal, as less important in shared and distributed leadership scenarios (Wahlstrom and Seashore Louis, 2008). However, in this study, gaps in principal-teacher communication compromise teachers' perceptions of the strength and effectiveness of school administration in the management of instruction and instructional reforms. The distant nature of administrative leadership in activities that can influence classroom practice affects teachers' perceptions of the administrator as the spearhead of the instructional reform process. Thus, the administrative leadership was viewed as less likely to enhance teaching by providing resources in the subject area and by helping teachers to solve instructional problems.

A distributed leadership model taps into the talent and experience of specialists and teacher leaders who work alongside their teaching colleagues. Substantial developments in research on principal, coach, and teacher leadership studies confirm that formal teacher leadership affects improvements in teaching through socio-cognitive learning (Hallinger and Heck, 2010; Hallinger & Murphy, 1986; Marks & Printy, 2003).

This study confirms that formal teacher leaders are in key positions to mediate the instructional reform goals and the needs of the teaching staff. In particular, new teacher

sought teacher leaders for guidance in areas of content and instruction. As in accounts of boundary spanning, through the personalization of their engagement with teachers, the teacher leader facilitates reforms through various levels of authority (e.g. the district, the school and the classroom) (Timperley, 2005; Firestone & Martinez, 2007). To engage teachers productively, teacher leaders need the attention, time, and trust of classroom teachers. However, teacher leaders are limited when they lack support from the administrative leadership. Successful formal teacher leadership requires significant support from school principals to enable teacher leaders to exercise authority as they provide resources (Mangin, 2006).

Research on comprehensive school reform points to the value of principal support for building school-level experts and instructional leaders during school reform (Camburn et al., 2003; Mangin; 2007; Smylie et al., 2003). This study confirms that, although formal teacher leaders have some measure of expertise in a subject area, if they carry no decision making power, the tendency of the teaching staff to seek out formal teacher leaders, is limited. By not enforcing formal teacher leadership's decisions and by limiting their decision making power, school administrators limit the value that formal teacher leaders can bring to the teaching staff. This study found that formal teacher leadership was viewed as less likely to help teachers to solve instructional problems than informal leadership scenarios.

Informal teacher leadership. There is a growing knowledge base which finds that one of the most powerful ways that principals influence student learning is by developing and supporting collaborative communities of professional practice (Murphy, 2013; Supovitz et al., 2010). Leadership tools promote climate and culture and influence teaching

and learning (Elmore, 2002; Spillane, Diamond & Hallet, 2003). By scheduling collaborative time the school leadership provides an environment where beliefs and values (otherwise known as the culture) come together around instructional issues. Since the informal teacher leaders are also colleagues, climate of trust and mutual understanding is more organic than in relationships between formal leaders and staff.

Informal teacher leaders are in a good position to help teachers improve their instructional practice, thereby taking on the function of developing people—which has been linked to improvement in student learning (Leithwood et al., 2004). This is particularly the case for informal teacher leaders. I found that distributed leadership tools (such as creating and sustaining collaborative structures and processes) provide for increased communication in multiple areas to affect improvements in instruction, while building a climate of learning among the teaching staff. Thus collaborative scheduling may be viewed as a leadership tool that supports teachers as they make sense of instructional reforms in their practice. It provides a forum in which teachers seek peers as leaders to: encourage them to try new ideas; discuss their instructional practices; provide resources that enhance their teaching in their subject area; and help solve instructional and class management problems.

Previous studies found that teachers seek one another for various reasons, including, proximity, perceived expertise in an area, and peers whom they trust (Coburn and Russell, 2008; Supovitz, 2008). This study adds to the research by showing that teachers overwhelmingly seek out fellow teacher leaders, informally, for various instructional leadership activities, including: encouragement, conversations, resources, solving problems and, classroom management. Informal teacher leaders enhance teaching

by providing resources and resolution to teachers' specific needs and concerns with a level of specificity that individual teachers are seeking to influence their instruction.

The organic development of informal teacher leaders in teacher planning meetings encourages professional learning through opportunities for discussion and dialogue. In these settings, where exchanges among teachers are both social and professional in nature, teacher leaders are especially well situated to prompt and guide discussions focused on instructional issues and developments that can also result in instructional coaching (Gallucci, 2008). In this way, professional development is situated in problems of practice for individual teachers and small groups or teams.

The interdisciplinary structure of middle schools oftentimes accommodates distributed leadership dynamics, and indeed takes advantage of the social and professional capital created by the structure. In this study teachers seem to spend a lot of time communicating with peers within their grade level and discipline; this social capital is, itself, a distributed leadership tool for reform implementation.

Relationship between leadership and teaching capacity. Research identifies the effects of principal leadership on student achievement and effects of distributed leadership on school capacity (Hallinger and Heck, 2010; Youngs and King, 2002). Moreover, literature on building teacher's instructional capacity highlights: teachers' knowledge and skills, technical resources, professional community, principal leadership and trust at the school level, data-based decision making, and peer assistance (Newmann, King and Youngs, 2000; Young and King 2003; Cosner 2009; Copland 200; Goldstein 2003). However, current empirical research on the effects of distributed leadership and building teaching capacity lacks details from the educational environment that would shed light on the

construction of teaching capacity. Such qualities that construct dimension of teaching capacity are a focus us in this study.

