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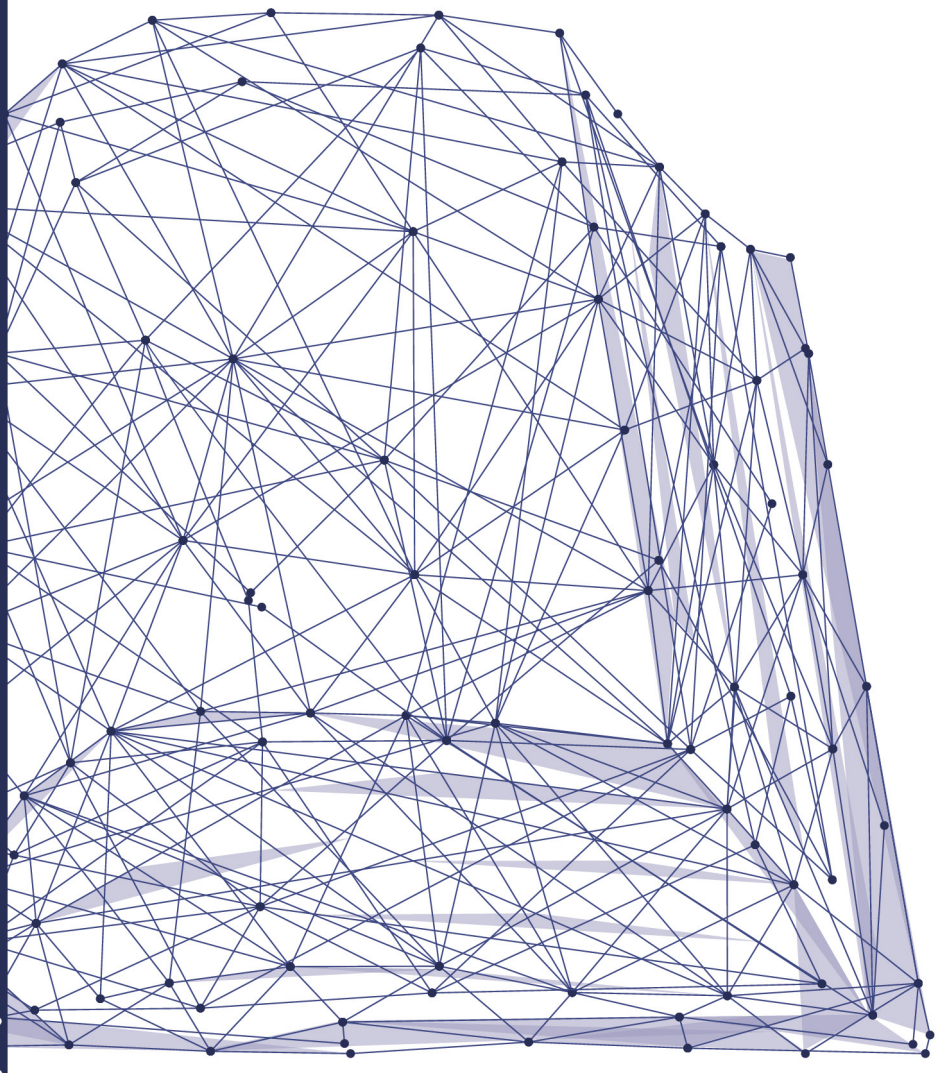
EDUCATIONAL LEADERSHIP : A MULTILEVEL DISTRIBUTED PERSPECTIVE



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Foreword

Educational leadership research has long highlighted the roles and functions of school principals. More recently, research has investigated leadership activity and impact at different levels in and across schools – from classrooms to central agencies. At the same time, there is widespread agreement that the multiple contexts within which schools operate play a significant role in how leaders shape their practice to positively influence student learning. However, there are too few sustained attempts which consciously connect research across these established and emerging subfields. As a result, our understandings of how successful leadership plays out and impacts student learning within complex organizational environments remains unfinished. The authors of this manuscript argue that if we want leadership research to genuinely inform practice and, most importantly, how it influences learning and teaching, attention should focus simultaneously on the exercise of leadership across its different forms, functions and levels, as well as consciously account for the multiple contexts within which leaders lead. In other words, rather than putting just one slide under the microscope, we need to examine the manifold variables in their natural laboratory to discover the different ways they interact with each other. To do this the authors advocate a *multilevel distributed* perspective as a way to frame future leadership research.

At the heart of the framework is an acceptance that educational leadership and teaching practice do not occur in isolation. Rather, they are embedded in multiple overlapping relationships. For example, the authors describe how teaching practice is co-performed by teachers and students who are, at the same time, engaged in relationships with other teachers, students, parents, other leaders, policymakers and beyond. These multifaceted relationships shape what teachers and students think and do in classrooms and thus influence learning. The authors caution that if we fail to recognize interactions between critical relationships, that deeper understanding of what teaching practice and student learning really entails in specific contexts will remain incomplete.

The authors further argue that educational leadership must be understood as entwined with classroom teaching if it is to ultimately improve student learning. Given that teaching is deeply embedded in relationships, educational leadership, as explained in the manuscript, is "fundamentally about cultivating and channelling relationships that access and activate resources for teaching practice" (p.12). These relationships and resources stretch well beyond the schoolhouse. Schools, therefore, cannot be viewed as standalone entities, but as a part of more expansive systems in which different contextual factors and interactions impact what happens in every corner of the enterprise. Research, therefore, and indeed all conversations about educational leadership whenever and wherever it happens, must traverse schools' traditional boundaries whether they be structural, cultural or geographic.

An important slice of the authors' argument resonates with what Robert Arnove (2013) refers to as the "dialectic of the global and the local" when he discusses the effect of globalization on education systems. As the world becomes more interconnected, what's happening locally can be shaped by research, policy or politics occurring in faraway places - this happens even as micro-level, local factors continue to infiltrate every aspect of school operation. Rather than being unquestionably received, global practices interact with these local actors and factors to transform contexts and so teaching and leadership practices. Therefore, it is the *dialectic* at work, where the *interactions* and relationships that matter the most to actual practice play out.

Through explicating the multilevel distributed framework the authors encourage us to think about educational leadership within, beyond and across the school, education systems and even the education sector. At the same time, the authors stress the fundamental place of relationships in weaving a student learning culture in and beyond classrooms. As such, the framework forces us to look more deeply into the human dynamics and interrelationships that drive successful leading and teaching in schools. Likewise, it argues for the importance of recognizing the power of interrelationships among different actors and forces at both the global and local levels. In short, the multilevel distributed framework gives us a new and exciting angle for further examining and understanding the vibrant field of educational leadership.

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Executive Summary

In this text we describe and advocate for a model of multi-level distributed leadership in education that integrates diverse sources across education sectors as a tool for improved teaching and supporting equal opportunity. The framework is offered as a response to an environment of narrowing perspectives of learning and educational goals characterized by leadership siloes and increasingly focused on administration and testing.

Effective educational leadership is viewed as broadly embedded in social relationships of influence extended across multiple individual players and organizations. Leadership in education is distributed: policy directions are shaped by context and emerge from an aggregate of leadership sources that produce broadly meaningful benefits in teaching, learning, and opportunity. The framework is grounded in a commitment to a more expansive, dynamic, and holistic understanding of teaching and learning that embraces the full range of human skills for contemporary needs in diverse education settings globally.

Our text traces the evolution of thinking around learning, teaching, and education leadership over recent years. Within the classroom, we consider teaching as a distributive practice, co-performed by students and teachers, in which multiple actors contribute content and value to the learning space. We explore untapped sources of leadership 'beyond the school and the principal' to include families, the wider community, and local and central government. From these perspectives, leadership is fundamentally a social process, emerging from interaction. The framework is designed to manage complexity created by such multiple levels of influence across the education sector, broadly delineated.

The effectiveness of any educational infrastructure hinges on its ability to build collaboration among relationships based on shared vision for teaching and learning.

We explore ways in which learning communities collectively reach coherent understandings of the unique challenges they face in a particular school or system setting. Further, this involves cultivating and channeling the diverse resources that support quality teaching.

We couple the research literature with vignettes to illustrate our concept of distributed leadership in action within the 'schoolhouse' setting, and we extend the discussion to include the greater education system of a region or society at large. Ultimately, our concept of distributed educational leadership extends to an entire education sector. We define the education sector liberally as universal –incorporating any and all of a society's resources in education— and indeed, given our increasing interconnectivity, extending potential resources globally. A multitude of transnational organizations can provide key interfaces in support for teaching, learning, and providing opportunity.

In advocating a multi-level mindset approach to leadership development, the research provides guidance for schools in transition from conventional, centralized leadership, to the more complex, distributed model of the education system. Our investigation acknowledges the variety and range of challenges diverse schools face in their unique contexts globally. This work reveals an ongoing need to identify, investigate, and compare educational leadership contexts, particularly in the non-western world, and envisions several potentially productive research directions.

CHAPTER ONE

Educational Leadership: From why to how we should care

Around the world we hear calls to improve student learning through effective leadership. Yet governments and international agencies, fixated on testing students in a handful of subjects, have contributed, intentionally or not, to a narrowing of conceptions of learning—and thus, a narrow conception of the role and scope of educational leadership. Contemporary needs call for the more expansive and dynamic understandings of learning that focus on developing the whole child. The process of learning is deeply embedded in social contexts: learning unfolds collectively. Students are a part of a broad set of social relationships that help shape learning, and, critical for our understanding of leadership, can be cultivated and shaped to promote learning. Moreover, and of critical importance, cognitive development does not happen in isolation from social, emotional, civic, and physical development.[1] As research on learning shows, a learner's cognitive development is integrally tied to his or her social and emotional development. We need to avoid artificially narrow and constrained notions of student learning, and to think expansively about what is possible. Improving student opportunities to learn in school is vital for healthy societies. The economic and sociopolitical well-being of our societies globally will depend significantly on the quality of student learning.

Student learning is both the subject and object of educational leadership. By student learning we mean much more than academic learning or, even more broadly, cognitive development. For any individual, learning across the full lifespan is fundamentally about cognitive, social, emotional, and physical well-being; and it is also about civic engagement. All these dimensions of human development are interconnected and integral. To genuinely understand and develop effective leadership toward improving student learning, we need a new framework for analyzing educational leadership. In this text we describe a multilevel distributed framework which views leadership as distributed —extended across multiple individual players and organizations, shaped by context both within and across them. The term leadership is widely used and variously applied; we define leadership as a relationship of social influence.[2] By educational leadership we mean social influence relationships linked with core educational functions –teaching and learning– that are intended or understood by members of organizations to influence their motivation, knowledge, and practice.[3] We set aside other functions of schooling by anchoring our discussion of leadership in supporting, improving, and maintaining the quality of teaching and learning.[4] We are motivated by concerns about the quality and equality of instruction. Policymakers and educators around the world are concerned about the general quality of student learning, particularly among some groups. Inequities in achievement and attainment are a pressing problem in most countries.

While student learning is the end result, the principle means that schools and school systems have for getting there is teaching. Distinguishing teaching from learning is important, as the two are often used together, even interchangeably, in discussions about educational leadership and improving education more broadly. This is problematic because they are distinct practices; teaching is the means for creating learning opportunities for students. Teaching is the core technology of schooling, the way we produce learning. Hence, teaching is both the subject and object of educational leadership. Efforts to understand educational improvement in general and educational leadership in particular must be firmly and systematically positioned in a comprehensive understanding of teaching.

[1] National Research Council, 2000.

[2] Bass, 1990.

[3] Spillane, 2006

[4] There may be other important ways that school leaders can improve outcomes beyond teaching and learning, such as through building social relationships between the school and community institutions. However, we put aside such other functions to focus on the core enterprise of schooling—teaching and learning.

Advances in research on educational improvement: Synthesizing insights

For a half century or more, researchers and developers working in the field of education around the world have contributed immensely to our understanding of education and ways of improving it. The knowledge base has grown, but mostly in several distinct sub-fields. Research on learning, whether in or out of school, has fundamentally transformed our understanding of how people learn across the lifespan. Research on student learning has generated new insights into how children learn, moving beyond behavioral notions to incorporate cognitive and socio-cultural views of learning.[5]

Research on teaching has also provided a rich knowledge base on teaching practice and its necessary tools. Moving beyond the process-product research and its behavioral portrait of teaching, scholars have shown how teaching is fundamentally an interactive practice.[6] Some have argued convincingly for thinking about teaching as a distributed practice co-performed by teachers and students.[7] There has been significant progress in identifying and building a knowledge base for teaching. These developments are fundamental to educational leadership; they are its bread and butter.

Research on school improvement and school effectiveness has empirically documented how schools can organize to create conditions necessary to improve teaching and student learning. Among other things, scholars have identified conditions that characterize effective schools as measured in terms of student outcomes including:

- Strong administrative leadership focused on quality instruction
- High expectations for students
- Planned curriculum coordination and organization
- Linking professional development to the expressed needs of the staff
- Clear and focused mission
- An orderly and safe atmosphere
- Frequent monitoring of student progress as basis for improvement
- Positive home-school relations.[8]

A key challenge is getting from recognizing such desired outcomes, to making it happen in the learning environment –the how of educational leadership.

