Title
Illuminating the Construct of Managerial Ambidexterity in the Context of Public School Improvement

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Publication Date
2012

Peer reviewed|Thesis/dissertation

Illuminating the Construct of Managerial Ambidexterity in the Context of Public School Improvement

By

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A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

Education

in the

Graduate Division

of the

University of California, Berkeley

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Fall 2012

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Abstract

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Principals must cope with the pressures arising from accountability while enabling flexibility in teachers' work. How do principals manage these tensions when attempting to improve their schools? And where are these tensions most commonly centered? Both questions relate to *managerial ambidexterity*, or how principals simultaneously advance coordination and flexibility to motivate teachers. The process of managerial ambidexterity is not well understood either conceptually or empirically in the school and management literature. To investigate the topic, I take an exploratory and qualitative approach. Through an investigation of 15 school principals, I find that their managerial ambidexterity strongly resides in resolving tensions located between performance-based accountability and the professional autonomy of the teacher. To resolve these tensions, principals use three methods, including affective appeals, cognitive interpretation, and the use of data. I link these methods to specific profiles of schools where principals engage in their managerial ambidexterity differently. Principals' perceptions of their context act to condition which methods are employed. I describe these school-levels contexts as layering in political schools, drops of control in low systems schools, matching in high systems schools, and masking in humanist schools. My findings show how some principals develop their organizations differently through various forms of ambidexterity enactment.

Acknowledgments and Dedications

To my mother who went into that gentle night and who will never be forgotten
To my father for his support of women's education and particularly of mine
To my brother for your eccentricity, thank you for making me smile
To the POME faculty and my committee for their continued support of my work
To Martha's Brothers' coffee for keeping me awake and nocturnal
Most especially to the principals whose time and dedication made this work possible

But friendship is the breathing rose, with sweets in every fold.

- ***Oliver Wendell Holmes***

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INTRODUCTION AND STATEMENT OF THE RESEARCH PROBLEM

Since Duncan's introduction of the term *ambidexterity* in 1976, there has been considerable attention given to how organizations manage forces that affect organizational performance. To deal with these forces, Duncan defines ambidexterity as aligning and adapting organizations for improvement; these dual functions relate to coordination and flexibility. Over 20 definitions have since emerged in management and business research with March (1991) providing the second most popular definition of ambidexterity: the need to exploit competencies while moving beyond them.

Although conceptualized differently, ambidexterity involves how best to balance management activities to advance organizational performance (e.g., Raisch & Birkinshaw, 2008; O'Reilly & Tushman, 2008; Gibson & Birkinshaw, 2004). In the ambidexterity literature, researchers commonly agree that managing for forms of coordination and flexibility are necessary (e.g., Duncan, 1976; March, 1991; Raisch & Birkinshaw, 2008; O'Reilly & Tushman, 2008).

At a management level, ambidexterity depends on people knowing how and when to initiate their control and flexibility. Yet, less of a direct spotlight is given to the actions (i.e., methods) that contribute to this process of management (Mom et al., 2009).

In this dissertation project, I look at the methods that managers use to enact ambidexterity differently. As part of this introduction, I describe what led to the emergence of managerial ambidexterity as an important area of study by examining the current gaps in the literature. I end this section by briefly explaining the relevance of managerial ambidexterity to public school research.

What Led to Emergence of Managerial Ambidexterity in Organizations Research?

The emergence of managerial ambidexterity came from existing gaps in the ambidexterity literature. These gaps include 1) focusing only on the role of the organization and not the individual, and 2) a lack of good measurement to understand how individuals contribute to ambidexterity in their organizations.

In the sub-sections below, I describe the two major traditions in ambidexterity research, which expose these gaps. I track their evolution that call for the need to study managerial ambidexterity.

Beginning with Duncan's earliest conceptualization in 1976, ambidexterity was originally understood through the structural ambidexterity approach. Structural ambidexterity defines ambidexterity as a function of its assignment to departments and units. For example, ambidexterity scholars following this approach would look at whether it is more effective for an organization to assign efficiency (i.e., alignment) to an engineering department and flexibility (i.e., adaptation) to a research and development department.

Challenges with this approach include that structural ambidexterity scholars still do not know why these assignments are effective. This is largely due an emphasis on the organization and the types of measurement used. For example, scholars use self-reports to study the effectiveness of assignments by departments, area of product, function, or through time. Effectiveness is looked at through the separation of tasks, sequentially and spatially, or by letting these tasks run in parallel (e.g., Raisch & Birkinshaw, 2008; Devins & Kahr, 2010; Andriopoulos & Lewis, 2009).

Approaches that exist under structural ambidexterity fail to understand how individuals contribute to performance. For example, we know little about how managers and their employees contribute to these ambidexterity practices. In other words, we know little about the human element involving cooperation. This human element may include not just individual actions, but also the role of individual beliefs, values, and perceptions.

For this reason, Raisch and Birkinshaw (2008) as well as Andriopoulos & Lewis (2009) offer that a secondary approach emerged in ambidexterity research. This second approach, called contextual ambidexterity, examines the importance of human values, norms, and motives in organizing. Specifically, contextual ambidexterity looks at how individuals' beliefs make ambidexterity happen. In the ambidexterity literature, Gibson and Birkinshaw (2004) are largely credited as the originators of this second approach.

To study contextual ambidexterity, Gibson and Birkinshaw's (2004) developed one of the few existing measures for its study. This measure taps into employees' beliefs about their levels of discipline (i.e., adherence) to current goals and their ability to stretch (i.e., move) beyond them; these views can affect organizational performance. In addition to measuring views about performance, the Gibson and Birkinshaw's (2004) measure also looks at how employees' perceived levels of trust and support can affect this process. Trust and support are referred to as social context factors in the Gibson and Birkinshaw instrument.

While Gibson and Birkinshaw provide the only popular measure of contextual ambidexterity, their work highlights the importance of employee perceptions and behaviors in the development of organizations.

Andriopoulos and Lewis (2009) describe Gibson and Birkinshaw's (2004) approach as having significant implications on management processes. For example, they explain that contextual ambidexterity can help find better ways to train, develop, and reward employees in order to enable ambidexterity. As part of this approach, it assumes that individuals can perform both alignment and adaptation functions based on how beliefs are constructed.

Although Gibson and Birkinshaw created one of the earliest measures that focused on this human element, further work needs to be done. For example, other studies using the contextual ambidexterity approach still rely on self-reports and/or case studies of a single firm or their units. Often these studies render invisible the tactics that managers use to construct those beliefs (Gibson & Birkinshaw, 2004).

Specifically, little is known about how individual beliefs and values are constructed that affect organizational development in ambidexterity; this is with the exception of some recent work that implicitly draws this connection (e.g., McCarthy & Gordon, 2011; Andriopoulos & Lewis, 2009; Güttel & Konlechner, 2009).

My dissertation builds on existing work by drawing a clearer connection between managers' understanding of their contexts and their ambidexterity enactment. As a third approach, Raisch and Birkinshaw (2008) offer that managerial ambidexterity can contribute to this understanding.

Mom et al. (2009) provide a formal definition of managerial ambidexterity. Specifically, Mom et al. (2009) define managerial ambidexterity as a manager knowing how and when to arrange exploitation and exploration activities in order to lift organizational performance. Arrangements of these activities are thought to affect performance of organizations. However, this take on ambidexterity is recent and remains underdeveloped.

For example, studies of managerial ambidexterity only look at its inferred effect through studies of top management teams (e.g., Carmeli et al., 2009; Beckman, 2006; Lubatkin et al., 2004), organizational practices as a function of strategic management or knowledge flows (e.g., Taylor & Helfat, 2009; Xiong, 2011), management practices that buffer or address environmental dynamism on organizational performance (e.g., Jansen et al., 2009), and the effect of certain leadership styles (e.g., transformational leadership) on performance (e.g., Jansen et al., 2008); these approaches fail to dig into the specific behaviors on the part of managers.

Equal to structural ambidexterity approaches, a further challenge is the lack of uniformity to measure managerial ambidexterity; this is despite some implied sense that it involves the use of control and flexibility to develop organizations.

The connection between how managers understand their organizational contexts and how they enact their ambidexterity is also the largest gap found in this literature. Recent work begins to investigate this connection (e.g., O'Reilly & Tushman, 2011; Tushman et al., 2011); however, this work remains high-level. Specifically, it does not detail out the methods that managers use to advance performance; this gap is the focus of this dissertation.

To address this gap, I take an applied approach to the study of managerial ambidexterity. Specifically, I investigate how public school principals enact their ambidexterity in the context of school improvement; this application has not been studied conceptually or empirically.

Why Study Managerial Ambidexterity in Public Schools?

In the context of school management and leadership studies, the need to study managerial ambidexterity is important. As complex organizations, public schools need to be managed around a variety of stakeholder demands and goals. They include how principals can tighten (i.e., align) their schools to achieve external accountability. Other demands include how principals can enable a professional learning community where new approaches can be invented and discovered (e.g., Elmore, 2000; Goldring & Rallis, 2000; Lindstrom & Speck, 2004).

As managers, principals must build capacity across diffuse stakeholders. However, these dynamics remain unknown. For example, how principals facilitate cooperation, or conversely coercion, among diverse stakeholders to advance performance is unclear. School improvement researchers highlight this lack of clarity as an implied concern in understanding school improvement as a process (e.g., Hopkins & Lagerweij, 1996).

What Areas of Study Limit the Study of School Improvement through Alternative Lenses?

Some of the current limitations, which affect understanding school improvement as a process, include the use of role-based and institutional theories.

Role-based theory refers to how individuals assume social roles, including at their workplace, that impact how they see themselves and how they organize their environment. The origins of role-based theory come from sociology and social psychology including from Mead's (1934) work.

In the context of public school studies, scholars use role-based theory to outline the various types of responsibilities, expectations, and leadership characteristics associated with school management (e.g., Murphy, 2002; Goldring and Rallis, 2000). For example, Goldring and Rallis (2000) specify some of these roles as the facilitator to negotiate the professional needs of teachers; the balancer to buffer the schools against, but also in compliance with state and district policy requirements; the inquirer to scan the external environment in order to meet community based needs; and the evaluator to assess and make improvements both internal and external to the school.

Often used more implicitly, the use of role-based theory projects what principals ought to do in their management or leadership of a school. These roles fail to describe the actual process involved in a school's organizational development. For example, many educational researchers recommend certain managerial and leadership hats, making it difficult to identify how a principal can possibly even fulfill and manage those functions.

In a different approach, the use of institutional theory has also been used to study how principals organize their schools. Meyer and Rowan (1977) introduced institutional theory to explain how organizations manage their external environment. The evolution of this research began to look at how individuals cope with external policy adoption when developing their organizations.

This evolution led to the emergence of neo-institutional theory and research on loose-coupling effects; scholars use these approaches to describe how and why individuals choose to adopt a policy or educational reform effort with greater or less fidelity (e.g., Coburn, 2005; Elmore, 2000, Ogawa, 1994). Although valuable, these studies, when applied to principals, fail to show us how principals foresee the future development of their schools.

Organizational theorists such as Mintzberg (1978) maintain that the role of management involves both the formulation as well as the implementation of strategy. Thus, the role of management moves beyond the use of these coping mechanisms that are studied under institutional theoretical approaches.

When looked at together, the use of role-based and institutional theories provides a lot of descriptive content but not enough elaboration as to how principals develop their schools for improvement. The sense from reading such works is a relativist accounting of the desirables in principal leadership under role-based theoretical perspectives. In their use of neo-institutional theories and loose-coupling research, researchers focus more on the historical reactions to policy on the part of individuals.

The use of both perspectives, while important, limits the incorporation of fresher perspectives needed to advance school development research.

Beyond this foreseeable contribution, what is offered by a study of public schools may also hold interesting insights to ambidexterity researchers. Most studies on ambidexterity are done in the private sector and not on public sector organizations that remain guarded by unions such as public schools.

The difference in application poses interesting challenges in how managerial ambidexterity may unfold differently. For example, in private sector organizations, the use of traditional sticks and carrots (e.g., use of promotions, demotions, pay increases and decreases to achieve compliant behaviors) often work because of at-will provisions in employment contracts between the employer and the employee.

Although considered a mutual provision, at-will provisions typically favor the employer in the private sector. An example of an at-will provision is when an employee signs an employment contract that stipulates that they could be fired at any point of time with or without cause. At-will employment provisions can enforce immediate cooperation, making employees more hesitant to stir up trouble and to voice their opinions. At-will provisions pervade most private sector employment settings with the exception of those with unions.

In contrast, public schools cannot use such sticks as easily to enforce cooperation. Even with ebbs and flows in school policies to centralize and to decentralize schools, policies involving selection, discipline, and termination still remain tightly regulated in the management of public schools. Largely since the 1970s, union policies and district rules restrict the ease with which to hire and to get rid of a worker (e.g., Hess & West, 2006).

The ability to enforce cooperation is further complicated by who is attracted to teaching and the horizontal career ladder. For example, teaching attracts individuals who are motivated by intrinsic, altruistic, and interpersonal aspects of their work (Cooman et al., 2007; Watt & Richardson, 2007). This type of employee also tends to be more independent and is less willing to be micro-managed. Moreover, teachers often spend the entirety of their careers in a flat career ladder. In private sector organizations, vertical career ladders are used to motivate employees that do not exist in public schools (e.g., Palestini, 2011; Baruch, 2004).

This point is not a trivial one to emphasize in a study of managerial ambidexterity. Ambidexterity depends on what beliefs motivate individuals to become more flexible or more controlled. An issue, exposed by the limitations of ambidexterity research, is that we simply do not know how managers engage in this process and in organizations where cooperation cannot always be assumed.

As an applied, qualitative study of public schools, this dissertation may open up alternative perspectives that are not known to private sector ambidexterity researchers. The aim of this dissertation is to illuminate what managerial ambidexterity may look like among a purposeful sample of principals. As part of my dissertation, I investigate the following research questions:

1. What dimensions of school improvement are most salient when principals seek to develop their schools?

2. What do principals’ responses reveal about how they organize their schools similarly or differently based on their perceptions of their contexts?

3. What are the common methods that through their use reveal different variations of managerial ambidexterity enactment?

By addressing these three questions, I expect to provide both theoretically and practically relevant knowledge that will inform the school administration and management ambidexterity literatures. My dissertation is organized into the following chapters.

In Chapter 2, I review more deeply managerial ambidexterity and the role of organizational context. This chapter serves two purposes. First, it provides the conceptual back-drop for this qualitative study, and it lays the initial groundwork through the presentation of a conceptual model to guide the reader. Second, it identifies some of the ways to study managerial ambidexterity across organizational contexts. Chapter 2 ends with a reiteration of the research questions for this dissertation.

In Chapter 3, I outline my methods, the identification procedure of this study's participants, and how I analyzed my data to study ambidexterity. In Chapters 4, 5, and 6, I report on my findings.

Specifically, in Chapter 4, I describe where principals commonly focused their efforts in school improvement; these common responses help to establish a point of comparability across the sample. As part of this chapter, I also identify how principals understood their organizational contexts. Based on common descriptions, I isolated profiles. I used these profiles to investigate the specific methods involved in ambidexterity enactment.

In Chapter 5, I report on the common methods that I found independent of and then within each profile.

In Chapter 6, I explain how principals typically combined these methods together, constituting what I call the "themes" or forms of managerial ambidexterity enactment.

Finally, in Chapter 7, I end my study by discussing its major conclusions and their implications on public school and ambidexterity research.

CHAPTER TWO: REVIEW OF THE LITERATURE (AND CONCEPTUAL FRAMEWORKS)

To examine the importance of managerial ambidexterity to school management, I provide an-depth review of the central gaps found in the literatures on school improvement and school leadership. As part of my review, I show the need to illuminate principals' ambidexterity as a relevent approach to understand how principals manage their contexts for improvement.

To show this importance, I review what is known about managerial ambidexterity from the literature. I also discuss its limitations. To address these limitations, I provide a conceptual model that links managerial ambidexterity to factors that could affect how principals enact their ambidexterity differently. I also introduce an initial typology that guides the reader and illuminates what managerial ambidexterity may look like among principals in the context of public school improvement. Both the model and typology were informed by my review of management research.

Reviewing the Gaps and the Need to Study Ambidexterity in Public Schools

Beginning with the school improvement literature, there is interest to know what makes a school effective when organizing its culture, goals, and climate for improvement. This attention shows a concern with understanding how a school's organizing process can affect its efficiency, consistency, and innovations as part of addressing multiple stakeholder demands. Demands include those made by the government, parental, community, and teacher stakeholder groups (e.g., Hopkins, 2007; Hargreaves & Fink, 2006).

Unlike similar literatures, which quantify these relationships as a form of prediction (e.g., the school effectiveness literature), the school improvement literature takes a more process-oriented approach to answer this question. Process-oriented approaches include the use of qualitative and case-study methods. Under this approach, researchers use these methods to understand how individuals manage their schools more or less differently (Creemers & Reezigit, 1997; Hopkins & Lagerweij, 1996).

In this light, the school improvement literature has evolved from its earliest origins in the 1960s and 1970s. In its earliest state, school improvement researchers studied this process through forms of curricular adoption and control. Trends in this literature now look at how schools are organized more holistically for improvement (Hopkins & Lagerweij, 1996). For example, under its current trajectory, the school improvement literature is concerned with understanding how schools renew their capabilities (e.g., Hopkins & Lagerweij, 1996) as well as how they sustain their performance over time (e.g., Hargreaves & Fink, 2006).

Under this approach, a core assumption is that schools have the capacity to select and motivate individual actions that can affect organizational development (Hopkins & Lagerweij, 1996; Harris, 2002; Townsend, 2007). Emphasis on capacity building, however, depends on how forms of management can influence this process.

Some recent work has investigated the importance of managerial organizing in this light. Hoachlander et al. (2001), for example, explain the importance of management as elevating academic expectations, increasing student engagement and motivation, providing focused and sustainable professional development, managing effectively the school site and schedules, building relational linkages, and monitoring and/or accelerating policies related to improvement and accountability.

These management functions are central to how principals' organize their schools for improvement. Luneberg and Ornestein (2004) identify these functions as involving five central dimensions (i.e., recipes). They include how principals 1) understand and clarify their school's general sense of purpose; 2) create a collective or individually driven learning environment; 3) develop and mentor their teachers; 4) align their school to state standards; and 5) create a data-driven and learning culture.

Though considered important, the five dimensions have not been linked to the methods that principals use to manage their contexts; this is with the exception of work by Hopkins (2007), Hargreaves & Hopkins (1991), Hargreaves & Fink (2006), and Fullan (1993) who begin to describe these linkages, though more theoretically.

At a high level, these scholars echo some of the challenges described by scholars and practitioners from the education leadership literature (e.g., Deal & Peterson, 1994; Evans, 1996; Wiseman 2005; Murphy, 2002, and Rallis & Goldring, 2000). The challenges include how control and flexibility should be organized to advance school improvement.

To address these challenges, principals must orchestrate activities for control including centralization (Fullan 1993; Wiseman, 2005), coordination (Hargeaves & Fink, 2006), rational structuring (Evans, 1996; Wiseman, 2005), the building of a collective community (Fullan, 1993; Hargreaves & Hopkins, 1991); Hargreaves & Fink, 2006; Murphy, 2002), and the building of collaborative consensus (e.g., Fullan 1993; Hargreaves & Hopkins, 1991; Murphy, 2002). Control activities are often related to functions needed for alignment.

At the same time, principals must allow for greater flexibility and self-organizing capabilities; these improvisational activities include those that provide for distributed management (Fullan, 1993; Wiseman, 2005), self-discretion (Fullan, 1993), humanistic individual or professional interpretation (Fullan, 1993; Evans, 1996; Murphy, 2002), diversity creation (Deal & Peterson, 1994; Hargreaves & Fink, 2006), and novelty or invention in curricula and program tasks or goals (Hargreaves, 2003a; Hargreaves & Fink, 2006; Hopkins, 2007). Flexibility-based activities often relate to adaptation (i.e., how to differentiate the school).

While detailing each function as important, the existing literature fails to show how principals incorporate both functions in order to develop their schools. Some work hypothesizes what this may look like by describing the straddling roles of principals through the use of role-based theory. For example, Rallis and Goldring (2000) describe some of these straddling roles as those of the integrator, facilitator, balancer, inquirer, and evaluator. These roles outline what may constitute managerial ambidexterity among public school principals. Murphy (2002) similarly describes these straddling managerial roles.

Beyond this approach, additional work attempts to explain how principals may use points of control and flexibility to develop their schools. Most of this work has been argued through institutional lenses.

Institutional lenses predominately focus on the reactions or failures in policy implementation. These failures are explained through high-level inferences and specifically why schools can or cannot improve on specific dimensions. Most of this work is reactive, explaining why schools fail to adopt policy; thus, they overlook how principals can improve their schools (e.g., Coburn, 2005; Elmore, 2000; Ogawa, 1994).

An inherent challenge with these approaches is that school improvement is about a process; this process involves how principals understand their contexts and which require different methods including both flexibility and control.

One way to improve upon existing perspectives is to introduce managerial ambidexterity as a framing construct.

How Is Managerial Ambidexterity Defined?

Although considered a newer construct in management research, managerial ambidexterity has been recently defined by researchers. Mom et al. (2009) specifically define managerial ambidexterity as a process involving how managers arrange exploitation and exploration activities that can affect organizational performance.

As part of their definition, Mom et al. (2009) draw on March's (1991) conceptualization. Specifically, they use a scale that asks managers to what extent they engage in activities related to exploration and exploitation. Exploration questions include those related to the search for new possibilities and the learning of new knowledge and ideas. Exploitation questions include those that involve carrying out existing routines, use of existing knowledge, and fit to existing policies and practices

One of the challenges in Mom et al.'s (2009) use of exploration and exploitation is that it misses the boat as to what ambidexterity is. Implicitly, exploration is tied to activities that make an organization more flexible. On the other hand, exploitation is tied to activities that bring greater control to an organization.

Although Mom et al. (2009) use March's organizational framework to measure managerial ambidexterity, they fail to get at the core dimensions involved in what influences control and flexibility.

This is a general issue in the managerial ambidexterity literature. For example, Mom et al. (2009) explain that the literature uses examples that dance around but never get at heart of what managerial ambidexterity truly is.

Some of these examples that Mom et al. (2009) cite from the ambidexterity literature include managers being able to host contradictions (Smith & Tushman, 2005; Tushman & O'Reilly, 1996), being able to multi-task (Birkinshaw & Gibson, 2004; Floyd and Lane, 2000), and being able to refine existing levels of expertise (Floyd & Lane, 2000; Hansen et al., 2001; Sheremata, 2000).

In addition to Mom et al. (2009), ambidexterity scholars offer other examples. Raisch et al. (2009), for example, describe managerial ambidexterity as a dynamic capability involving managing top-down and bottom-up knowledge flows (Mom et al., 2007), having a both short-run and long-run orientation (e.g., O'Reilly and Tushman, 2004; Probst & Raisch, 2005), and integrating information based on expertise as appropriate to the situation (e.g., Cohen and Levinthal, 1990). Finally, Rosing et al. (2010) explain that managerial ambidexterity requires the need to be able to "open up" as well as to "close down" the organization based on situational and task demands.

Although described through a variety of activities and actions, managerial ambidexterity, at its core, depends on how individuals can manage the complex and ever-changing needs of their organizations (Raisch et al., 2009); this includes being able to manage across points of control and flexibility through the use of methods.

To manage this dynamic process, ambidexterity scholars, including O'Reilly and Tushman (2008), assume that individuals must be able to manage their contexts across three dimensions. These dimensions include how individuals 1) ***recognize (i.e., sense and understand)*** the contextual demands or needs made upon an organization, 2) ***take the appropriate action (i.e., implement, reconfigure, and seize resource and activities)***, and 3) ***evaluate*** these actions as part of any organizational development effort.

Yet, how these cognitions and actions are displayed by their managers involve choices around how best to construct and execute control and flexibility.

How choices are constructed and executed, which exemplify different aspects of control and flexibility, connects to how managers organize processes. These processes affect 1) the content of tasks and their operationalization, and/or 2) the human relational requirements of an organization or the general social processes of organizing (e.g., Rosing et al., 2010).

Beyond these actions that affect the content and human relational requirements of organizing, temporality or modality may also play a critical role in organizing and executing these managerial choices (e.g., Ramo, 2002; Crossan et al., 2005; Roe et al., 2009).

The first pacing mechanism relates to how action is taken that is consonant to external timing demands such as schedules or deadlines (i.e., clock-time). This is called chronos in organizations research. The second pacing mechanism relates to how action is taken that is consonant with more individual, qualitative aspects of timing; this may include gut feel. Qualitative aspects of timing are not always specified or driven by external schedules. This is called kairos in organizations research.

Although the above areas are important, at an empirical level, when looked at in existing studies of managerial ambidexterity, they still remain murky. Beyond Mom et al.'s (2009) recent study, other empirical studies on managerial ambidexterity never get at the methods that exemplify constructions of control and flexibility in organizations.