This study begins to address how school leadership contributes to dimensions of teaching capacity (teaching potential) that may affect instructional improvements and enhance student learning. I employed grounded theory here because previous research has identified particular variables or constructs for school capacity (Copeland, 2003; Youngs and King, 2002). However, theories have not speculated on the relationship between distributed instructional leadership and dimensions of teaching capacity. The study findings confirm human capital, social capital and decision capital as dimensions of teaching capacity. They also show that these dimensions of teaching capacity weight differently in their ability to influence classroom practice. Dimensions of teaching capacity (human capital, social capital and decision capital) were identified and confirmed through the interrelatedness of survey items representing teacher perspectives and behaviors. These are statistically linked to instructional leadership support.

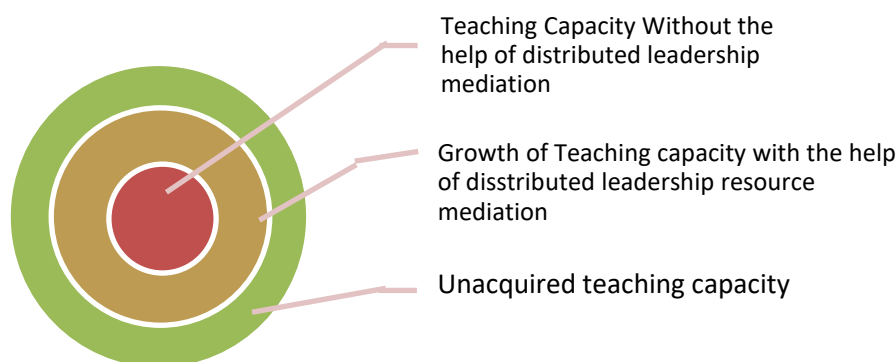
In this study, distributed leadership implies a social distribution of leadership where the leadership function is stretched over tasks, tools and interactions of multiple leaders (Firestone, 1989; Spillane, 2002). It captures how various types of leadership share in the responsibility and function of guiding improvements in teaching and learning. Structures that use formal teacher leadership as a mediator between instructional leadership and the practice of teaching can be informed by the Conceptual Framework of Teaching Capacity depicted in this study.

Teacher leaders have greater access and a more direct impact on teachers, and thus on teachers' instructional practice. The presence and practice of this accessibility

generates opportunities for teachers to interact on matters that affect instructional improvements (otherwise known as social capital). In turn, the interactions that result from this social capital can generate human capital (in the form of teacher knowledge and improved disposition to learning). Decision capital occurs when teacher's knowledge and experience enables them to reflect and make good judgements about variables in their environment; such as, resources, techniques and strategies. When leadership tasks, tools, and exchanges foster social, human, or decision capital teachers capacity is increased.

The concept of teaching capacity can be likened to the zone of proximal development, wherein increasing the teachers zone of proximal development is the difference between what the teacher can do without help and what he or she can do with help (Vygotsky 1978). Figure 5-1 presents a model of distributed leadership on teaching capacity.

Figure 5.1:
Teaching Capacity – Modeled with Vygotsky's Zone of Proximal Development



Developing high quality teaching in large scale school reform requires a focus on individual capacity within the collective and collaborative educational system. When teacher's capacity increases they are more likely to affect improvements in the teaching and learning that occurs in their classroom. Thus, identifying the key dimensions in the

construction of teaching capacity allows leadership to increase student learning and achievement by supporting elements in the educational environment that harness human, social and decision capital—teaching capacity.

There is a need for leaders in middle schools to better understand how distributed leadership can influence human, social and decision capital in teaching. Through this study I attempt to provide more direct links between leadership and the teacher's ability to affect growth in student performance.

Constraints to promoting school climate through distributed leadership. The work of leading learning improvement in schools cannot be understood without close attention to the influence of the larger policy environment with which the school interacts on a daily basis. These influences from the external environment may or may not be consistent or coherent with school leadership practices. They present school leaders with demanding environments and create issues for school leaders related to: identifying and prioritizing, interpretation of the reform message, and the development of systems and processes for implementation. School leaders must be able to attend to multiple dimensions of a learning agenda at the same time.

The identification of school goals is facilitated and associated with the implementation of state mandates. Thus, the implementation of the CCSS, the achievement of PARCC readiness, and the implementation of teacher evaluation systems are inescapable goals in most schools. Emphasis on these goals can cloud, and even inhibit, the implementation of goals that have been identified at the school level. This incoherence can effect uncertainty in staff priorities and challenge the staff's focus on goals toward increased student achievement.

Moreover, a lack of full information and clear implementation plan for sweeping state initiatives creates a focus on understanding the process of the implementation rather than on the intended reform outcomes. Confusion and uncertainty about the implementation of state reforms undermines the leadership and teaching staff's ability to focus on reform goals that the school has identified for the year. In schools throughout the country, major state education policies are being simultaneously implemented and regulated through accountability systems. These accountability reforms are in their infancy, requiring schools to focus on the implementation processes as school goals.