Research on educational policy design and implementation has also generated insight into the conditions under which policy does and does not influence what happens in schools and classrooms. Policies filter through multiple levels of interpretation and engagement before they enter classrooms. Many factors along that journey shape how the policy is understood and implemented.[9] Leaders in central offices must contend with a new policy, interpret it and incorporate it in their belief system.[10] They pass their construction of policy to school leaders and teachers, who must grapple with it themselves. Teachers within the same school can come to a different understanding of policy expectation due to differences in their experience, their beliefs about instruction, their social networks, and the depth and frequency with which they can engage with the policy.[11] Interactions with people outside the formal school system,

[5]National Research Council, 2000.

[6]Brophy & Good, 1986; Dunkin & Biddle, 1974; Mitzel, 1960; Rosenshine & Stevens, 1986.

[7]Cohen, 2011

[8]Purkey & Smith, MS, 1983; Downer, 1991; Lezotte, 2001; Brookover & Lezotte, 1977; Council of Ontario Directors of Educational, 2011; Calman, 2010

[9]Spillane, Reiser, & Reimer, 2002

[10]Spillane, 2000

[11]Coburn, 2001; 2004; 2005; Coburn, Russell, Kaufmann, Heath, & Stein, 2012

such as researchers and professional development providers, can influence how teachers understand policies.[12] These multiple levels of influence create a great deal of complexity that policymakers and educational leaders must contend with. We aim to provide a framework for handling this complexity, and encourage leaders to view it as an opportunity to intervene at a number of inflection points.

Research under the rubric of educational administration and school leadership has also generated important new empirical knowledge about how leaders can effectively manage their schools so as to improve teaching and student learning. At least three developments merit attention given our focus in this brief. First, a major development involved teaching and student learning that is becoming more central to research on school leadership. Beginning in the 1980s, the concept of 'instructional leadership' contributed to bringing leadership for teaching more attention in research on school administration.[13] Scholars working in the instructional leadership tradition identified both the roles and functions of instructional leaders, including defining and communicating a clear mission for instruction, managing a program for instruction by coordinating curriculum and supervising teaching and students' progress, and nurturing a positive learning climate for both children and adults in schools.[14] Recent work underscores the critical importance of those roles and functions associated with instructional leadership for cultivating student learning. One meta-analysis involving 27 research studies focused on relationships between school leadership and student outcomes, for example, shows that the closer school leaders' work is to teaching and learning, the more likely they are to have a positive influence on student outcomes.[15]

Some scholars argue, based on a synthesis of the literature, that school leadership is second only to classroom teaching in contributing to student learning outcomes.[16] While this work has helped tremendously on affording teaching more attention in educational leadership research, much work remains on unpacking the relations among leadership and teaching.

A second development in educational leadership research has centered on moving beyond an exclusive focus on the school level and the school principal in particular. Research on teacher leadership makes a strong case for going beyond the school principal and other school administrators in order to understand educational leadership inside schools. At the same time, several scholars have shrewdly drawn attention to leadership as a system-level phenomenon.[17] This work has contributed to broadening our understanding of educational leadership beyond the schoolhouse. Still, a key challenge that remains is figuring how these various sources of leadership operating at different levels, typically studied independently of one another, work in tandem or not to support teaching and learning. The tendency to compartmentalize leadership by pigeonholing principal leadership, teacher leadership, system leadership and so on, contributes to a disjointed portrayal of the educational leadership process. After all, when it comes to the actual work of teaching and learning, the interrelationships among leadership at different levels is what will matter most, not the influence of any one source of leadership independent of the others.

A third development over the past few decades involves a push for attention to the practice of school leadership; that is, how the work of leadership is actually accomplished on the ground inside the schoolhouse.

[12]Coburn, 2005; Morel & Coburn, 2019

[13]Edmonds, 1979; Leithwood & Montgomery, 1982; Hallinger, 2003; Marks & Printy, 2003; Southworth, 2002; Peterson, 1989; Sheppard, 1996; Murphy, 198

[14]Hallinger & Murphy, 1985; Hallinger, 2009; Murphy, 1988

[15]Robinson, Lloyd, & Rowe. 2008

[16]Leithwood & Jantzi, 2005; Leithwood et al., 2004; Louis et al., 2010

[17]Chapman et al., 2010; Dimmock, 2016; James et al., 2007

One line of work in this area centers on understanding the actions or behaviors of school leaders, especially head teachers or principals, but also others such as coaches and teacher leaders. Principals who talk with teachers to promote reflection and promote teachers' professional growth are more effective in promoting instructional change according to teachers; more specifically, strategies such as making suggestions, giving feedback, offering praise, modeling, using inquiry, soliciting advice and opinions, and giving praise, motivate teachers to improve their teaching.[18]

Another line of work frames the practice of leadership distinctly differently, arguing that focusing only on actions fails to capture the essence of practice because it is fundamentally social. In this view, leadership practice is not simply about what any one does but about what they do together in interaction with one another. Remember that leadership is a social influence relationship, so leadership practice is ultimately about interactions. Work in what has become known as the distributed leadership tradition advances a particular view of the practice of leadership as a product of the joint interactions among school leaders, teachers, and aspects of their situation such as tools and routines of various sorts that are the means for interaction. Leadership practice unfolds in the interactions among people and their situations; each being an essential constituting component of educational leadership. In this framing, leadership practice is about more than actions; it is fundamentally about interactions. While this work has managed to foreground the practice of leadership, it has mostly centered on that practice in the schoolhouse, focusing more on how leadership is horizontally distributed in schools but with limited attention to how it is vertically distributed across levels of schools and school systems.

Taking work in these various sub-fields of educational research together, we have learned a great deal about improving student learning in schools. Still, the siloed nature of these research advancements and the relative scarcity of efforts to connect and integrate across sub-fields poses a major challenge for those engaged in the work of educational improvement. One challenge with these lines of inquiry is that they have operated more or less independently of one another as subfields within educational research and training. More integration of the knowledge base across these various sub-fields is essential if the research is to inform the work of educational improvement in meaningful ways.

A second challenge is that, while we know that schools exist in school systems and that school systems look quite different both within and across nations, there have been few attempts to conceptualize how the embeddedness of schools impacts leadership for improving teaching. These points of variation no doubt have profound implications for educational leadership. Indeed, scholars are increasingly calling for research that situates leadership within broader systems and have begun to engage in comparative work on leadership.[19] Yet the lion's share of attention, in both the research and practitioner literature, has been at the school or central office levels. There have been few systematic attempts to conceptualize leadership as a multi-level phenomenon. As we will show, school leaders are embedded in multiple overlapping relationships implicating a host of organizations, within and outside formal school systems.

[18]Blase & Blase, 1998; 1999; Blase & Kirby, 2000.

[19]Harris & Jones, 2015; Neumerski, 2012; Hopkins & Woulfin, 2015; Cobb et al., 2018

A multilevel distributed framework for education leadership

Building on recent developments in educational research in general and educational leadership research in particular, as overviewed above, we develop what we refer to as a multilevel distributed perspective on educational leadership. We do so in an effort to build on core findings from the field and also to tackle some of the challenges we have identified with the extant knowledge base. By tackle we mean sketch a framework for research and development work on educational leadership that would allow for grappling with the challenges we have identified in research and development work moving forward.

Our multilevel distributed framing of educational leadership is premised on three core and interrelated ideas about teaching and educational leadership. First, our analysis centers on practice –the practice of teaching and of educational leadership. We focus on practice because that is where the rubber of educational leadership ultimately meets the road of supporting and improving teaching and, by extension, student learning. Moreover, as a relationship of social influence, what ultimately matters is what actually happens in practice as people interact. Further, centering on practice means that to understand relations between leadership and teaching we must examine the interconnections between two interdependent practices.

Second, we take a distributed perspective to practice, arguing that practice, whether teaching or leading, unfolds in the interactions among people as enabled and constrained by aspects of their situation. Building on activity theory, distributed cognition and socio-cultural activity theory,[20] we see practice as an evolving from interactions among people as these interactions are enabled by aspects of the situation. In this way, practice is stretched over people and aspects of their situation that enable and constrain their interactions with one another. The situation then is not just a stage on which people practice; features of the situation are not merely 'aids' or 'accessories' for practice but rather essential, defining elements of practice. To understand practice we need to focus on people, who are interacting with one another, with aspects of their situation, rather than people who are abstracted from their situations. Casting aside the picture of the lone teacher is difficult, even when one acknowledges that leading and teaching practice involves a cast of characters in interaction, and not a one man or woman act.

Third, leadership is an embedded practice, implicating leaders in multiple organizations who are engaged in the collective task of improving teaching in schools. Research on educational leadership frequently focuses on the schoolhouse. At times, it expands to consider how relationships between schools and other organizations —such as central offices or other schools— shape school leadership. But the reality is more complicated. Schools and school leaders are embedded in a broad set of relationships with people and organizations both within and outside of school systems that have a profound impact on how leaders can shape the teaching that occurs inside of the classroom. Leadership, therefore, is not only distributed horizontally—across people and aspects of the situation within schools—but also vertically—across people, organizations, and aspects of the situation in educational systems[21] and the educational sector more broadly.

[20]For example, Hutchins (1995a) documents how the task of landing a plane can be best understood within a framework that includes the manufactured tools and social context of the cockpit which situate a pilot's activity.

[21]We distinguish between school systems, which simply administer and manage educational service for a populace, and educational systems, which are instructionally focused and working with schools to support and coordinate teaching in schools and classrooms. We discuss this in more detail in Chapter 4. We focus throughout the brief on educational systems.

Previewing our multilevel distributed perspective on educational leadership we identify several essential interrelated components that we outline in the next three chapters.

In **Chapter 2,** we anchor our multilevel distributed frame firmly in teaching as the core technology of schooling. If educational leadership is to ultimately improve student learning it must be integrally tied to teaching and a consideration of how to support and resource teaching practice. We see students and teachers as co-performing teaching practice with, and about, particular materials and embedded in a set of relationships with others including students, parents, peers in the schoolhouse and beyond, school and system leaders, and various other actors including key stakeholders such as community leaders and policymakers. These overlapping and interacting relationships are critical because they condition what teachers and students notice and the choices they make in the classroom and thereby influence teaching practice. In particular, these relationships influence not only access to but also the activation of those resources necessary for teaching practice. Resources are both constitutive of and constituted in practice; that is, resources such as knowledge and materials shape interactions among people in practice while at the same time resources are produced and reproduced in practice. We classify resources as human, social, material and cultural and argue that the interactions among these different sorts of resources influence resource access and activation.

In **Chapter 3,** we shift our attention to leadership in the schoolhouse. We frame educational leadership as being fundamentally about cultivating and channeling relationships that access and activate resources for teaching practice. Whereas cultivating relationships refers to strategically initiating and developing them, channeling relationships denotes focusing and directing these relationships substantively. Accessing resources is chiefly about building, procuring, and distributing resources whereas activating resources refers to noticing and using resources in practice. Though the two are closely interrelated, distinguishing between access and activation draws attention to the fact that resources often go unrecognized as such and unused in practice.

Coordination is an essential challenge in cultivating and channeling relationships to access and activate resources to support teaching and enable its improvement. There are many moving parts, relationships, and resources in interacting across classrooms, grade levels, departments, and the schoolhouse. Coordinating these parts is demanding but an essential aspect of leadership in the schoolhouse. It involves not only consistency in what messages about teaching and learning are communicated to students, teachers,

[22]Cohen, Spillane, Peurach, 2018; Cohen, Peurach, Glazer, Gates, & Goldin, 2013; Hopkins, Spillane, Jakopovic, & Heaton, 2013; Peurach & Neumerski, 2015; Woulfin, 2015

and other stakeholders but also working to ensure that the material, social, human, and cultural resources work together more or less in unison to support teaching. We argue that addressing the coordination challenge involves structuring the interdependencies among relations and resources in ways that support teaching practice as well as maintaining and improving that structure over time. We use the concept of educational infrastructure to explore how educational leadership engages in structuring resources and relationships. We define educational infrastructure as consisting of roles, structures, and resources used to support and coordinate instruction, maintain instructional quality, and enable instructional improvement.[22]

In **Chapter 4,** we further expand our analysis of educational leadership to incorporate the role of beyond-the-schoolhouse relationships. Schools do not have a monopoly on designing and deploying educational infrastructure as entities beyond the schoolhouse. For example, schools engage in designing educational infrastructure but the extent to which they do varies by nation state. Hence, we frame educational leadership practice, like teaching practice, as embedded in multiple overlapping relationships with teachers, students, other school leaders, parents, community leaders, system leaders, and various other stakeholders. School leaders' decisions and hence the practice of educational leadership at the school level is conditioned by these relationships. Indeed, we can think about school leaders and schools as embedded in a broader educational sector, consisting of a wide variety of actors, organizations, and educational systems, that shapes how leadership unfolds in schools. Educational systems attempt, some more than others, to coordinate and structure relations and interactions about instruction among school and system leaders, teachers, students, and other stakeholders by designing and deploying an educational infrastructure, and supporting its use in school and classroom practice. Educational infrastructure includes those instruments and tools that are the essential materials for teaching including curriculum and student assessments. It also includes those formal positions, procedures, routines, and tools that educational systems design and deploy to support teaching and maintain the quality of teaching. Educational infrastructure coordinates the core educational functions and also other core functions such as recruiting and hiring professional staff, professional learning, monitoring quality of teaching and learning, and leadership. It includes norms, values, and cultural cognitive scripts such as beliefs and expectations for student learning. Critical in any consideration of educational infrastructure is how it coordinates, or not, relationships and resources around a taken as shared vision for teaching and learning.[23]

[23]Cohen, Spillane, & Peurach, 2018; Spillane, Hopkins, & Sweet, 2015; Hopkins, Spillane, Jakopovic, & Heaton, 2013; Leithwood, Louis, Anderson, & Wahlstrom, 2004; Peurach & Neumerski, 2015

CHAPTER TWO

TEACHING: ENGAGING THE OBJECT AND SUBJECT OF EDUCATIONAL LEADERSHIP

Leadership is always about leading someone to do something and that something is not incidental but essential to understanding the work of leading. For educational leadership, that something is teaching. Teaching is not only the object of leadership but also the subject. Any effort to understand and develop educational leadership is not worth its salt unless it engages seriously with its object and subject – teaching practice.