As previously noted, most of the work on managerial ambidexterity has been more implied including in studies of top management teams (e.g., Carmeli et al., 2009; Beckman, 2006; Lubatkin et al., 2004); organizational practices as a function of strategic management or knowledge flows (e.g., Taylor & Helfat, 2009; Xiong, 2011); management practices that buffer or addresses environmental dynamism on organizational performance (e.g., Jansen et al., 2009); as well as the effect of certain leadership styles (e.g., transformational leadership) on performance (e.g., Jansen et al., 2008).

Moreover recent work, which has turned to the importance of exploring management actions in ambidexterity, remains equally challenged. For example, the flavor of this recent work, including articles by Tushman et al.'s (2011) on the ambidextrous CEO and O'Reilly and Tushman's (2011) work on how managers explore and exploit as part of their ambidexterity, highlights only the general principles behind management organizing.

In their work, these principles, also argued as propositions, are explained and distilled from general case study findings of leaders. Their discussions are combined with media and/or other high level anecdotal evidence that emphasize how to enable ambidexterity by building structure through teams and visions statements.

For example, Tushman et al. (2011) use their findings and anecdotes to highlight the need for the ambidextrous CEO to 1) develop an overarching identity, 2) examine how to reconfigure their team structure in order to deal with tensions at the top for ease in integration, and 3) the need to embrace consistency. O'Reilly and Tushman (2011) offer a similar set of principles that they relate to propositions. They include the need to do the following: develop an overarching vision, provide clearer articulation of strategic intent, build senior teams committed to ambidextrous strategy and the incentives to do so, build distinct and aligned subunits for exploration and exploitation, and build teams that can address demands and tensions around resources allocations.

O'Reilly and Tushman (2011) end their article with the need to understand how ambidexterity is managed with choices, choices that I extend to control and flexibility. However, these choices follow a general line of argumentation found in the empirical findings of Mom et al. (2009) and specific to recent managerial ambidexterity research. Specifically, these choices do not just emerge through the interaction with formal structures, but also through managers' level of "connectedness" with others and their organizations.

Understanding Managerial Ambidexterity and Its Sources: A Conceptual Framework and Model

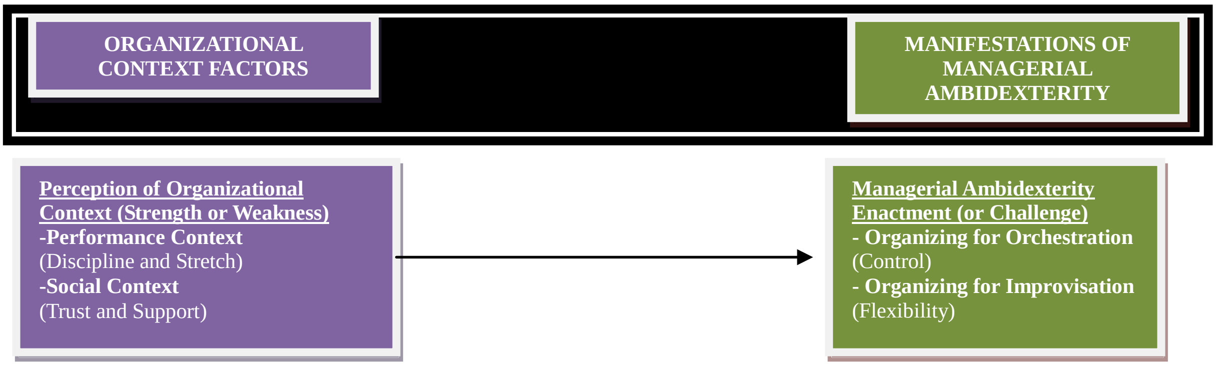
The challenges exposed by existing studies of managerial ambidexterity reveal a fundamental flaw by failing to address two basic questions both conceptually and empirically.

First, what are the different dimensions of control versus flexibility that can serve as a launching point to understand and then study managerial ambidexterity?

Second, how does managerial ambidexterity reflect how managers understand their organizational contexts and specific to their beliefs about their organizations' performance and social context factors that can inform its study?

As part of organizing my conceptual review and frameworks to address both questions, I provide the conceptual model pictured on the next page. The construction of this model was based on research drawn from organization studies. As part of building the model, I looked at how managers would see their organizational contexts that could alter their managerial ambidexterity enactment. I devote my time to this relationship as part of my empirical study.

FIGURE 1: A Conceptual Model of Managerial Ambidexterity and Perceptions of Organizational Context



In the following sub-sections, I explain conceptually what existing frameworks can inform the two questions proposed in this section. I follow this explanation with a statement of the specific research questions used in this study.

How Do We Parse Out the Dimensions of Managerial Ambidexterity?

Beginning with the green box of managerial ambidexterity, how do we differentiate its dimensions as related to control and flexibility? The managerial ambidexterity literature has been relatively silent apart from offering some high level descriptions that now call for a more robust framework.

Specifically, descriptions found in the ambidexterity literature offer two general sets of counterpoints. These two counterpoints provide clues as to what frameworks can be imported for the study of managerial ambidexterity; these counterpoints include how activities are orchestrated as opposed to how they are improvised.

Examples of orchestrated activities include those that bring centralization, formalization, the bringing of unity (cohesion, collaboration), and sometimes though not always standardization. In application to studies of ambidexterity, orchestration is generally about control and how it may influence alignment (i.e., how to bring structure and coherence to an organization).

On the other hand, improvisational activities are defined by a more loose and open-ended feel. Examples of improvised activities include those involving decentralization, less formalization, the bringing of individual divergence, novelty creation (bricolage), and innovation. In application to studies of ambidexterity, improvisation is generally about flexibility and how it may influence adaptation in organizing.

In the ambidexterity scholarship, references to the terms orchestration and/or improvisation are only mentioned and sometimes are confounded with each other; they are not deeply operationalized in ambidexterity research.

For example, O’Reilly and Tushman (2011) reference the need to orchestrate opportunities as part of managing for ambidexterity. However, they fail to deepen what orchestration actually looks like and how it is studied. In earlier work, O’Reilly & Tushman (2007: 8) also mention the need to “orchestrate organizational structure, culture, people, and process to simultaneously sustain existing product innovation and to spur creativity”. Güttel and Konlechner (2009: 61) reference O’Reilly and Tushman (2008) as well as Teece (2007) to explain ambidexterity as requiring an emphasis on “coordination/integration, learning and reconfiguration as orchestration processes.”

While some explanations tend to use the term orchestration more prominently, others lean on improvisation. For example, ambidexterity researchers such as He and Wong (2004) associate improvisation as part of adaptation to explain the other hand of ambidexterity.

Although implied analogies for control and flexibility, orchestration and improvisation may be promising frameworks to study managerial ambidexterity. Most examples given in the ambidexterity literature can be matched to either of these organizing functions. However, their specific dimensions have not been parsed out in this literature; this failure stalls understanding their purpose, use, and core assumptions when developing organizations.

Independent from research on ambidexterity, orchestration and improvisation have not only been mentioned, but have also been studied more richly in organizations research.

This body of work offers greater detail to understand both conceptually and empirically how control and flexibility are constructed as part of management organizing.

For brevity, I summarize these areas with examples in Typologies 1 and 2, which both differentiate orchestrated control from improvised flexibility. Typology 1 provides a general conceptualization. Typology 2 is a concrete version with hypothetical examples. Both typologies can be found in the appendix.

The typologies cover the three domains of organizing, including how content, human relationships, and pacing, are used by individuals, to develop an organization. I cover the three domains and extrapolate them from my review to the following types of purpose and action: Leader's or manager's focus; assumptions about the nature of change (i.e., planned or more loose and open-ended); assumptions about followership behavior; indicated use and the pacing of time; assumptions about the cognitive process; and how, what I call, the five "Rs" (routines, resources, rituals, roles and responsibilities) are constructed.

Beginning with the left hand side of the typology, the purpose of ***orchestration*** is to reach a point of commonality by shutting down or closing off differences in an organization (e.g., Ashkansy et al., 2000; Wallace, 2004; Ritala et al., 2009); although definitions vary in the use of the orchestration among management scholars, these definitions commonly relate to how managers or individuals can build commonality to plan and predict activities in an organization (e.g., Ashkansy et al., 2000; Wallace, 2004; Ritala et al., 2009).

The approach of orchestration is to initiate control over individuals and their groups; activities involving control are often facilitated by controlling tasks and people through various means such as tightly bound and specified routines, directed resources, cult-like rituals, and stricter adherence to roles and responsibilities (e.g., Sproat, 2001; Sirmon & Hitt, 2009). Since the mantra of control dominates orchestration, it assumes that employees follow and do not question the actions of the leader or a manager.

Largely because this form of organizing involves getting people and tasks on the same page, orchestration is often regulated not just through tightly bound routines, resources, rituals, roles and responsibilities; it is also regulated through chronological time and schedules in order to bring about long-run stability and coherent movement. The use of chronological time is often associated with choreographing change as a means to meet more efficiently externally driven results (e.g., Eisenhardt & Brown, 1998, Grabner, 2007). This form of organizing is contrasted with improvisation.

On the right side of the typology, the purpose of ***improvisation*** is to allow for less-prescribed, self-organized change. Less-prescribed change allows an organization to diversify and adapt to changes more quickly through individual discretion (e.g., Moorman & Miner, 1998; Cuhna et al., 1999; Miner et al., 2001). Similar to orchestration, improvisation has been defined differently among management scholars. However, improvisation, as a form of management, generally tolerates individuals' ability to self-organize and to construct more open-ended change (e.g., Moorman & Miner, 1998; Cuhna et al., 1999; Miner et al., 2001; Weick, 1998).

Largely because this form of organizing involves more individual allowances for greater flexibility, it is often facilitated through less specified routines, greater flows in resources, more openly diverse rituals, and more flexible roles and responsibilities (e.g., Kamoche et al. 2002, Weick, 1998). Moreover, it assumes that employees do not necessarily have to follow more prescriptively what a leader or manager says or does.

Since flexibility is often less controlled, chronological schedules may play less of a role than under orchestration; moreover, the use of gut feel, often referred to as kairos in the literature, may pace changes in an organization (e.g., Crossan & Sorrenti, 1997; Weick, 1998; Crossan et al., 2005).

In sum, Typologies 1 and 2 offer one way of capturing the different dimensions of orchestrated control to that of improvised flexibility. Managerial ambidexterity can be looked at through this broader framework of orchestration and improvisation. Specifically, it can be used to understand the multiple ways in which control and flexibility can manage the alignment and adaptation process of organizations. The use of both functions (orchestrated control and improvised flexibility) may run in parallel (meaning using both “hands” concurrently) and/or 2) may involve switching between these two functions to develop organizations at different points in time.

What Is the Tie between Managerial Ambidexterity and Organizational Context?

Although understanding what managerial ambidexterity may look like is important, another consideration is how managerial ambidexterity is shaped by individuals' understanding of their organizational contexts, the first purple box in the conceptual model.

Ambidexterity scholars generally acknowledge that ambidexterity falls under the contingency perspectives of organization theory; contingency perspectives simply state that what people and their organizations do is contingent upon what happens in their organizations (e.g., Raisch & Birkinshaw, 2008; Raisch et al., 2009).

Organizational context follows similar assumptions. Specifically, in the organization studies literature, it is thought that individuals are shaped by their understanding and beliefs about their organizations. A wide variety of literatures in organizations studies, including those from change management, organizational culture, and climate, have talked how these beliefs influence management perception and action.

Specifically, the strength and uniformity of these beliefs are thought to influence whether individuals can meet the challenges and opportunities in an organization (e.g., Eby et al., 2000; Weiner, 2009) as well as what a manager can do in an organization (e.g., Meyerson & Martin, 1987; Waldman et al., 1998; O'Reilly & Chatman 1996; Deal & Peterson, 2009). More uniform cultures, as one example, may be viewed as easily controlled (i.e., orchestrated). This is contrasted with organic (loose) cultures, which may lend themselves more easily to improvisation (e.g., Meyerson & Martin, 1987).

Within the ambidexterity literature, contextual ambidexterity places greater emphasis on the importance of these beliefs. Gibson and Birkinshaw (2004), who draw on Ghosal & Bartlett's (1994) framework, provide one of the most coherent explanations.

Specifically, in Gibson and Birkinshaw's (2004) discussion of contextual ambidexterity, they talk about how these beliefs can influence the performance context (i.e., adherence and stretch in goals) and the social context of work (i.e., its trust and support dynamics). Beliefs about the performance and social context can influence ambidexterity through the levels of motivation and actions on the part of individuals.

Under the ***performance context***, Gibson and Birkinshaw (2004) argue that employees' ambidextrous behaviors may be influenced by their beliefs about how task goals are constructed as well how they are reinforced within their organizations. Ways of altering those beliefs occur through ***discipline and stretch***, which can emerge from a variety of sources (e.g., general management, human resource management policies, and so forth). ***Discipline*** refers to whether employees feel that they are given “clear standards for performance and behavior, a system of open, candid, and rapid feedback, and consistency in application of sanctions”. ***Stretch*** refers to whether employees believe that they are allowed “to voluntarily strive for more rather, than less, ambitious objectives”.

Research on public schools indicates that beliefs about discipline and stretch can affect the management of a school (e.g., Leithwood & Jantzi, 1999; Hallinger & Heck, 1998); For example, principals may orchestrate or improvise activities differently depending on whether they believe faculty can adhere to and can move beyond task goals.

In addition to the performance context factors, trust and support may also affect the management of a public school (e.g., Hallinger & Heck, 1998; Leithwood & Jantzi, 1999; Bryk, 2010). Gibson and Birkinshaw (2004) describe trust and support as part of the organization’s ***social context*** that may influence ambidexterity. ***Trust*** refers to whether employees believe that they can “rely on the commitments of each other” and whether they believe they have been treated fairly and/or equitably by others in an organization (Gibson & Birkinshaw, 2004). ***Support*** refers to the ways in which employees believe that their organization provides access to resources, forms of guidance, and helping behaviors (Gibson & Birkinshaw, 2004).

In research on public schools, Bryk (2010) talks about the relevance of trust and support in the context of school improvement. For example, in his analysis of principals in Chicago Public Schools, he notes differences in levels of school performance. He attributes different levels of school performance not just to the organizing actions of principals, but also to principals’ perceptions of trust and support dynamics of their schools. The findings show that the concepts of contextual ambidexterity, when applied to principals’ perceptions of trust and support, could affect organizing actions.

Across this work, a challenge is a lack of clarity as to how these managers understand their organizational contexts and how this understanding contributes to managerial ambidexterity enactment.

In a different article, Birkinshaw and Gibson (2004) offer that there are four ambidextrous behaviors on the part of individuals that affect their organizations. These behaviors include individuals’ willingness 1) to take on initiatives and to be alert to opportunities, 2) to seek cooperation and opportunities to collaborate, 3) to be brokers who seek to build internal linkages, and 4) to be multi-taskers who are willing to wear more than one hat.

These behaviors are not clearly linked to how managers perceive their organizational contexts. For example, later in that article, Birkinshaw and Gibson (2004) infer this relationship through the use of media anecdotes and stories about well-known companies and organizations; these inferences are not tied to the actual observations and perceptions of leaders and managers.

The failure to specify this relationship exposes a limitation known in this line of research (e.g., Raisch & Birkinshaw, 2008; Güttel & Konlechner, 2009). As previously mentioned, recent work has attempted to study through case study design the implicit association between a firm’s or a unit’s performance and the management actions of individuals (e.g., McCarthy & Gordon, 2011; Andriopoulos & Lewis, 2009; Güttel & Konlechner, 2009); however, this work remains high-level and is less detailed.

Thus, the aim of this dissertation is to understand this connection between how principals understand of their contexts and how they enact their ambidexterity in the context of school improvement.

Statement of Research Questions

1. What dimensions of school improvement are most salient when principals seek to develop their schools?

2. What do principals’ responses reveal about how they organize their schools similarly or differently based on their perceptions of their contexts?

3. What are the common methods that through their use reveal different variations of managerial ambidexterity enactment?

CHAPTER THREE:
METHODS

Overview of the General Methods and Collection Procedure

To investigate the three research questions of this study, I took a qualitative approach. Qualitative studies yield evidence that may not necessarily be generalizable to all populations. To increase rigor and acceptance of the findings, I used a method that Yin (1994) and Miles and Huberman (1994) call triangulation. I used triangulation throughout this study in order to increase its validity.

As part of triangulation, I used different methods including surveys, observations, shadowings, on-site interviews, and ad-hoc follow-ups; follow-ups included member verification checking to validate, where possible, the findings of this study. Please refer to Table 1 in the appendix, which details out the particular approaches used by principal in this study.

In the sub-paragraphs below, I describe the specific methods and data collection procedure used for each research question.

To investigate the first two research questions of this study, I began with a semi-structured interview, roughly from one to two hours long, combined with follow-up conversations; as part of these conversations, I had principals describe and rank the five areas of school improvement. The purpose was to understand where principals focused their efforts in school improvement.

As part of these in-depth interviews and follow-up conversations, I asked principals general questions about their school's culture. Questions included those about the school's performance and social context and the challenges with managing those contexts for performance. The purpose of these questions was to gauge quickly how principals perceived their school context, factors affecting school improvement, and some of the sources that could affect their process of organizing. I used these answers to help inform research questions one and two of this dissertation.

After conducting at least two initial observations, I distributed paper-based surveys. The paper-based surveys had principals rate how they saw their organizational contexts first when they began at their school as principal and now in its present state. The purpose was to understand, before subsequent observations, where principals saw themselves and their schools changing; specifically, it could help inform follow-up conversations about the methods used and processes involved in managerial ambidexterity enactment.

All interviews and surveys were conducted by me. After conducting at least two observations, I continued observation and shadowing sessions with each fully participating principal.

To investigate research question three, I conducted observations and shadowings over the late summer, fall, and spring periods based upon principals' availability and their school schedules; most of the activities (roughly 80% of the sample), I conducted during the early to mid-fall with follow-ups in the spring.

I initially used Typology 1 and its concretized version, Typology 2, as my initial guiding posts for the observations. The purpose of this study *was not* to verify each conceptual dimension of these typologies. Rather my intent was to use them as a baseline to develop an observation protocol that I could use to catalogue the specific verbal and non-verbal behaviors related to managerial ambidexterity enactment. Please refer to both typologies in the appendix.

From the descriptions of activities in my field notes, I then expanded my observation protocol in order to deepen my analysis of the verbal and non-verbal behaviors related to the methods used in managerial ambidexterity enactment.

All of the activities related to this study followed IRB consent procedures. Any identifying information, including those of participants, their school staff and faculty, school name, and district identifiers, was removed in the final analysis and reporting of this study.

Identification of the Participants for this Study

In order to access principals, I used contacts at university principal leadership institutes. I also cold-called school districts to recruit through email and by phone an initial group of principals. As part of my recruitment criteria, I initially looked at a smaller sample of 7 principals. However, the initial sample yielded biases. Specifically, I found principals who only represented elementary schools in predominately urban areas that could alter the findings. Thus, I focused on expanding the sample to find as many different schools as feasibly possible given the timing constraints of this study.

As a result, I looked for principals who worked in a variety of different schools: elementary, middle school, and high schools in urban and suburban areas and with different levels of performance across six school districts.

My criteria for selecting principals included at least one year as the principal at that school. My choice of at least one year was to control for any issues that could be explained by newcomer socialization and thus could alter the organizing dynamics of the school. By expanding the sample, I was able to identify an initial group of 20 principal contacts. 15 principals decided to participate with 1 principal only partially participating in the study; this was due to a job transition to a private school. The partially participating principal helped to inform the initial analytics related to the school profiles but could not be observed to document more richly forms of managerial ambidexterity enactment.

The 14 remaining principals participated in interviews, surveys, observations/shadowings, and ad-hoc follow-ups/interviews, ranging roughly between 10 to 40 hours study participation time; this time included verification of the data. Time involving participation was spread over at least two months in order to provide for enough variation to observe principals at different points in time.

Although I had hoped more diversity, the majority of participants were male, a total of 10 with 5 female principals in the study. This disproportion reflects an existing bias in public school management roles were women remain underrepresented in middle and high school principal leadership roles and where they remain in roughly equal portion with their male counterparts in elementary schools (e.g., National Center for Education Statistics, 2004). All 5 principals with the exception of 1 were elementary school principals. They were in roughly equal proportion to the number of male elementary school principals in this study. The table below provides a description of the 15 participant sample.

TABLE 2: School Sample Breakdown

School Urban Suburban Total			
Elementary	6	4	10
Middle School	1	2*	3*
High School	1	1	2

**One principal dropping out of the study due to a job transition to a private school.*

Materials and Instruments Used in This Study

Materials and Instruments for Research Question 1. To understand which dimensions of school improvement are most salient to how principals develop their schools, I drew conceptually from the Lunenberg and Ornstein's (2004) five dimensions of school improvement. These five dimensions include how principals 1) understood and clarified the general purpose or vision of the school, 2) encouraged a collective or individually driven learning environment, 3) provided and developed instructional and professional support, 4) aligned the school to state standards, and 5) created a data-driven and learning culture in their school organization.

Questions were culled into a semi-structured interview format from a variety of different school improvement studies that touched on each of these five dimensions. In the initial design of the study, there were two separate interviews, one for an initial warm-up and another one to be used at a later point in time to ask questions about school improvement.

The failure in the first principal interview to get at richer responses led to the use of a combined interview format. This combined format included the list of sample questions found in the appendix. Additional questions were added after the initial warm-up interviews as part of follow-ups. These questions included, for example, asking the principal to rank order which of the five dimensions were considered central to their daily organizing process of school improvement. The use of a rank order helped to establish a point of comparability that would inform research question two of this dissertation.

Materials and Instruments for Research Question 2. To answer research question two of this thesis, "what principals' responses reveal about how they organize their schools similarly or differently based on their perceptions of their contexts", I not only had to use measures that would identify how principals responded commonly to school improvement (highlighted above), but I also had to identify how principals' understood their contexts similarly or differently based on their descriptions. To get at those differences, I needed to create organizational profiles from principal responses. As part of that process, I employed a two-step method.

First, I utilized an adapted version of Gibson and Birkinshaw's (2004) five-point Likert scale to school settings. The Gibson and Birkinshaw scale is one a way to assess individual beliefs about the readiness of an organization's performance and social context that affect ambidexterity more generally (i.e., alignment and adaptation). I used this instrument more descriptively to have principals document their perceptions about their school's context in terms of its social and performance context. This included first when they began at that the school as principal, marked as a "B", and its current or now state, marked as an "N".

Documentation of these beliefs as "B" and "N" states enabled me to understand to what extent principals believed that their school contexts, specifically their staff and faculty, had changed over time. Moreover, documentation of these beliefs allowed me to investigate through interviews and follow-ups not only how principals saw their cultures, but also how they planned to develop their organizations.

The documentation of these states, I coupled with questions from the initial semi-structured interview and informal follow-up interviews that asked principals to describe their school's personality (i.e., its culture) on both factors. These descriptions were paired with survey responses and follow-ups to identify trends in the data and to isolate profiles. They were then paired to common types of responses that undergirded principals' responses to the school improvement questions. The survey was distributed in paper format. A copy of the adapted Gibson and Birkinshaw survey is contained in the appendix.

Materials and Instruments for Research Question 3. To study managerial ambidexterity methods and their enactment, I leveraged Typology 1 and its concretized version Typology 2 as my initial observation protocols to answer research question three of this study.

The use of both typologies was one way to begin documentation of principals' verbal and non-verbal behaviors and actions. I specifically used both typologies to catalogue methods related to managerial ambidexterity enactment found both within and across the profiles in the sample.

During the first two months of study, I developed a more expansive observation protocol emerging from my field notes in the use of both typologies. This expansive protocol allowed me to deepen my observations. To deepen my observations, I looked at the following: principals' physical posturing, tonality of speech, use of inquiry and advocacy, and silence patterns in the use of ambidexterity methods and where they were found. I also looked at how principals used verbal and non-verbal behaviors with methods that expanded or contracted routines, roles, responsibilities, and rituals related to tasks and relationships.

Data Analysis

For research questions one through three involving interviews and observations, I took detailed notes and tape recorded the sessions where possible and permitted using a digital recorder. Audiotaped interviews were transcribed and analyzed using methods described by Miles and Huberman (1994) and Strauss and Corbin (1998). I initially used Atlas.Ti as my choice of qualitative software. However, due to the breadth and types of different data collected, I resorted to manual printouts, which I looked at in conjunction with field notes, principal handouts of their schools and their data, and survey responses, in order to analyze the data.

As part of my process, I utilized data reduction, data display, conclusion drawing, and verification to establish common themes after my initial codification of the data. I then linked themes to categories. Both codification and the establishment of themes and categories occurred iteratively. I then counted how many times a specific theme appeared across principals to determine levels of support. For levels of support, I first looked at the consistency of principal responses and observations that supported specific codes, themes, and then categories that I identified from the data. This process was used generally.