Given the increased rigor of standards, the process of improving teaching and learning is lost in the complexity of trying to weave program improvements into pre-existing structures, norms and values. The vague priorities and fragmented implementation of new policies can dilute the effectiveness of the school's focus on teaching and learning as a priority in the school.

Implications

Leadership and classroom instruction are at the top of the list of factors that contribute to student learning (Hattie, 2009). Leadership activities support teachers toward more effective teaching and learning. During the implementation of instructional reform, school leadership enactment must impact teaching such that teacher knowledge, skills or pedagogical practices-gained, through the reform implementation, are transferred into the classroom through enhanced instruction.

In understanding distributed leadership for effective instructional reform, it is important to identify sources of instructional leadership and how these sources support teachers in improving teaching and learning in the classroom. Prior to this study, existing

research had yet to provide sufficient focus on the dynamics of distributed instructional leadership and how it can coherently bear on instructional improvement priorities.

Working from the premise that instructional leadership should affect teaching capacity, I developed a conceptual framework that associates distributed instructional leadership with teaching capacity. Teachers are the mediating link between school leadership and instructional reform in the classroom. Therefore, in this study I focused on teachers' perceptions of distributed school leadership and dimensions of teaching capacity during the implementation of instructional reforms in one school.

The findings of this study suggest that instructional reform implementation is mediated by a variety of leadership activities that are distributed among tasks, tools and situations found in the educational environment. Some leadership tools, such as scheduling and departmental restructuring, are intentional and manipulated by the school administrator, or principal. However, beyond the hierarchical structure of administration and teachers, there exist layers of leadership sources and functions that affect teachers and their ability to affect growth in student learning.

Some of these leadership activities involve informal relationships and exchanges among staff, where one or more staff members are sought for their expertise in one area or another (Smylie & Hart, 1999; Spillane, et al., 2003). Thus, situations in which the expert ideas are communicated and exchanged become an essential component of leadership in practice. All three leadership media – tasks, tools and situations – are inextricably interwoven and work holistically to affect instruction. Therefore, levels of administrative and teacher leadership (both formal and informal) are at play, in a variety of processes and

forums, both intentional and unintentional, to affect improvements in teaching and learning.

I found that sources of leadership include administrators, formal teacher leaders and informal teacher leaders. These sources of leadership weight differently on their ability to influence, or support, teachers. The variation on their ability to influence classroom instruction may be linked to the type of interactions each source of leadership has with teachers. Teacher contact with administrators is limited; yet, teacher's seek administrative leadership for decisive information about goals and expectations. Teacher contact with formal, or positional, teacher leaders is greater with newer teachers who seek support and guidance from teacher leaders who have been identified, as resources, by the school administration. Finally informal exchanges among peers, which stem from peer expertise on issues related to classroom practice, are common.

I suggest that the task of administrative leadership must include development of structural processes and procedures that allow formal and informal leadership to focus on instructional practices. I also suggest that through their presence and prominent endorsement of secondary activities that build climate and community, the school administrative leadership identifies and prioritizes goals and resources. These activities can affect teaching and learning, either directly or indirectly. Thus, distributed leadership should focus on refining educational leadership strategies to manage human, social and decision capital, such that teaching capacity can affect instructional improvements.

I offer a grounded theory that confirmed a significant association between leadership and components of teaching capacity. In this study, teaching capacity is a conduit between distributed school leadership and instruction. I identify human capital,

social capital and decision capital, as the three dimensions of teaching capacity that were statistically correlated with distributed school leadership during instructional reform. This is important for instructional leadership in schools because it identifies areas where school leadership could more greatly impact teaching and learning in the schools. Through this study I hope to build connectivity between research on distributed instructional leadership and enhancements that affect instructional improvements.

Research supports learning efforts that occur in teachers' daily practice (Wenger, 1998). Collegial leadership interactions contribute to the quality of teachers' learning and have the potential for change and innovation as teachers develop shared values and create meaning together. School administrators should establish and maintain norms of interaction among teachers and school leadership that engage and promote teachers in discussion of instructional quality and improvement. Future research should explore how school administration can actively build distributed leadership structures and relationships in ways that will build teacher's ability to: make good judgements (decision capital); gain knowledge and disposition toward instructional improvements (human capital); and, engage in meaningful collegial interactions (social capital).

Increased student expectations raise the stakes for teachers through greater accountability. Accountability reforms are a catalyst for broadening the perspective on leadership to include informal and more subtle paths of instructional leadership, such as: tools, tasks and situations. The challenges associated with the changing nature of distributed leadership in the high-accountability environment are not well documented. However how teachers make sense of instructional reforms is largely dependent on school

leadership's implementation of the reform. Distributed leadership can provide direction, guidance, and support that enable or inhibit teachers to improve teaching and learning.