Readers might be wondering 'what about student learning? Isn't student learning the bottom line for educational leadership?' Definitely! Student learning is the ultimate outcome! But in jumping from educational leadership to student learning in one swift leap is to sideline the very means of getting to that ultimate goal: teaching. Educational leaders improve student learning by cultivating the conditions that allow excellent teaching to grow and flourish. It would be a mistake to place the cart before the horse in a rush to center educational leadership in learning. Though improving student learning is the ultimate goal of educational leadership, to realize that ambition we must engage earnestly with teaching.

Learning is not a synonym for teaching. Learning calculus or painting is not the same as teaching calculus or painting. Often used concurrently in conversations about educational leadership, these distinct, if closely related practices, get squished together in ways that blur the lines between teaching and learning. Many great theorists, from Dewey to Bruner, seeking to radically reform teaching, write more about learning detailing and theorizing how students learn but mostly gloss over teaching or cast it as something of a reflex of learning.[24] The assumption appears to be that if teachers understood learning (and their subjects), teaching would follow.

Research on teaching over several decades, however, suggests that teaching and learning are distinct if intertwined practices; theorizing one of them is not the same as theorizing the other.

Distinguishing teaching from learning is not an intellectual parsing of terms; it is a very pragmatic and practical effort to foreground the production function of schooling, its core technology. If we want to understand and develop educational leadership so that it ultimately enables student learning, then we must engage seriously with teaching, as that is the chief means we have for getting there. As we stated in Chapter 1, we take the holistic view that learning across the full lifespan is fundamentally about cognitive, social, emotional, and physical well-being; and it is also about civic engagement.[25] Our discussion of educational leadership, therefore, begins very intentionally with an anchoring in the nature of teaching. If educational leaders hope to generate and sustain high-quality instruction in classrooms, it is vital to understand the nature of teaching. This chapter is all about the practice of teaching and the resources essential for supporting and improving the practice. To this end, we characterize and examine teaching as an embedded practice by exploring:

- Teaching as a co-performed, distributed practice, and
- The resources essential for teaching practice.

At the outset we conceptualize teaching as a distributed practice that is co-performed by teachers and students.[26] Critical to understanding this is to view teaching as an embedded practice in which teachers and students are both part of a larger set of relationships that shapes how teaching unfolds in the classroom. Classrooms are not islands, independent of one another; teaching is not an individual practice. Teachers talk, collaborate, and strategize with each other. Students socialize, play,

[24] See Cohen, 1988

[25] National Research Council, 2000.

[26] Freire, 2018; Cohen, 2011

and study together. A teacher talks about a student with her teacher from the previous year, influencing the teacher's understanding of the student and her social and academic background. Teaching as an embedded practice means that relationships among and between teachers and students fundamentally shape how they co-enact teaching practice.

Our discussion of teaching considers both the technical and cultural aspects of teaching practice. We also explore the resources essential for teaching, quality teaching in particular. Our framing of teaching as a distributed and embedded practice forms the very foundation for our examination of educational leadership beginning in Chapter 3. To put our argument bluntly, any effort at understanding and developing leadership that is useful and usable toward improving student learning must be firmly and integrally tied to a rich and expansive understanding of teaching practice. If you don't agree, you can stop reading now!

Co-Performing Teaching: A distributed practice

Eager to get to student learning, we often downplay, side-step, and short-change teaching in our deliberations about educational leadership. Our deliberations about teaching and its improvement often dwell mostly, even exclusively, on the will and skill of the classroom teacher. Teachers' motivation and knowledge are crucial resources for teaching. Teachers need deep knowledge of what they teach and equally deep knowledge about how to represent that material in ways that is appropriate given where their students are developmentally. And teachers need decent materials with which to engage their students in learning.

The 'will and skill' mantra conveys an image of teaching as something of a solo practice, roughly equivalent to what teachers do and say as they intentionally seek to engage students in learning something (see Figure 1). In this view, teaching is about the behaviors of teachers in classrooms, their moves and shakes, and utterances. This is a well-established view of teaching in most societies, supported by popular media such as movies that portray teachers as heroic iconoclasts, singlehandedly helping their students to triumph over adversity and develop a love of learning. There is also an established research tradition, process-product research, that focused on identifying the correlates between teacher behaviors and student learning.[27] We have learned a great deal from this research tradition including the importance of several things that we now take for granted such as using 'wait time' and 'praise' as teachers. Viewed this way, improving teaching involves recruiting smarter and more knowledgeable individuals to the profession, creating better teacher preparation and professional development opportunities, cultivating

[27]Brophy & Good, 1986; Dunkin & Biddle, 1974; Mitzel, 1960; Rosenshine & Stevens, 1986

opportunities for teachers to learn on the job, and ensuring that the materials that teachers have to teach with are top-notch and enable their learning in practice.[28] The will and skill catchphrase conveys a notion of teaching, and of the resources essential for teaching, that over-simplify the practice of teaching.

Several scholars argue for thinking about teaching as a distributed practice, by which we mean that teachers and students in interaction with one another about and with particular material, including intellectual material, co-perform teaching.[29] Though the teacher is critical, so are students by virtue of how they interact with the teacher and one another, the ideas they voice, and their ways of being in these interactions. At the same time, how the teacher engages students, both individually and collectively, and treats their ideas and ways of knowing is also constitutive of teaching practice. Anyone who has taught –whether six-year-olds or twenty-six-year-olds– appreciates this; just think about how teaching practice can change markedly from classroom to classroom or from one school year to the next though lesson plans and objectives were roughly the same.

In this framing, teaching is not equivalent to the behaviors of the teacher though what the teacher does is of course crucial. Rather, the practice of teaching is in the interactions among teachers and students as they work with one another to make sense of particular material (e.g., multiplying fractions, *papier mâché*) with particular materials (e.g., texts, manipulatives, etc.). While the teacher's actions or behaviors are a key input to teaching practice, so are students' actions. Teaching is constituted in the interactions among them as these interactions are enabled and constrained by the materials they are working on and with. Framed this way, teaching is a distributed practice stretched over teachers and students and the materials that allow their interactions.

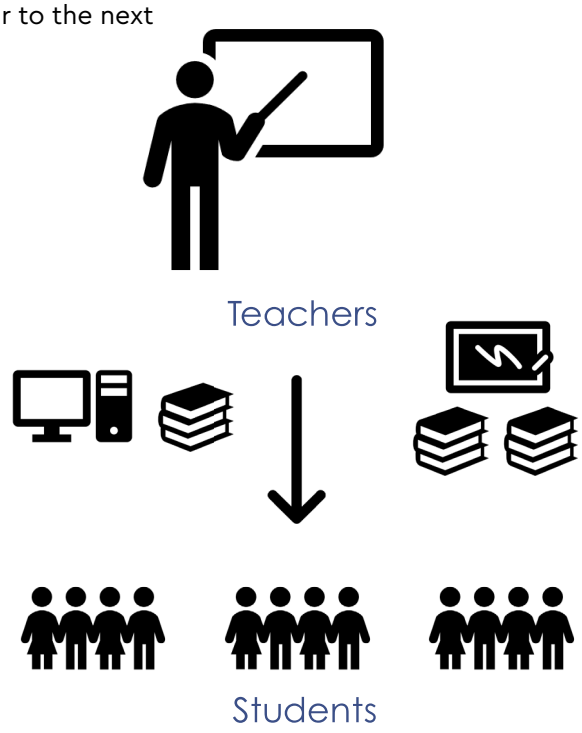

Figure 1- The "will and skill" image of teaching practice

[28]Ball & Cohen, 1996; Davis & Krajcik, 2005; Drake, Land, & Tyminski, 2014; Davis, Palincsar, Arias, Bismack, Marulis, & Iwashyna, 2014

[29]Cohen & Ball, 1999; Cohen, 2011; Delpit, 1995; Freire, 2018.

At the same time, teaching is a situated practice, situated not only in the moment by moment interactions among a teacher and a group of children but also in their particular histories and identities. This idea is distinct from the idea of teaching as an embedded practice, although the ideas are similar. As an embedded practice, teaching is shaped by a larger system of resources and relationships. As a situated practice, the act of teaching occurs at the intersection of the unfolding interactions among teachers and students, informed by their experiences and identities. Both teachers' and students' identities, formed and shaped through experiences beyond the classroom, influence who they are and how they engage with one another and the material of teaching. Teachers' identities influence how they hear, see, and take up students' ideas and ways of engaging. While many teachers enter the teaching profession with a strong moral purpose, and a sense of social obligation to others and society, their sense-making about classroom interactions can turn out very differently depending on their identities.[30] Though with considerable less experience in and of the world, students also enter classrooms not as blank slates or empty vessels, but with a wealth of ideas and ways of exploring the world from their everyday experiences beyond the school. These everyday experiences with numeracy, literacy, nature, and so on do not evaporate once students enter the classroom door and engage in co-performing teaching with their peers and teachers.[31]

Resourcing the distributed practice of teaching

Framing teaching as a distributed practice means that we must rethink the resources essential for teaching. While still acknowledging and foregrounding the importance of the teacher, we must think more expansively about resources for teaching and its improvement. The challenge is two-fold. First, it involves adopting a more wide-ranging sense of what resources are essential for teaching. Second, it necessitates reconsidering how we think about developing and using resources for teaching in actual practice; it has to do with resources in use. It is both what constitutes a resource for teaching and how these resources are actually used in teaching practice – the what and the how of resources for teaching. As David Cohen and his colleagues remind us[32], what is essential is not just what resources are potentially available but also whether and how teachers and students recognize, activate, and use resources in co-producing teaching.

Recognizing resources means that teachers identify potential resources they can use in their practice. This may seem an obvious point; but it is critical and should not be overlooked. The mere presence of resources does not guarantee that teachers will engage with them; their usefulness is by no means transparent. Teachers must see them as potential resources and make sense of them as such.[33] Resource rooms in schools throughout the world are stuffed with moldering texts, unopened science kits, books still in their shrink-wrap. Many less obvious resources go unnoticed and untapped.

[30]Goodlad, 1984

[31]Though detailed discussion is not practical here, the distributed and situated conception of teaching practice we sketch above is informed by work in traditions such as socio-cultural activity theory and distributed cognition (see Hutchins, 1995a, 1995b; Lave, 1988; Pea, 1993; Resnick, 1991; Vygotsky, 1978). In these traditions, knowledge is viewed as distributed in the social, material, and cultural artifacts of the environment and knowing is the ability of individuals to participate in the practices of communities. Teaching involves creating opportunities, grounded in problems that are meaningful to learners, that encourage and enable participation in inquiry and learning by supporting the learners' identity as skilled inquirer, and enabling them to develop disciplinary practices.

[32]Cohen, Raudenbush, & Ball, 2003

[33]Coburn, 2001

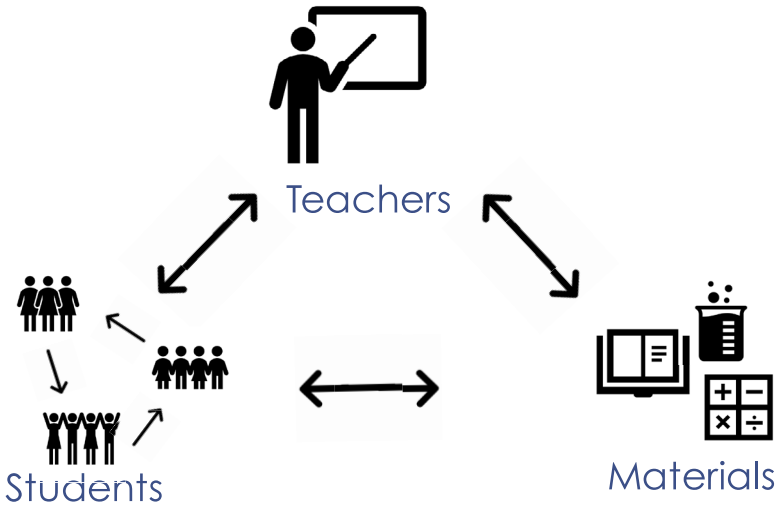

Figure 2 - The co-production of teaching between teacher, students, and material

For example, students come to schools with cultural resources and background knowledge that teachers could harness in instruction, but often do not.[34]

Once teachers recognize resources, they must also activate them—engage with them in a process of making sense and integrating them into their teaching practice.[35] A teacher may understand the importance of a student's cultural background for supporting her learning, but fail, for whatever reason, to incorporate that knowledge in her teaching practice. Once activated, teachers must then use those resources, in conjunction with students, in co-producing teaching. For example, in Figure 2, we show the reciprocal interaction between teachers, students, and material resources. Material resources are often thought of as self-contained and "pregiven", so that the use of the material is contained in itself and the teacher merely "follows the directions." Rather, teachers and students interact and collectively make sense of these materials. This idea extends to other resources which we discuss more below.