To identify levels of support, I conducted a within and between "profile" analysis; this process allowed me to search for similarities and differences among the methods used by principals that were codified from the data. I then stepped back from the data to see how these methods spoke to general categories independent of their specific contexts; I then looked at how these methods were used within a specific organizational profile that highlighted different themes and purposes of ambidexterity enactment.

Themes and categories were looked at in terms of their strength based on their repetition, ranging from highest to lowest levels of support. Strongest support or (SS) occurred 60% or greater across the sample or within a profile of participants (where relevant to the analysis). Medium levels of support or (MS) occurred roughly greater than 33% but roughly less than 59% across the sample or within a profile of participants (where relevant to the analysis). Tentative support or (TS) occurred roughly less than 33% across the sample or within a profile of participants (where relevant to the analysis). No support or (NS) is when a pattern could not be identified in the sample. Determining levels of support is a common practice used in qualitative studies to understand whether the findings are important enough to pursue in later empirical studies (e.g., Clair & Dufresnse, 2004).

As part of my verification process, I checked, where possible, my findings with each fully participating principal during the mid-point and toward the conclusion of the study. Verification also included double-checking models, the profile distributions, use of methods, and the themes of ambidexterity enactment that were distilled from my analysis.

Verification of the data served two purposes. The first purpose was to provide any correction and refinements to my interpretation and analysis of the results. The second purpose was to provide additional contextualization of the results that were not initially captured through the existing instrumentation design and/or were not given as much salience in the initial analysis of the data. I used member verification checking with the principals in order to increase the accuracy and the credibility of the findings and their interpretation. Table 3 in the appendix summarizes the types of data that I collected and my approach in analyzing the data for each research question.

CHAPTER FOUR:
FINDINGS PART I – ANALYSIS OF SCHOOL IMPROVEMENT RESPONSES AND IDENIFICATION OF PROFILES

In this chapter, I report on my findings to the first two research questions.

- What dimensions of school improvement are most salient when principals seek to develop their schools?

- What do principals' responses reveal about how they organize their schools similarly or differently based on their perceptions of their contexts?

As part of organizing my findings, I first discuss which dimensions of school improvement principals focused upon as part of their school improvement process. I then look at how principals perceived their contexts based on their responses to the Gibson and Birkinshaw measure and the interview data. From these results, I identified critical tensions and the ways that principals sought to address those tensions in their contexts. Based on the similarity among principals' responses and how these responses matched to principals' descriptions of their contexts, I created profiles. I end this chapter with a summary table of the common patterns identified and discussed as part of this findings chapter.

Dimensions of School Improvement Considered Most Salient in Principal Organizing

To understand which areas of school improvement were considered most important to the principals, I asked them the questions related to the five dimensions of school improvement. As part of my interviews, I asked principals to rank order the importance of these dimensions.

I begin this section by reviewing which dimensions principals considered most important to their process of organizing. I then briefly review those dimensions that had the weakest support and how principals discussed them.

In principals' responses to the school improvement questions, they shared the greatest commonality or strongest support (SS) to the following rank order: 1) developing and mentoring teachers, 2) creating a collective and individually driven learning environment (e.g., with principals most commonly reporting a greater emphasis on collective rather than individual learning), and 3) creating a data-driven and organizational learning culture. The third ranked item, creating a data-driven and organizational learning culture, was most commonly reported as means by which to achieve the first two dimensions, found in roughly 80% of the sample.

Principal responses varied in terms of their explanation. However, they shared the commonality of this ranking. They also shared the commonality of whom they could control and to what extent policies drove their need for a collective rather than an individual learning environment.

Whom they could control involved discussions around teachers' work and specifically how much flexibility to give to teachers' efforts. One principal talked about the constraints in providing individual flexibility to his teachers.

> *There's not really a lot of room for that. I don't know that public schools under the gun our like ours have that kind of time. I really don't know. It really is about standards and instruction. Everybody has to be exposed to the same things in different ways depending on the kids. But there's little room for extension and a little room for remediation. But to be honest, that's not easy.*

Similar to this principal, other principals focused on teachers' work; however, they offered different explanations. Some of these explanations were specific to certain profiles. For example, equity considerations dominated most of the explanations in the political school profile surrounding teachers' work; this will be talked later in Chapter 5.

Even with these slightly different explanations, the explanations commonly converged on how to address the pressures arising from accountability (i.e., standards) with the work of teachers. For certain profiles, these pressures moved beyond accountability toward a higher achievement orientation. This will be addressed later in this chapter.

In the other areas of school improvement, less consistently (TS) did principals report an emphasis on alignment to state standards as a central to their organizing philosophy; in at least one case, one principal felt that her prior experiences with policy enactment led her to question this emphasis. She explained this issue in terms of the Open Court reading program, a reading program implemented by policy that this principal viewed as inadequate in representing certain populations of students.

> *Well I talk to them and talk them into sense. Like I talk to the associate superintendent of teaching and learning. And she tells me to do a supplement. A supplement. And so that is what I am doing to supplement the literature. And I notice that Latino-Americans are very underrepresented in Open Court. And they are very underrepresented.*

However, the tension felt from not complying with state standards ironically resurfaced repeatedly among principals; for example, 90% of the sample reported that some aspect of standards and district policies affected the development of their schools; these explanations were discussed around performance bars (i.e., how to achieve results needed for performance-accountability). This will be discussed later in this chapter and specific to how school improvement revealed a tension between accountability to enact policies and the professional autonomy of teachers; this tension typically centered on who should take control and responsibility for the implementation and accountability to results. One principal described this tension metaphorically as a cat and dog game.

> *It's like a cat and dog game. The policy maker wants dog like obedience from the school, but the school is filled with cats. Cats who want their autonomy, their academic freedom, and their own definition of control. So invariably the role or my job as principal is to get the cat to play dog tricks. By giving them discretion but also making them responsible to outside obligations. Herding cats and not letting them stray.*

In their responses to the remaining school improvement questions, principals provided the weakest support (TS) to the question about clarifying the school's sense of purpose. This question asked principals to explain their understanding and use of mission and values statements at their school. Most principals, approximately 86% of the sample, responded that while a mission or values statement existed, they were not readily used to develop their schools for improvement; some principals cited forgetfulness or could not fluently recite verbatim their schools' mission or values statement. The following is a short dialogue with a principal about his ability to recall the mission statement at his school.

> *Nicole: Can you briefly state what it is?*
>
> *Principal: I don't know…*

Nicole: OK. Is it on the school website?

Principal: Yeah, I have a copy I can send to you. It talks about that all our students will be successful. You know? Learning in the 21st Century. And they'll be diverse and open to diversity. You know? That kind of thing.

Other principals responded that there was a different set of mission and values statements used in their schools than what appeared on school walls. In some schools, such as in political schools, the mission and values statements were known and differentiated; however, this was less than typical in the sample. Finally, one principal described the use of mission and values statements as more fluid and less designed.

It's almost like being an iron chef. You walk into the public school and it's like the ingredients have been laid out in front you. Often you don't have that much choice and you have to work with what you got. You are constantly cooking up different recipes for change and purposes.

In addition to the five dimensions of school improvement, some principals referenced parents as having an important impact on their process of organizing. When principals referenced parents, they talked about parents as critical to building involvement and obtaining additional resources for their schools. For example, one principal, whose school was running into its fifth year of school improvement, saw parents as playing a larger role of taking on additional responsibilities.

So I'm trying to get more, to some degree, delegation. But I want people to be empowered to do these things that has been more traditionally centralized. And it goes back, really quick, to the family stuff, too. I want the families to develop the agendas. I want the families to organize the family resource room. I want the families to make sure the coffee is done and the computers are on. Not because I don't want to do it. God knows it's easier for me to do it. But because that's the whole idea of that. I don't want me or any one individual to be the person that makes something happen. Because eventually I won't be here.

In a high performing school, a principal explained the importance of parents as creating a broader system of accountability that could hold teachers responsible for results.

It's really more around creating a system of accountability. So, for example, with families, I believe that one of the reasons that you have higher levels of teacher accountabilities in higher income neighborhoods is because of the families. It's actually not necessarily the principal that's doing it; it's the families that are holding that teacher accountable through their high expectations, through their knowledge of the fact that they have a right to go to their child's classroom at any time, through knowing how to ask the right kinds of questions in the conferences or in those kind of follow-ups. So for us that was really important.

Although some principals viewed parents as central to their organizing process, this level of centrality did not occur repeatedly across the sample. Some patterns later emerged in the enactment of ambidexterity that revealed the importance of parents in organizing the school for improvement. For example, in highly cohesive schools, where principals likened their schools to a "family", performance accountability pressures emerged from parents and not from policy demands. These pressures forced principals to consider how to deal with parents as part of their organizing process for their schools. This finding will be discussed in further detail in Chapter 5.

What Principal Responses Reveal in Organizing Schools for Improvement

Principals' responses to the school improvement questions generally revealed tensions in their school contexts; these tensions surrounded how to address performance-based accountability, often tied to test score results and the use of curricula, with the professional autonomy of teachers. To address these pressures, principals made repeat references to the actual word responsibility and/or how to deal with aspects responsibility (i.e. ownership) in order to develop their schools.

> *For me, the biggest blessing and curse in a school is the teacher. Trying to make teachers responsible, to take that level of ownership can be a nightmare. Especially if they don't want accountability. And who does? After all you are being judged on results that you can't necessarily guarantee.*

Responsibility was repeatedly talked about in terms of teachers' willingness to extend their accountability. The word, responsibility, was used repeatedly across principals' responses from interviews, observations, and follow-up sessions.

In principals' responses to school improvement, responsibility was talked about differently based on how loose or tightly cohesive the school dynamics were perceived by principals. This level of looseness or tightness will be described later based on principals' descriptions of their contexts in levels of discipline, stretch, trust, and support that I identified to specific profiles.

Responsibility took on two forms. The first form was how to make teachers more accountable in their work. Examples are given the next section. I labeled this category of responsibility as directive responsibility. This particular category was found in less cohesive schools that I explain shortly.

The second form of responsibility was more supportive and elaborated on teachers' existing skills. This particular category of responsibility, what I labeled as elaborative responsibility, looked at pushing teachers into an even higher achievement orientation while providing, in some cases, forms of social support. I explain with evidence what this looked like later in this section. Under this form of responsibility, principals sought to raise expectations of their teachers' performance and, in particular, to what they already did well; these principals were found mostly in high performing schools.

Examples of "Directive" Responsibility Found in Less Cohesive Schools

Beginning with less cohesive schools, directive responsibility sought to control teachers' work by emphasizing either the impact factor on kids or ways to sell teachers on assessments and evaluations as part of their work. Less cohesive schools tended to be underperforming public schools with the lowest AYPs in the sample. Many of these schools were program improvement status. For example, many, though not all of these schools, had AYPs in the 700s and below.

In their discussions, principals identified several issues that required their need to enact directive responsibility. For example, some principals explained the need to direct responsibility in order to overcome teachers' blame-staking. One principal, for example, described her need to make teachers more accountable because of their tendency to blame poor results on the kids and their families.

> *I think that was one of the biggest problems. Because when I first came here, only 13% of the students were proficient. I mean a low 13%! I couldn't believe it! And I said, "What do you attribute to those low scores?" The answer was outside of themselves [the teachers]. They said "the family", "the language". You had those two excuses. So I convinced them that they needed to take a look at what's within their realm of control. You know, "You can't change the family. You're not a social worker. We're not going to the homes to change that. And kids all over the world learn a language. In fact, in Europe they know five languages. So what's the problem with the language?" So that started turning it around, getting a different mindset, raising teacher's expectations.*

A different principal explained this issue as originating from his teachers being "young" and wanting someone to "spit in the eye of the system" so that they could be innovative. He later explained his need to provide direction among teachers in order to hold them accountable to the standards.

> *And I had given them the directive of what to think. But I had said to them as teachers who are responsible for content, process, and product, isn't interesting that all of our energy and thinking is about how we feel. And that we did not want to measure and that was a mess for young teachers at the time. But there was a lot of anger from the staff because they had hired me. Because I was innovative. They had hired me because I had multiple perspectives. And I interview well and I had answered the questions based on where their perspective was and I knew how the teacher would feel and the custodian would feel. And did not make things up but knew how to couch my questions so that they were there. And my office clerk was on that interview panel. And surely, they had felt a little betrayed. You know I thought that you would be my advocate and all that. That you would allow us to be who we are rather than balance the forces between what is happening to us. And they had wanted someone who would basically stand up and spit in the eye of the system. And that you cannot unfortunately do as a principal.*

In the preceding responses, principals repeatedly discussed the problems of their teachers in taking on more responsibility that could affect the school's alignment to accountability. In the first case, the issue was one of blame-staking kids and their families. In the second case, the issue was the youngness of the teachers and their desire to be innovative.

Both of these issues were commonly found in less cohesive schools. Other common patterns of taking on responsibility included the need to elicit more empathy from teachers and to embed this focus in the planning and the execution of tasks.

One principal, for example, talked about the need for teachers' help to move the school out of program improvement status by placing more leadership responsibility on them.

> *Putting some responsibility on them, so they need to articulate exactly what they're doing. I can sit here and put some bullshit newsletter together all I want that says all sorts of stuff. But it's making…what I told them at the end of the year is, "I need help. I need departmental leadership help," whereas we communicate as a…we have a monthly leadership team meeting. They bring from their departments issues. I give to them to bring back to their departments information. The next step is to help them*

facilitate those departmental meetings on a more micro, and I would macro facilitate with them.

These examples were identified to contexts that were considered less cohesive. For example, these contexts were described by their principals as highly political cultures (i.e., lots of cliques) or schools where accountability systems were not as embedded in the daily running of the school. I will explain later in this chapter the different types of schools that I classified as less cohesive. They typically shared a common issue of being underperformers that needed to improve their results; they were contexts where principals talked about the need to create directive responsibility.

Examples of "Elaborative" Responsibility Found in More Cohesive Schools

In contrast, cohesive schools took on a different a form of responsibility. In more cohesive schools, the need for responsibility involved how to get a higher achievement out of the teachers.

High achievement patterns were found most prominently in cohesive schools. These schools in particular had above average AYPs often in high 800s and well into the 900s; they also were found typically in stable SES demographics often with less diverse demographics in comparison to less cohesive schools. In more cohesive schools, I found what I refer to as elaborative responsibility.

This particular form of responsibility involved raising teachers' work and skill expectations to an even higher of level of performance. This entailed searching and modeling other high performing schools and/or asking teachers to model even higher levels academic achievement. For example, in some schools, this included an emphasis on GATE (Gifted and Talented) programs.

One principal in a cohesive school described the need to push his school's math program well beyond what was expected.

... So I approached the second grade teachers and said, "Folks are doing it in other places. Why don't we do that here?" Because we have the…we might not have the money that matches, but we definitely have the students that are definitely capable. If other students can do it, why can't our kids do it? Anyways, they kind of scoffed at the idea and it was like, "Well, we're already working on other things. We want them to do their addition and subtraction facts, let alone multiplication facts." I think that response that I received from the teachers was just such that they're not willing to push their kids and extend what they're learning. It's not a second grade standard and there's no importance, then, in other words, for them to do that, even though our 2nd grade scores very well on standardized tests, meaning that all the kids do…I mean 85-90% of the 2nd graders are all at standards. So it's not like there's struggle and that we're spending a lot of time in interventions trying to get kids just up to where they need to be. They always end up where they need to be. So why not push the curriculum or academics?

While elaborative responsibility was pushed to higher levels of achievement, there was equally a sense of social support in the forms of encouragement, trust, and valuing to achieve those ends. One principal in a high performing school talked about the importance of encouragement and comfort to extend teachers' responsibility.

All my staff know people who have been teaching up and down the peninsula or all throughout California. And they kind of know that this is where it's going. The state has really been pushing these adoptions. In addition, the district is in program improvement so they recognize that this something that the district needs to do. Obviously, there is a certain amount of… and I had to respect, appreciate, and acknowledge the district is in program improvement and this school is not. These are the invested teachers that had been here and had seen this school really improve in its API scores dramatically. At the same time, I really wanted to encourage them in their pride and in their ownership with that. So it was an easy place for them because they felt a lot of confidence in what they had done. They definitely felt pressure and there was a lot of stress....

Descriptions of Schools Organizational Contexts and Identification of the Profiles

In the previous section, I addressed the findings to the first question of this thesis. Next, I move on to the second research question. Specifically, I discuss how principals perceived their contexts and how they matched to different forms of responsibility found by profile.

These profiles were derived from two sources. First, how principals described their school's context, and second how these descriptions matched principals' responses to the adapted Gibson and Birkinshaw (2004) measure.

From my analysis, I identified four school contexts, which I call profiles. I labeled these four profiles as political, low systems, humanist, and high systems schools. The labels were derived from common descriptors used by principals about their schools that were informed by organizational culture frameworks from the organization studies literature (i.e., Bolman and Deal's description of organizational contexts).

Political and low systems school contexts reflected different dimensions of low cohesive cultures, which I shall explain shortly. These schools were in contrast to humanist and high system contexts, which were considered more cohesive.

Beginning with the political context, the label for this profile was derived for schools described as "political"; "having cliques"; and having "a strong union presence in this school". The following is a sample description from a principal who described his school as political.

This is a highly-political building, from my perspective, with highly-political staff. We have the fourth grade teacher here, fourth, fifth grade teacher. It's kind of in one camp. Then, we have the immersion teachers versus the general education teachers

When matched to their responses on the Gibson and Birkinshaw measure, principals in these contexts saw their schools similarly as having the lowest levels of trust and support in the "begin" states of their school's social context. One of principals said this about the trust dynamics of his school:

It's fragmented trust. I would say fragmented. I would say it's certain individuals, certain people, certain grades have a high level of trust and high level of collaboration and others are very low.

In contrast, the label of low systems was identified to a different profile of schools that were described as "chaotic"; "innovative"; "few or limited rules or procedures" by their principals. Specific phrases used by principals included "teachers being young and naive and not understanding systems" and a "country club" mentality. One principal described his school culture and staff as follows:

> *I had inherited a culture of do anything that you want. And that was embraced. And actually the parents loved it because the kids came home happy and loving school. And that is powerful and that is the first step to any success. And they had had that but they did not have any of the other pieces. And I had said isn't interesting that we had had so few in skills and knowledge. Does that tell us something about where our focus is?*

When matched to the Gibson and Birkinshaw measure, this profile, similar to the political school profile, had the lowest levels of discipline in their performance context in its assessed "begin" states by their principals but not as low in terms of trust and support as schools in the political context profile.

In contrast to these two profiles, the generation of the labels for the humanist context and high system profiles schools were initially more difficult to differentiate. For example, both humanist and high systems contexts were repeatedly reported by their principals as being highly cohesive or "collaborative" schools. On the Gibson and Birkinshaw measure, these schools looked similar in having the highest levels of discipline, support and trust compared to the other schools in their begin states.

Although appearing somewhat similar, the humanist and high systems schools were differentiable along the dimensions of their social context factors. Humanist schools, in particular, were identified through principal report as having higher levels of trust and support than their high systems school counterparts.

At a deeper level, they were also described differently. For example, humanist schools were typically described through adjectives and descriptive phrases such as being "family-like" and "it takes a village" or "everybody gets along here" school. One school principal offered her theory as to why her school's culture was more family-like. In the following description, she described the previous principal as being hands-off, which forced teachers to become more of a community.

> *We're close. We're like a family. I mean it's interesting. I mean the staff is really very seasoned and veteran and just willing to go the extra mile, whatever needs to be done. One theory I've heard is the previous principal was not a part of that. She kind of did her thing. And the staff did their thing. And when I, myself, was a teacher, I never talked to her. I never asked her for anything. I just did my own little thing in my own little classroom. So one theory is everybody became really strong and self-sufficient because they couldn't rely on her or ask her for something. There was no support there. That also made us all very close. I think it's part of it, but I think it's also who we are as people. We just happen to be very harmonious.*

More family-like and community like descriptors were used in contrast to high systems schools, which were described more as "professional", "systems" schools; these schools did not have the same sense of communality or social intimacy in their descriptions. One principal described his school briefly as follows:

> *But, it's a professional culture here. So everybody follows the district pacing plan and everybody followed the district guidelines.*

The "profiles" followed a similar though not completely identical classification schema found in organizations research. For example, Bolman and Deal (2003) classify organizations as more structuralist (akin to factories associated more with high systems that focus more on tasks), human relational (akin to families and more indicative of what I label as humanist schools), and political-like jungles (associated more with political organizations with diffuse relationships); these three classifications resonated well with what was identified in the data.

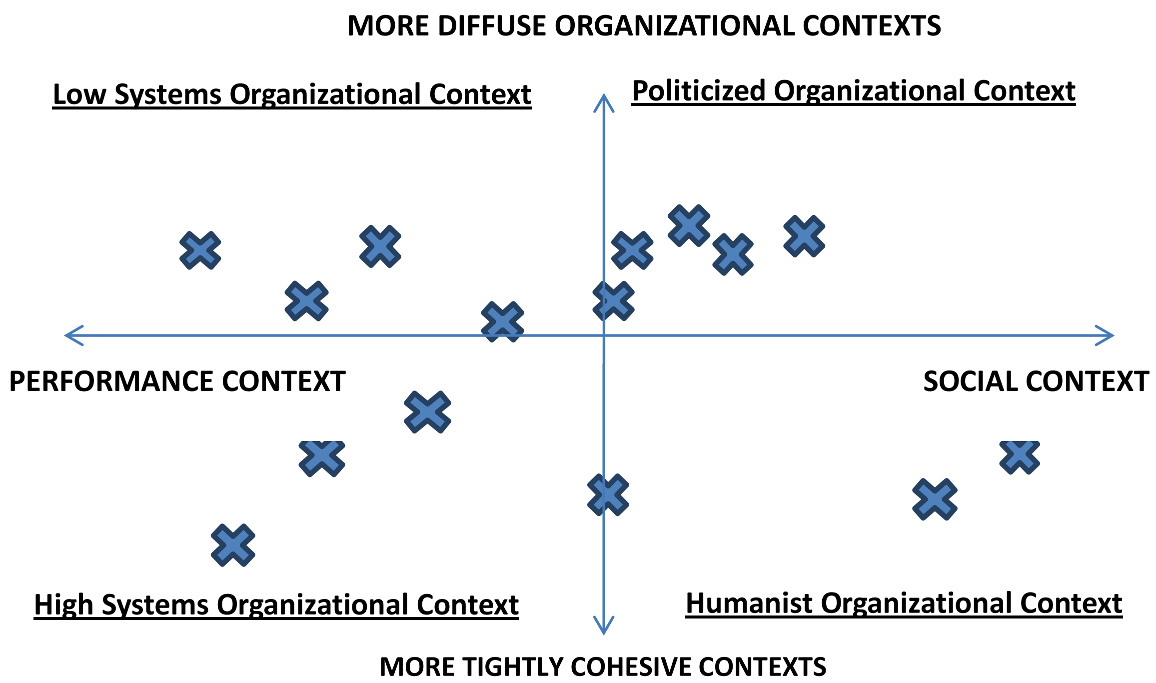
On the other hand, low systems did not fall cleanly into a category that could be informed by existing theoretical typologies. For example, Bolman and Deal (2003) argue that there are symbolic organizations, which are more theatrical; thus the label of "low systems" was left untouched.

Distribution of the Profiles

The typology pictured on the next page provides a summary representation of the specific profiles identified from the data. In the typology, the Xs are a rough approximation of where schools were reported to fall into a specific profile. This approximate sketch was derived from looking at how the 14 principals responded to the Gibson and Birkinshaw measure, principals' general descriptions of their school's context, and then asking them to verify the position of the X for their school on the typology. The one exception was the principal who eventually dropped out of the study; this particular principal provided a description of his school's context in the study and the pressures affecting his school.

Xs, which were positioned closest to another quadrant, represented school contexts that were considered hybrids; hybrids were placed into the quadrant with the strongest similarity. The most populated quadrants included schools considered political, high systems, followed by low systems organizational contexts. The least populated quadrant included schools considered by their principals as humanist context schools. Placement of the Xs was verified with the 14 fully participating principals.

TYPOLOGY 3: A Summary of the School Distributions



Connecting the Profiles to the General Findings about School Improvement

As part of answering question two of this thesis, I connect principals' descriptions of their contexts to the findings about school improvement (i.e., principals' need for different forms of responsibility).

Beginning with less cohesive schools, I found directive responsibility took on two different forms.

In political schools, principals focused directive responsibility on kid impact in teachers' work. Principals in political schools often stressed this emphasis with lower SES and policy-informed groups such as Black and Latino kids; this particular emphasis was reflected in how they used their ambidexterity, which will be discussed with additional examples in Chapters 5 and 6. One principal described his emphasis on the kids as a way of repurposing teachers in order to get them to function as a unit.