Administrative leaders seek to extend their reach through: formal teacher leaders who act as coaches, in-house staff developers, and model teachers. Through a distributed perspective, informal teacher leaders emerge in paired or small group exchanges that capitalize on individual expertise. These sources of school leadership contribute differently to reforms in classroom instruction with informal teacher leaders having the most direct effect on instructional reform implementation in the classroom.

The findings of this study suggest that administrative leadership should emphasize consistency in program coherence and communication of instructional reform priorities that focus on the intended reform goals. Moreover, understanding the context of distributed school leadership for instructional reform is vital. Administrative leadership should focus on strengthening formal teacher leadership and creating situations where informal leadership emerges. By expanding opportunities for the school leadership to affect human capital, social capital and decision capital, the school leadership can affect teaching and learning in the classroom. The main implication here is that as distributed school leadership implements instructional reforms, leadership activities should foster and support dimensions of teaching capacity—which have the potential to effect improvements in teaching, and thus in student learning.

Summary

This study was developed to explore an innovative conceptual framework on leadership and teaching capacity. Through the study I offer a lens with which to examine the influence of school leadership on dimensions of teaching capacity. This investigation

corroborates previous research that suggests that when distributed leadership is focused on instruction, it fosters a learning environment centered on instructional improvements. The implication is that instructional reforms may be mediated by distributed leadership that focuses on dimensions of teaching capacity.

Through this investigation I examine the process of distributed leadership as it is used to implement policies that emphasize instructional improvements. Though policy influence was not a direct focus of the study, it is apparent that the current policy landscape—of teacher evaluation and curriculum reform—is a major underlying force affecting the way school leadership exercises instructional leadership. In this regard, my research sheds light on leadership development as a process, not an event. The findings relate to school leadership and capacity building activities at an early stage of policy implementation. They suggest that the complex work of leading a learning improvement agenda requires a phased policy implementation in which the wider policy objectives are coherently interwoven with local school goals.

Three major findings highlight this study. First, leadership is distributed formally and informally, among tasks, tools and situations that significantly affect teachers. Second, teachers seek administrators and other positional leaders to communicate expectations and provide resources that impact their teaching. They look to informal teacher leaders within their peer groups for encouragement, practical support, and resources in areas that are more intimately related to their classroom instruction. A third major finding is that dimensions of teaching capacity could be identified in three areas (human capital, social capital and decision capital). Dimensions of teaching capacity can be manipulated by leadership to provide instructional support and increase teaching capacity during reform

implementation. The implication is that school leadership could identify and refine reform activities, to affect classroom instruction.

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Appendices

Appendix A: Administrator Interview Instrument

Gender: M F Years as an administrator: _____ ...in this school: _____

1. What type of leader are you? What leadership moments are you most proud of?
2. What have been your main goals and priorities for this past school year and the next few years? Why do you consider these important for the district/school at this point?
Can you share an example of how you would like to improve/change or move forward as a leader.
3. Who do you consider an effective leader? Why?
4. How do teachers assume leadership roles at your school?
5. Describe what you consider to be the two or three most important and effective leadership activities you have seen over the past few years. As you describe the activities, please indicate their main goals, the staff who participated, the amount of staff time they occupied, and the kind of work staff did as they participated in them.

How have these activities contributed to your school's goals to improve instruction and student achievement?
6. In what ways, if any, do you depend on expertise, materials and/or contributions from projects or agencies external to the school?the district administration ?
.....teachers?other administrators? Who and why?
7. What challenges the improvement of teaching practice/instruction at this school? (structure...process...knowledge /professional development...attitudes... decision making - examples..) Can you provide examples for each?
8. What promotes the improvement of the teaching practice/instruction at this school? (structure...process...knowledge /professional development...attitudes... decision making - examples..) Can you provide examples for each?

Thanks for your assistance!

Teacher Interview Instrument

Grade and Subject: _____

Gender: M F Number of years Teaching: _____

Leadership Team: Y N Number of years In this school: _____

My main interest is in understanding how school leadership has contributed, if at all, to your instructional practices. By school leadership, I mean any formal or informal people/activities that guide you in your teaching practice (advance staff knowledge, skills, attitudes, expectations, etc. in order to improve student learning). These include administrator, teacher leaders, colleagues. Teaching practice could include common planning and released time to work on instructional practices, curriculum or assessment in your school; networking with teachers in this school or from other schools, etc. Given this broad definition, we have a number of questions about leadership/guidance in this school.

1. How would you describe the school's central mission and major goals? What are the most important programs and activities in place to help in achieving the mission? To what extent do teachers agree with these priorities and are committed to achieving them?

- 2a. Schools often pursue many different initiatives to improve, and for many schools these tend to be fragmented and not well coordinated. What is the school's approach to supporting instructional improvement?

From a leadership perspective, who is essential in furthering the school's mission and goals. Have leadership structures, processes of decision making actually contributed to achieving the school's mission and goals? If so, how?