Knowledge in teaching

As noted earlier, efforts to improve teaching often dwell on teachers' will and skill. Both teacher and student motivation to participate are important to teaching; there is considerable evidence that teachers' motivation to teach particular material to students is based on their expectations for those students, often tied to students' race, class, and ethnicity.[36] While acknowledging the importance of teacher and indeed student motivation to teaching practice, we see motivation and knowledge as integrally intertwined in practices and inseparable from the relationships that shape the context of teaching. Teachers' willingness to improve depends in great part on their knowledge; it is difficult for primary school teachers who only understand mathematics as concerned with procedural knowledge to be motivated to transform teaching so that students learn about the principles of mathematical knowledge. Desiring something one has no knowledge about in the first place is difficult. Motivating teachers to engage students –whom they see mostly as

[34]Delpit, 1995; Ladson-Billings, 1995

[35]Coburn, 2004; Spillane et al., 2002

[36]Rosenthal & Jacobson, 1968; Rist, 1970

lacking basic procedural knowledge of mathematics– in studying principled mathematical knowledge is as much an issue of teacher knowledge as it is their will. The motivation and knowledge essential for teaching are interdependent. Hence, we do not treat motivation as somehow distinct from knowledge and other key resources essential for teaching; rather we see them as intertwined and developing interactively.

Conceptualizing teaching as a distributed practice, co-enacted by teachers and students, does not undermine the role of the teacher and the critical importance of teacher knowledge. If anything, it expands the knowledge base of teaching. Importantly, scholars have made tremendous strides in identifying and describing knowledge for teaching. Over the past several decades, Lee Shulman and other scholars have worked at identifying the knowledge base for teaching.[37] This has been a major contribution of educational research to the practice of teaching over the past quarter century or more. Unfortunately, it often goes unrecognized not only by policymakers and school reformers but also by scholars of educational leadership and school improvement more broadly.

To begin with, knowledge of the context of teaching from the classroom to the grade level to the school and beyond to the local educational agency or authority, neighborhood and community, and province/state and nation, is essential for teaching. Teachers also need to know the educational ends, purposes, and values, and how these are anchored philosophically and historically. Teachers must know about teaching as a practice in general; pedagogical knowledge about how to manage a classroom, arrange students, organize classroom time, sort out conflicts among students, and so on, is not specific to teaching any particular school subject. They need to have knowledge of the curriculum they teach; that is, know the tools they will work with in the classroom with students. By curriculum, we mean the content that teachers are expected to teach and the material with which they teach it.

A key departure in Shulman's work on identifying a knowledge base for teaching was to call attention to the content being taught and exploring its entailments for the knowledge base. Teachers also need to know the material or subject matter they teach, something that scholars refer to as content or subject matter knowledge. Teachers need to fully internalize the subject matter they engage students with, so that they can present it to students at various stages of development in ways that are accessible to them. The distinction

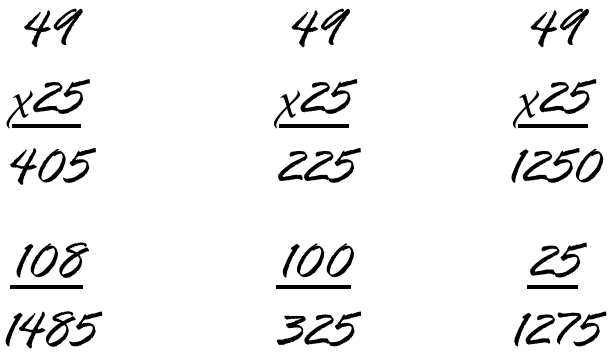

Figure 3 - Identify the strategy used to reach the incorrect answer

[37]Shulman, 1987

between mastery of a subject (content knowledge) and mastery in teaching it (pedagogical content knowledge) is important. To know something well does not mean one knows how to teach that something to others who know it less well. A grand master of painting may lack even rudimentary knowledge about teaching beginners how to paint. We all know this intuitively, whether based on our primary, secondary, or tertiary classroom experiences: brilliant minds don't always make the best teachers of the material they know better than most.

Work in several content areas, particularly mathematics, has helped to unpack pedagogical content knowledge over the past decade. Deborah Ball, Heather Hill, and colleagues, for example, have expanded our understanding of pedagogical content knowledge helping us appreciate how a deep knowledge of mathematics as a discipline or subject is not equivalent to understanding that subject matter for teaching.[38] Good teachers know mathematics in ways that differ from mathematicians because they know mathematics for teaching. They understand mathematics in ways that help them appreciate how students engage with, make sense of, and work at solving math tasks. A teacher may understand the procedure for two-digit multiplication (e.g., 49 x 25), and also have a deep understanding of the math principles undergirding the procedure, yet may lack the requisite knowledge to teach the topic. If you are not convinced, consider Figure 3.[39] Can you identify the strategies that the three students used in multiplying 49 by 25 that resulted in incorrect answers?

[38]Ball, Thames, & Phelps, 2008; Hill & Ball, 2004

[39]We thank Heather Hill for letting us use this example.

The easy part is that all three children got an incorrect answer. What is critical in helping these students master two-digit multiplication is seeing how they arrived at these three very different outcomes. Most individuals, including those with a deep knowledge of mathematics, find it difficult to identify what thinking was behind student computation. Remember also that teachers have to do this in the moment as they interact often with many other students, several of whom came to different answers. This knowledge matters in use, in practice.

Knowledge of Mathematics in Teaching (MKT) refers to an ability to notice and understand students' thinking processes about two-digit multiplication including processes that can lead to errors in computation.[40] Absent a strong knowledge of mathematics for teaching, or any other content area teaching for that matter, a teacher may only see incorrect answers. In order to engage students with learning, however, recognizing the thinking that produced a particular response is essential and a key recourse in classroom teaching. Much of the teaching knowledge of mathematics or science or reading is likely developed on the job, in teaching, underscoring the importance of paying attention to knowledge in use.

But teaching is never purely technical; it is also fundamentally cultural. While Shulman's typology attends to knowledge of learners and knowledge of educational contexts (thus allowing for culture), the literature lacks attention given to the cultural resources essential for teaching. The ideas and ways of knowing that students rely on for learning and in co-performing teaching with their teachers often go unrecognized by teachers and many of their peers. Some teachers only see in their students a lack of knowledge, or what scholars refer to as 'deficit thinking' on the part of teachers and educators more broadly.[41] We are all impacted by deficit thinking of some sort or another in our everyday interactions when we fail to recognize or appreciate the cultural resources that others use in our interactions with them because we lack familiarity and understanding of their cultural practices. When teachers fail to notice and recognize the cultural resources that students have developed from their everyday experiences at homes and in their neighborhoods, resources that could support teaching practice go untapped and unexplored in the classroom. Teachers may be oblivious to their students' own efforts to use such resources in teacher-student co-teaching, and thus lose critical tools to ensure that students learn and succeed.

Despite their youth, children of four or five years have an array of experiences with learning and teaching from their interactions with family and neighbors. They come to school and the classroom not as blank slates, but with emerging ideas about the world and about ways of engaging with it. These ideas and ways of engaging in the world are cultural resources that begin to form what Anne Swidler refers to as a 'cultural toolkit'.[42] Our cultural toolkits emerge early in life based on our everyday experiences with the social and natural world, and are our primary means for our informal and formal interactions with others, including in school. Cultural resources can differ in important ways depending on our circumstances that may vary by socio-economic class, ethnicity, national origin, religion, and others. The prescribed school curriculum seeking to standardize a program of study privileges the cultural knowledge of some dominant groups over others. As a result, the cultural resources of some children are only weakly aligned with the dominant cultural context –the knowledge and ways of knowing– that are valued in a given school curriculum or system where they enroll.

Research on children's cultural practices and learning in informal settings around the world has

[40]Hill, Schilling, & Ball, 2004 Hill, Blunk, Charalambous, Lewis, Phelps, Sleep, & Ball, 2008

[41]Valencia, 2012; Garcia & Guerra, 2004; Ainscow, 2005; Clycq, Ward Nouwen, & Vandenbroucke, 2014

[42]Swidler, 1986

generated rich insight into their emerging knowledge of numeracy, literacy, and the natural world. By participating in cultural practices –e.g.: dominoes, dice, basketball, story-telling, rapping, bartering, and dancing– children gather cultural resources that enable them to develop an identity and a sense of belonging.[43] But these cultural resources often go ignored, and are sometimes even shunned, in schools and classrooms, contributing to feelings of alienation and not being valued as students.[44] Teachers may even view cultural background as an impediment to learning[45]. Even when students from marginalized groups do well, they often do so at tremendous cost to their own social and psychological well-being as they attempt to navigate different worlds and use unfamiliar cultural toolkits.

Most important for our purposes is the role that student cultural resources can play in teaching. Several scholars have worked to theorize classroom teaching in an effort to bridge how children learn outside of school with their in-school learning. Gloria Ladson-Billings refers to this bridging as "culturally relevant pedagogy".[46] These scholars argue that students' classroom experiences must allow them to succeed academically while also valuing their cultural knowledge and ways of knowing. Indeed, if teachers could recognize and use students' cultural knowledge, it could enable their academic success with the prescribed curriculum. At the same time, a culturally relevant pedagogy involves teaching about social, cultural, and economic inequities. Using and valuing children's cultural resources in teaching, empowers students emotionally, intellectually, socially, and politically, and supports a sense of pride in identity. We believe that when teachers fail to notice students' diverse cultural resources, those resources often remain dormant and untapped in teaching. We need to further explore the role of student knowledge in co-performing teaching.

Meet Maria , a second-year teacher in a large city some 150 miles from the small rural town where she grew up and went to school. Maria wanted to be a teacher since her second year in school, when she played school with her younger sisters and friends. Though Maria's parents had only a few years of formal schooling, they encouraged Maria to pursue her dream of becoming a teacher. They saw it as a respected career and as an opportunity for Maria to earn a decent living and avoid the challenges they faced daily in making ends meet to support their family. Despite economic hardship, Maria's parents managed to save enough money that, together with scholarships, allowed their daughter to go to college and become a teacher. Maria excelled in college and her excitement around becoming a teacher only grew as she learned about the subjects she would teach and, even more interesting to her, developed a rich understanding of pedagogy. She thrived as a student teacher in various settings including a three-week stint in the elementary school she attended as a child. With a sense of social obligation and a desire to help others, Maria opted to teach in an urban school in a working-class neighborhood with students from various ethnic backgrounds, including a small community of immigrants from a neighboring country. While the students Maria teaches come from families not unlike her own socio-economic background and share the same national identity, Maria's ethnicity is different. Despite her strong commitment to teaching, after two years on the job, Maria is struggling to engage the seven-year-olds in mathematics. They have trouble using the mathematical procedures they encounter in the textbook and as prescribed by the school system's curriculum. She fears they were not taught essential skills in prior grades, came to school lacking basic numeracy skills, and have fallen behind. Yet she is puzzled to observer that a student, Alberto, who helps his mother sell fruit in the market, is not only adept at making change, but also in keeping a tally of what is sold. In school, however, Alberto has trouble with even the most rudimentary math tasks, and rarely contributes despite Maria's encouragement.

[43]Nasir, 2002; Saxe, 1988; Taylor, 2009; Lee, 1995

[44]Nasir & Saxe, 2003; Farkas, Grobe, Sheehan, & Shuan, 1990

[45]Anagnostopoulos & Rutledge, 2007

[46]Ladson-Billings 1995; Lee, 1995; Tate, 1995

Materials in teaching

Interactions between teachers and students as they co-perform teaching mathematics or writing are enabled and constrained by the materials they work with —including texts, tests, manipulatives, and others. While we discussed content knowledge earlier, curricular materials of various sorts are also critical because they frame and focus interactions among teachers and students, and thereby contribute to defining teaching practice. Curricular materials, texts, and formative and summative assessments are all key resources for teaching. The material resources that teachers and students use are the building blocks of teaching; they fundamentally define how teachers and students construct understanding of the subject matter they are attempting to make sense of together. While the availability of material resources is clearly important, we focus here on two dimensions related to the design of materials that we believe are especially important.