> *One of the major challenges at this school is getting the teachers to produce results. Many of them have an attitude problem. And I have to keep their focus on the kids. So I repurpose them. Kind of recycle them. Replace their individual beliefs about what it means to be a teacher. Forcing them to keep it on the kids. So the school can function as a whole.*

In contrast to the emphasis on the kids found in political schools, principals in low systems schools looked at ways of selling teachers evaluations and assessments as part of their work. For example, in observations, principals in this profile were observed to make accountability interesting, fun, or stressing the importance of owning the entire process of school work that included assessments and evaluations. This related to ways of stretching responsibilities to include these areas but without as strong of an emphasis on the kids as found among political school principals. One low systems principal, for example, explained his need to get teachers to focus on similar targets and to develop their consciousness as the organizing focus.

> *Principal: And when I had those first beginning teachers, I had wonderful archers. If you think of instruction as archery, they can shoot any target at any time but they never chose to hit the content and standards target. And so if you think about archery, the purpose is to point, hit a deer, and eat. So it's okay if you can hit a target. But that application means something completely different in real life. And how are they using it in middle school, highschool and as a CEO. And if we cannot talk about this target in a way in that everybody understands it, then you can't get the giant ball of inertia moving, which is called school change.*
>
> *Nicole: So how do you get them to move?*
>
> *Principal: Consciousness is one of them. And specifically what forces are around us. Consciousness of where we are. Consciousness as instructors.*

When looking at principals' responses to the Gibson and Birkinshaw measure, principals in both school profiles reported the highest evolution in their school's development toward discipline. In both schools, principals talked about how their schools needed more procedures and systems in place. The need for more systems indicated a trend among these principals to develop their schools into a high systems culture. One principal in a low systems context described his need to implement more structures at his school:

The structures in place were few and far between, always shifting. Our district is a district of past practice. So past practice can be what happened last week, it can be…usually, it's obviously a structure that's in place that goes on and on. Our school, every day I'm finding things that are less structured. So one of my challenges was to be able to do that and it goes back to communication and just kind of basic structure, is to kind of space out the calendar of the year for events.

In addition to developing higher levels of discipline, low systems principals also reported in the Gibson and Birkinshaw measure evolution toward higher stretch goals. This finding was in contrast with political school principals who reported minimal growth to negative decrements in their school's evolution in stretch. These differences will be discussed and revisited in Chapter 5.

In contrast to these less cohesive schools, more cohesive schools (i.e., high systems and humanist schools) had stronger associations with more elaborative forms of responsibility and not directive forms of responsibility.

Elaborative forms of responsibility came from principals' responses that emphasized a higher achievement orientation for their teachers that moved beyond accountability. Elaborative responsibility was tied to getting teachers to try new and different things but with even higher expectations of performance; in some cases, these expectations were accompanied with forms of social support.

In more cohesive schools, elaborative responsibility involved extending teacher skill development. A principal in a high system school described this emphasis as stressing both the need for discipline and innovation among his staff.

You know, there's always a sweet spot in anything. We try to do a blend of all of them. We are definitely high discipline in our expectations of our students, in the expectations that the staff is here and their work gets done, that the environment is professional. But we do try to be innovative.

Similar to directive responsibility, there were two different sub-categories of elaborative responsibility. They differed in terms of openness, as opposed to protectionism, in the development of teachers' skills. For example in high systems schools, principals' responses discussed skill variety as a public endeavor. This is contrasted with humanist school principals who were more protective and private in their development of teacher skill variety. Two contrasting examples are provided below.

One principal in a high systems school talked about the use of an open database system as a means to build teachers' skills that was more public and open. The public nature of skill development would force teachers to align and extend their skills to achieve even higher outcomes.

It's a coordinating thing and then my sort of dirty little secret is people are going to do a better job when they know everybody's looking at it. If I know that when I submit my lesson plans, 50 other staff members have access to it and are going to access it, I'm going to do a better job. I'm going to make sure the spelling is right. I'm going to make sure that the chart looks fancy. I'm going to make sure I have a clear objective that I have an assessment, that it's driven by the standard, that it's clear and it really aligns to what's going on at the grade level. It's evidence of follow through from grade level collaboration that our PTA and school's invested a lot in. I'm going to do a better job. And what I found – that's exactly what happened.

This type of response was contrasted with humanist school principals. Humanist school principals were more protective about this process, which became apparent in observations and shadowing walks. For example, one humanist school principal commented on the need to guard more safely teachers' skill development and their willingness to take on more risks.

> *In a school that is so close-knit like ours, often the difficulty is bringing up difficult conversations about how to improve. That involves a private conservation with teachers. To have them take risks and try different things.*

When looking at principals' responses to the Gibson and Birkinshaw measure, principals in both school profiles reported the highest begin states across the discipline, stretch, trust, and support. They also reported the lowest levels of growth with humanist schools, reporting the lowest growth (difference in "B" and "N" states) overall; lower levels of growth suggest greater maintenance across these dimensions.

The table pictured below summarizes the findings from this chapter.

TABLE 4: A Summary of the Common/Differentiable Patterns Identified to Each Profile

Dominant Characteristics Identified in Each Profile	**Self-Report High Cohesive Schools**		**Self-Report Low Cohesive Schools**	
	High Systems	*Humanist*	*Low Systems*	*Political*
Type of Responsibility				
Directive	*MS (Task Identity & Significance)*	*MS(Task & Identity);TS (Task Significance)*	*SS (Task Identity); MS (Task Significance)*	*SS (Task Significance); MS(Task Identity)*
*Elaborative**	*SS (Teacher Skill Variety)*	*MS (Teacher Skill Variety)*	*TS (Teacher Skill Variety)*	*TS (Teacher Skill Variety)*
***Forms of Elaborative Support**				
Trust	*MS*	*SS*	*TS*	*TS*
Encouragement	*MS*	*SS*	*TS*	*TS*
Valuing	*SS*	*SS*	*TS*	*TS*
Average of Groups Performance Indicator (outside report)				
2011 API	*860*	*894*	*777*	*765*

**Note categories are not mutually exclusive and take into account hybrids (those schools that cross the axis) into calculations.*

CHAPTER FIVE: FINDINGS – DESCRIBING THE METHODS INVOLVED IN AMBIDEXTERITY

The previous chapter discussed the finding that principals needed to create different forms of responsibility in their contexts. I identified and linked these forms of responsibility to four profiles based on principals' perceptions of their contexts and from their responses to the school improvement dimensions; principals' responses to the school improvement questions exposed the tension between performance-based accountability and the professional autonomy of their teachers, calling for forms of responsibility.

The next step is to understand what ambidextrous behaviors principals used to create these forms of responsibility in their schools. In this particular chapter, I begin to report on research question three of this study.

- What are the common methods that through their use may illuminate different variations of managerial ambidexterity?

Specifically, I report on the three groupings of ambidextrous methods found across all schools. They include the use of data, cognitive interpretation, and the use of affective appeals. I begin this chapter by explaining how I identified these three groupings of methods in the sample. I then show how principals used methods specific to each profile and grouping. By highlighting their purpose, I show how they function based on principals' perceptions of their contexts; this explanation provides the foundation to understand how principals enact their ambidexterity differently that will be described in Chapter 6.

Deriving the Three Common Categories of Methods in Managerial Ambidexterity

From my analysis of data, I identified three categories of ambidextrous methods that occurred across all schools. They included the *use of affective appeals, cognitive interpretation,* and the *use of data*.

Beginning with the category, use of data, I identified this category of ambidexterity methods from how principals directly handled and talked about data and assessments with their faculty. For example during data read out sessions, did principals attend to demographic groupings with equal timing or how did they skip/rush through certain groups? How did they talk with the data (i.e., tell stories, elaborate to broader themes)? Were they more open (i.e., allowing more physical access) or more protective (i.e., not allowing and issuing denials) with data in terms of public/private viewing and accessibility?

The second category of ambidexterity methods, cognitive interpretation, I identified from how principals organized space, time, and content related to areas that could improve teachers' interpretation of their work. This included looking at how principals organized activities around teachers' interpretation of standards, curricula, and assessments. For example, how did principals talk about improvement as tied to this work that could affect its interpretation? How was purpose framed in teachers' tasks that could affect their coordination in the school? When did this occur? This second category did not directly involve data or ways of formulating emotional support.

Beyond these two categories, I identified a third grouping of ambidexterity methods, what I called, use of affective appeals. From principal follow-ups, this category involved ways to influence emotion and social support that varied in terms of negative and positive tonality.

Specific Methods Found within Each Grouping and by Profile

In the sub-sections below, I provide examples of the specific methods identified to each grouping and by profile. I documented these methods from my observations of principals and specific to how they addressed the tension between performance-based accountability and the professional autonomy of teachers. The methods talked about in this chapter speak to how principals created forms of responsibility to address this tension.

To guide the reader, I list in the following table those methods that I was able to observe with moderate to greatest frequency among principals by profile and grouping. Next to each method, I report its frequency in the sample.

TABLE 5: Common Methods Identified in Each Profile and Their Groupings

Organizational Profile	**Political**	**Low Systems**	**Humanist**	**High Systems**
Common Ambidexterity Methods Used by Principals to Construct Responsibility				
Affective Appeals	*Appreciation and Celebrations of Specific Efforts (SS)* *Guilt Tripping (SS)*	*Humor/Play (SS)* *Necessity (SS)* *Professional Recognition (MS)*	*Courage/Face Saving Conversations (SS)* *Developing Zones of Protection (SS)*	*Championing and Celebrating General Accomplishments (SS)* *Transitioning Away From Weaknesses (SS)*
Cognitive Interpretation	*Self-Reflection (MS)* *Individual, Group Investigation of Loss, Weakness (SS)* *Improvement as social equity; Improvement as realism – "being real" in society (SS)*	*Self-checks for accuracy (MS)* *Group Investigation of Process (SS)* *Improvement as exploration in systemizing innovations and success (SS)*	*Replication of expertise (SS)* *Improvement as High Achievement/Gifted (SS)*	*Use of Thought Experiments (SS)* *Improvement as Innovative Journey (SS)*
Use of Data	*Selective Attention (MS)* *Stories to Create Collective Social Empowerment in Accountability (SS)* *Use of Multiple Sources (MS)*	*General Focus (SS)* *Creating Choice within Accountability (SS)*	*Obfuscation (SS)* *Confidentiality, Privacy, and Protection from External Evaluation (SS)*	*Recognition and Verification of Expertise (MS)* *Elaboration of Expertise from Accountability (SS)*

*** Methods listed occurred strongly within a given profile and with weak (TS) to no support in other profiles.***

The Political Context

Beginning with the political context, the major issue identified from principal report included the need to build directive responsibility. In the previous chapter, directive responsibility was defined as a form of responsibility used to hold teachers accountable for performance. This form of responsibility, I tied political and low system principals. Among political context school principals, directive responsibility took the form of how to increase kid impact in teachers' work based on principals' perceptions of their contexts. The specific methods found in each of the three groupings stressed this emphasis.

Examples of Affective Appeals. Beginning with affective appeals, I identified two methods from principal observations with this emphasis. The first included *appreciation and celebrations of specific efforts* and forms of *guilt tripping.*

Appreciation and celebrations of specific efforts varied among political context school principals. They largely encompassed the creation of time to appreciate and give celebration to the efforts of specific teachers through "thank yous" sessions. In the majority of observations, principals used thank-yous to support other faculty for their movement beyond their required roles; this occurred among four of principals in this context. For example, one principal talked about a teacher who stepped into a difficult situation while acknowledging this teacher's work in the area of curriculum.

> *…. So we thank {refers to a teacher} because she stepped into a situation that was very difficult both emotionally and what's the other word that I want to use {teacher interjects and says physically]. Physically. {everyone laughs}. As well as just putting together the program. Putting together the curriculum. And she brought a lot of structure and planning to the situation, which is quite good.*

Appreciation of effort included not only the acknowledgement of teachers going beyond themselves, as was exemplified in this quotation, but also celebrations of how they helped socio-economically underperforming students. For example, a principal in a historically underperforming school celebrated teachers' influence on helping Black kids move into higher levels of performance.

> *…What we really need to celebrate in terms of our African American students at large is that we have a positive change for our African American students for last year. And we are even outpacing the district with that particular population [applause]. So that's a reason to celebrate. Now even if it is only 5% growth, if we were able to do that with all different sections and whatever we went through last year, I'm pretty sure that this year we can do even better than what we did last year. In both language arts and math, our African American students show growth.*

Celebration of these specific efforts and forms of appreciation occurred at the beginning and at the end of these meetings; they were focused predominately on the kids. In follow-up discussions, principals explained their use of appreciations and celebrations as a means to highlight the significance of teachers' work on their students. One principal explained his use of these celebrations as follows:

> *...It's about the children. And what I am celebrating and what I am acknowledging is that you are helping to move these kids to a higher level and with the school as a collective. And, within that group that I celebrated, there are other ones who will need to be looked at. But, they need to be part of that celebration. Individually, I need to deal with them in a different way. Individually, I need to address the things that I address.*

Interspersed with forms of individual appreciation was a high frequency of *guilt tripping* rituals. *Guilt tripping* highlighted something not yet achieved or a let-down for kids. *Guilt tripping* was found among three of the principals in this profile and was commonly interwoven with the use of celebrations to deconstruct the meaning of teachers' work.

One principal for example used the question, "What is it?", repeatedly between the causes for celebration as his form of guilt tripping. In the following example, this principal uses this question to focus on the achievement gaps among Black and Latino students at his school.

> *…What is it that we are aiming for? And what is it that we are supposed to be working for this year? And later when we look at data, we'll see that there are reasons to celebrate and there are reasons to keep the mindset of where we need to be moving our children. And, where have we let them down?*

The use of this question phrase was connected to forms of celebration; it was also connected to areas of what could be done better for underserved students populations in instruction.

In several follow-ups, the purpose of *guilt tripping* was explained to me. For example, principals talked about the ways to motivate teachers toward a broader sense of purpose by moving blame away from the child toward developing forms of passion. In a follow-up discussion with a different principal about the use of guilt tripping, she explained the need to move teachers away from a sense of hopelessness about the kids.

> *Well, they tried to blame it on the kids and their families. They know my philosophy. I say, my whole philosophy is: what's within your realm of control? Are you saying that these external things cannot be overcome? I mean, have you given up? This is a case of hopelessness, hopelessness? You know.*

When asked more explicitly to describe the purpose of guilt tripping, this principal emphasized the need for teachers' passion and to "be on the bus"; this principal later tied this emphasis back to the kids.

> *Yeah. That comes from Good to Great, that book. If you're not passionate about what you do, get off the bus. That's how he says it. Because then, if a person is passionate about what they do, they're going to try to do the right thing. They may need support but they'll try to do the right thing, get to school on time, take care of their responsibility.*

The use of affective methods highlighted the significance of teaching work on the children, and, particularly the most disadvantaged; this was common to this profile.

Examples of Data Use. The use of data also stressed this emphasis on the kids. The first major use of data involved *selective attention* to specific student demographic populations. The second major use of data embedded *stories of empowerment.* And, the third method involved the use of *multiple sources.*

Selective attention involved careful readout session in observations of principals. Principals spent more time reviewing data for specific groups including selecting teachers to read performance data with greater care and at slower verbal speeds for certain underperforming populations (e.g., Latino and Blacks) when compared to other principals. In this example, the principal had teachers read out the data for the past four years for Black, Latino, and other non-white students while skipping over other demographic categories.

> *Principal: But in the meantime, can I ask you -- we need to just go over the last four years- just for the Black, Latino and Non-Whites*
>
> *Teacher : OK.*
>
> *Principal: Seven, eight, nine, ten.*

Teacher: For Latinos, we have 2007, 56%; 2008, 54.8%; 2009, 53.3%; 2010, 52.5%. Once again, those are Latinos.

Principal: Uh-hmm.

Teacher: …So, for African-Americans, in 2007, 19%; 2008, 19 -- or 18%; 2009, 60%; and 2010, 60%.

Principal: And other non- white?

Teacher: And other non-white, we have -- OK. For 2007, that's 6%; 2008, 5%; 2009, 4%; and 2010, 4%.

Care to specific groups occurred at higher rates of frequency in this profile. Two principals had the strongest frequency in the use of this tactic while two other principals used this tactic intermittently. The most attention in these read-outs focused disproportionately on the results of Black, Latino, and non-white students.

When asked whether this was intentional or not, three of the principals acknowledged that selective attention was deliberate. The most commonly cited reason was to direct teachers' attention to the kids. The following is a sample response given by a principal to my question about his intentionality in the use of this tactic.

It is. It is. It is. It goes back to that concept. There will be students who will learn anyway regardless of who the teacher is. Okay? And I heard something similar. They learn even though they had a bad teacher. So, there is a group of students that still learns. Because they get it from home. They have the conditions. They have the environment that will help them. Those who don't will not move exactly for the same reason.

In addition to selective attention, the second major way in which data was used by principals included *stories of empowerment*. *Stories of empowerment* also focused the significance of teachers' work on the kids; Stories of empowerment had strong associations with a social justice or equity perspective; they were tied to sub-themes involving stories of hope and stories of the underdog. For example, principals in three of the schools used social activist writers, including Delpit, to tie the emotionality of being perceived as Black or Latino to motivate teachers' sense of purpose in their work.

One of the principals used stories from "The Little Prince" that he tied to broader themes of "gift-giving" and "opportunity-giving" to these students. He used this story to increase teachers' understanding of Latino students as part of balanced literacy training.

What I really take from this book is that we give children the opportunity to give and to receive the literature. When we give and receive the possibility of reading the word, we are giving the children actually the word. So, if an adult, old, vibrates, gets excited, cries and weaves through the book, a book that I read many years ago, just imagine what we can do for our children when we give them that gift. So, today it's about that. It's about connecting what we heard yesterday around balanced literacy.

Finally, the third major use of data among political context school principals included a higher than average emphasis on the need to *use multiple sources*. The use of multiple sources occurred predominately among two of the principals in this profile with a third principal using this method intermittently. Principals typically used multiple sources to question the nature of teaching practices in order to enhance student learning. In a faculty meeting, one principal talked about the need to search for different perspectives in order to achieve movement into the national standards and to increase higher order thinking skills for her students.

> *Can we identify multiple sources? I had a conversation with someone recently and they said yes you know the multiple sources, which are the new national standards are so important because if you look at the French- American war from the American perspective it is very different from the French perspective… Yeah but we need multiple sources though…Because I think that we are limiting our students thinking when we don't do that. Also we need to think about Bloom's taxonomy and specifically those higher order questions.*

Principals, in this profile, commonly looked at alternative sources to broaden what constituted good teaching. In their use of multiple sources, principals used this method to focus teachers' work on the students.

Examples of Cognitive Interpretation. Cognitive interpretation also appeared to emphasize student impact. Principals in political contexts were observed to use three methods most strongly in this profile. They include *Individual and Group Investigation of Loss and Weaknesses, Self-Reflection Exercises,* and *Associations of Improvement as Social Activism and Realism.*

*Individual, Group Investigation of Loss and Weaknesse*s was typically associated with the failure to bring about accountability and to lead those efforts for specific student populations. In principals' use of this tactic, they had teachers investigate their loss or weakness in not knowing or fully understanding the needs of their students. Four principals in this profile were observed using this method.

As one example, a principal had a group of teachers investigate their own failed understanding of Latino EL experiences and their needs.

> *Always Running La Vida Loca, Gang Days in LA by Luis Rodriguez. There is a specific reason why I chose this book. I had planned before for us to watch the video. But I think there is a little bit more -- if you give us the opportunity to understand the video, once you see it. Because the video is a little bit stronger. And so, as we get ready to welcome our students. As we get ready to understand who they are. And sometimes we will not be able to understand. As much as we want to, sometimes we will not. But we need to question in order to understand it. This is the father. He went through a specific experience and he's living the same experience through the eyes of his son. How many of us have families that we don't know going through this and more? What I want you to do at your table is to talk about this.*

Investigation of individual, group loss involved introspection to develop a fuller gauge on student experiences.

In addition to this tactic, principals used *self-reflection exercises* repeatedly after data readouts and guilt tripping rituals in order for teachers to understand their student populations better. The use of this tactic appeared to have moderate support in this profile. Two principals used this tactic repeatedly while the two other principals used it intermittently. These self-reflective exercises often involved questioning teachers' work and their professional purposes as exemplified toward the end of the last quotation.

Self-reflection exercises included teacher team-breakout sessions and/or allocation of time for individual reflection. They involved periods of silence or talk-out sessions among teachers to understand the nature of their work and which student populations they were affecting. In a follow-up interview, a principal explained the importance of these self-reflection exercises as growing teachers in their work and moving them away from blaming their kids.

> *And it was clear that the teachers were growing and learning the more they reflected. And one teacher concluded in her journal that, 'you know, after all this reflection, I realized the problem was not Johnny, Jane, Susie and Joe, the problem was me. I was the problem.'*

To enhance a focus on the kids, principals also associated teachers' work with *improvement as a form of social equity and realism*. Principals tied social equity to "wip[ing] out the bottom", as one principal put it, of underperforming Latino and Black students; principals used similar phrasing in the sample. In other cases, some principals used the word equity to frame the work of their teachers. Four of principals were observed using some form of this tactic in this profile. One example is given below.

> *And how do we equate that with equity? What is their relationship right now? So today, we are going to deepen our understanding of the instructional framework, the balanced literacy equitable. And again, we continue this passion for social justice. And we name it clearly, our African-American students and our EL students. So instruction, relationships and within that relationship is how do we interact? So that is part of the work that we are doing today. And it's just the beginning.*

When stepping back, the use of this and other methods in this profile were woven around student impact in this profile.

The Low Systems Context

In juxtaposition to political context school principals, low systems principals sought to create directive responsibility by expanding teachers work to incorporate assessments and accountability but with less of an emphasis on student impact. Principals saw their teachers as "having their heart in the right place" but often wanting to pursue their own creativity and innovations. Principals' use of the methods in this profile was tied to selling and finding ways to have teachers expand incorporation of evaluations and assessments as part of their work.

Examples of Affective Appeals. Beginning with affective appeals, I identified three techniques that commonly had this emphasis among low systems principals. The first method included the use of *humor*, or aspects of *play* in work. The second common method involved the use of *necessity*. Finally, the third common method involved the use of *professional recognition.*

The use of *humor* and aspects of *play* was found among three of the principals in this profile. Examples of verbal expressions falling into this category included the use of humorous phrases or jokes to appeal to teachers' interests to take on accountability. In the following example, this principal makes a humorous play on Percocet, the painkiller medication, by using the term “focuset” to help teachers focus and fall in love with standards during a data review session.

> *But remember. Use focuset! Remember to use focuset! Focus on those standards. Kill that pain. And get that warm, fuzzy feeling. And I know you just love standards. Now I sound like one of those med ad commercials for percocet. Let’s just not get to the side-effects. [laughter].*

In another school, a principal allowed the use of game shows to solicit teachers’ interests in assessments and standards. In this particular school, teachers used a game show to understand student assets by leveraging a taxonomy that was developed by the principal. Once the game show was over, the principal explained the purpose of the activity as a means to solicit teachers’ interests in what they could do better in their teaching.

> *Principal: Okay. Can I have your attention, please? First, let’s give [mentions teachers’ names], can you give them a round of applause? [applause] Any time you want to present something to the faculty, you just ask. I’m happy to have teachers share what they know. I have two questions. First question: Looking at the strips that you saw at your table, was there anything for you that you might do differently now that you're thinking about it that perhaps you haven’t been doing? Are there any ideas what they said that might affect your practice? Who says yes, there might be an idea?*

This example illustrates a common pattern among low system principals. Principals sought to evoke teachers’ interests to incorporate assessments and accountability but without a specific reference to their students through the use of this tactic.

In debrief sessions, other principals talked similarly about their use of this tactic as a means to get teachers’ “buy-in” into aspects of their work related to accountability. One principal described his role as a “used car salesman” and specifically as selling teachers on aspects of accountability that they may not necessarily want. He explained this metaphor.

> *So, I'm selling them on, "Hey, this is part of it. Hey guys, the district, we got to do this". It builds student capacity so they can get comfortable taking tests of 75 questions. They need to get used to taking tests anyway. The world is filled with tests. So part of it is selling them on the process. It kind of goes back to the sense of humor or sarcasm. You're sort of trying to soften them up. In the military, I'm a big military history buff, you know they always try to soften up the island before the invasion.*

In addition to the use of humor and play, principals used *necessity* as a second tactic to expand accountability in teachers’ work. The use of necessity was found among four of principals in this profile. Among low systems principals, the use of necessity elicited urgency and empathy from teachers to get them on board with accountability. The same principal who talked about the need to use of soft bombs of humor also explained his use of necessity to expand teachers’ responsibilities into accountability by building empathy.