- 2b. Tell about recent changes in leadership structures, processes and decision making that actually contributed to achieving the school's mission and goals?
3. 3a. When considering whether to take advantage of potential assistance from your school leadership, do you insist that they meet any particular conditions to increase your comfort and use of them? In other words, what conditions make you comfortable to reach out for resources or assistance? ...from whom do you seek this assistance?

3b. Please describe what you consider to be the most important and effective (leadership) activity/decision you have seen or participated in over the past year. That is, tell us about the activity/decision that you consider to have had the most positive impact on your instruction and as a teacher. As you describe this, indicate

its main goals, who participated, the amount of time, the kind of work you did, and what you gained from it (e.g., new knowledge, skills or attitudes).

4. Beyond the activities just described, have there been any other (leadership) activities in the last few years that you think have had significant impact on student learning? If so, please describe these (i.e. main goals and activities, the staff who participated, the amount of time, and what was gained).
5. To what extent are faculty members involved in decision making about the nature and direction of instruction at the school? What has been your own involvement in these kinds of decisions? Has there been disagreement among the faculty on these kinds of decisions? If so, how has this disagreement been handled?
6. Has leadership been more effective for some teachers and some students than others? In other words, who may be missing out on its potential positive effects?
7. How many colleagues do you rely on consistently for feedback and constructive criticism on teaching, curriculum, and assessment? Please describe a recent experience with colleagues in which you experienced productive professional dialogue.
8. If you had the opportunity to improve the current program of leadership that would help to support you in providing and/sustaining quality in your instruction, what would you change /add/keep? Why?

Thanks for your assistance!

Appendix B: Leadership and Teaching Capacity Survey Questionnaire

Q0 Hello! Your response will advance research and practice in teaching capacity and educational leadership. The following questions focus on: curriculum (what you teach and the resources you use), instruction (how you teach it), and school leadership (administrator, supervisor and teacher). The survey should take about 20 minutes. Thank you for your contribution!

School Curriculum & Inquiry Practices

Q1 Please indicate how strongly you agree or disagree with the following statements regarding the reform climate in your school.	Strongly Disagree (1)	Disagree (2)	No Opinion (3)	Agree (4)	Strongly Agree (5)
a. This school has made curriculum changes designed to better meet the needs of our diverse student body (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. This school has a clear vision of instructional reform linked to the common core standards for student learning and growth (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Teachers in this school regularly examine student performance on core curriculum standards (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Teachers in this school collect and use student performance data on the common core curriculum to improve their teaching (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Assessment of student performance leads to changes in the implementation of the curriculum in my classroom (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Influence Over School Policy

Q2 At this school, how much actual influence do you think you have over school policy in each of the following areas?	No influence (1)	Minimal influence (2)	Moderately influence (3)	Influence (4)	Extremely Influential (5)
a. Setting discipline policy (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Establishing curriculum (strategies, skills and resources) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Determining the content of professional development programs (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Deciding what teacher meetings will focus on (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Deciding how the school budget will be spent (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Control in Your Classroom

Q3 At this school, how much control do you feel you have in your classroom over each of the following areas of your planning and teaching	No control (1)	Slight control (2)	Moderate control (3)	Much control (4)	Complete control (5)
a. Selecting textbooks and other instructional materials (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Selecting content, topics, strategies and skills to be taught (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Selecting teaching methods (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Determining the amount of homework to be assigned (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Disciplining students (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Professional Development Climate

Q4 Consider the professional development climate in your school. To what extent do you agree or disagree with each of the following?	Strongly Disagree (1)	Disagree (2)	No Opinion (3)	Agree (4)	Strongly Agree (5)
a. When my school decides upon a change, the change is supported with professional development opportunities. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Most professional development at this school enables us to build on our current teaching experience. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. This school draws on the current base of teacher knowledge and practical experience as resources for professional development. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Teachers in this school help one another put new ideas, from professional development activities, to use. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Professional Teaching Climate

Q5 Now consider the professional teaching climate in your school. To what extent do you agree or disagree with each of the following statements?	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
a. Teachers in this school are continually learning and seeking new ideas to improve instruction (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Teachers maintain high standards of performance for themselves. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Teachers in this school exhibit a focused commitment to student learning. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Teachers take steps to solve problems, they don't just talk about them (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Teachers feel responsible to help each other do their best (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Teachers in my department trust each other (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Information to make informed instructional decisions is readily available to teachers (e.g., about student performance, resources, etc.) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Frequency of Meetings

Q6 During the last month, how often did you participate in formal meetings (e.g., department/staff/district meetings) with other teachers related to the following?	Once or less (1)	2-3 Times (2)	Once a Week (3)	2-3 Times a Week (4)	Daily (5)
a. Understanding and addressing Common Core State Standards (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Identifying skills students need to achieve curriculum goals (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Developing and accessing materials and lessons needed to address the curriculum (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Teaching techniques and student activities to address curriculum (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Reviewing ideas to assess student learning (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Reflection of your instructional practice and/or setting future professional goals (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q7 During the last month, how often did you participate in informal meetings with other teachers related to the following?	Once or less (1)	2-3 Times (2)	Once a Week (3)	2-3 Times a Week (4)	Daily (5)
a. Understanding and addressing Common Core State Standards (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Identifying skills students need to achieve curriculum goals (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Developing and accessing materials and lessons needed to address the curriculum (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Teaching techniques and student activities to address curriculum (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Reviewing ideas to assess student learning (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Reflection of your instructional practice and/or setting future professional goals (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8 Over the past year, when you planned lessons, activities, assessments, etc, with other teachers, when did MOST of this collaboration take place?
(Choose one only)