First, classroom materials that address the same topics in a curricular domain can be arranged in various ways. These differences can influence how students and teachers work with and use these materials in teaching as well as the technical and cultural knowledge of the domain they use with the materials. Some curricular materials are designed in ways that create opportunities for surfacing or bringing out student thinking and ideas in classrooms of co-performing students and teachers. Others tend to do little or nothing to surface such thinking publicly.[47] A curriculum that engages students in exploring a mathematical topic such as adding fractions using manipulatives and other representations, provides greater opportunities for students to surface their cultural knowledge about fractions than a curriculum that focuses mostly on learning an established procedure. As a result, teachers often come to appreciate that their students do indeed have rich understandings of mathematics. Several studies document how the same mathematics or language arts curriculum can turn out very differently according to who is teaching. Differences are found even in adjacent classrooms where successful teaching practice emerges partly from the superior quality of a teacher's knowledge of subject matter in concert with pedagogical knowledge and skill. The same holds for student assessment materials.[48]

Second, and related, some materials do little to reflect the cultural knowledge and experiences of their users, especially marginalized students. Reflecting the experiences of a dominant group in words and images, such materials do little to engage students from different cultural backgrounds that are unrecognized in the materials.

Resources and relationships in teaching as an embedded practice

We can categorize the discussed fundamental teaching resources into four types that are needed to build and sustain high-quality teaching. We framed this discussion of resources by characterizing teaching an embedded practice, meaning that the practice of teaching is part of, and shaped by, a broader system of relationships and resources. Most obviously, teaching is embedded in the relationships among students and their teachers in the classroom. At the same time, teaching is also embedded in a set of relationships that extend beyond the classroom and, as our discussion of cultural resources in particular captured, these relationships can influence how students and teachers interact in teaching (See Figure 4). How teachers and students use resources through interaction with one another is conditioned by these relationships. For example, students may use their relationships with others

[47] Ball & Cohen, 1996; Davis & Krajcik, 2005; Davis, et al., 2014; Schneider & Krajcik, 2002; Beyer, Delgado, Davis, & Krajcik, 2009

[48] Wiggins, 1998

–other students, family members– to cooperate or resist participating in classroom teaching. [49]

To appreciate instructional practice as embedded, take the perspective of Maria. In her everyday practice, she interacts with her students, sometimes with their parents also; to varying degrees these relationships inform how she participates in classroom teaching. She also draws on her own relationships with family members and teachers who taught her as a child. She talks with colleagues —socially, but she also reaches out to them informally for advice about teaching. On the weekend, she discusses her students with friends, some from her teacher preparation program. She talks formally and informally with her principal and other school and school system leaders and these conversations regularly focus on what and how students learn, including appropriate expectations for students in her classroom. She familiarizes herself with learning standards provided by the school system and attends professional development sessions offered by a local university. She collects instructional materials and ideas from several online communities. Each of these relationships influences how she interacts with students in her classroom and how she works to co-produce teaching with them. Further, while some relationships are for the individual teachers to choose, others are required as part of the job. Some are formal, others are informal, and still others are a hybrid. These relationships can enable her interactions with her students in ways that improve the quality of teaching in her classroom but they can also constrain her interactions with students. For example, her informal or formal interactions with teachers in her school might serve to reinforce her emerging sense that her students simply lack basic mathematical knowledge, and dissuade her from delving deeper into her observation that students like Alberto appears to show a much more sophisticated understanding of mathematics in the marketplace.

As suggested by Maria's situation, teachers' and students' embedded relationships condition how they access and activate resources in teaching. Teaching and teachers as

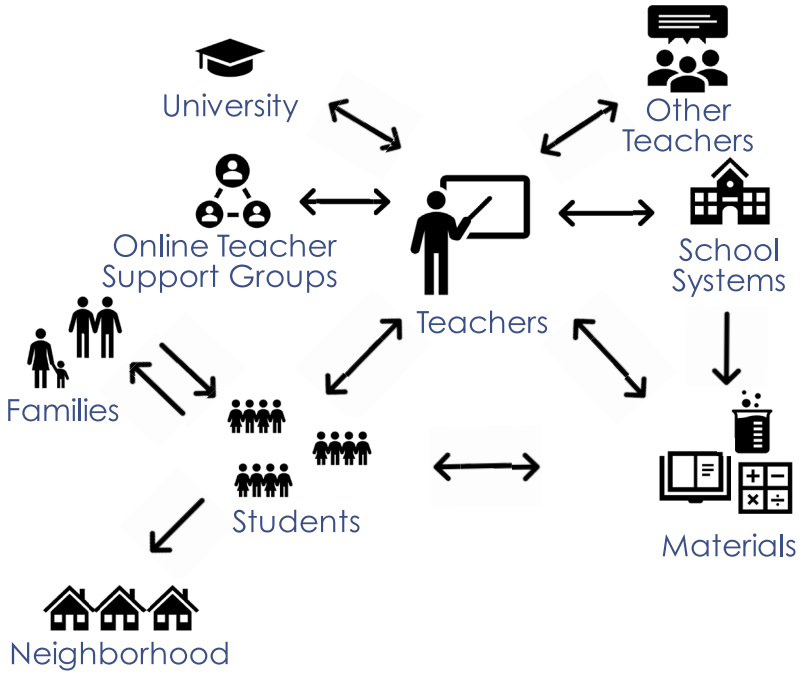

Figure 4- Teaching is an embedded practice

[49]Willis, 2017

social actors (and the students who co-produce teaching with them) are embedded in numerous relations that condition their interactions with one another in co-performing teaching. Embedded in a set of relationships with others –students, parents, colleagues in the schoolhouse, school and system leaders, and others– both teachers and students draw on the toolkit of resources these relationships provide for their interactions in co-performance teaching. The choices that teachers (and students) make –what and how they practice in the classroom– emerge from these overlapping and shifting relationships.

These intersecting relationships that embed teachers and students influence teaching practice –in positive as well as negative ways– by providing access to and supporting the use of resources for instructional practice. Supporting and improving the quality of teaching then is fundamentally about resources and relationships. In an effort to simplify our discussion of resources for teaching, we classify and define them into four broad categories: human, social, material, and cultural. We fully appreciate that the distinctions we draw for analytical purposes are somewhat artificial in practice as these categories can overlap; a human resource such as knowledge might also be classified as a cultural resource.

Human resources refer to the knowledge and skill of individual teachers in particular but also to others who co-produce teaching such as specialist teachers (e.g., bilingual and special educational teachers), para-professionals, and even students. Much of the empirical work in this area has focused on the knowledge and skill of teachers though there is some important work on students' human resources and whether and how they get used in the classroom.[50]

Social resources reside in the relations among people – among teachers, teachers and students, among students, teachers and parents, teachers and school leaders, and so on– including norms such as trust and collective responsibility, information accessed through these social ties. Under social resources we include not only those of teachers and other professionals but also students, parents, and other stakeholders in the school –the basic formal unit for organizing learning in most societies.

Material resources including curricular materials, but also time, procedures, and routines are also critical as they serve as the medium or vehicle for human interaction. Teachers and students make sense together and negotiate meaning of the world with materials both abstract and concrete –such as curricular materials, student work on academics proposed in curricular materials, or student assessments. The same holds for teachers' sense-making about teaching with their peers. Materials do not simply imbue meaning that teachers and students somehow decode and extract. Teachers and students interact with these materials to negotiate meanings about teaching, and learn what it means to know them.

Cultural resources refer to 'generalizable' scripts and knowledge that are consciously or unconsciously used in everyday social interactions, in classrooms and schools but also in families and neighborhoods. These cultural schema are generalizable in that they can be used across various social situations such as classrooms and schools but also in everyday activities from playing games to shopping. We have schema, for example, about the nature of intelligence (innate versus effort based), learning, teaching, and content such as mathematics, writing, and reading. Cultural resources vary across countries[51] but can also vary within countries depending on the institutional sector and by different subgroups based on class, ethnicity, and national origin.[52] Moreover, as noted earlier, the cultural resources of some subgroups are valued more than others in schools.

[50]Nasir, 2002; Nasir & Hand, 2008; Taylor, 2009

[51]Stevenson & Stigler, 1994; Stigler & Hiebert, 2009

[52]Lareau & Horvat, 1999; Diamond, 1999

Students and teachers will engage cultural resources that reflect their background. Teachers must recognize and tap into the cultural resources that students bring to the classroom, particularly when they do not match their own. Teachers are typically middle-class professionals; research suggests that teachers will implicitly (and at times even explicitly) reward "middle-class" behaviors.[53] This can alienate students who don't share that background and lead to unequal opportunities for learning in the classroom. Viewing students' cultural resources as an asset, as we have argued, requires reframing instructional as a co-produced practice.

As teachers and students notice and use these different types of resources in co-performing teaching, they shape one another through interaction. For example, how a teacher's human resources, such as pedagogical content knowledge, is used in teaching mathematics depends in some measure on her ability to recognize and use the cultural resources of her students. Because teaching is a distributed and situated practice, we have to be mindful of how different types of knowledge for teaching interact in teaching. The knowledge base for teaching is always in some important ways particular and situated; it is about the resources for co-performing teaching with a particular group of children.

The critical challenge for supporting, maintaining the quality of, and improving teaching, centers on not only managing human, social, material and cultural resources but managing relations among these resources as they are embedded in the multiple and overlapping relationships among teachers and students. This is a significant challenge, but it is the main task for educational leadership that seeks to improve student learning through teaching.

[53]Rist, 1970

CHAPTER THREE

LEADING: EDUCATIONAL LEADERSHIP IN THE SCHOOLHOUSE

Most empirical, theoretical, and practical work on educational leadership centers on the schoolhouse. Indeed, leadership in the schoolhouse is most proximal to classroom teaching. Recently, several scholars have wisely drawn attention to educational leadership as a system-level process.[54] We will turn to the system level in Chapter 4 as an integral component of our multi-level and distributed take on educational leadership. While anchoring our analysis of leadership in teaching in the previous chapters, we argued that teaching practice involves an array of relationships that extend beyond the classroom and that shape how it unfolds. Seeing teaching as a distributed and embedded practice, drawing on multiple relationships and resources, we frame our discussion of leadership in the schoolhouse as cultivating and channeling relationships for accessing and activating human, social, material, and cultural resources essential for teaching.

Taking a distributed perspective, we focus on the practice of educational leadership rather than the actions, behaviors, or personality traits of the head teacher or principal or any other leader. While acknowledging the importance of individual action to that practice, we see leadership practice unfolding in the interactions among school staff. Some have formal leadership designations, others do not, as these interactions are enabled or constrained by key aspects of their situation. Understanding these interactions is central to the practice of educational leadership. And aspects of the situation, such as organizational routines and materials of various sorts, fundamentally shape these interactions by framing and focusing how people interact.

Consistent with a focus on practice, a distributed perspective also allows for individuals other than the head teacher, or indeed other formally designated leaders, to be engaged in and responsible for leadership in schools.[55] Leadership is not confined to the principal's office or school faculty meetings, but occurs throughout the school as administrators, teachers, coaches, and many others engage in leadership practices. These might include, for example, a mentor teacher's modeling a writing lesson in a novice teacher's classroom, or a high school science department where teachers are designing lessons to help their students build connections across biology, chemistry, and physics. Though schools are relatively flat organizations, even in the schoolhouse leadership unfolds within and across levels of the organization – it is a multi-level phenomena.

In this chapter, we explore leadership practice in the schoolhouse anchoring our discussion in resourcing teaching as an embedded and distributed practice. We frame leadership in the schoolhouse as being about cultivating and channeling relationships that access and activate resources for teaching practice and in school work practice more broadly. Our approach pushes beyond the what, to engage with the how, of educational leadership. We organize our discussion around the following intentions:

- A diagnostic mindset
- Cultivating and channeling relationships for resourcing teaching
- A coordination challenge

Embracing a diagnostic mindset

Careful diagnostic work is necessary before jumping in to transform relationships among school staff who are expected to access and activate resources for teaching. Diagnostic work involves figuring out the current state of affairs and trying to understand why things work the way they do. Problems never come whole, prepackaged, and waiting to be discovered behind classroom

[54]Chapman, 2010; Dimmock, 2016; Lee, Hallinger, & Walker, 2012

[55]Gronn, 2002; Spillane, 2006; Spillane, Halverson, & Diamond, 2001

walls. Diagnosis is a process of piecing together problems and identifying dilemmas; it involves careful observation of everyday life in schools, gathering information, noticing patterns, generating working hypotheses or hunches about what is going on. For school leaders, it means inviting dialog about problems, negotiating ways to address them, and leading the way through consensus as much as possible.

At the most basic level, when it comes to building relationships and resources for teaching, diagnosis involves taking inventory of a school's human, social, material, and cultural resources and understanding how these resources are dispersed among school staff. An elementary school, for example, may lack teachers with the content knowledge or the pedagogical knowledge to teach mathematics as suggested by a new mandated curriculum that requires students to understand the concepts behind the mathematical procedures they are used to learning by rote. Or, as is more likely, a handful of teachers may have both the content and pedagogical knowledge for teaching the new curriculum, but are all concentrated in the higher primary grades. As a result, other teachers, especially early grade teachers, have few opportunities to develop their content and pedagogical knowledge to teach the new mathematics curriculum in ways that engage their students with its core concepts. Understanding whether and how resources are activated and used in practice can be complex, and means observing resources in use to understand what is going on. Maria still struggles despite the evidence of her content knowledge, mastery of pedagogical knowledge, and her deep commitment to her students' learning. A key part of her struggle is that she lacks particular cultural knowledge critical for noticing the knowledge and skills of her students that could be activated in the classroom and used to help student learning. Researchers and school reformers in diverse parts of the world have documented how schools can improve the quality of classroom teaching when they notice and use resources from students' homes and neighborhoods –what Luis Moll calls "funds of knowledge".[56] Using these resources creates connections between school and home, making the experience of school more meaningful and relevant to students. An example from outside of educational is the asset-based community development framework[57], which emphasizes the need to create an inventory of the "gifts, skills, and capacities" of community residents in community improvement efforts. This makes such efforts a two-way street, creating self-determinacy and ownership. The impact is similar in classrooms. Teaching and learning become more meaningful, creating more engagement and motivation. Hence, cultivating relationships that bridge the school with families and neighborhoods can help teachers access and activate resources they can use to support teaching.