> *I use the soft bombs and try to loosen them up. "Okay, hey, he's on our side. He gets it. Okay, let's meet him halfway." You're building sympathy to some degree. And maybe it's just my way of kind of not getting people to be push back on me. You know, I mean again — it's not like I avoid confrontation. But I try to get things done in a non-confrontational way. And in this regard, this brings out so much, so many bad feelings in people. But this is ultimately something that they need to do.*

In this example, necessity involved acknowledging the realities of public schooling but with less of emphasis, if any, on the kid factor.

Principals similarly talked about the realities of public school policy and the practices that called for necessity as part of this tactic. In some cases, there was brief mentioning of student impact. This principal talked about the necessity for homework turn-ins in order to improve teachers' understanding of student work.

> *And not to pooh-poo, although I am pooh-pooing. There's a lot of outdated pedagogies, as we use them in the business. But you guys will use the discretion. It's important, though, to push the kids. It's necessary. Show it to me*

Later in this faculty meeting, this principal stressed what was important to the teachers so that they would incorporate evaluation and assessments into their teaching.

Beyond the use of necessity as a tactic, principals in this profile also used forms of *professional recognition* to tap into teachers' interests. Forms of professional recognition were broad, public ways to recognize teachers. The use of professional recognition was found in at least two of the schools.

For example, one principal recognized the professional accomplishments of teachers through nominations for teacher of the year or by selecting them as guest speakers at administrative conferences; this principal talked about forms of professional recognition on shadowing walks and in his newsletter. In interviews, he explained the importance of teacher recognition.

> *And the teachers who suck at it are always the losers. So you have created the winners and losers. And you haven't created the climate where everyone feels invested. And I don't want education to look like a funnel but rather a colander. I don't want all people coming from different background and then being squeezed into one or two measures of success. I want everyone to find their own way of success and to have a million of them and that will validate everyone.*

Similar to its use by other principals, professional recognition was a means to draw teachers' attention and to get them on-board with accountability.

Examples of Data Use. Beyond their use of affective appeals, principals in low system schools also used data to expand teachers' responsibilities. They did so in two major ways by taking a *general focus* with data and by *creating choice within accountability*.

A *general focus* in data involved having teachers look more holistically at performance gaps across socio-demographic groups. Four of principals in low systems contexts used this tactic.

For example, principals in low contexts schools did not skip or overly attend to specific groups at the same rate. They also tended to talk more generally about students' success in specific programs and assessment systems. One example is provided below. In this particular example, this low systems principal talks about the gaps by specific grade-level in the use of curriculum associates data, a vendor and system used for interim assessments, and not by specific demographic category as was found in political schools.

> *And so there is a gap of exactly 26%. And so now the question is where do we want the kids as a grade-level to score on the next curriculum associates so they*

incrementally build their way up to 66% in that specific content area. And so when we look at the safe harbour that is one of 10%. If they score 10%, that would be around 50, and another 10 then they would still be about 6 percentage points short. And so maybe for the next time you want to have a 15% bump and so we are trying to get the grade level minimally above the proficient level. And so is that clear or unclear? {Calls on a teacher}, you nodded to both?

In a follow-up discussion, this principal explained his use of this tactic to broaden his faculty's focus as part of teacher development.

I don't want to overly focus my teachers' attention on just one group. I want to broaden their view. I want them to see themselves in accountability, for themselves, and not just tied to one demographic. For me that helps them to have creative options rather than narrowing their attention.

Broadening of focus was coupled with the second method of *creating choice within accountability*. Creating choice within accountability referred to a tactic where principals allowed teachers to self-select specific questions and book content material to achieve accountability. This was done in free-form discussions where teachers could select and formulate strategies to achieve accountability and their responsibilities related to assessments; in these sessions, principals offered suggestions rather than advocating for their views.

One sample sequence is provided below. In this sequence, teachers discuss what interim assessments that they were going to use based on performance data they just had reviewed. The principal only interjects to provide advice.

Teacher 1: I mean the ones that are coming up like chapter five and the ten is coming up and the six is five and seven. And then chapter five is seven. And what did we say? And so for standard five, you will be getting in five and six. And those are the key standards

Principal: Of the ones that you guys were looking at are there any of those that you have identified?

Teacher 2: Take a lazer focus and focus on the ones that [refers to a teacher] was talking about and see if we can do some reengagement.

Teacher 1: Five we can do.

Principal : Which they did well on?

Teacher 1: 43% is still strategic

Principal: It is still strategic but it is still not. I mean it is a decision that you guys have to make.

In this example, the creation of choice included how teachers could extend their own discretion in their evaluation of data and choice of assessments. This was a common trend among low systems principals, specifically among the four principals in this profile.

Examples of Cognitive Interpretation. Tactics involving cognitive interpretation were similarly focused on expanding teachers' accountability. I identified three common tactics among low systems principals that were used toward this end. They include *group* *investigation of process, self-checks for accuracy,* and *improvement as exploring and systemizing innovations with success.*

Group-investigation of process was found among four of the principals in this profile. Principals used this tactic as an organizing method in conjunction with creating choice in accountability. In contrast to this other method, group investigation of process appeared meta-cognitive. Specifically, it moved beyond the examination of specific book or test content. Instead, it involved ways for teachers to inquire and reflect on the purpose of evaluation and assessments in their work. Similar to other methods in this profile, this tactic was focused on developing teachers' interests with less of an emphasis on student impact.

To develop teachers' interests, principals used *group investigation of process* as part of reflective sessions that would review the benefits and drawbacks of specific programs and assessment systems; these review sessions looked at how teachers could be smarter than the system. This was done in group faculty meetings; it was also done in one-on-one discussions with specific teachers. One sample excerpt is provided below from a general faculty meeting on how to beat the CELDT.

> *Principal: You either live by the data or die by the data or both. And the point is that we have to be smarter than the data and the CELDT. We have to understand it. So that we can make the adjustments that you do and like we do for your instructions… So is there any ah has that people have gotten in the CELDT? Anything that you are changing in your teaching because you know the CELDT better? Anything?*
>
> *Teacher: I spent the two weeks before just showing them what it looks like. And I told them that this is not cheating that this is called being aware of what you are being tested on.*
>
> *Principal: What piece of it was it?*
>
> *Teacher: Just to see what it would look like before it showed up.*
>
> *Principal: And how and what impact do you think it had? If nothing else, maybe it made them feel more relaxed.*
>
> *Teacher: I guess.*
>
> *Principal: Anything else?*

In this sequence, this principal asked teachers to think about how to beat the CELDT test rather than just investigating its specific items. In a follow-up discussion, this principal explained his philosophy in the use of this tactic to develop higher levels of consciousness among his teachers in their use of assessments.

> *We are going to be measured in a state standardized way. And we are going to have to understand how we are going to be measured. And we have to be conscious about translating your passion and your teaching and your students learning and success into how it's going to be assessed. And in the context of state accountability systems.*

Consciousness was tied to teachers' interests in the use of group investigation of process. In addition to this method, another tactic appeared important to expand teachers' use of assessments; this tactic was *self-checks for accuracy.*

Self-checks for accuracy involved ways to have teachers double-check their interpretation by taking on the role of evaluator; this particular method was observed among two principals in this profile.

Principals, who used this method, looked at ways to increase teachers' understanding of these assessments in conjunction with school expectations in accountability. In the following sequence, a principal in a low system school talks about ways to increase the use of ELD standards, including in content, timing, and use, as part of a handbook related to teachers' work and school expectations.

Principal: .....Guys as you're brainstorming, if you're not sure if it fits just write it down, we'll edit those. If you're on U through Z, that should be when, what, how. If you're on K through O, you should be... Guys can I get your attention real quick please I want you guys to double- check your understanding. [Refers to a teacher] Will you tell the group what we're doing?

Teacher 1: You've got to see what your letters are from your paper and that's what you're looking at on the table...

Principal: You're doing what with this information?

Teacher 2: I don't know why we are doing this?

Principal: You're brainstorming, giving us our school expectations. What are we doing with ELD? ELD should be on the chart. How many minutes are doing we do it? How many days a week do we do it? What are we doing during it? Trainings we've had. Expectations of all of us as a staff. Talk about, discuss, and share it.

Self-checks for accuracy were used in conjunction with a third tactic found among low systems schools principals, *improvement as exploration and systemizing innovations and success*. This third method varied among principals. It commonly involved ways of addressing accountability by validating or questioning activities that would lead to new insights and success in teachers' work. One principal explained his process of systemizing innovations and success by allowing teachers to do a video critique and then giving them questions and problems to focus upon as part of their development process.

So teachers are now videoing themselves for about an hour. Then they take that home and they look at the video and they chose about a 10 or 15 minute block that they want to show their grade level team. And have them -- and then I give them a specific question for problem and have them sort of hammer it out. So I did that with one of my teachers who is not afraid and we did it as staff. And then they did a fish bowl of her grade level team and went through that. And then she talked about the power that it had for her and how she learned so much. She's already a great teacher. But I thought it was powerful that a great teacher got to see how she and other teachers could improve.

A different low systems principal had teachers connect their creativity to the success of the DIBELS system when educating their kids. DIBELS was a recently implemented assessment system at this principal's school.

And how you engage these systems with your students, but those creative decisions that you make are very powerful. They sustain and maintain the success that we have.

And so what this system and what this DIBELS is? And what it can be at its best? And what we should make it is a tool to help you?

Although this principal references students, he connects the success of the teachers to the system and specifically to the tools that teachers could develop toward those ends. Among principals in this profile, three of the principals used *improvement as exploration and systemizing innovations and success* as a method prominently. One principal used this tactic intermittently to spike teachers' interest in accountability.

Holistically, the methods found in this profile involved ways to expand teachers' work into areas of accountability; principals' use of these methods had less of an emphasis on kid impact when compared to those methods used by their political school counterparts.

The Humanist Context

In contrast to principals who used methods to increase teachers' accountability in their work (i.e., directive responsibility), principals in humanist and high systems schools used tactics to extend teachers' skills to even higher levels of achievement. I identified this emphasis to what I called elaborative responsibility in Chapter 4. To create elaborative responsibility, humanist school principals used methods that could extend teachers' skill development to higher levels of achievement that often involved levels of protectionism.

Examples of Affective Appeals. In humanist schools, I observed two methods in principals' use of affective appeals that spoke to this emphasis. They included the use of *courageous or face saving conversations* and developing *zones of protection* to protect teachers from a sense of harm.

Courageous or face saving conversations involved methods that would encourage teachers to take on criticisms or give suggestions related to their skill development. This particular method was observed among two of the three humanist school principals; it was mentioned by the third humanist school principal.

One example is provided below of a humanist principal who used the term courage, which she later explained as the form of a "gentle conversation".

To be able to say to the teacher, look, you know this is coming up, let's talk about this. And so I think that kind of conversation, those kinds of honest dialogues. Being open to saying, I want to help. If there is a problem, I want to help. And here are some suggestions…

This principal used the concept of courage not just to bring up difficult these conversations, but also as means to make teachers feel comfortable to develop their passions and address challenges. In one particular meeting, this same principal talked about encouragement to further teachers' leadership development on committees as a form of risk-taking.

But I do want you to be on committees that you are passionate about. And which challenge you. And I want to encourage you to take that risk

Emphasis on risk was talked about in terms of building teachers' skills toward an even higher achievement orientation. In addition to more verbal forms of its expression, forms of courage were observed with tactics that would preserve privacy to take these risks. Tactics to preserve privacy later reappeared in the use of data. Specifically, these tactics included ways to protect confidentiality around data from external evaluation around teachers' work.

Ways of maintaining courage were closely related, and, physically located behind closed doors, called "face-saving" conversations by another principal. In debriefs, this principal explained the purpose of these face-saving conversations.

> *Well, some people could say you trying to hide something? I'm not trying to hide something. In fact, what you're trying to do is to provide the forum to be able to discuss it but one-one-one. So that people know this is a safe and secure area for us to be able to be very thoughtful. And kind of honest in our conversation. But they know because of that, because it's protected, that they can do that. And so it's more honest, but also to protect their self-esteem.*

The use of private settings was also found in other schools and included a second tactic, *developing zones of protection. Zones of protection* involved ways to protect teachers from a sense of harm. Zones of protection were found across all three schools among their principals; they included how communications, events, and physical spaces could be controlled and organized that could protect teachers in their skill development.

One humanist school principal, for example, described his need to control how communications were delivered.

> *…At a very big and successful school, it's been a learning process for me as how to deliver messages, how to compartmentalize them, how to frame them, how to couch them, how to word them as a zone of protection. I'll give you a kind of a funny analogy. One person calls the job of a principal as the job of the liver. So, you filter messages from the teachers to the district office and filter messages from the district office down to the teachers…So, I don't necessarily think it's a political hot button. But if it's an important topic, it has to be delivered all at once. To all the people. Or delivered carefully to build trust.*

In another school, *zones of protection* included the use of events that could not only increase parental involvement, but could also provide opportunities to control safety around teachers' work. Specifically, the use of events allowed this principal to know when to step in and protect the teachers from parental pressure. In a follow-up session, this particular principal explained this method.

> *I probably told you this is about safety. And safety looks very different. You know safety certainly physical safety, but then also safety to take risks. Safety to do your best. Safety to learn. So that's the number one important thing for me, that's going on. And then I think when you have that safety in place, when teachers are feeling good about themselves, and they feel a safe to instruct the children, it creates a love of learning. And then when you have safety and love of learning together it just goes to the grades. The grades go along and the performance goes along with that.*

Safety included not just physical safety; it also included how to make teachers feel comfortable to take risks, to feel good about themselves, and to develop a love of learning in their students.

Humanist school principals commented similarly on the need to protect their teachers through discourse and physical spaces. Zones of protection also related to displays of evidence and access to data in schools. This involved the use of data, which I discuss next.

Examples of Data Use. Similar to the use of affective appeals, principals' use of data sought to extend teachers' skills through levels of protectionism. I identified two methods with this emphasis including *confidentiality, privacy, and protection from external evaluation* and *obfuscation* in data use.

Confidentiality, privacy and protection from external evaluation varied among humanist principals. Principals' use of this tactic commonly involved physical displays of data-evidence and accessibility to data including by parents and by me, as a researcher. For example, humanist schools were similar in that they had the most spartan walls in the displays of students' academic work and test score results when compared to the other schools in the study.

Several reasons were given by principals. One explanation included not to overstimulate and distract students from the core foci of learning. Below is short excerpt from that conversation.

> *The idea is that the brain, in order to really function, needs a clutter-free environment and needs to be on focus on just what it should be learning, in order to start painting patterns and absorbing that information.*

A second reason, provided by a different principal, included protection from aggressive parents who could threaten the work of teachers by probing into the performance results of kids. The following is an excerpt of that discussion.

> *The first person whom they look for on that wall is their little pride and joy. If their little pride and joy is not in the nth percentile of the class, then all hell breaks loose. The first person whom they call is me. And specifically to complain about the teacher. That can disable the sense of community that we have at this school. And so we have to be careful about what we show around here. Just like parents, teachers are sensitive. And they need to be respected. Evidence prompts questions. And those questions can destroy our school culture.*

Finally, a third reason given by another principal was to prevent test score leakage by parents around GATE (Gifted and Talent Education) results that could prompt questions. To counteract this issue, this principal explained the need to train parents and protect confidentiality around data.

> *There will be more emphasis on confidentiality. I talked a lot about that. But last year, I heard parents talking with the kids. And that is absolutely horrible. When it especially happens in third grade, not because third grade is doing anything wrong, but it's because of the whole tier-three GATE sort of issue. How come this child got tested? I do not want my child to do it. How come this child was in the program and not my child? And so I will make that clear and there will be training in the field. The parents need to be trained.*

For principals in humanist school contexts, displays of data evidence and accesses to them were perceived as threatening especially when displayed to outsiders.

In fact, the most difficult schools to access sensitive data were humanist schools. They were most open in letting me view sessions where high achievement data were discussed but were least open in allowing me to sit in and record meetings on underperforming populations. Differences in terms accessibility were made explicit through repeat turn-aways by two of the three principals to view sensitive data. In follow-ups, I was told that my exclusion from some of these meetings was nothing personal; instead, I was told that it was how the school maintained confidentiality. Confidentiality was also related to forms of social support for teachers.

When principals gave me access to private meetings, principals were quiet. In those sessions, teachers did most of talking to test out new ideas and concepts. For example, in coaching sessions, principals listened approximately 90% of the time in those meetings. Principals also framed their roles as being more supportive to their teachers in those sessions. One example is provided below.

> *Principal: I wanted to meet to work on half of the working goal section because we have so many things. And planning. And forms. And brainstorming out there. And you know it kind of helps to synthesize everything. And have one focus for the year. Or some kind of aligned goals for the year. So you know -- like you know what you're working towards. And I want to know what I can do to support you. You know about SMART goals. So I need you to be attuned in your goals. I wanted to us to take a look at those. And then also how far we've gotten on this.*

Throughout the meeting, the coach and the teacher negotiated which students to focus upon to increase their performance; the principal just listened and interjected only intermittently to provide support to the teacher. An example of an abridged account is provided below.

> *Coach: But I think this is the right way to focus. You're just going back to what you did at the very beginning. That's why the students are surely getting better, pulling out of basic or below basic. So it sounds like you want to focus on the students that are basic or below. And you want them to reach proficiency. And how many of all these students…Or could you choose a number, and just focus on these students? Do you want it to be all of them?*
>
> *Teacher: I don't want to do [mentions a student's name].*
>
> *Principal: Exactly.*
>
> *Coach: I mean its a little mark in the circle.*
>
> *Teacher: Well because these guys were not -- I mean these are the ones that [mentions another students' name].You know now that I know him as a student. [Mentions a different student] like for sure needs more support or I would like to focus on them. [Mentions another student]. See I wouldn't. Now that I know them, it's like maybe she's just does it poorly. But like in class and my assessments, I feel like she's strong enough. Whereas, this one really needs more, so should I….*
>
> *Coach: Well if you just count all these students and then just sort them. One way to think about it is to focus on what students you want to include. Like you're focusing on the instruction and -- so you want to include the students that you think from your general instruction will move up because you think they will make it. You're focusing on what they need. And then also sort of have these subgroups within this group of --*

that this four or five, you think that will be additional. So focus support for those focus students. If that makes sense.

Teacher: Yeah.

In private sessions, there was a sense of openness in the review of data. In public forums, principals did not detail out specific results by demographic category. Instead, they talked or showed only the overall performance of the school. In humanist schools, principals spent the least amount of time publicly reviewing the data, less than a quarter of the time when compared to other schools in my observations. I labeled this *obfuscation* due to the lack of breadth both in explanation and review of all performance categories by these principals. Two of the three principals were observed using this method.

In one school data obfuscation included only showing the school's total AYP score for that year on one powerpoint slide. During the presentation of that slide, the principal made the following statement.

We talked to the parents about what we're doing. Star pepperoni, pepped us all up that PLC grade level collaboration. And instruction based on assessment. And a strong dedicated team of teachers determined that students learn. We made it happen. Thank you. It is wonderful. And the district is proud of all of us.

The time spent on this slide was less than half a minute with a quick hurrah given to teachers for maintaining their high performance averages. In the other school, there was also only brief mentioning of the school's scores during an unrecorded session of that meeting. When looked at in conjunction, the methods involving the use of data had strong elements of protecting teachers from external evaluation while allowing teachers the possibility to exercise their discretion.

Examples of Cognitive Interpretation. In addition to data use, cognitive interpretation also stressed greater skill development of teachers toward an achievement orientation in humanist schools. From principal observations, I identified two methods with this emphasis including *Replication of Expertise* and *Improvement as High Achievement/Gifted.*

Replication of Expertise included principals' search for external and internal practices and their formal presentation to develop their teachers; these practices were not associated with school district policies. On shadowing walks, I observed two of three humanist school principals using this tactic. For example, I observed principals talking with their faculty about what kinds of programs they wanted to bring to the school to support teachers' skill development. One principal explained the process as scouting.

Now I'm like the scout. I go out and I try to find research because I have some extra time and that's my passion. So I'm going out. And I'm finding what are other schools doing? What the research says? What's does this conference say? And then I try to find the practices and research and read about it. And then when I kind of find something, then I bring the staff together. I go look at what I found. Here's what I feel about it. Can you take a look at it? Can we have some discussion about it? Usually it's something that I know they want help in or they want. Or, something that they're curious about. So then I bring it back and certainly discuss what's been happening…

Replication of expertise was also coupled with the interest of teachers.

…This again goes back to what I notice. I try to really be watchful. Who's interested, and why? And then help find opportunities for them to kind of get some training in that and then bring that training back…When you see cherry picking, I try to go, oh, that teacher really has talent. And I call them. And I go. I really see you have an interest in that. I'm interested in it too. What can we do? Where do you need to go? What do you need to do? And then would you be willing to share that with the teachers?

In addition to these searches, there were also presentations with activities led by teachers to replicate areas of expertise. In these presentations of activities, teachers organized discussion around the content, relevance, and then engaged in a free-form discussion of that content around activities. Principals remained silent throughout these sessions. Replication of areas in expertise was strongly associated with developing higher levels of achievement in learning and teaching.

For example, in one humanist school, teachers replicated expertise from a book chosen by teachers called "Making All Kids Smarter"; the book, "Making All Kids Smarter", describes how to alter the content of teaching to improve acceleration, pacing, levels of depth, complexity, and novelty to enhance giftedness in students; these approaches were used in conjunction with GLAD training from the district but extended to teachers' self-selected training strategies for achievement in students.

To replicate expertise from this book, one teacher framed its importance while a second teacher facilitated an activity that showed the faculty how they could apply the techniques from this book. The activity was followed by a one hour discussion among teachers with the principal being silent. The vignette below shows how the first teacher described the importance of this book and what she learned from the training before transitioning to the second teacher who introduced the activity.

Teacher 1: And so I felt really empowered when I left by the teachers and the presenters. And all of the people there. They were just inspiring. I felt leaving that I felt smarter. I felt like I wanted everyone around me to be smarter and to do better. And that's why I like the title of this book too. Because I think it's the truth. And this is something they touched. I mean that we have to think about when we're trying to address the needs of those kids and how you have to balance. When you think about high achieving students, we want to accelerate their curriculum. And we want to latterly enrich their span, which is to give them opportunities to become better at what you're teaching and to balance that. That one is not better than the other. That doing a balanced approach of both. To take what you're already teaching to all students and give them that in complexity within that curriculum. I felt like accelerated but neither stand alone.

Teacher 2: So there are more components that we're going to talk about. There is acceleration and components of novelty. They are all in the book. And they are over there on that chart because we kind of, thought it would be kind of good to use the blade strategy. And then the word pairing exercise. We are going to explain how it affects neuron development. You will have at your table pencils and cards. And when you hear us talking using these words, you need to think how it associates with another one. And where they belong on that picture. Take out a cue card. That cue card there. There are little pieces of paper cut out.

The emphasis on developing high achievement in teaching was common at this school and at the two other humanist schools. On the other hand, teacher development around underperforming student populations appeared more protected and sheltered. Looking holistically at the methods in this profile, they reveal a common trend of protectionism in teacher skill development by their principals.

The High Systems Context

In the remaining profile, high system principals, similarly stressed the need to develop teachers' skills in order to elaborate responsibility to an even higher achievement pattern. Unlike humanist context school principals, high system principals used a different set of methods more openly and persistently to develop their teachers. These methods were done more publicly and by linking the intrinsic goals and motivations of their teachers to the extrinsic goals of the school.

Examples of Affective Appeals. I was able to identify two methods among high system principals with this emphasis in the use of affective appeals. The first included *championing and celebration of general accomplishments.* The second included *transitioning away from weakness*.

Championing and celebration of general accomplishments referred to ways of making teachers feel proud about their contributions to the status of the school. Three of the high systems school principals used this tactic. A common trend included a higher than average use of sports metaphors to draw these connections. At least two of the high systems school principals referenced sports metaphors repeatedly in this profile as part of this method.

For example, one principal compared his teachers and their performance to the San Francisco Giants and winning the World Series. The use of this analogy to the San Francisco Giants and other winning teams was mentioned at least 5 times; it was used to link the accomplishments and efforts of the teachers to this particular school. It was also done as public forms of praise among parents and teachers.

> *Anyway a year ago, you may have remembered that I compared the teachers to the Lakers. And it may have seemed like a bad comparison at the time. So now lighting strikes twice. And now I compare them to the Giants.*

In follow-up sessions, this principal explained the use of this metaphor as a way to recognize teachers' accomplishments and to make them excited about winning goals for themselves and the school.

> *Why I think people like that is because I think people really do like the fact that it is a fight. And you don't know it. You know sports metaphor is a great thing to bring up because look we don't know who's going to win the game tonight between the Miami Heat and the Boston Celtics. I don't know how my kids are going to do on this test that they took two weeks ago. I'm not going to find that out until July… And sometimes -- and for example I had a teacher that totally back fired on. She is really good, a really rigid third grade teacher that I was talking about. At a public forum, I called her like Kobe Bryant. You know I referenced her as the "Black Mamba" which is Kobe Bryant's nickname. I said, she's great. She's very intense. She gets her work and done everything else. And it was totally accurate. And everybody else thought it was a really great compliment because they saw that she was driven, you know, by*

detail. But she didn't necessarily see that in herself. And so at first she didn't take it as a compliment.