- ☐ a. During formal meetings (1)
- ☐ b. During contracted planning time (2)
- ☐ c. Informal encounters during the school day (3)
- ☐ d. After school on your own time (4)
- ☐ e. Does not apply (5)

School Leadership

Q9 Consider each of these statements about administrative and/or teacher leadership in your school. To what extent do you agree with the following statements?	Strongly Disagree (1)	Disagree (2)	No Opinion (3)	Agree (4)	Strongly Agree (5)
a. Leaders in my school create structure, time and resources to support adult learning. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Leaders in my school help teachers develop and maintain high standards. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Leaders in my school help teachers use information about student achievement relative to standards in order to improve instruction. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Leaders in my school enable the staff to discover common ground and shared values. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Leaders in my school challenge others to find, clarify and solve problems. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Leaders in my school use authority to create ways for everyone to have voice and power. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Leadership Sources of Support

Q10 Consider each of these statements with regard to each of the school leaders listed. Mark all those with which you would AGREE or STRONGLY AGREE.	Administration (1)	School Leadership Team / ScIP (2)	Curriculum Resource Teacher (3)	Reading Specialist/ Math Specialist (4)	Other Colleague (5)
a. Communicates the instructional expectations to staff. (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Has a clear vision for the school and communicates this to the staff. (5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Encourages me to try out new ideas in teaching. (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Talks with me occasionally about my instructional practices. (3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Enhances my teaching by providing me resources in my subject area. (4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Enhances my teaching by helping me solve instructional problems (e.g. clarify student misconceptions or the common core curriculum, etc.) (6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Helps me improve my teaching by helping me solve class management problems. (7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Modification to Instruction

Q11 In the past year, did leadership, professional development or collaborative activities in the following areas lead to modifications in your instruction (Strongly disagree, Disagree, No opinion, Agree, Strongly agree)?

If AGREE or STRONGLY AGREE answer question B.

Activity Areas	Happy	Somewhat Happy	Neutral	Somewhat Sad	Sad	Not Effective	Slightly Effective	Moderately Effective	Effective	Very Effective
a. Core ideas of my subject/content area (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/> Not Effective	<input type="checkbox"/> Slightly Effective	<input type="checkbox"/> Moderately Effective	<input type="checkbox"/> Effective	<input type="checkbox"/> Very Effective
b. Techniques of classroom discussion (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Direct instruction (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Student reasoning / critical thinking (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Student Assessment (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Knowledge of student (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Common Core Standards (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. PARCC assessment (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Time on Specific Teaching/Learning Activities

Q12 With 100% as a total, what percent of your classroom teaching and learning time involved the following?

- _____ a. Hands-on activities, problem-based learning, cooperative learning, research, and other student-centered learning. (1)
- _____ b. Student-to-student talk/conversations that help students construct knowledge. (2)
- _____ c. Listening and responding to teacher talk, lecture, direction-giving and/or questioning. (3)
- _____ d. Working independently or in cooperative work group, with teacher support to complete task on worksheets/documentation or fact-finding in books and resources. (4)
- _____ e. Working on teacher assigned work independently with minimal or no teacher support. (5)

Demographics

Q00 Just a few more questions about you... These questions will help to analyze the information by different teaching groups (e.g. grade and discipline).

Q13a I teach...

- ☐ 6th grade (1)
- ☐ 7th grade (2)
- ☐ 8th grade (3)

Q13b Click to write the question text

- ☐ Language Arts (1)
- ☐ Math (2)
- ☐ Social Studies (3)
- ☐ Science (4)
- ☐ Special (e.g. P.E., Health, World Language, Technology) (5)
- ☐ Other (6) _____

Q13c My primary position is...

- ☐ Teacher (1)
- ☐ Other (2) _____

Q13d I am part of the School's Formal Leadership Team (e.g. SciP, DEAC, CRT, Reading Specialist, Math Coach, etc.)...

- ☐ No (1)
- ☐ Yes (2)

Q13e The highest level of education I have completed is..

- ☐ 4-year College Degree (1)
- ☐ Master's Degree (2)
- ☐ Masters +30 (3)
- ☐ Doctoral Degree (4)

Q14a Gender:

- ☐ Female (1)
- ☐ Male (2)

Q14b I have been an educator for...

- ☐ 0-3 years (1)
- ☐ 2-4 years (2)
- ☐ 5-8 years (3)
- ☐ 9-14 years (4)
- ☐ 15 years or more (5)

Q14c I have worked at this school for...