A related part of diagnostic work involves understanding the structure of the social relationships among staff around teaching, whether they are personal, professional, or a mix of both. The quality and quantity of resources can depend on which colleagues a teacher interacts with about their teaching. The pooling of ideas and resources among teacher communities circulates new understandings of content, ways of teaching, and generally provides critical support for improved teaching. Knowing how relationships are formed at the school or sub-unit (e.g., grade level or department) is important in understanding whether these relations are optimal for sharing and for developing resources essential for teaching. Maria's challenges, for example, are at least partly a result of not having relationships with teachers with the cultural knowledge that could help her improve her teaching. Relationships in schools can

[56]Espinoza & Vossoughi, 2014; Gutiérrez & Vossoughi, 2010; Gutiérrez, Morales, & Martinez, 2009; González, Moll, & Amanti, 2006; Moll, Amanti, Neff, & Gonzalez, 1992

[57]Kretzmann & McKnight, 1993

vary significantly among and within schools, from one grade level team to another, or even according to the subject matter. These differences shape the human, social, material, and cultural resources that individuals and groups can access, and how they are used.

Another key diagnostic task involves learning what resources reside where in social networks. School staff may develop specialized knowledge in certain content areas and become experts. Knowing who has expertise and specialized knowledge can allow school leaders to intentionally structure relationships so that others can tap into knowledge.[58] Diagnostic work must also attend to the strength of the relationships, including frequency and levels of trust. Trusting relationships are especially important for developing knowledge and skills – key human resources for teaching. Such diagnostic work is difficult but important in forming relationships that optimize building, access to, and activation of resources in practice.

Equipped with an understanding of a particular learning environment or school through defining some problems and dilemmas with respect to resources and teaching relationships, educational leaders can begin to think about whether and how they could work to cultivate and channel relationships.

Cultivating and channeling relationships for accessing and activating resources

We argued in Chapter 2 that teaching is embedded practice, shaped by a network of relationships and resources. The critical work of educational leadership involves strategically cultivating and channeling relationships that support accessing and activating those human, social, material, and cultural resources essential for quality teaching. Research offers several key insights into how educational leadership in the schoolhouse can cultivate and channel relationships among school staff –as well as among staff and students, and their parents– that are essential for building, accessing, and activating resources critical for instruction. By cultivating relationships we mean strategically initiating and developing them overtime. By channeling relationships we mean focusing and directing them substantively.

Educational leadership is a social endeavor, shaped by relationships. What students experience and learn in their algebra class has consequences for their participation in their physics class. Similarly, students' ability to engage the third-grade reading curriculum depends in important measure on the reading skills they gained in second grade. Coordination across classrooms is essential if students are to learn and grow as they progress through school. As teachers co-perform teaching with their students, they frequently encounter unexpected situations they are unsure how to manage; interacting with peers can help them define the problem or dilemma, and develop the knowledge and skills necessary for managing them.

The relationships that support accessing and activating resources essential for teaching practice don't just happen naturally.[59] Yes, teachers interact with one another, but these

[58]Daly, Moolenaar, Bolivar, & Burke, 2010; Brooks, Normore, Liou, Daly, Brown, & del Fresno, 2015; Chapman & Hadfield, 2010; Penuel, Riel, Krause, & Frank, 2009; Frank, Zhao, & Borman, 2004; Penuel, Sun, Frank, & Gallagher, 2012; Coburn, Mata, & Choi, 2013

[59]Bourdieu, 1986

interactions often are only tangentially about teaching.[60] These relationships work, moreover, to solidify the teaching status-quo as teachers and leaders reinforce each other's beliefs and points of view about teaching. If left to our own devices we tend to interact with others who are like us in terms of race, gender, cultural background, and age –what sociologists refer to as homophily; as they say, 'birds of a feather flock together'.[61] As discussed in the last chapter, such relationships can dampen a teacher's ability to see and activate the cultural resources of students who are different from them culturally. Maria, for example, tends to seek out and interact with other teachers in her school who come from similar cultural backgrounds as her own. If she interacted with teachers in her school who shared the same cultural backgrounds of her students, Maria might begin to recognize the cultural resources of her students. Further, evidence suggests that school staff tend to interact with other staff who share similar beliefs about teaching, though this may depend in some measure on the subject.[62] If true, this pattern poses a problem for educational leadership as it only serves to reinforce teachers' knowledge and beliefs rather than challenging them.

The good news is that school leaders can and do influence relationships among school staff around teaching. The school's formal organizational arrangements, such as leadership positions and grade level assignments, play a more influential role than homophily based on individual characteristics.[63] Teachers of the same primary schools grades, for example, are much more likely to interact with one another about their teaching.[64] Similarly individuals, including regular classroom teachers, who have a formal leadership position, or teachers who report having more professional development on teaching a particular subject are more likely to be sought out by their colleagues for advice.[65] Moreover, school staff tend to interact more with one another about their teaching when they are located nearby one another and/or when their walking patterns overlap.[66] Educational leadership can shape relationships among school staff about teaching in ways that contribute to accessing and activating resources for teaching.

But relationships among staff must be focused substantively, scaffolded, and developed over time if they are to contribute to accessing and activating resources for teaching. School leaders can strategically cultivate new relationships among staff by formally assigning new staff members a mentor or coach. A principal or lead teacher can cultivate relations informally by connecting a teacher who is struggling with teaching a particular subject or unit with a successful colleague in that subject or unit. In this way, school leaders strategically broker relations among their colleagues. Formal and informal brokering of relations among staff, however, must be strategic to contribute to building, accessing, and activating resources. Simply creating a new formal position does not mean that relationships will automatically form around the person in that position as intended.[67]

Cultivating relationships has to be based on careful diagnostic work that identifies staff who have the knowledge and expertise to help others learn and grow as teachers. Moreover, being an outstanding teacher does not necessarily make one a good mentor and guide for novice or less accomplished teachers.

Some school leaders may be better positioned in their school's relationship

[60]Coburn & Russell, 2008

[61]Feld, 1982; Ibarra, 1992; Lazarsfeld and Merton 1954; McPherson, Smith-Lovin, and Cook 2001; Mollica, Gray, and Trevino 2003; Monge and Contractor 2003

[62]Coburn et al., 2013; Spillane, Hopkins, & Sweet, 2015

[63]Spillane et al., 2015; Moolenar, Daly, & Sleegers, 2011.

[64]Spillane et al., 2015; Spillane, Kim, & Frank, 2012

[65]Spillane, Shirrell, & Sweet, 2017

[66]Spillane et al., 2017

[67]Daly et al., 2014

network to cultivate particular sorts of relationships. Teacher leaders who teach full or part-time, for example, seem to play more prominent roles in brokering relations among school staff about teaching than full-time administrators such as principals and deputy principals.[68]

At the same time, school leaders help cultivate relations among staff by creating formal structures that bring staff together regularly to plan, discuss, and problem solve about their teaching. Designing and implementing organizational routines such as grade level meetings, department meetings, instructional rounds, professional learning communities, and learning walks can, under the right conditions, build human and cultural resources among staff and create opportunities for resources to flow among sub-groups. Working together to evaluate students' formative assessment work in mathematics or writing, for example, teachers often learn about student thinking about a subject from one another that they otherwise might have not seen. Similarly, teachers can bring a variety of complementary knowledge and skills to these exchanges that can generate new resources. Bringing together content area experts with teachers with strong pedagogical knowledge can create new instructional strategies they can then try in their classrooms.

Building these sorts of relationships centered on teaching also involves developing capability through careful hiring of new staff and strategically investing in professional development opportunities for existing staff. Relying on existing staff resources is rarely sufficient; leaders should closely consider what cultural resources and skills a candidate might bring to the staff that would specifically address current needs. Similarly, professional development designed for targeted staff should be valued as an investment in the staff as a whole, as everyone benefits through constant interaction. Indeed, strategically building relationships that extend beyond the school (which scholars refer to as 'bridging ties') are important in that they ensure school staff are exposed to new ideas and help avoid group think among school staff. New ideas from the outside can challenge *status-quo* thinking about teaching and its improvement inside.

Cultivating supportive staff relationships around teaching, however, involves more than designing routines that bring teachers together regularly. Several other conditions have to be met if these relationships are to genuinely contribute to accessing and activating resources for teaching. To work together productively teachers and staff need to develop trust.[69] Without trust, teachers are less likely to engage openly and honestly with one another about their teaching. In this way, teacher knowledge and social resources (such as trust) interact in practice to influence whether and how relationships contribute in meaningful ways to improving teaching practice.

Building generative, productive relationships among staff about teaching requires a clear, well-developed, coherent, and shared understanding of the means and ends of schooling. Efforts to cultivate and channel relationships among staff that build resources for teaching depend on a reasonably clear and well-developed shared vision for what and how students should learn. When teachers interact and collaborate on curricula and teaching, they create the raw substance of teaching. But if the curriculum and teaching strategies supporting it are ambiguous and ill-defined, or if school staff hold radically divergent views, then cultivating and channeling relationships that support teaching is difficult; teachers and school leaders are pursuing different educational goals.

Using different materials, texts, and summative assessments makes cultivating deep, productive relationships among teachers about teaching very difficult. Teachers negotiate understandings about

[68]Spillane, Healey, & Kim, 2010

[69]Bryk & Schneider, 2002

using shared materials that provide a language for talking about teaching.[70] Classroom materials are important not only for teaching practice, but also for teachers' joint work outside the classroom as they work together to develop resources.

Of course, educational leaders also need to be aware of relationships among staff that are counter-productive, distracting, and downright toxic. Relationships among teachers that reinforce judgments about student capabilities based on ethnicity, socio-economic status, nationality, gender identity, etc. undermine teaching quality and must be decisively addressed.

Resources and relationships in school and classroom practice: A coordination challenge

Managing the many moving parts involved in cultivating and channeling multiple relationships toward accessing and activating numerous resources for teaching is a difficult and essential challenge for school leadership. These moving parts span across classrooms, grade levels, departments, and the school. They include formal and informal interactions. Effectively coordinating the whole is challenging but essential to supporting and improving the quality and equality of teaching.

One can take comfort in that our distributed approach to educational leadership can be undertaken by an array of individuals, with and without formal leadership designations. While engaging more people in the work of leadership can reduce the burden, it does not avoid the challenge of coordination. When school leaders are not on the same page, their efforts could very easily undermine one another; coordination is the key. The linchpin of coordination is a clear, shared, and mutually acknowledged vision for instructional practice. It entails well-articulated beliefs about high-quality instruction, norms of professionalism, and ambitious, but achievable, goals for improvement. This vision of coordination supports two critical factors that enable high-quality instruction; coordination fosters coherence among human, social, material, and cultural resources,[71] and it provides direction, motivation, and morale through the challenging process of instructional improvement.[72] Maintaining a clear vision is crucial to avoiding failed efforts to reform instruction and motivate teachers.[73] The task of leaders here involves developing and articulating the vision for instruction and working with others to develop a shared understanding of, and ownership of that vision.

Coordination, underpinned by a clear and shared vision for instruction, is vital because educating is a collective endeavor, both inside and outside the classroom. The internal coherence of the endeavor determines the quality of the learning it enables. Absent some base level of synchronization among the various parts, school staff and students may hear conflicting messages about core parts of the endeavor –such as what to teach, to whom, how to teach, and who is capable of learning. If a group of teachers work to develop an understanding and appreciation for their students' cultural resources related to mathematics in biweekly grade level meetings and professional development sessions, but the head teacher in regular classroom visits either implicitly or explicitly devalues such considerations as taking time from teaching the content critical for students to do well on achievement tests, then, teachers get conflicting messages about what resources are important for teaching. If teachers and school leaders learn to express their ideas and engage in deliberations about teaching in instructional rounds and learning walks, but in department meetings voicing ideas and critiques are the purview of the department

[70] Lampert, Boerst, & Graziani, 2011

[71] Newmann et al., 2001; Cobb et al., 2018

[72] Bryk et al., 2010; Hallinger, 2011

[73] Anagnostopoulos & Rutledge, 2007; Cobb et al., 2018

chair alone, teachers receive mixed messages on how to improve teaching. When the principles of mathematics and knowledge of procedure is valued in discussions with leaders, but student formative and summative assessments (on which teachers are evaluated) measure only students' procedural knowledge, then teachers not only receive mixed messages on what they should be teaching, but the materials they use to understand students' mathematical thinking constrain their efforts to access their students' thinking about math principles.