Other high system school principals used forms of championing and celebration that did not rely on sports metaphors but had a similar function. For example, this principal celebrated how their math program had a regional presence through high scholastic achievements brought about by the specific efforts of the teachers.

Various explanations were given by principals in their use of championing and celebrations. In many cases, their use appeared carefully done. In a debrief session with one principal regarding celebrating improved scores in English, he explained:

Principal: We recognize it with a celebration and then we move forward. And that's it. It's not something that we have anything huge about. We don't do whatever about it. It's not like, you know -- we don't have big celebrations over some of these things. But we celebrate them -- We celebrate them, I guess, concisely, I guess.

Nicole: So what's the purpose of celebrating them concisely? So what's the purpose in being…

Principal: We want to make it distinct, if you will. Or, we want to make a point about it. But we don't need to drag this thing on because there is still work that we're doing. It is part of our jobs.

The purpose of concise celebrations was later explained by this principal as a means to motivate teachers in their skill development. In addition to forms championing and celebrations, principals used a second tactic of transitioning discussions away from weakness to enhance teachers' skills.

Transitioning away from weakness referred to a set of methods where principals appeared to shift, move, or reframe conversations away from teachers dwelling on an area of weakness. Areas of weakness included teachers' sense of frustration or expressions of their inability. At least three high system schools principals used this as a tactic with a fourth principal mentioning it.

Examples varied in terms of their purpose. Two purposes included instilling a "growth mindset" in teachers while keeping them committed to achieving higher levels of performance. An example of the former included the "thorn and rose" exercise found at one school.

The "thorn and rose" occurred during a non-recorded introduction of a faculty meeting titled, "The Character of Work Habits Day." The purpose of the meeting was explained in further detail in a recorded follow-up session with the principal. From my field notes, I provide an abridged account of what I had observed as part of that meeting and specific to this exercise.

Excerpt from field notes: The principal proceeded to explain the exercise. She first explained that a thorn was something that was considered a weakness in their work such as an issue with a student or problem. She then explained the rose, which was something that teachers could celebrate as an individual accomplishment from their work. The exercise began from her left. The first teacher began to her share frustration with one of the students in the learning of multiplication tables. As the teacher explained the issue with the student, the teacher kept on stating that this *student was "just not getting it". That she tried everything. And she was taking it personally as a teacher. As the teacher continued to explain her frustration, the principal interjected asking her how she could change that experience into something positive. The teacher responded that the student seemed to enjoy video games in her discussion with parents. And that maybe getting her on to a math game might be good. Other teachers began to offer their suggestions.*

In a follow-up interview, this principal explained the purpose of the "thorn and rose" exercise.

It's a growth mindset. It's a growth based mindset. A lot of people have studied and written about that. It is the same as advocacy framework. You know. All that and kind of work but it is the same thing as looking at having a vision and a gap between vision and reality right. That's the same thing. Because it's looking at where we're trying to get to, where are we now, what do we need to do to get there.

The use of this exercise was a means to enable a "growth mindset" for teachers but linked to the vision of achievement at this school.

In a different high systems school, there was a similar emphasis on *transitioning away from weakness*. In the following example, this principal explains how he built commitments in the school's reading program, called Reading Naturally, by not allowing teachers to dwell on weakness. In his explanation, the principal described weakness as forms of distraction, which needed to be "adjusted".

There's always going to be those excuses. That's why I somewhat adjusted it like, "You know what, I heard about this two months ago. I sent the computer tech over there, and I never heard anything else since. So, what truly is the issue?" I don't want to get into kind of a drawn out personalized discussion with people venting about truly what it is, that they can't do it, or calling them out in front of the full staff, But essentially, these things were said, that they needed to be done at the beginning of the year. The implementation of Read Naturally needed to be done, and it was a commitment. It was said very clearly at the beginning of the year, and here we are in January.

"Adjustments" among teachers would enable commitments to support higher achievement in the school's reading program. These commitments were later tied to the need to enhance teachers' skills in their work.

Examples of Data Use. Principals also used data to extend teacher development toward higher achievement. Among high system school principals, I identified two methods with this emphasis including efforts to *elaborate expertise from accountability* and ways to *recognize and verify expertise*.

Elaboration of expertise from accountability involved identifying specific goals in accountability and then tying them to teachers' goals and experiences to advance achievement. Principals used taglines, including "expeditions", "charting your course", and "a journey", to create this tie. In other cases, it was folded into the creation of student academic pathways to develop teachers' skills. As a tactic, elaboration of expertise appeared, in some form, across four high systems schools.

For example, one principal selected an educational coaching program titled, "Learning Expeditions", to help her teachers extend learning targets toward higher levels of achievement. In a meeting, the principal and the coach talked about how to develop these targets around the data that would encourage teacher development toward higher achievement. This included a brainstorm session of what teachers wanted to focus upon for themselves and their students. This became part of what was called "the greet" session of the meeting. At a later point in that meeting, the principal revisited the targets as a way to advance student preparation beyond their grade level. The following is a short excerpt from a portion of that meeting:

> *Principal: The area that I think that we have it down is around the social studies and science content. And that actually leads to what was brought up around the critical thinking skill. And how are we really developing that through our expedition. But the favorite thing I think is how are we actually preparing our kids for middle school and beyond. To make sure that they have an understanding of these core ideas around social studies and science.*

Although appearing to focus on student achievement, in a follow-up session from that meeting, the principal explained the purpose of these expeditions as a way to recognize the autonomy and the professionalism of the teachers.

> *Principal:…I mean that's part of why I talk about autonomy for accountability. And it has to do with also the professionalism of the teacher and honoring them as professionals. And that's one of the best ways you can appreciate and value your teachers. And give them the working conditions that they need to really do a good job is to give them a certain amount of curricular freedom around implementation.*

> *Nicole: But what's the importance of the concept of a journey or an expedition?*

> *Principal: Well there is also this intentional backwards mapping of what it means for the teachers…It's a whole series of learning experiences that you have to have to get to… I mean being a life-long learner, if that makes sense.*

"Learning expeditions" involved ways to extend the teachers' goals beyond accountability to the idea of life-long learning in their skill development.

In a different school, elaboration of expertise involved ways for teachers to recognize and share expertise around data. In the following sequence, two teachers share their expertise around data targets that they had just set for their students. This observation was done in the principal's office with him present while the two teachers discussed and exchanged their expertise around the data.

> *Teacher 1: You can see about what did they do the first time at the very beginning of the year and how much they jumped from August, September to now November which is a huge jump. But for measurement and geometry, you'll notice the scores at the beginning of the year were at 51 and 50. They jumped to 58 and they jumped to 61. And this is supposed to be at 77 so they're still way low and you have to do a reasonable. You have to be doing something that's more reasonable.*

> *Teacher 2: So what's the criteria for reasonableness?*

> *Teacher 1: Well, we're looking also at, one, can we actually teach a lot of this stuff? And how much of it is actually thrown in and dispersed throughout until you actually do that measurement?*

Teacher 2: So you look at the content difficulty as part of like your decision role?

Teacher 1: Yeah.

Teacher 2: And when are we going to actually teach it?

Teacher 1: For example I'm teaching subtraction, multiplication, division. Long division is not going to come up yet. And they're low in it. And they're going to be low in it until we actually teach that thing. So, it's not coming up until a few months from now. And they have to take it in February. So even if I introduce it in February, it won't be mastered in February.

Teacher 2: What about learning rate from students? I mean kids just pick things up really fast and they're going to -- and then we have kids who take a longer time to process information. Do you introduce some of the stuff earlier? See there are kids that have a longer processing time or --

Teacher 1: We've learned from last year, what we decided to do is part of their math homework starting in August, we do a review, every week there's a place value review page of place value…..

Elaboration of expertise was different from choice in accountability found in low systems schools. Although both tactics stressed teachers' discretion, they appeared different in their emphasis in their use. Whereas low systems principals tried to sell teachers on standards related to accountability, high systems principals looked at extending teachers' existing skills both within and beyond accountability. In a follow-up discussion with this principal, he explained the purpose of this tactic.

... I really encourage teachers. And I have a free and open dialogue with them about the art and science of teaching. I want them to respect that in themselves. And I want them to feel like this is a place where they can be fully actualized as an educator. And feel comfortable teaching in a way that they want to teach because I have found in my experience that that's how to lead the best teachers. You can try to get somebody to teach a way that you want them to. But if that's not their style, they won't have as much success in that.

The use of this tactic was one way to encourage teachers to initiate dialogue about their skills, but also to develop teachers' sense of actualization in their work. In addition to elaboration of expertise, as a data use method, principals used a second tactic to extend teachers' development. This tactic had teachers *recognize and verify* areas of their expertise as a means to develop best practices that moved beyond accountability. This method was found repeatedly among two of the four high systems school principals. One of principals described his use of this method.

I think here at this school, you know, there are a lot of best practices that the teachers have. It's a matter of defining those particular best practices and how they fit in particular to these types of skills or these types of, I guess the interventions of what these kids needed. So the data had revealed that these students needed a certain type of instruction or they needed some additional instruction. And the teacher's questions, "Well, I don't know what to do with them. You know, I don't know what these interventions are that you're talking about." And my response was actually, "You do know because it is part of best practice, your set of best practices. It is part of your teaching skill set. It's like what would you do with any kid if they don't *understand, you know, a particular thing? Tell me what it is?" And they would rattle off a bunch, "Well, I would do this and then I do this." And I said, "Exactly. That's what needs to be done with these kids."*

In the second school, the principal talked about this tactic as a way to develop connoisseurship (i.e., expertise) among his teachers in their recognition of quality in data use.

Principal: …I think that in a higher functioning school such as ours that there is more expertise. Thus the personnel within it are going to be more attuned to quality elsewhere. And so you can sort of discern what is going to be higher quality material to bring in as with the quality grapes. What's the grain of grapes? You know. What makes it quality? The water, the climate and all that stuff as opposed to something less of quality. I mean I am going to get the grapes from the better environment with the better growers. And that's going to help me achieve with my goals much faster. Data is a real challenge because good data, the collection, the generation of the collection of and the reporting, the accessibility to a good data is I think one of the greatest challenges we have in education. It's expensive. It's laborious. It's a system. You don't just grab data. It's like anything. You can grab all the data you want. But if it comes from a lousy source that's unreliable or invaluable or whatever then it's not very reliable. So a big part of our process has been figuring out how to generate data from, you know, common expectations of what we're going to do in assessments that get in a lot of different aspects of student performance that really reflect what it is .

The use of this tactic stressed a similar emphasis on teacher skill development to those methods found in this profile.

Cognitive Interpretation. Tactics involving cognitive interpretation similarly focused on building teacher skill development. Among high systems school principals, I observed two methods with this emphasis including the *use of thought experiments* and *improvement as innovative journey.*

Use of thought experiments refers to methods used by principals that would help their teachers experiment with new concepts and ideas in their skill development. In the following example, a principal hired a coach to help teachers exchange thought experiments on how to teach a standard related to "teaching good citizens".

Teacher 1: I was thinking good citizen becomes complicated later on because being a good citizen one way if you follow what you're supposed to do according to what your government says then you may be doing things that -- you might be doing the wrong thing. All these rules and concepts relate to the environment. If you look down a river, there would be certain consequences for that. If you plant everything in one place with a single crop, there would be consequences for that. And then the character traits are just really important for what people do and what does the earth comes on for that.

Coach: [calls on another teacher]

Teacher 2: History, often you start in the past and then you work up to the present. And so that's where the natural flow that happens that will give the kids a lot of input, beginning about what people are and what they do and how they should act, blah, blah, blah. And then by the end of the year, they should be manifesting those traits *and bringing their learning into their lives and be actors and citizens now in their community.*

So, somewhere in there I really think is our through lines. And I would love it if everyone will think of the years as a flow. By the end of the year, they are now bringing to their community. All the learning and that gets back to exactly, what you're saying about the good citizen. The first thing is the last thing, you know?

Coach: [calls on another teacher]

Teacher 3: I was noticing that K1, K2, the focus for social studies is more sort of general…. used to compete with actual history in 4, 5, elementary school.

Teacher 4: I had the same, wondering the focus for K, 1 and 2 are on science and then in 3rd and 4th it shifts to social studies. And we haven't really given them a lot of background around social studies…

The use of thought experiments appeared as a common organizing tactic among all four principals in this profile. Similar to the methods that would elaborate expertise, the use of thought experiments were often embedded within similar exercises and around data where teachers could test out a new concept or technique.

They were also associated with the second tactic of cognitive interpretation, *school improvement as innovative journey*. Principals spoke about their use of this tactic slightly differently as part of teacher skill development. One principal explained the purpose of this method as means to move teachers beyond just being mechanics in school improvement.

You know if you just talk to people about standards that reduces your students as automatons. And it reduces you to a mechanic. But if you can talk about the journey and how they learn, you know, then it's much more about child development, nurturing this learner as a person. You know how do you as a person feel comfortable interacting with them? And I feel like that's much more real and much more powerful.

In a conversation with another principal, he explained the use of this method as a means to facilitate collaboration among his teachers so that they could exchange expertise with each other as part of their development.

Principal: …One of things what we've tried to do is, you know, with our general direction that I talked about previously is to give teachers the kind of freedom to figure out ways to sort of just establish systems that are collaborative especially collaborative systems. And we highly encourage collaborative structures.

When looked at more holistically, the methods used by high systems principals in this profile revealed a common pattern of elaborating teacher skill development toward higher achievement.

CHAPTER SIX: HOW PRINCIPALS COMBINE METHODS (SAMPLE THEMES OF AMBIDEXTERITY ENACTMENT)

In the previous chapter, I described the common and the specific methods used by principals to create responsibility in their contexts. In this last findings chapter, I continue to address research question three of this thesis.

- What are the common methods that through their use may illuminate different variations of managerial ambidexterity?

Specifically, I explain how principals combined methods, reflecting the ways in which principals handled the tension between performance-based accountability and the professional autonomy of their teachers as part of their ambidexterity. I first explain how I documented these "themes" of ambidexterity enactment before describing their specific forms and purposes of use by profile.

Deriving the Different Forms of Ambidexterity Enactment

To identify forms of ambidexterity enactment, I looked at how principals used ambidextrous methods with their verbal and non-verbal behavior.

Specifically, I looked at how these methods were coupled with verbal behavior that indicated greater control versus flexibility.

For forms of control versus flexibility, I looked at whether principals used more close-ended questions (e.g., dichotomous yes/no questions) or open-ended questions; the level of aggressiveness in tonality (such as loudness and greater speed versus slow and more welcoming); and the use of declarative statements with a given method in their verbal behavior.

In addition to verbal behavior, I looked at principals' non-verbal behavior. This included looking at principals' posturing and the use of the room such as standing at the front of the room, placing hands on their hips, and peering over people's shoulders as indicators of control. This is contrasted with forms of non-verbal behavior that indicated greater flexibility such as sitting at the back of the room and listening quietly in the use of a method.

I also looked at where it was done. For example, did the principal use an ambidexterity method more publicly or more privately and for what reasons?

From these behaviors, I developed a map of managerial ambidexterity enactment. Maps of managerial ambidexterity show how these methods were used together by their principals to address tensions in their contexts and specifically to create different forms of responsibility. From these maps, I identified the following "themes" of ambidexterity enactment as the strongest (SS) among the number and use by profile.

- Layering among political school principals
- Drops of control among low systems school principals
- Masking among humanist school principals
- Matching among high system school principals

I provide in the sub-sections below a brief explanation of these themes by profile.

The Political Context: Ambidexterity through Layering

Beginning with the political context, principals stressed an emphasis on the kid factor as part of creating directive responsibility. The methods described in the previous chapter similarly stressed this emphasis in order to get teachers on-board with accountability. In their use of these methods, principals reiterated this attention on the kids through what I called a layering pattern. This particular pattern appeared prominently in this profile among four of its principals, showing strong support (SS). It was also a pattern that occurred more so than in any other profile.

In this study, *layering* refers to an ambidexterity pattern where principals appeared to switch back and forth between deconstructing and reconstructing teachers' work.

Deconstruction refers to how teachers' work was loosened up for questioning. Reconstruction refers to how teachers' work was reattached and tightened to a purpose around kid impact. Deconstruction and reconstruction appeared switched back and forth in layers through principals' use of methods in this profile.

In the excerpt below, this principal talks about her faculty's need to pursue Chevron grants. The use of these grants would increase learning opportunities and test scores for the kids. In the brackets, I show with the labels "D" and "R" the deconstruction and reconstruction pattern of how the teachers' work was deconstructed and then reattached to kids; layers of deconstruction and reconstruction moved back and forth in principals' use of methods in this profile.

> *But what we will have to do is look at ourselves from a diagnostic point of view and decide upon the kinds of things we are missing and what do we need to ask for. And what we are doing with our work. And I am going to be asking that big time this year. And for you to think about these things.* D
>
> *I am going to go after Chevron this year. Chevron fully supports science. Because that is what their industry is all about. It draws that connection to our kids. For our kids. And to everyday realities. And so there maybe possibility of grants. And this is And so I am giving you two forms* R
>
> *related to these test results that you have to think about. One is for the grade-level team. That's second through sixth grade. When you meet together. I want you to think about it as part of your work. The other one is to break it down by ethnicity. As we know, our two significant groups now are just our ELs and our Latinos. We don't have enough African American kids to say that they are a significant enough group. That does not mean that we don't teach our kids who are not a significant enough group. But it does require that we are fully aware of who they are and what we are doing to get them into the afterschool program.* D
>
> *And I want you to take the next couple of minutes to think about this.*

Among political school principals, there was variation in the use of this ambidexterity pattern. The most common pattern involved thank-yous for teachers' specific efforts at the beginning and at the end of meetings.

Between these thank-yous, I observed principals using methods related to deconstruction, reconstruction, and so forth. This pattern occurred in many, though not all, cases.

Methods, which typically accompanied the process of deconstruction, included guilt tripping, the use of multiple sources in data, and individual and group investigation of loss, and weakness; these methods were strongly associated with the process of deconstruction in this layering pattern. During the process of reconstruction, I noticed principals using the methods of school improvement as social activism and realism as well as stories of collective and social empowerment; the use of these methods appeared to focus teachers' attention on the kids.

The remaining methods, including those of selective attention to data and self-reflection, were used as either as a deconstruction or reconstruction method among these principals. These methods also switched back and forth.

Their pairings and their iterations also varied by principal. Given the number of different combinations of these methods as part of this pattern, I provide an abridged account from part of a half day meeting with a different principal as another example of layering.

> *Abridged excerpt from field notes: The principal was standing in front of the room. After going through a series of thank-yous for the teachers going beyond themselves for the kids, he told a story and talked about the importance to their work on kids. The principal continued to explain how he felt rejuvenated to come back to do this work and to fight the war on poverty for the kids. They had reasons to celebrate but that they had more work to do and that they sometimes let the kids down. The principal than asked each teacher to stand up and introduce themselves and to explain to the group what is it they were here for and what needed to be done for their latino and black kids. The meeting then proceeded with about 20 minutes worth of introductions and how they saw their role as teachers. After the introductions were done, the principal then began to review the agenda. The principal started talking about the importance of their work on the kids. He then explains again the need to understand the what is its of teaching work as focused on the kids. He went into a short reflective exercise with teachers regarding their purpose of their teaching. During the exercise, he placed a finger to the side of his face, seated himself at the corner, and watched how teachers responded. He did not interject. This exercise lasted for about 20 minutes followed by a group share-out by individual teachers and their purpose in teaching underserved kids. The principal kept on asking the teachers whom do they serve and what is are they here for. Once the exercise was complete, the principal got up and stood at the front of the room and then restated that would again be work around social equity. That the work around equity was nothing new but something that they would continue as part of social justice for their students.*
>
> D
>
> R
>
> D
>
> R

Control and flexibility appeared in verbal and non-verbal behaviors that complemented this layering pattern. Examples of observed control included more authoritative stancing such as hands-on-hips and standing at the front of the room with the use of more declarative descriptions, explanatory statements. There also appeared to be a lack of generative discussion (use of dialogue and questions). Most deconstruction and reconstruction involved high levels of control.

Between these switches, I observed principals using self-reflective exercises that involved the use of data and appeared with forms of flexibility. For example, I saw these exercises combined with behaviors where principals sat down, observed teachers from the back of the room, and listened to their teachers. I also saw principals involving teachers in more generative discussions.

In follow-up conversations about the purposes of this ambidexterity layering pattern, principals described their need to stress the student impact in teachers' work. Their descriptions focused on how to create a common objective. For example, in one discussion with a principal, he described it as the need to develop common commitments to the students.

> *…I think, at least for this school, one of the key components is the desire of the teachers to really serve the kids. And the commitment that they have with the group of kids that we educate. What we didn't have was the how to get there. So, everyone did it on their own way. Everyone thought that by being activist is all by speaking and not by concentrating on the actual teaching, delivery of instruction. We were doing that political and social piece. So, part of the strategy is to really engage teachers into paying attention to what the kids are learning.*

Another principal explained the importance of this ambidexterity process as creating continuity in education especially when teachers were doing their own thing.

> *There is no continuity in their education. And so we need some. We need some continuum from grade to grade to grade for the previous teacher to build on. You know, rather than kids being just lost. And there are so many holes in their instruction because teachers were doing their own thing. It's a way of bringing the teachers together behind a uniform purpose.*

While some of their explanations varied, principals commonly associated this layering ambidexterity pattern as means to develop a consistent ideology around teachers' work that emphasized kid impact. This pattern followed a similar emphasis of the methods described in Chapter 5.

The Low Systems Context: Ambidexterity through Drops of Control

In contrast to political context school principals, low systems principals sought to expand responsibility among their teachers but with less of this emphasis on kid impact. In this particular context, the methods, described in the previous chapter, held this emphasis to create this form of directive responsibility.

In their combined use, I noticed the use of *drops of control* as an ambidexterity pattern among these principals. Drops of control involved principals' use of certain methods that were dropped within free-form discussions in order to turn teachers' attention to standards and assessments. This particular pattern appeared most prominently in this profile; I found it used repeatedly among three of the principals and intermittently with one of the principals in this profile, thereby exhibiting strong support (SS).

I observed this pattern most frequently in this profile largely because low systems schools had the highest rates of free-form teacher discussions that took up the majority of meeting time. For example, principals in low systems schools typically started off their meetings with brief introductions, sometimes framing what the faculty would be doing that day, followed by loosely-defined teacher discussions that took up between 50 to 80% of meeting time.

During these teacher discussions, I observed these drops of control. *Drops of control* refer to how principals used methods to punctuate teachers' free-form discussions about their work that would incorporate evaluations and assessments.

Specifically, I noticed that principals would drop a line of humor, utter a phrase of necessity, and/or would ask teachers to self-check accuracy in interpretation within mostly open-ended teacher discussions. Open-ended discussions typically involved group investigation of process, improvement exercises that would systemize innovations and success, and the use of data as a general focus of conversation.

The following example shows how a principal drops the methods of necessity and self-checks of accuracy into a group discussion that investigates the DIBELS assessment system. Drops of control are used by this principal to expand teachers' responsibilities by helping them to define success in their use of DIBELS.

> *Abridged excerpt from field notes: During the discussions, the principal listened in on different group tables and interjects intermittently with clarifying questions how they would ensure success as teachers in the profession and what creative choices they would make. He asks for each teacher to critique each other. The teachers discuss choices and offer criticisms amongst themselves. He explains the need for them to check for miscues in in the assessment system so that they could target success. He then moved on to another group of teachers listening in on their tables. He then interjects asking the teachers to brainstorm at their tables what were the positives and then the deltas, which he explained was his term for the negatives of the systems. As part of introducing the next brainstorm session, he asked the question to the teachers of how they could be better than the system. Another brainstorming session among the teachers ensues for the remaining time of the meeting with a discussion of how they could beat DIBELS. The principal again listened in on tables.*

The following excerpt from my field notes is a second example that shows how another principal used drops of control.

> *Abridged excerpt from field notes: Free-form discussion ensues around the items and standards with the principal circling from table to table. During this time, he listens at each table interjecting with a question to clarify which standard or question they were looking at and what made sense to them. One teacher says that she has trouble focusing on the standards. Other teachers also chime in. The principal tells another joke telling them to use focuset in reference to percocet to kill pain and to get them to fall in love with the standards. Laughter erupts again. The teachers go back to discussing the standards.*

These drops of control, as I had observed them, did not follow a distinct layering that I had identified to political context school principals. Instead of this tight switching pattern, where control was often imposed back and forth, drops of control occurred sporadically among principals in the low systems profile. As part of drops of control, I also saw principals using questions and statements that would generate and clarify the need for teachers to take on more assessment work. These forms of verbal behavior were used to expand the use of these assessments that often accompanied the punctuated use of methods.