- ☐ 0-3 years (1)
- ☐ 2-4 years (2)
- ☐ 5-8 years (3)
- ☐ 9-14 years (4)
- ☐ 15 years or more (5)

Q15 One last optional question...people define professionalism in a variety of ways. In your opinion, what does it mean to suggest that a teacher demonstrates a high degree of professionalism?

Thanks for your assistance!

Appendix C: Consent Form to Participate in the Research Study

My name is Cecilia I. Crespo. I am a graduate student at Rutgers University. As a member of the Middle School staff and administration you are invited to participate in a research study. The purpose of this study is to explore the role of school leadership in building teaching capacity at the middle school level. The study consists of a staff-wide survey, and interviews and focus groups with selected participants. Thank you for your willingness to participate.

Participation in the study will involve the following:

1. Approximately 8 to 10 interviews, lasting approximately 30 to 40 minutes. Some follow up may occur via phone or email at the option of the participant.
2. Two focus groups will be conducted, each lasting between 45-60 minutes and including 6 to 10 participants.
3. A confidential on-line survey of all staff and administrators that should last between 15 to 20 minutes.
4. This informed consent form pertains to the survey, interview and focus group.

Confidentiality:

This research is confidential. Confidential means that your identifiable information, such as your name, will not be revealed in any report of this study. If you agree to take part in this study, your information will be assigned a code. A “master list” linking the code to your identity will be maintained only by me and stored in a locked file cabinet. As I process the data any names used during interviews and focus groups will be replaced with pseudonyms and numeric codes. Therefore, the data collected during this study is confidential.

My research team and the Institutional Review Board at Rutgers University are the only parties that will be allowed to see the data, except as may be required by law. A published report of this study will not contain identifiable information. All study data will be kept in complete confidence for one year from the time of this study.

Risks/Benefits:

There are no foreseeable risks to your participation in this study. Participation may not benefit you directly and poses no known risks to you or your job. For participating in this study, you will receive no monetary compensation. However, the knowledge that we obtain from your participation, and the participation of other volunteers, may help us to better understand teaching and learning in middle school education and education leadership.

If a report of this study is published, or the results are presented at a professional conference, only group results will be stated, unless you have agreed otherwise.

“Subject’s Initials _____”

Alternatives to Participation:

Your participation in this research is voluntary. You may refuse to answer any questions with which you are not comfortable, and you may withdraw from the study at any time. If you

withdraw from the study before data collection is complete your data will be removed from the data set and destroyed.

If you have any questions at any time about the research or the procedures, you may contact me, Cecilia Crespo as the Primary Investigator at 732-991-9210 or my faculty advisor, Dr. Bruce D. Baker, at 10 Seminary Place, New Brunswick, NJ or 848-932-7496 x8232.

If you have any questions about your rights as a research subject, you may contact the IRB Administrator at:

Rutgers University Institutional Review Board for the Protection of Human Subjects
Office of Research and Sponsored Programs 3 Rutgers Plaza New Brunswick, NJ 08901-8559 Tel. 848 932 0150 Email: humansubjects@orsp.rutgers.edu

Please sign below if you agree to participate in this research study. You will be given a copy of this form to keep.

Subject (Print): _____

Subject's Signature _____ **Date** _____

Investigator's Signature _____ **Date** _____

Consent to be Audio-Recorded:

With your permission, your interview and/or focus group will be audio-recorded, which will supplement my notes and allow me to have more accurate data. The audio files will be used only for this study, kept confidential, stored in a locked file cabinet and will be destroyed after the accuracy of the transcription has been verified. Your permission for audio-recording is required in order to participate in an interview or focus group. Please sign below if you agree to have the interview audio-recorded.