Coordination is about much more than all school staff getting on the same page and saying, doing, and valuing the same things in an effort to send consistent messages to students, teachers, and other stakeholders. It is about the material, social, human, and cultural resources that enable day-to-day interactions among school staff. The interconnected use of shared resources, for example, can enable coordination, such as in the case of three Grade 5 teachers who teach the same mathematics curriculum, give the same monthly formative assessments, participate in the same weekly grade level meetings where they discuss student work, and use a set of connected resources when they work together and in their classrooms. These shared resources allow their joint work on teaching, and enable the development of new knowledge about instruction.[74]

To understand coordination, leaders need to appreciate the interdependencies among the various activities and moving parts in which school staff and students interact. Interdependencies differ. Some activities happen separately but interdependently; for some, the sequencing is key; for others concurrent management of interdependencies is necessary. Consider some games such as soccer or basketball. Teammates have distinct roles that partly guide their actions as they play –co-perform– the game. However, the action in the game is dynamic and fluid, roles and expectations must be flexible, and plans for action are loosely pre-determined and general. In co-performing the game players have to be mindful of their teammates, passing the ball to teammates strategically when they see opportunities to set one another up to move the ball toward the goal. The interdependencies in cricket or baseball are no less important to the co-performance of the game but also differ. Teammates often work separately from each other —players bat one at a time— but their actions have collective consequences. The same holds for relay racing. The runner on each leg of the relay depends on the actions of the preceding and/ or subsequent teammate. The race follows an established sequence.

These examples show how interdependencies vary by task and objective, and that coordination of interdependencies is achieved in various ways. For leadership tasks such as facilitating a faculty meeting, interdependencies can be concurrent and active, as in soccer. As in baseball or cricket, two or more leaders work interdependently at separate tasks, but achieve a single goal. A principal and an assistant principal may both conduct teacher evaluations, where they each observe half the teachers. Execution of instruction across grade levels is an example of a relay task. The performance of a third grade teacher depends partly on the performance of his or her students' second grade teacher —both in content taught and in teaching quality.

The coordination challenge is largely about structuring interdependencies among relations and resources in ways that support teaching practice —and maintaining that structure over time. To help conceptualize this, we use the idea of an infrastructure, connoting a set of entities and the relationships among them required for the operation of an enterprise. An educational infrastructure consists of roles, structures, and resources intended to support and coordinate teaching, maintain its quality, and enable improvement.[75] Much of the work of creating an educational infrastructure

[74]Lampert et al., 2011.

[75]Cohen, Spillane, Peurach, 2018; Cohen, Peurach, Glazer, Gates, & Goldin, 2013; Hopkins, Spillane, Jakopovic, & Heaton, 2013; Peurach & Neumerski, 2015; Woulfin, 2015; Spillane, Cohen, & Peurach, 2019

occurs outside the schoolhouse.

We will pin this topic for now, and return to it in the next chapter. For now, it is critical to recognize that how leaders in schools coordinate resources and relationships depends in part on activities that occur outside the schoolhouse. In some school systems, such as centralized ministerial systems common in European countries, core components of educational infrastructure (e.g., curricula, assessment, teacher educational) are created by outside entities; schools are compelled to use them or do so out of necessity. In other systems, schools have a great deal of autonomy in modifying such educational infrastructure components, or are required to create them. Regardless of these circumstances, inside the school leaders must jointly develop and maintain an educational infrastructure that defines roles, establishes structures for interactions, and accesses (or creates) and distributes resources to support teaching, maintain its quality, and enable improvement. The interdependencies are vital. Developing a math curriculum for a school's primary grades requires resources (expertise in curriculum development, math content knowledge, materials to use), clearly delineated roles (assignments to various learning strands or grade levels), and structures that support collaboration (established meeting times). In an educational system that provides a curriculum and other components of infrastructure for schools, the specifics of this work for school leaders changes, but the leadership tasks remains the same —maintaining an educational infrastructure that supports high-quality teaching, supporting the use of that infrastructure in school and classroom practice, and managing the infrastructure and its use to improve quality and reduce disparities in teaching and learning.

Contrary to popular thinking, standards and assessment –the rallying cry for educational reform in some countries for several decades–

though they may provide a framework that could inform such work, do not themselves form an educational infrastructure. The work of creating and maintaining an educational infrastructure in the schoolhouse involves four elements:

1. Establishing a clear vision for teaching and learning that supports the identification and coordination of human, social, material, and cultural resources;
2. Building consensus on specific teaching and learning outcomes and designing an infrastructure around those outcomes and using them to manage performance and maintain accountability;
3. Supporting the use of resources in practice by developing leaders' and teachers' professional knowledge and capabilities, and providing clearly defined roles and expectations;
4. Distributing instructional leadership among leadership roles and teams responsible for performing, coordinating, and managing all of the preceding.[76]

[76]Peurach et al., 2019

Educational infrastructure is critical to the coordination challenge of cultivating and channeling relationships and accessing and activating resources with an eye toward producing and maintaining quality instruction for all students. This is no small feat and depends on the leadership of principals as well as other school staff. Moreover, as we suggested above, effective educational infrastructure depends on individuals and organizations in the school environment. By school environment we mean the educational sector in which schools are embedded, and in particular how organizations in the sector coordinate the work of designing and building infrastructure, support its use in school and classroom practice, and manage the infrastructure to improve the quality of teaching and reduce disparities in students' opportunities to learn. School leaders find themselves both enabled and constrained by what happens outside the school.

CHAPTER FOUR

BEYOND THE SCHOOLHOUSE DOOR: MANAGING INTERDEPENDENCIES IN EDUCATION SYSTEMS

Schools are not self-sufficient islands where leaders operate in isolation. They rely on their environments for essential resources.[77] Schools need parents to send children, sometimes regional, national, or even international agencies to certify their work, and a combination of government and non-government organizations for everything from textbooks to tests and technical assistance. These resources are especially important for the work of educational leadership: supporting teaching, maintaining quality, and spearheading improvement. The work of designing and deploying an educational infrastructure is stretched across multiple actors and organizations in the broader environment. Schools depend on their environment for students and professional staff, including teachers; leaders must often look beyond the schoolhouse to cultivate relationships and access the resources critical for high-quality teaching.

School leaders make use of such wide-ranging relationships to shape –for better or worse– the work of school leadership. Beyond-the-schoolhouse relationships provide access to resources, and can act to constrain school leaders. Leaders cannot easily shape relationships to their whims or agenda, or simply ignore them. The research, as we have discussed previously, presents a portrait of school leaders as part of large and intricate system of interdependent relationships that they need to cultivate and channel in order to support teaching, enable its improvement, and maintain its quality overtime.

Scholars frame the environments in which schools operate as organizational fields[78] or, more commonly, as sectors. A sector – such as the health sector or the energy sector– consists of the set of actors and organizations operating within a given domain, supporting those who provide a product or service. We can think of schools as the focal organizations in the educational sector, but we also have to pay attention to the array of ancillary actors – organizations and individuals– that are critical to the work of the educational sector. There are government and non- government actors, and other agencies, non-profit and for-profit. The sectoral organizations are critical to supporting classroom teaching by cultivating and channeling relationships that access and activate resources. The work of coordinating and supporting the design, deployment, and use of an educational infrastructure often means working with and across multiple organizations in the sector. While the greater educational systems of some countries take on a considerable share of this work, in others, individual schools shoulder more of the coordination burden and drive the process. In examining the educational sector, we argue for an extended conceptualization of educational leadership as a multi-level distributed process, involving a broad set of individuals and organizations that take responsibility for leadership and the human, material, and social resources essential for the project. Leadership in the schoolhouse plays a further important role in producing, regulating, and coordinating resources across the sector.

In this chapter, we consider how schools are embedded in the broader educational sector, focusing on those relationships and resources that are critical in improving classroom teaching. We find that the work of leadership in schools is fundamentally shaped by (1) the availability and arrangement of resources for teaching and (2) the extent to which one or more actors in the sector works to coordinate these resources and relationships by designing, deploying, and managing an educational infrastructure. We organize this chapter into three sections:

1. The education sector and educational leadership
2. The education sector, education systems, and educational infrastructure
3. Multilevel distributed education leadership

[77]Scott, 2015
[78]Scott & Meyer, 1983

The educational sector and educational leadership

The educational sector consists of any and all organizations engaged in work related to schooling and educational. Schools and educational systems and are involved, in various ways and to varying degrees, in coordinating the design, deployment, and support of educational infrastructure in practice. Often the terms "school system" and "educational system" are used interchangeably; however, we see them as capturing an important analytical distinction: they refer to different ways of organizing.[79] An educational system is chiefly concerned with the function of schooling and schools; it is focused on the day-to-day teaching and learning in schools –the core technical work of schooling. Educational systems include the set of central organizations that drive efforts to support instruction and its improvement; these could include district offices (or team within the office), a charter management organization, a diocese office, or even a national or provincial ministry.[80] System roles can overlap, spanning national, state and provincial governments; some schools belong to two or more educational systems, such as when a local public school district adopts an International Baccalaureate program.

We use "school system" to refer to organizations at the national or regional levels with the legal authority to provide schooling by building and operating schools, sorting students into schools and classrooms, and resourcing classrooms with teachers and sometimes instructional materials. Analytically, the key distinction between school systems and educational systems is that the latter establish the vision for learning and improving instruction, build and coordinate resources to support the vision in school, and addressing inequalities in students' opportunities to learn.

There are also religion or faith-based and independent systems which operate with various degrees of government regulation or quasi-government regulation depending on the national educational sector and the particular system. In some countries, national or provincial government ministries regulate all school systems receiving public funding. In others, there is limited government regulation and limited public funding for such systems. Finally, there are international educational systems, like Montessori schools and the International Baccalaureate, which operate schools with varying levels of involvement from governmental entities depending on where they operate. Though school systems take different forms, they typically include schools and some central agency or hub that manages them.

The educational sector also comprises a hodge-podge of other actors and organizations—professional development providers, community and professional organizations, unions, philanthropy, research firms and institutes, supplemental educational providers, and others. These organizations typically do not directly provide schooling but play a supportive role in providing resources (human, social, material), sometimes directly in school or classroom practice.[81] Other organizations serve regulatory functions regarding resources and services. In some educational sectors, the same organization performs more than one of these functions.

Depending on the particular national educational sector and the decisions of regulatory agencies, the presence, form, and role of these organizations can vary. These ancillary organizations can influence the work of leadership in the schoolhouse and beyond by shaping the resources school leaders and teachers can access, and support the use of resources in practice.[82]

[79]For a more detailed discussion see Spillane et al., 2019.
[80]Peurach et al., 2019
[81] Rowan, 2002
[82]Coburn, 2005

Schools depend on the educational sector in which they operate for legitimacy, and for other essential resources to improve the quality of teaching, and address inequities in students' opportunities to learn. How schools are embedded within an educational sector is a critical consideration for schoolhouse leadership because it shapes which resources are available, how they can be accessed and supported in practice. Governmental organizations may regulate the training and certification of teachers and other professional staff —or this essential resource for teaching may be delegated to quasi-governmental organizations. Alternatively, the training and certification of teachers may go mostly unregulated or with minimal government oversight. Various organizations in an educational sector produce and distribute various resources –some provide curricular materials, others develop, administer, and score student assessments, others provide pre- and in-service professional preparation and development. In some national sectors, government and/or non-governmental organizations work to regulate the efforts of these organizations and their provisions. These variations are consequential for leadership in the schoolhouse because they contribute to differences in the work and the challenges that school leaders face as they attempt to cultivate relationships with various organizations in the sector toward supporting teaching.

Some organizations in an educational sector are transnational, raising the question of how to define boundaries. Examples are publishers such as Pearson or organizations that design and administer international student assessments (e.g., PISA), the Organization for Economic Cooperation and Development (OECD). Some educational systems operate across various national educational sectors such as International Baccalaureate and AMI Educational. Although organizational fields are often not constrained by national borders, because of distinct differences among nations, we believe it is useful to think about them, for analytical purposes, in terms of national educational sectors. A nation's regulatory agencies often have the power to shape the educational sector by authorizing who can provide particular services within national borders.

The educational sector, systems, and infrastructure (re)building

We just made a critical distinction between school systems and educational systems, both denizens of educational sectors. Moving forward, however, we use the term educational system instead of school system, for two reasons. First, our chief interest is in educational leadership, focused on the core educational function of schools: teaching. Therefore we are interested in educational system building. Second, recognizing efforts in several countries on educational system building, we think focusing on educational systems is paramount in importance. In referring to these organizations as educational systems, we recognize that they are at various stages in transitioning from school systems to educational systems. Their range of progress in building systems impacts the work of educational leadership, both at the system and school levels.

One way in which educational systems matter to leadership is that they attempt (some more comprehensively than others and in different ways) to address the coordination challenge we identified in Chapter 3: improving teaching quality and equality by cultivating and channeling relationships. What distinguishes education systems from school systems is that they work to:

- Coordinate the designing and building of educational infrastructure,
- Support the use of that infrastructure in school and classroom practice,
- Manage educational infrastructure and its use in order to improve and maintain the quality of teaching and reduce inequities in opportunities to learn.[83]

As a reminder, by educational infrastructure we mean the roles, structures, and resources used to coordinate and improve teaching and address equality of learning opportunities. Educational infrastructure includes instruments and tools that are the material of teaching, such as curricula and student assessments. It also includes the formal positions, procedures, organizational routines, and tools that educational systems design, acquire, and deploy to support teaching and its improvement. Further, it includes the coordination of core educational functions, including building a technical culture anchored in consistency among the components of infrastructure, and representing a shared vision for teaching and learning. Other core functions include recruiting and hiring professional staff, teacher educational and ongoing professional learning for staff, monitoring teaching quality, and leadership and management and improvement of teaching.