In follow-up conversations with principals about drops of control, they described the need to let teachers drive the process. Most of these discussions placed less of an emphasis on student impact factor found in political schools; instead the emphasis was how to get teachers on-board with standards and accountability to expand responsibilities in their work. The following principal provides his explanation.

Principal: …So, it's not like we do good one year and all of a sudden, all the heat is off. So, I mean part of it is I understand that we have to make incremental growth. That's truly the way to move this process forward. So part of that is brokering, I have to observe to some degree what they're capable of doing on their own without me driving the entire meeting. I mean, I can't be a micromanager in that part because I think for the most part —

Nicole: Why can't you be? — What would result, do you think, if you're a micromanager?

Principal: I think, in my experience, that putting too much specificity on agendas of this sort, gets less accomplished. The teachers tend to try to make sense out of what I'm asking of them specifically and I get less. I had rather them run with it because it also allows me to see what they do and don't get. It's almost like a student —

Drops of control also appeared consistent to the purpose of the methods described in Chapters 5. Specifically, principals stressed their need to expand teachers' assessment and evaluation responsibilities.

The Humanist Context: Ambidexterity through Masking

In the humanist context, there was a different pattern of ambidexterity. In this context, principals looked at expanding teachers' skill toward higher levels of achievement; expansion of these skills stressed high levels of protectionism in this profile that I classified as a form of elaborative responsibility. In the previous chapter, the methods in this profile spoke to this emphasis. In their combined use, principals showed a similar pattern by controlling physical spaces and access to data in order to develop teachers' skills carefully. This ambidexterity pattern, what I referred to as masking, appeared most prominently in this profile. I found this pattern repeatedly among two of three principals in this profile, demonstrating strong support (SS).

Masking developed teachers' skills through levels of protectionism and created boundaries between public and private viewing of this process.

For example, when discussing sensitive data, principals used physical zones of protection, confidentiality and privacy practices in data, and the use of courageous and face-saving conversations in order to protect teachers' skill development. In public sessions, individual results appeared controlled and obfuscated from general viewing.

In other instances, where data were less sensitive and involved high achievement, the data were made more public. Principals gave teachers control to structure their conversations about high achievement methods. When I was allowed to observe private sessions, I also noticed teachers directing their own development.

I offer one sample vignette from a meeting in a school where masking took place. The beginning part of that meeting involved a review of confidential data around lower performers; I was asked to leave during that portion of the meeting to maintain the need for confidentiality related to zones of protection.

Abridged field notes excerpt one: I was invited to an afternoon faculty meeting. The secretary led me to the school library where the faculty meeting was took place. I was immediately greeted by the principal who asked me to wait outside because they were discussing confidential information about some of the lower performing students and *teachers. I was led to an ante break-room area that had a couch and two large tables. I was asked to sit on the coach. The principal asked me if I wanted any coffee or tea. She told me to wait outside for her to get me. I was sitting on the coach for about 30 minutes when the principal returned. She said that now I could come in.*

At a later point, I was invited back to that meeting. The faculty were then reviewing and replicating strategies around GATE and specific to brain break times. GATE refers to Gifted And Talented Education programs, which are programs geared to the highest performing student populations. The following is an excerpt of that meeting.

I was greeted by a group of teachers. The principal whispered into my ear that the teachers were now in process of teaching new GATE strategies. The principal then seated herself in at to the side of the room listening to the teachers. Two teachers were leading a discussion with the other teachers. One of the teachers was talking about giving a cross-lateral brain break as an effective strategy in the classroom for higher performing kids. Another teacher talks about the cross-lateral brain break as being supported by scientific research in GATE for high achievers. The teacher talks about the brain break time as helping kids focus on what they are doing that it is calculated by their age plus three minutes that it caps off at 16 minutes and then at 20 minutes for adults. The teachers then discuss in an activity how they would use this strategy to increase scores on STAR tests. The principal just nods and listens throughout the meeting.

The abridged field-notes show the patterns of masking. Control was observed through rates of exclusion by principals related to activities involving underperforming populations. Rates of exclusion were noted in comments made to me by principals as well as their use of physical exclusion. Rates of exclusion commonly centred on more sensitive areas of performance in teachers' work.

In contrast, principals were observed to provide more flexibility to their teachers and access to them when high performance and achievement data and their strategies were discussed. In another humanist school, I was allowed to observe a high performing math teacher in a rare observation with a teacher behind closed doors in the development of SMART goals. At this school, SMART goals were used by teachers to develop higher achievement targets for their kids.

Abridged fieldnotes excerpt two: The teacher begins to explain that the kids were strong in algebra but needed to work on number sense. She talks about some of the issues she has had with the different students. The coach then asks her a series of questions. The teacher and the coach then go into a brainstorm about benchmarks around specific student. The coach explains that the teacher could count and sort specific students to focus on instruction and need. The teacher then starts to specify achievement targets and instructional strategies for these students. The coach asks her questions. Throughout the coaching session, the principal listens offering only intermittent comments that support the teacher such as exactly, right or ah hah. The coach explains the purpose of the SMART goal and asks the teacher where she wanted to set projected targets to tighten the performance of the students. The principal interjects once saying was a way for the teacher to extend her expertise. The teacher continues to develop projected targets around individual student and grades and test scores. The coach and the teacher brainstorm a bunch of what they called power strategies with the principal listening.

In sessions involving teacher skill development, I observed principals interjecting less and listening more. When principals interjected, their questions appeared to be offerings of support. In those sessions, teachers appeared to control their skill development toward higher achievement.

In follow-up conversations about masking, principals explained their need to create a less defensive environment for their teachers in order make them feel comfortable to take risks. One principal revisited her explanation in the need to create a safe environment for the teachers.

> *So I think people do their best when they feel safe and when they feel they're in a respectful trusted place where they're safe to make mistakes, where they're safe to try new things, whether it'd be a teacher or student. I know as a student, even as an adult, if I don't feel safe I shut down and I can't look. You could be talking to me. And I'm just like feeling unsafe. And it's like they actually say a part of your mind shuts down. So I always go to management levels….*

Another principal similarly explained the need to create a protective environment for teachers to take risks and to improve themselves.

> *I mean, when you teach and you're doing a lesson -- I think that for the teachers here it's the same as an artist painting a masterpiece or painting a picture. You're putting that same risk out there. You're creating something, you're being vulnerable if somebody comes in and critiques that. It's very personal. It's their lifework. They put effort and energy until the last minute. And they're trying to do the best they could to the best of their ability. I think everyone here operates under that pretense. We're all doing the best we can. So I don't want to put people in the defensive or make them feel like I am disapproving of their efforts and their energy. We try to put our best foot forward. I just always try to validate and we as a team are constantly trying to improve ourselves. But it's not based on any kind of fear, threat or criticism. It's just constructive.*

Similar to the previous profiles, there was a consistent theme in this profile. In this context, the theme of ambidexterity stressed teacher development through high levels of protectionism. This theme followed a similar emphasis in the use of ambidexterity methods discussed in Chapter 5.

The High Systems Context: Ambidexterity through Matching

In the last profile, high systems principals similarly stressed an emphasis on teacher skill development as a form of elaborative responsibility. Unlike humanist school principals, this was done more openly and through a different set of methods. In high systems schools, I saw principals link the intrinsic goals of their teachers to the extrinsic goals of their schools. In their combined use of methods, principals created these linkages through a process that I called matching. This pattern was common to all of principals in this profile, exhibiting strong support (SS).

Specifically, *matching* involved how linkages could be tightened through principals' use of control and flexibility.

Linkages tapped into teachers' attitudes, skills, and knowledge related to their personal goals and accomplishments. Principals specifically linked teachers' goals through the use of methods that could extend teachers' competencies and expectations.

I provide two different examples from my field notes showing how matching occurred in two schools. The first example shows how a principal used a learning expedition coach to develop these linkages.

Abridged field notes excerpt one: The learning expedition meeting begins with the coach and the principal talking about the development of learning targets around data and how it encourages student and teacher achievement. The principal then asks the teachers to do a brainstorm of what learning targets they wanted to focus upon and then what they wanted to learn from those targets related to themselves and the achievement of their students. The teachers gather at the front of room identifying target content goals drawn as a map on a whiteboard. On the board, there are a variety of different skills and content areas listed. Both the principal and the coach begin a greet session by asking the teachers to share out what learning target means to them and how they think it increases higher student achievement. The teachers begin a group share out of their learning targets and how they believe it was linked to higher student achievement.

In this second excerpt, a different principal engages in a similar pattern of matching.

Abridged field notes excerpt two: The principal explains that he was happy that the lion's share of the increases were related to this test. However, he wanted the teachers to search in themselves for winning and new strategies and not to dwell on the CMA issue as a loss but something that remained on the agenda as continuous improvement. He then gives a bunch of handouts to the teachers with bar charts on different student classes and populations explaining that the different colors related to different growth patterns that they were going to develop some new strategies around. He asked the teachers to reflect on their winning strategies of skills and expertise and to discuss some new ones that they specifically apply for the upcoming year. He explains the importance of these strategies as ways of raising individual expectations for themselves and for their students. The teachers begin a share out of strategies related to the achievement data of their students.

High system schools principals appeared to weave control and flexibility around personal skills and experiences to school performance metrics; this was done at higher levels when compared to other school profiles.

Forms of control varied but included championing teachers' accomplishments to school goals, verification of expertise, as well as moving or transitioning teachers away from dwelling on weakness. Forms of flexibility were commonly associated with the use of thought experiments and improvement as innovative journey. The use of these ambidexterity methods helped to establish these linkages.

In follow-up conversations about matching, principals gave slightly different explanations; they commented similarly on the need to match expectations between their teachers and their schools to enable greater achievement of their teachers.

For example, the following principal explained matching as a means to improve the delivery method between the teacher and the student toward higher achievement.

Principal: If possible, you match a teacher to achieve the highest results they're professionally capable of on the CST with the ability to do so. You don’t have time. You don’t put them in a situation where you're saying, "Here's your scripted curriculum. This is what you're going say every minute of the day." Because if they're a good teacher they're going to go, "Forget this. This is burning me out."

Nicole: So how do you do that?

Principal: What I try to do is I try to not only match expectations for their students high performance but I also try to match expectations of delivery as well.

A different principal explained the process as a way to improve teachers’ recognition of their own skills.

It is very native, it is very intrinsic to what they do on a regular basis, they just didn’t know that this particular time or this particular situation with these students was what they needed to be doing. It’s getting them to recognize that they have all these, they have most of the tools in the tool case...

Though explanations varied, they reveal a process that could build connectivity between the teacher and school achievement goals. This pattern also appeared to support the findings of Chapter 5. Specifically, high systems schools principals stressed an emphasis on teacher skill development into a higher achievement orientation in the use of their methods; this process was done in a less sheltered way and through methods that could facilitate this goal linking process.

CHAPTER SEVEN: THE MAJOR CONCLUSIONS OF THIS STUDY AND THEIR IMPLICATIONS

In this final chapter, I summarize my major findings pegged to each of the three research questions.

1. What dimensions of school improvement are most salient when principals seek to develop their schools?
2. What do principals' responses reveal about how they organize their schools similarly or differently based on the perceptions of their contexts?
3. What are the common methods and techniques that through their use may illuminate different variations of managerial ambidexterity?

By summarizing my findings, I do so with the following aims in mind: First, following inductive approaches of qualitative inquiry, I revisit the conceptual framework and update the model from Chapter 2. Second, I talk about how my findings from Chapters 4, 5, and 6 inform and extend the model and offer testable propositions. Third, I explain this project's limitations. Finally, I end this chapter by discussing how the findings inform the ambidexterity and the school management literatures.

Revisiting the Findings of the Research Questions

Findings for Research Question 1. Beginning with the first research question, my findings identified three areas considered important to principals when improving their schools. They included in rank order 1) developing and mentoring teachers, 2) developing an individual and collective learning environment among students (with an emphasis on collective learning), and 3) creating a data-driven and organizational learning culture.

In Chapter 4, I discussed how principals' responses to these school improvement questions revealed a general tension between performance-based accountability and the work of teachers. This tension exposed the need for principals to create different forms of responsibility. Each form of responsibility looked different based on principals' understanding of their contexts as identified by the four profiles in this study.

Findings for Research Question 2. These differences informed research question two and were discussed in Chapter 4. In that chapter, I tied these differences to how principals described their schools' contexts and their responses to the Gibson and Birkinshaw measure. Principals' responses led to the creation of four profiles: low systems, political, high systems, and humanist schools. Each context embedded different assumptions by principals regarding the challenges to create responsibility in their schools.

The first type of responsibility, what I called directive responsibility, was commonly found in political context and low system schools (i.e., more cohesive schools). I defined directive responsibility from principals' responses as the ways to hold teachers accountable to results.

In political schools, principals focused directive responsibility on student impact in teachers' work; in many cases, principals stressed which kids (i.e., the Black and Latino). Much of the rhetoric around directive responsibility emphasized social justice for these kids.

In contrast, low systems principals constructed directive responsibility differently. Specifically, these principals looked at ways to sell teachers on accountability as part of their work; this was done without the heavy emphasis on the kid factor. In this context, I observed principals pushing teachers to buy-into assessments and evaluations as part of their work; this particular pattern was less common in other schools.

On the other hand, more cohesive schools had principals who stressed a different form of responsibility. They emphasized what I defined as elaborative forms of responsibility. In Chapter 4, I defined elaborative responsibility as common to humanist and low systems school principals and specific to principals who stressed higher achievement among their teachers beyond that of accountability.

Among principals in high systems contexts, elaborative responsibility included raised expectations. Raised expectations involved stretching teachers' skills to even higher achievement expectations of performance. In this context, principals took more of a public (i.e., less protective) approach to develop these skills.

Equally humanist school principals had a high achievement focus for their teachers' skill development. However, this development was done more protectively. For example, principals explained their need to protect their teachers and repeatedly denied access to sessions where more sensitive data around teacher performance were discussed. I was told that this had nothing to do with me; rather, it was the general practice of these schools.

My findings to research questions one and two contextualize how principals understood their contexts differently.

Findings for Research Question 3. Principals' perceptions of their contexts led to different ways (i.e., methods) to enact their ambidexterity, which I investigated as part of research question three of this study.

In Chapter 5, I described three common groupings of methods (e.g., affective appeals, cognitive interpretation, and data use) that principals used as part of their ambidexterity. Affective appeals referred to a group of methods used to organize emotions and forms of social support in teachers' work. Cognitive interpretation included those methods that principals used to organize teachers' interpretation of tasks. Finally, use of data referred to those methods involving the handling and the display of data. These three groupings of methods were found across all schools.

Within each profile, specific methods built a different story of ambidexterity enactment. In Chapter 5, I gave examples of these specific methods before moving on to Chapter 6, where I described how principals combined these methods together (i.e., the "themes" of ambidexterity).

Principals in political schools used methods as part of their ambidexterity enactment pattern that focused on the kids. I labeled this pattern as *layering*. Layering referred to a process where principals deconstructed and then reconstructed teachers' meaning of work with a focus on the kids; this process involved intricate switches between control and flexibility in the use of methods.

Among low systems school principals, the focal point was different. The methods and patterns of ambidexterity enactment looked at ways to extend teachers' responsibilities without imposing a focus on the kids. I defined this pattern as *drops of control*. This process involved principals dropping lines of humor, necessity, and accuracy within more free-form discussions around group investigation of processes and systematization of innovations and success; drops of control were used to sell and refocus teachers' attention to incorporate assessment and evaluations into their work.

In contrast, high systems school principals used their methods and ambidexterity differently. The emphasis among these principals was to extend teachers' existing skills through an ambidexterity enactment pattern that I labeled as *matching*. Matching referred to a process where principals used methods to link the intrinsic goals of the teacher to those of the school. Principals firmed up or loosened these linkages in their use of methods as a means to extend teachers' existing skills.

Finally, humanist school principals similarly used methods and their ambidexterity to extend teachers' skills. This ambidexterity process was more protected. I defined this process as one of *masking*. Masking referred to the use of protectionism to develop teachers' skills more carefully toward a higher achievement orientation through the construction of spaces and accessibility to those spaces involving teachers' work.

When stepping back, ambidexterity revealed different ways of constructing responsibility patterns. What I offer are some examples that I identified in this study. Other may exist.

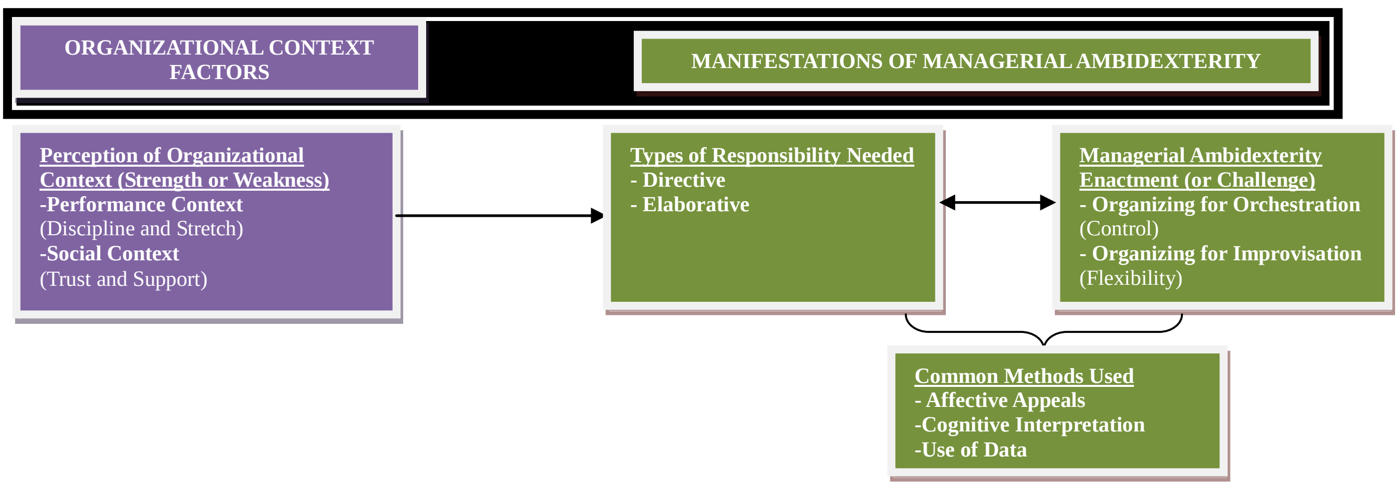
How Do the Findings Illuminate and Extend the Conceptual Model?

From my findings to the research questions, I made two updates to the model. The two major updates are pictured in the revised model found on the next page.

The first update is the need for different types of responsibility (i.e., directive or elaborative). Different types of responsibility flow from the embedded tensions in each context between performance-accountability and teachers' work. I identified forms of responsibility within each context from my findings to research questions one and two. They are connected to the second update of this model, the three common organizing methods of ambidexterity (e.g., affective appeals, cognitive interpretation, and the use of data). These methods I identified across all schools.

I left out of this model the forms of ambidexterity enactment. This is largely because there could be an indefinite number of combinations. My intent is to provide only the most generalizable model based on the findings from my study.

FIGURE 2: A Revised Model of Managerial Ambidexterity



Below, I provide a set of general propositions that could be tested in a later empirical study drawn from the major conclusions of this study.

> Proposition 1: In the context of school improvement, the pressures to improve a school center on the tension between performance-based accountability and teachers' work. This tension manifests in the need for different types of responsibility to manage teachers' work.
>
> Proposition 2: In schools that are considered less cohesive, directive responsibility is more likely to be present due to the school's diffuse dynamics and its likelihood to be an underperformer. This is contrasted with schools that are more cohesive, where elaborative responsibility is more likely to be present.
>
> Proposition 3: Managerial ambidexterity is used to enact forms of responsibility through methods that fall within three groupings (i.e., affective appeals, cognitive interpretation, and the use of data). However, their specific examples and combined uses manifest differently and for different purposes.

Limitations of this Study and Avenues for Future Research

The findings and updates to the model provide areas for further contemplation. Yet, they do have limitations.

First, the results are neither generalizable to all schools nor organizational contexts. The sampling was expansive given the limited time for this study. At a future point, a second study should try to replicate the existing findings for further refinement in studies of public schools and organizations with similar dynamics.

This may include taking the set of propositions, proposed in this chapter, and "testing" them in other schools and similar organizations. Organizations with similar dynamics may include, for example, public sector organizations with human resource policies and structures that do not easily lend themselves toward employee cooperation; these may include, for example, organizations with a strong union presence.

Second, this study looked at how principals perceived their contexts and how they affected ambidexterity enactment. The focal point of this study was on the principal.

The question not addressed is: whether principals' ambidextrous behaviors were *effective* in transforming or changing the beliefs of their teachers? A follow-up study would investigate how teachers would respond these behaviors.

Finally, a question not answered by this study is how managerial ambidexterity evolves over a longer period of time. This study took snapshot views of the principals and their perceptions of their schools contexts and their ambidextrous behaviors. While valuable, a subsequent study would look at how principals change their methods over several years of time and their implications on school improvement.

Given its limitations, this study's findings open up a broader conversation regarding how managerial ambidexterity manifests in organizations where gaining employee cooperation is difficult.

In schools, the difficulty to gain cooperation converges in the tension between performance-based accountability and professional autonomy of the teacher. Independent of SES and neighborhoods effects, management of public schools commonly center upon the work of teachers as the most controllable point.

Yet that controllability is often tenuous at best. This is because holding teachers accountable to uncertain outcomes may affect teachers' beliefs about the fairness of their work; this becomes a management challenge for principals when improving their schools.

How the Findings Inform Ambidexterity and Public School Research

My findings show that managerial ambidexterity enactment in the context of school improvement commonly centers on this tension between performance-based accountability and teachers' work; this tension demands different forms of responsibility construction.

Responsibility is defined as the ownership over tasks and duties; this ownership holds a person and/or organization accountable (e.g., Browning, 2012). An inherent issue exposed in public schools is how ownership is distributed through forms of responsibility. Ownership over one's work is salient to a teacher's identity as a form of discretion (e.g., Day, 2002).

Responsibility enters into the equation by potentially displacing, shifting, or reorganizing the levels of control that teachers have. How responsibility is created and managed by principals becomes central to addressing the tensions from performance-based accountability; these tensions emerge from forms of judgement in the effectiveness of teachers' in achieving those responsibilities. It also is embedded in how principals enact their ambidexterity (i.e., creation of control and flexibility) around teachers' work.

The three groupings of methods (e.g., use of affective appeals, cognitive interpretation, and the use of data) and their use speak to those tensions. Specifically, they speak to how principals managed and used their ambidexterity differently as ways to facilitate forms of responsibility as responses to their contexts. They are also supported by existing research.

For example, research has reported on how principals influence responsibility and specific to how accountability is balanced, shifted, or maintained in teachers' work. This process occurs cognitively (e.g., Spillane et al., 2002), emotively (e.g., Diamond et al., 2004), and through the use of data (e.g., Coburn & Talbert, 2006; Honig & Coburn, 2008).

In the context of public school improvement, my findings show that the combined use of these methods reveals deeper complex patterns; these complex patterns rest on how to coordinate school goals and how to gain cooperation to move both within and beyond those goals.

Coordination is a technical term from organization studies that describes how the work *is* done; it is more cognitive and structural. Coordination is contrasted with cooperation, which is defined by how the work *ought to be* done (See Shafritz et al., 2011); cooperation functions on beliefs and emotions. It is thought that both coordination and cooperation are necessary to develop organizations effectively. They occur through the creation and distribution of responsibility.

In this study, the creation of responsibility appeared interwoven with principals' ambidexterity and specific to how tasks could be coordinated and how cooperation might be gained. This process entailed how end-impact, the selling of work, goal linkages, and the use of privacy were constructed through principals' ambidexterity patterns as ways to respond to tensions in their contexts.

Understanding what this process looks like informs the existing literature on school improvement and leadership. Specifically, it moves the literature beyond the use of role-based and institutional theories to understand how this responsibility construction process occurs.

As explained in the introduction, role-based theories describe what roles principals ought to assume in the management of their schools. Moreover, newer approaches in the broader category of institutional theory, including research on neo-institutional theory and loose-coupling effects, describe how principals may generally react to policy as part of school improvement efforts. However, they fail to explicate how principals manage responsibility in teachers' work in their specific contexts of school improvement.

In their broader applications to the ambidexterity literature, my findings also have implications. Traditionally, this literature has focused more on the structural and economic drivers behind managerial ambidexterity enactment in private sector organizations.

My findings show that in a study of a public sector organization, this process moves beyond task allocation to include how responsibility is constructed through cognitive, emotional, and data-based methods. This suggests that ambidexterity is not just structural; instead, it rests on how responsibility is constructed in the coordination of and cooperation around work tasks.

In this vein, the findings of this study draw greater attention to the importance of responsibility constructions in ambidexterity research that move it beyond its present conceptualization.