Subject's Signature _____ **Date** _____

Appendix D: Initial Factor Analysis

ROTATED COMPONENT MATRIX	Factors		
	1	2	3
Q1. REFORM CLIMATE			
c-Teachers in this school regularly examine student performance on core curriculum standards	.60	0.15	0.15
d-Teachers in this school collect and use student performance data on the common core curriculum to improve their teaching	.54	0.18	0.24
e-Assessment of student performance leads to changes in the implementation of the curriculum in my classroom.	.36	.28	.08
INFLUENCE OVER SCHOOL POLICY IN...			
a. Setting discipline policy	0.21	.60	0.36
b. Establishing curriculum (strategies, skills and resources)	0.18	.72	0.27
c. Determining the content of professional development programs	0.15	.51	.48
d. Deciding what teacher meetings will focus on	0.21	.55	.54
e. Deciding how the school budget will be spent	-0.03	.49	.56
Q2. CONTROL IN YOUR CLASSROOM OVER			
a. Selecting textbooks and other instructional materials	0.11	.69	0.04
b. Selecting content, topics, strategies and skills to be taught	0.02	.63	-0.01
c. Selecting teaching methods	0.05	.60	-0.28
d. Determining the amount of homework to be assigned	.15	.38	-.40
e. Disciplining students	.01	.51	-.32
Q3. PROFESSIONAL DEVELOPMENT CLIMATE			
a. When my school decides upon a change, the change is supported with professional development opportunities.	.15	.58	.31
b. Most professional development at this school enables us to build on our current teaching experience.	.08	.62	.38
c. This school draws on the current base of teacher knowledge and practical experience as resources for professional development.	.02	.63	.30
d. Teachers in this school help one another put new ideas, from professional development activities, to use.	.62	.25	.16
Q4. PROFESSIONAL TEACHING CLIMATE			
a. Teachers are continually learning and seeking new ideas to improve instruction	.68	.00	.27
b. Teachers maintain high standards of performance for themselves.	.77	-.03	.14
c. Teachers exhibit a focused commitment to student learning.	.80	-.03	.10
d. Teachers ... solve problems, they don't just talk about them	.84	-.01	.20
e. Teachers feel responsible to help each other do their best	.77	.11	.16
f. Teachers in my department trust each other	.68	.08	.04
g. Information to make informed instructional decisions is readily available to teachers (e.g., about student performance, resources, etc.)	.57	.45	.17
Q5. FREQUENCY OF FORMAL MEETINGS			
a. Understanding and addressing Common Core State Standards	.22	.24	.77
b. Last month, formal meetings with other teachers..-b. Identifying skills students need to achieve curriculum goals	.31	.14	.78
c. Developing and accessing materials and lessons needed to address the curriculum	.33	.04	.82
d. Teaching techniques and student activities to address curriculum	.30	.09	.80
e. Reviewing ideas to assess student learning	.27	.07	.83
f. Reflection of your instructional practice and/or setting future professional goals	.35	.09	.80
EIGENVALUES	10.10	3.57	2.87
PERCENT OF VARIANCE	18.97	16.55	19.58
CUMULATIVE VARIANCE	18.97	35.53	55.11

The table above provides the results of an initial principal component factor analysis. It resulted in the fitting of 30 items into three factors, with 28 loadings above .40. The loading numbers represent the correlation of the test item with the factor. Working with underlying theory in factorization two items with loadings below .40 (Q1e and Q3d) were determined to be weak indicators for this study and were suppressed. As theory indicates, the three factors can be highly correlated because aspects of teacher interactions (social capital) affect teacher knowledge and dispositions (human capital) and decision making (decision capital). Thus four items (Q2c, Q2d, Q2e and Q5g) had multiple strong loadings among two of the three factors. These items (determining PD content, deciding on the agenda for teacher meetings and deciding on the school budget, and information readily available to make informed decisions) do not allow a distinct correlation for one of the three factors; they too were suppressed from the final factor analysis. Table 4.4 presents the final results of the factor analysis.

A second principal axis factor analysis was conducted on the remaining 24 items. Three factors were identified with Eigenvalues above one. Each of the 24 items loaded strongly on only one factor; loadings were of .40 or higher. The three factors explain 54% of the variance. Factor one, human capital, consists of nine items, with all items loading from .40 to .85. The nine items that make up the human capital factor are conceptualized as indicators of the instructional reform climate, teacher professional development, and the teacher professional disposition to instructional initiatives. Factor two, decision capital, consists of nine items, with all items loading from .41 to .73. These nine items are conceptualized as indicators of influence, over school policy, control in the classroom and professional development climate. And factor three, social capital, consists of six items

with all items loading from .68 to .90. The six items that make up decision capital were all conceptualized as indicators of, the extent to which teachers meet about various instructional ideas. Alpha reliability coefficients were computed for each of the three factors: human capital (alpha .88); decision capital (alpha .83); and social capital (alpha .96). Table 4.4 shows each dimension's items, alpha coefficient, and factor loadings.

Human capital consists of the accumulation of all prior investments in education, on-the-job training, health, migration, and other factors that increase the individual teacher's productivity. Economic theories have long understood the value of returns on the investment of human capital as a critical contributor to the organizations product. Teachers were asked questions that measured the extent to which reforms; professional development and professional climate affect teacher knowledge and disposition. One of these questions (Q.1e) was eliminated from the analysis because it carried loadings below .40. Another question (Q.4g) was eliminated because it loaded fairly high on two of the three factors. Three additional items (Q.3a, 3b and 3c) carried loadings from .02 to .15 on the factor measuring human capital, factor 1. However, the items loaded between .58 and .63 on Factor 2, the factor assessing the dimension of decision capital in teaching capacity. The items remained in the construct but were used to operationalize human capital of the theoretical construct. The remaining items carried loadings between .57 and .84. The eigenvalue for the human capital dimension was 4.6, indicating a good number of relationships, intercepts among the items and respondents, which are caught within that pathway.

To assess social capital, teachers were asked questions that assessed the extent to which teachers met to discuss curriculum, students or teaching. One of these questions was

eliminated from the analysis because it carried loadings below .40. The remaining items carried loadings between .77 and .83. The eigenvalue for the decision capital dimension was 2.87. To assess decision capital, teachers were asked questions that assessed the extent to which teachers felt they had influence over school policy and control in their classroom. One of these questions (Q3.d) was eliminated from the analysis because it carried loadings below .40. Another question (Q.2c, 2d and 2e) were eliminated because they loaded fairly high on two of the three factors. They were therefore dropped from to decision capital construct.