APPENDIX

TYPOLOGY 1: Orchestration-Improvisation

Various dimensions of intent and actions in organizing for balance	**Orchestration (Control)**	**Improvisation (Flexibility Arrangements)**
Leader focus	"Presentation of a leader's theme and following of it" (e.g., principal initiating his/her theme only – closing off or asking followers to adhere to his/her theme)	Making provisions for individuals to initiate or reinterpret a theme (e.g., people think more independently- they do not ask for permission but take action)
Description and indicator of the change process	Planned change (e.g., planning documents, meetings to plan change, use of ceremonies to get people on the same page); a planned, group-organizing capability	Unplanned – less prescribed change (e.g., loose, open-ended, and ad-hoc); a less-prescribed, self-organizing capability
Description and indicator of the follower's role	Follower's Role: Adherence to rules and support of pre-defined actions (e.g., reprimands, sanctions, or the need for support behind a purpose)	Follower's Role: Meaningful divergence of rules and actions (e.g., acknowledgement or need for individual risk, difference, and diversity)
Indicated use of time in the context of change	Often orients to the future by creating path goal dependence (e.g., following of pre-specified goals) either of current and future activities to ensure future prediction (e.g., we plan x to meet our goal of y)	Often orients to the dealing of the present by moving away from path goal dependence but may be used to inform future activities (e.g., how do we deal creatively with surprises for which we have no plan)
Indicated nature of the action (pacing of time)	Often paced more slowly than improvisation; Separates and paces activities through chronological time; separating the art of creating from the art of enacting the change (e.g., use activities to plan ahead and then follow)	Often paced more quickly than orchestration; Merges chronological time with kairos; combines the art of creating as occurring simultaneously with the art of enacting change- relies on kairos (or the recognition of the qualitative aspects of timing to find an opportune moment to make a strike for change) (e.g., trial-error and learning by doing)
Indicators of the cognitive processes	Reliant on rational predictable rules – depends upon how stability is maintained (i.e., understanding that surprises or unplanned events are threats to stability in organizing) (e.g., treats surprises or deviations from the plan mostly as negative)	Reliant on more intuition and less prediction - depends on how instability is used to create a learning organization (i.e., understanding that surprises or unplanned events are opportunities in organizing) (e.g., treats surprises more positively and specifically as an opportunity to invent and learn)
Typical associations (indicators) in the use of this organizing strategy	Typically associated with centralization, formalization, the bringing of unity (cohesion, collaboration), and sometimes though not always standardization; can influence alignment and may inform how to bring structure to adaptation	Typically associated with decentralization, less formalization, the bringing of individual divergence, novelty creating (bricolage) and innovation; can influence adaptation and may also inform how realignments should happen
Organizing tools	The five "Rs" - routines, resources, rituals, roles, and responsibilities are used to create a point of commonality, reductive of conflict (convergence-building); as a result, they are often more tightly configured (e.g., use of strict procedures and practices, rigid routines, directed resources not freely exchanged by others, strict job descriptions for roles and responsibilities, and very cult-like rituals that do not appreciate deviance and diversity)	The five "Rs" - routines, resources, rituals, roles, and responsibilities are used to create functional conflict (divergence-building); as a result, they are often more loosely configured (e.g., use of loose open-ended procedures or practices, flexible routines, freely exchanged resources, loose and flexible job descriptions for roles and responsibilities, and acknowledgment of individual differences in school rituals)

Definitions of the five "Rs":

- **Resources** - factors that produce an end product, good, or service – resources can include for example material (physical, human, and financial), cognitive, affective, which depending on their use, can be an asset or liability in the production of a product, good, or service
- **Routines** – the patterns of activities used to organize and execute on tasks and relationships that often involve the use of a resource; routines can occur daily, monthly, or yearly, but often have the flavor of being repeated; routines can hold institutional memory of how to perform skills and how facts are used and organized
- **Rituals** – a special kind of routine that is used to carry the values, traditions, and beliefs of an organization, which organizes the school culture and makes it unique; rituals are not always tied to the daily execution of tasks and relational responsibilities
- **Roles** – defined as the boundary points of individual social relationships and task requirements in a given context
- **Responsibilities** – are those expectations related to tasks or relational exchanges, which make a person and/or group accountable; responsibilities may be tied to specific roles and/or may function independent of them

TYPOLOGY 2: Examples of Orchestration-Improvisation

Various dimensions of intent and actions in organizing for balance	**Orchestration (Control)**	**Improvisation (Flexibility Arrangements)**
Leader focus	“Presentation of a leader’s theme and following of it” (e.g., principal initiating his/her theme only – closing off or asking followers to adhere to his/her theme) ● ***Sample Principal Actions:*** *During meetings or activities, the principal does most of the talking, interrupts others, or superficially acknowledges people but redirects the group toward his/her own plan of action; during school ceremonies, may use the school mascot or the global we to build uniformity behind the principal’s vision or plans for change – does not fully acknowledge individual diversity or allow time for others to speak up* ● ***Sample Principal Rhetoric:*** *“We need to get on the same page.”; “Okay, I understand that, but we need to get our ducks in a row.”: “We need to get our school ship shape/”: during school ceremonies, “We are the Lowell Indians and “we are all in this together.”; “There are no differences among us.”*	Making provisions for individuals to initiate or reinterpret a theme (e.g., people think more independently- they do not ask for permission but take action) ● ***Sample Principal Actions:*** *During meetings or activities, the principal allows people to talk; the principal listens and validates people’s ideas; the principal provides helping behaviors to support teacher and staff to come up with creative solutions and the taking of initiative; during school ceremonies, embraces difference, diversity, and creativity by creating time for students, teachers, and staff to speak up and extemporize.* ● ***Sample Principal Rhetoric:*** *“That sounds like a great idea, how can I be of help to you?”; “Does anyone have any suggestions of how we can rectify xyz problem or issue?”; “What do you need from me to help you run with this idea?”; during school ceremonies, “We have a wonderful, diverse community that has so much to offer. It is important for us to represent ourselves in our own unique way.”*
Description and indicator of the change process	Planned change (e.g., planning documents, meetings to plan change, use of ceremonies to get people on the same page); a planned, group-organizing capability ● ***Sample Principal Actions:*** *During the school day or school week, the principal looks at school budgets and the school’s scorecard to distribute supplies and organize activities to run the school on a schedule; may talk to the secretary to set up meetings throughout the week; during the meetings, talks about goals and milestones to organize activities; during school ceremonies, uses the assembly time to plan school milestones to get everyone on the same page such as use of an agenda* ***Sample Principal Rhetoric:*** *“It is important for us to set out our goals and responsibilities.”; “We should have a plan of action to take care of things around here.”; “In looking at our milestones, we may need to redefine our goals just to make sure that we are all clear and consistent.”; during the school assembly, “I want to remind you that during the month of April we have the following xyz goals or activities that we need to take care of.”*	Unplanned – less prescribed change (e.g., loose, open-ended ,and ad-hoc); a less-prescribed, self-organizing capability ● ***Sample Principal Actions:*** *During the school day, the principal spontaneously pulls people aside and asks them to do things off the cuff; during meetings, may ask staff and teachers to brainstorm new ideas; asks staff and teacher to come up with something new to resolve a problem that is not designated in an assigned task or schedule; volunteers people to take charge and generate solutions not directed by the principal him or herself; during the school assembly, there is little organization (i.e., no formal meeting agenda)* ● ***Sample Principal Rhetoric:*** *“Can you guys organize your own task force and get your creative thoughts and ingenuity on this?”; “Can you develop a solution for it, and report it out at the next faculty meeting of what you guys came up with?”; during the school assembly, “Does anyone have anything else that they want to say or contribute in terms of what they would like to do for our school?”*

Description and indicator of the follower's role	Follower's Role: Adherence to rules and support of pre-defined actions (e.g., reprimands, sanctions, or the need for support behind a purpose) ● ***Sample Principal Actions:*** *During the school day or school week, the principal revisits expectations with teachers and staff who have gone astray; has sit-downs to review performance and goals; patrols the school to make sure that everything is in-place; during the school assemblies and meetings, performs shaming rituals to make people feel bad for not falling in line; sanctions or rewards by constraining or freeing up time and budget for the teacher or staff based on adherence to pre-scribed roles and responsibilities; threatens or uses less coercive methods to bring teachers and staff in line* ● ***Sample Principal Rhetoric:*** *"As I told you before, you are responsible for xyz.": I am just reminding you that you need to have that taken care of by tomorrow";" I need you to support me 100% of the way."; " Could you please make sure that this happens by x deadline?"*	Follower's Role: Meaningful divergence of rules and actions (e.g., acknowledgement or need for individual risk, difference, and diversity) ● ***Sample Principal Actions:*** *During the school day or school week, the principal redefines together with teachers and staff roles and responsibilities; has sit-downs to have teachers and staff come up with new tasks and individually-driven responsibilities; during the school assemblies and meetings, showcases people who have done things differently; sanctions or rewards by constraining or freeing up time and budget for the teacher or staff through the meaningfulness of less specified contributions; uses encouragement and empowerment to allow teachers and staff to diverge* ● ***Sample Principal Rhetoric:*** *"It is important for us to feel that you are empowered and that this is a safe environment for people to take risks around here."; "I expect you to take the initiative and to come up with your own ideas to make this school a better place."; "There is no one right course of action, so long as there is some kind of positive impact."*
Indicated use of time in the context of change	Often orients to the future by creating path goal dependence (following of pre-specified goals) either of current and future activities to ensure future prediction (e.g., we plan x to meet our goal of y) ● ***Sample Principal Actions:*** *During the school day or school week, the principal constantly looks at the schedule or goals to plan for future activities; tries to make estimates using these tools; uses benchmarks to help achieve goals for some future date* ● ***Sample Principal Rhetoric:*** *"Okay, so I noticed that we are several weeks behind here. What kind of milestones do we need to get us back on track?"*	Often orients to the dealing of the present by moving away from path goal dependence but may be used to inform future activities (e.g., how do we deal creatively with surprises for which we have no plan) ● ***Sample Principal Actions:*** *During the school day or school week, constantly looks for people to generate quick fixes not run by a schedule but to deal with short-run issues and emergencies* ● ***Sample Principal Rhetoric:*** *"Okay, I just noticed that xyz is happening. Can you think of some way of fixing it?"*
Indicated nature of the action (pacing of time)	Often paced more slowly than improvisation; Separates and paces activities through chronological time; separating the art of creating from the art of enacting the change (e.g., use activities to plan ahead and then follow) ● ***Sample Principal Actions:*** *Sets out goals several weeks and months in advance, assigns*	Often paced more quickly than orchestration; Merges chre44onological time with kairos; combines the art of creating as occurring simultaneously with the art of enacting change-relies on kairos (or the recognition of the qualitative aspects of timing to find an opportune moment to make a strike for change) (e.g., trial-error and learning by doing) ● ***Sample Principal Actions:*** *Does*

	people, and then schedules follow-up meetings to check on the progression ● ***Sample Principal Rhetoric:*** *{This will vary – however, the principal will mention the amount of time that it will take to get something done which should be longer than improvised activities}.*	*things on the fly and gut feel depending on the situation* ● ***Sample Principal Rhetoric:*** *"Hey, I just thought of this idea! Is there any way we can get this done?"*
Indicators of the cognitive processes	Reliant on rational predictable rules – depends on how stability is maintained (i.e., understanding that surprises or unplanned events are threats to stability in organizing) (e.g., treats surprises or deviations from the plan mostly as negative) ● ***Sample Principal Actions:*** *Looks surprised or shocked when something falls behind or interrupts the schedule; starts to raise hell or highlights the severity of the surprise or mistake* ● ***Sample Principal Rhetoric:*** *"I can't believe that this is happening?": "What the hell is going on!"; "This should have never have happened."*	Reliant on more intuition and less prediction - depends on how instability is used to create a learning organization (understanding that surprises or unplanned events are opportunities in organizing) (e.g., treats surprises more positively and specifically as an opportunity to invent and learn) ● ***Sample Principal Actions:*** *Does not appear shocked or surprised when something happens; looks for ways of calming people down and to think of it as a learning opportunity* ● ***Sample Principal Rhetoric:*** *"These kinds of things always happen."; "Don't worry about it."; "Go with the flow!"*
Typical associations (indicators) in the use of this organizing strategy	Typically associated with centralization, formalization, the bringing of unity (cohesion, collaboration), and sometimes though not always standardization; can influence alignment and may inform how to bring structure to adaptation ● ***Sample Principal Actions:*** *Use of agendas, meeting minutes, and handbooks* ● ***Sample Principal Rhetoric:*** *Use of formal titles and the global we*	Typically associated with decentralization, less formalization, the bringing of individual divergence, novelty creating (bricolage) and innovation; can influence adaptation and may also inform how realignments should happen ● ***Sample Principal Actions:*** *More ad-hoc loosely organized agendas, no or limited meeting minutes, few handbooks, emphasis on individual deliverables* ● ***Sample Principal Rhetoric:*** *First name calling and stress on the individual*
Organizing tools	The five "Rs" - routines, resources, rituals, roles, and responsibilities are used to create a point of commonality, reductive of conflict (convergence-building);are often more tightly configured (use of strict procedures and practices, rigid routines, directed resources not freely exchanged by others, strict job descriptions for roles and responsibilities, and very cult-like rituals that do not appreciate deviance and diversity)	The five "Rs" - routines, resources, rituals, roles, and responsibilities are used to create functional conflict (divergence-building); are often more loosely configured (use of loose open-ended procedures or practices, flexible routines, freely exchanged resources, loose and flexible job descriptions for roles and responsibilities, and acknowledgment of individual differences in school rituals)

Sample Questions Asked in the Semi-Structured, Informal Interviews, and Follow-up Probes about the School's Organizational Context and School Improvement

School Context, Community, and District Profile Questions

- *What is the general history of this school, the school's community, and how did you become principal at this school?*
- *Schools often have a specific kind of personality or value system? Can you describe what this look particular school's personality or value system looks like? For example, when you first started here what did you notice as important? What were the political hot buttons? If you were training a new principal or teacher, what should a new principal or teacher look for and pay particular attention to at your school?*
- *Is it easy or difficult to get discipline and stretch in school goals among the staff? How so? Can you describe the level of trust and support dynamics in the school?*
- *Is it difficult or easy to get stretch and discipline among staff toward school goals? How so? Can you describe the level of trust and support in this school?*
- *How would you describe the community that this school serves? (Race, SES, community type, urbanicity, background of parents)*
- *Can you describe the student population at this school and their particular needs (Race, SES, attitude toward learning and discipline)?*
- *Can you describe the level of parental involvement at your school (e.g., PTO/PTA, volunteers, attendance at school functions/conferences) and their particular needs?*
- *How would you describe the relationship between the school and the school district's central office? Is it easy to get assistance? (Note: the three stressor questions may be asked at this point to the principals; these three stressors are listed at the very end of this interview protocol).*
- *Does this school have any particular partnerships with other community organizations (for or non-profit)? How is the school affected positively or negatively by these partnerships – if applicable?*

General Questions Asked about School Improvement

- *How does school improvement occur more generally at this school? What are the strategies and actions that are involved in order to create school improvement at this school?*
- *What is your role and how would you describe your leadership in the context of school improvement at this particular school?*
- *Among the five areas noted by scholars on School Improvement as most important to principals (clarifying the school's purpose, creating a collective and/or individually learning environment, developing teachers, aligning the school to state standards, and creating a data-driven and learning culture), which are the most central to your daily process of organiz-ing? Why?*

Sample Questions Asked on School Improvement By Area

Clarifying the School's Purpose

- *Does this school have a mission and/or values statement? How was it developed? What was your role in it? Is it more symbolic or do people walk-the-talk of the mission statement around here?*
- *Can you cite it verbatim?*
- *What is your vision for this school to improve that you consider in your leadership (or in your teaching - for teachers)? For example…*
    - *When you visit a classroom, what are the first things you look for as signs that the classroom is an effective learning place?*
    - *What do you feel are the key components of maintaining high staff morale?*
    - *What are things that catch your attention when looking at a school and at teachers?*

  - *As a building administrator, what message would you want your school to convey when visitors walk into the building?(For teachers, what message would you want your school to convey when visitors walk into the building)*
  - *Please describe the role you feel parents, teachers, and students should play in the operation of this school.*
- *Have you communicated this vision to your school? If so what was school's reaction, what were the barriers and opportunities that you noticed? How did you alter this reaction, if relevant?*
- *How do you generally develop your school consistent or independent of your vision for school improvement? (For teachers- how does your principal develop your school consistent or independent of his or her vision for school improvement?) When do you change or alter this vision and for what purposes? (For teachers, when does principal change or alter this vision and for what purpose?)*

Creating a Collective and Individually Learning Environment

- *What new or innovative teaching strategies have teachers implemented in this particular school over the past year? In what areas and for what purposes? (e.g., pilot programs, team teaching, collaborative/grade level planning, level of faculty involvement).*
- *Do you have a tendency to value collective versus individual learning needs or vice-versa? Why?*
- *How does this school address the needs of "at-risk" students? What are the programs that are in place or have been created? Are they externally and/or internally driven? Can you describe them to me and your role in this process?*
- *Do you have an inclusion program at this school? How does it work? Can you describe your role in this process?*
- *What other special education services are in place at this particular school? Are they externally and/or internally created or driven? Can you describe them to me and your role in this process?*
- *How are the individual needs of students met in their classes, especially if they fall behind or if new needs pop up in this school?*
- *Discuss your knowledge of the current trends and best practices in reading, writing, and arithmetic and how you plan to keep your staff involved with the current and changing educational trends. What do you do to keep abreast of these trends and how do you implement them in your school?*

Development of Teachers

- *How many teachers employed at this school last year did not return as teachers this year? Why did they not return?*
- *How much of the staff development at this school is district initiated? What in-services have been created for this school? How were they developed? What was your role in organizing these processes?*
- *How much staff development have you used to help improve or develop this school? What types of in-services have you in particular brought to this school? And, how did you create and manage them?*
- *Do teachers at this school have input regarding staff development? If so, in what ways? How do you manage that process?*
- *How much faculty involvement is there in the development of school policies, procedures, or task? (e.g., Site-based management team or other vehicles for decision-making) What is the success of faculty in developing new policies? How did they execute on it?*
- *Please describe what you feel a model building staff development program would look like.*
- *Please share what professional development activities you have actively participated in over the last two years and what specific steps you would take to promote and encourage continued professional development of yourself and fellow staff.*

- *Describe what you consider to be a good teacher and how do you make sure teachers are living up to your expectations?*
- *If you became aware of a teacher that is having difficulty with instructional techniques and classroom management, what would you do to help? (Note: If they say mentoring, it may be necessary to ask them to elaborate on what they mean by mentoring.)*

Alignment to State Standards

- *How are you generally informed about the changes to state standards? What is your next step in the process after being informed of those changes?*
- *To what extent is there alignment among the written curriculum (the standards based curricular guide), the taught curriculum (what is actually being taught in the classroom) and the tested curriculum (what students are expected to understand and be able to do)?*
- *What means have you taken in this school to ensure adherence to state standards? Do you follow a standard procedure and/or create new in-house processes to ensure adherence? Can you describe this process or these processes to me?*
- *How are your current instructional strategies different from those previously used with the state curricula guides or guidelines? What makes them different? How were they developed and for what purposes?*

Creating a Data-Driven and Organizational Learning Culture

- *What metrics or data do you pay particular attention to as part of developing short-run and long-run goals for your school and teachers? What is involved in this process and how do you use them?*
- *How and when do you use AYP scores and test scores to organize the school differently? What is involved in that process? What standards or innovations arise from that process of organizing?*
- *How do you model an organizational learning culture (a culture willing to improve) at this school? How do you define this learning culture? What processes do you put in place to sustain or change performances?*
- *What tools and resource do you use to promote an organizational learning culture or sustain best practices developed in this school? How do you disseminate them and make them stick/change for the school more generally and for teachers?*

Sample Principal Profile Questions

- *How long have you been in education?*
- *Years that you have been in a teaching role? (May or may not be applicable to principals)Years as an administrator?*
- *Years as a principal or an assistant principal?*
- *Years at this school?*
- *Do you have any administrative help? What is his/her/their role in helping you lead this school?*

Organizational Culture Context Survey

Organizational Culture Context (Adapted from Gibson and Birkinshaw)

Survey Overview: We are conducting a survey to understand how your school's organizational culture contributes to the performance of its general tasks and goals as well as how the social context of your school provides support and trust toward those ends. Prior to beginning the survey, please reflect, for at least two minutes, your experiences with the following:

1) How tasks and goals are created, implemented, and reinforced generally in this school and to what extent people can move within and beyond them
2) How the school provides as sense of trust and support to achieve these tasks and goals more generally in the school

For each of the following statements, please select the number that best describes your sentiments using the following five point Likert scale.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

This school encourages teachers, school staff, and school administrators to set individually challenging goals.	1	2	3	4	5
This school provides teachers, school staff, and school administrators opportunities to challenge us creatively, instead of narrowly defining tasks for us.	1	2	3	4	5
This school encourages teachers, school staff, and school administrators to be more focused on doing our current jobs well than on motivating us to higher levels of individual task discretion and responsibility.	1	2	3	4	5
This school makes a point of stretching (growing) teachers', staff, and school administrators' abilities and professional judgment beyond current task duties and responsibilities.	1	2	3	4	5
This school evaluates and sanctions teachers, staff, school administrators based on rigorous measurement and evaluation of their performance against school goals.	1	2	3	4	5
This school holds teachers, staff, and school administrators accountable for their performance.	1	2	3	4	5
This school uses appraisal feedback such as teaching evaluations or test score performance to improve teacher, staff, and school administrator performance.	1	2	3	4	5
This school devotes considerable effort and resources toward developing teachers, staff, and school administrators professionally.	1	2	3	4	5
This school gives teachers, staff, and school administrators sufficient authority to do their jobs well.	1	2	3	4	5
This school pushes decision-making down to the lowest appropriate level.	1	2	3	4	5
This school supports teachers, staff, and school administrators' ability to work hard and to develop their capabilities in order to implement our school's goals.	1	2	3	4	5
This school bases decisions on facts and analysis not politics.	1	2	3	4	5
This school treats failure (in a good effort) as a learning opportunity, not something to be ashamed of.	1	2	3	4	5
In this school, teachers, staff, school administrators are encouraged and are able to take risks.	1	2	3	4	5
In this school, teachers, staff, and school administrators are given realistic goals to support their performance and development.	1	2	3	4	5

T[...]d that informed your answers above. Please list those that were particularly relevant in your answering of this survey.

TABLE 1: Methods Used in This Study and Breakdown by Principal

Methods Used in this Study

Type of Methods	*Number of Principals Participating*
Surveys	14* principals
Initial Interviews	15 principals
Formal Follow-ups	14* principals
Shadowings, Observations, & Ad-hoc Follow-ups/Interviews	15 principals

Breakdown of Study Time by Principal (Approximate Time by Principal)

Principal	*Initial Interview in Hours*	*Formal Follow-ups in Hours*	*Shadowing, Observations, Ad-hoc Follow-ups/Interviews in Hours***	*Approximate Total Hours Spent*
P1	1.5	2.5	18	22
P2	2	3	25	30
P3	2.25	2	35	39.25
P4	1.5	2.25	15	18.75
P5	2	3	22	27
P6	1.5	2.25	30	33.75
P7	1	1.5	17	19.5
P8	1.25	1	16	18.25
P9*	2	No*	0.5	2.5
P10	1	2.75	16	19.75
P11	1	1	8	10
P12	2.25	2.25	20	24.50
P13	1	1.25	11	13.25
P14	1	1.5	10	12.5
P15	1.5	1.75	14	17.25
Averages across all schools	***1.5***	***2***	***17.2***	***20.6***

*Principal who dropped due to job change
**Minimum of three observations done per school.
.25 = 15 minutes, .50 = 30 minutes, .75 = 45 minutes

TABLE 3: Data Used and the Analytic Process Employed by Research Question

Research Question	Data Used	Data Analysis
RQ 1: What dimensions of school improvement are most salient when principals seek to develop their schools?	• Interview questions on School Improvement from Lunenberg & Orenstein and rank order	• Analysis by themes and frequency based on rank order to principals' interview responses to the school improvement questions
RQ 2: What do principals' responses reveal about how they organize their schools similarly or differently based on their perceptions of their contexts?	• Interview questions on School Improvement from Lunenberg & Orenstein and rank order • Interview questions about the school's context • Gibson and Birkinshaw survey	• Analysis by common themes and frequency matched to the principals' descriptions of school contexts and responses to the Gibson and Birkinshaw measure • Linked to the common patterns found in what was most salient to the principals
RQ 3: What are the common methods that through their use may illuminate different variations of managerial ambidexterity?	• Observations, shadowings, and follow-ups with the principals	• Analysis of principals' verbal and non-verbal behaviors initially using Typologies 1 and 2 then using the expanded observation protocol • From the analysis of these behaviors, identification of the common methods found in each profile and then across all profiles • Identification of the common ways to combine the methods by mapping methods to control and flexibility; mappings were identified to common themes and their frequency both within and across the profiles

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