As discussed previously, education systems vary in how the design and deployment of infrastructure is achieved. In nationalized and centralized systems a central ministry or provincial office typically takes a prominent role. In other educational systems, central offices may play a more modest role, but leave other tasks for maintaining and supporting infrastructure to schools. The work of leadership in schools varies significantly.

Educational systems are organized variously with entailments for how and where infrastructure building and support happen. Peurach and colleagues[84] have developed a typology identifying four types of educational systems that design, deploy, and support the use of educational infrastructures differently: managerial, market-driven, federated, and networked.

- Managerial systems: A central authority, such as a school district, is responsible for designing and deploying an educational

[83]Peurach et al 2019; Spillane et al., 2019.

[84]Peurach et al., 2019

infrastructure. Central offices develop resources, articulate a vision for teaching, provide guidance and support, and form relationships with other organizations.

- Market-driven systems: Delegates the responsibility for creating and maintaining an infrastructure to school leaders. School leaders are responsible for creating and delivering resources, cultivating relationships with other organizations, and creating a vision for improving teaching.
- Federated systems: Responsibility for developing an infrastructure is balanced between a central authority and local schools. The central authority sets guidelines, establish frameworks, and articulates principles to guide local schools. Leaders in local schools work within those bounds to cultivate and channel relationships to access and activate resources for the improvement of teaching.
- Networked systems: A central authority establishes and maintains an educational infrastructure, while leaders in local schools can channel and adapt relationships and resources provided by that infrastructure. Such local efforts inform the central design of the infrastructure.

In thinking about educational leadership then, we cannot focus exclusively on the schoolhouse but must also consider system leadership. People in educational systems perform key leadership functions and take on important responsibilities, such as articulating a coherent vision for teaching and learning and for improving teaching. Leaders develop, provide access to, and support the use of critical resources, such as curricular materials or professional[85] development. The extent and quality of work by system leaders, and how they are organized (managerial, market, federated, networked), has important impact for leadership in the schoolhouse. Further, several different educational systems may operate in any one national educational sector. As a result, simple cross-national comparisons of leadership are somewhat problematic as the work and challenges can differ both at the school and system level depending on the educational system.

The type of educational system(s) a school belongs to shapes the coordination among actors and organizations in the sector. If a school is part of a managerial system, much of the work of designing and deploying an infrastructure is done by central offices. Leaders in schools may therefore rely less on other ancillary organizations to access and activate support. In contrast, in federal system, school leaders may have to reach out to other organizations in the sector to secure instructional materials or professional training.

In Chapter 3 we framed educational leadership in the schoolhouse as a distributed practice; that is, educational leadership is constituted in the interactions among school staff as they are enabled –or constrained– by key aspects of their situation. Educational infrastructure is perhaps the most critical aspect of that situation. In other words, the unique nature of an educational system's infrastructure helps build the work of leadership in the schoolhouse differently.

Designing and deploying an educational infrastructure involves multiple actors and organizations across the sector, depending on the system and the national educational sector. This underscores the importance of taking a multi-level perspective by thinking about leadership as extending over the school and the educational system –and indeed over the educational sector more broadly. This is the subject we examine next.

[84]Peurach et al., 2019
[85]Cobb et al., 2018

Multilevel distributed educational leadership

The work of supporting and improving teaching is not solely the province of school leaders, teachers and other professional staff and stakeholders. As we have argued, schools are part of an educational system or systems,[86] and embedded in an educational sector that provides essential resources and support. We conceptualize leadership as a multilevel, distributed process, reflecting the collective nature of designing and deploying an infrastructure that involves several organizations. Moving beyond the schoolhouse, our account makes the case for thinking about leadership most broadly from a multilevel distributed perspective.

A multilevel distributed perspective of leadership goes beyond a single element of leadership such as the central office or ministry level; and it is not simply an aggregate of various sources of leadership across the broader educational sector. A multilevel distributed perspective of educational leadership presses for a close, systemic examination of how all players in the sector interact to build educational leadership in practice. The unique ways in which these many elements interact varies according to the character of the particular educational system and the national educational sector. A multilevel distributed approach is more about multiplication than addition!

While research has not yet fully explored the multilevel nature of educational leadership, there is much research that captures how leadership at the school level interacts with, and may depend on, leadership at other levels. The reverse is often the case as well —leaders in local school district offices, and in national, or provincial ministries of educational depend on school leaders to buy in to a shared visions for teaching and its improvement.[87] In this section, we share some examples on research that illuminates the multilevel nature of educational leadership.

We know from this research that school leaders depend on leadership in these organizations to access the resources necessary for effective teaching, and that system leaders rely on school leaders to realize their ambitions for teaching and learning. Much of this research focuses on relationships between schools and central agencies —for example, between a school and district offices in the United States[88] — or among schools, such as in school federations in the United Kingdom.[89] Researchers have found that school leaders depend on the resources and commitment of leaders in other organizations and central hubs, and that their ability to marshal the resources and motivation toward improving teaching is critical to success in local schools. The ability of leaders in central offices to articulate a coherent vision for teaching shapes how school leaders understand and implement efforts to improve the quality of teaching. Jackson and colleagues[90] found that central office leaders "set the direction" for mathematics improvement efforts in at least two key ways. First, they provided vision and resources –such as ongoing professional development— for school leaders to develop their understanding of changes to teaching and their ability to support teachers. Secondly, leaders determined where key decisions were made which had critical consequences for reform. The researchers found that when school leaders were responsible for important decisions about teaching[91], but lacked the human, material, or social resources required to make and implement those decisions, they

[86]We acknowledge that there are independent schools that do not belong to educational or school systems as defined here, but for the purposes of this brief, we do not attend to these schools.

[87]Spillane, 2000

[88]Honig, 2008; Cobb et al., 2018; Johnson et al., 2018

[89]Chapman et al., 2010; Hopkins, 2009

[90]Cobb et al., 2018

[91]Johnson et al., 2018; Forman et al., 2015

could not sustain efforts to improve teaching. Coherence of visions and resources within and across schools and central offices is key to efforts to improve teaching.

Similarly, research on "middle leadership" demonstrates how leaders in central offices can play a critical role in accessing and activating resources for improving teaching in schools.[92] For example, the International Baccalaureate system, which coordinates the design and deployment of an educational infrastructure that is used by schools in many nations, relies on "middle leaders," such as curriculum and instruction leaders and grade-level teacher leaders, to coordinate the implementation of that infrastructure by supporting its use in practice in IB schools and classrooms.[93] Supporting the use of the IB educational infrastructure in school and classroom practice, these middle leaders help teachers and school leaders not only access but also activate these resources for teaching. Thus, IB has designed programs to cultivate relationships between middle-leaders and networks of school and to develop middle-level expertise.

Relationships between schools that form a network can also provide school leaders with access to resources essential for supporting and improving teaching. In the United Kingdom, there are efforts at cultivating collaborative relationships between schools, partnering successful schools with struggling schools.[94] These efforts are school-led, reflecting a networked system in which schools together collaboratively build an educational infrastructure. Leaders in struggling schools can access resources (expertise, materials) from leaders in high-performing schools. A similar effort was undertaken in Belgium, in which communities of schools were formed among the main school systems in the nation in order to engage in the work of improving teaching.[95] These partnerships capture how building school-to-school networks might provide support for designing and deploying infrastructure, and support its use in school and classroom practice in order to improve the quality of teaching and redress inequities in opportunities to learn.

We have dwelt on formal relationships among schools and between schools and the central hubs or offices of local, provincial, or state school or educational systems. But leaders cultivate many other relationships, formally or informally, with other types of organizations to access and activate resources. Leaders in schools or educational systems sometimes partner with universities or professional development providers to support improvement in teaching. These can provide human, material, social, or cultural resources that schools may lack internally.[96] Leaders also actively seek out expertise, especially during efforts to improve teaching quality, by cultivating informal relationships with people in community organizations, universities, and professional development firms.[97] Research-practice partnerships, in which schools work with university-based research teams, have become increasingly popular for such efforts.[98] Managing these relationships requires attention to issues of authority, status, and priorities, since school leaders and researchers often have various expectations, responsibilities, and timelines.[99]

Taken together, this research reveals the importance of beyond-the-schoolhouse relationships. School leaders rely on these relationships to access resources critical for improving classroom teaching. School leaders

[92]OECD, 2015

[93]Walker et al., 2019

[94]Hopkins, 2008; Dickens, 2019; Chapman, 2018; Chapman et al., 2017

[95]Day et al., 2008

[96]Coburn, 2005; Muijs et al, 2011

[97]Moolenaar et al., 2011; Morel & Coburn, 2019

[98]Coburn et al., 2016

[99]Coburn et al., 2008; Penuel et al., 2013

are not passive recipients in these relationships, but actively build and negotiate them. Yet to date, research covers only a small part of the embedded nature of schools. While further empirical research is needed to understand how variation in the educational sector within and across nations shapes leadership for teaching in schools, we can synthesize insights from the research we reviewed in Chapters 2 and 3, as well as what we reviewed here, to conceptualize the dimensions of multi-level leadership. We have shown how the work of educational leadership expands beyond the schoolhouse, that leadership is, more or less, distributed across individuals and organizations in the educational sector. In educational sectors around the world, systems take on more or less of the work of coordinating the resources and relationships essential for supporting and improving teaching, and reducing inequities in educational opportunity. The arrangement of the educational sector, and the relative role that educational systems play in designing and deploying an infrastructure that school leaders can use to improve teaching, has profound implications for the work of educational leadership.

- First, leadership for teaching draws on relationships with a wide range of organizations within educational systems that have been noted. School leaders must cultivate and channel these relationships to access and activate resources critical for teaching.
- Second, the relevance of these various actors that comprise an educational sector will vary, depending on the type of system of which the school is part, and the degree to which government or non-government agencies in a sector regulate the production and use of key resources. We have described the features of market system authority as residing at the school level, while in a managerial system, authority and responsibility resides in the system's central office or hub. Decisions regarding which relationships to cultivate and channel will depend on where in the sector key resources are developed and deployed and who supports their use in practice.
- Third, the work of educational leadership in schools will vary depending on the educational system it belongs to and the extent to which it supports the design and deployment of an educational infrastructure.

Conclusion

In this chapter, we expanded our view of educational leadership by recognizing that (1) schools are embedded in multiple critical relationships for improving teaching; and (2) leadership is distributed across the entire sector in order to best coordinate the design, deployment, and use of an educational infrastructure. Focusing narrowly on individual school responsibility misses the array of relationships that school leaders should cultivate to improve teaching. Education systems vary in how they do the work of coordinating resources and relationships fundamental to successful efforts.

We welcome the recent increased recognition researchers have given system leadership. Scholars are beginning to conceptualize how the embedded nature of schools shapes educational leadership in teaching. Research provides important glimpses of how and why sector-wide relationships matter. But we need a concerted effort at conceptualizing and studying these relationships, the dimensions along which they vary among educational systems and national educational sectors, and how they matter for the practice of leadership and teaching in schools. In exploring the concepts of educational sector and system, we have developed a multilevel distributed framework to understand how leadership work is broadly distributed across systems and sectors. Our framework is about understanding how the practice of educational leadership is defined in the interactions among various aspects of schools, systems, and sectors. The interactions range widely according to the school, the system, and the particular educational sector; those differences have an important impact on leadership.

CHAPTER FIVE

CONCLUSIONS AND IMPLICATIONS

Building on advances in educational research and, more particularly, educational leadership research, we developed a multilevel distributed framework for thinking about and analyzing educational leadership. We build on three key developments in the field over the past several decades:

- *Centering educational leadership on teaching and learning;*
- *Focusing on leadership practice from a distributed perspective;*
- *Moving beyond an exclusive focus on the school-level, to view leadership as a practice embedded in and conditioned by educational systems and sectors.*

We also drew on developments in various sub-fields of educational research, in particular, on teaching, effective school organizations for improving teaching and learning, and educational leadership. Our brief is motivated by a desire to build an analytical framework to address three blind spots in current approaches to educational leadership by:

- *Explicating relations among leadership practice and teaching practice;*
- *Exposing the interrelationships among different sources of educational leadership operating at various levels, from classrooms, to schools and beyond, to educational systems and the educational sector;*
- *Elucidating how the practice of educational leadership is not only distributed within the schoolhouse, but also distributed across educational systems and the educational sector.*

Our multilevel distributed framework for analyzing educational leadership comprises five integral components:

- *Anchoring educational leadership solidly in teaching;*
- *Acknowledging teaching as an embedded practice;*
- *Accepting educational leadership as being about cultivating and channeling relationships for accessing and activating resources for supporting teaching;*
- *Answering the coordination challenge essential to cultivating and channeling relationships;*
- *Accessing resources by cultivating and channeling relationships beyond the schoolhouse in the educational sector in general and educational systems in particular.*

We conclude by considering some of the implications of our multilevel distributed framework for those of us working in educational leadership and educational improvement broadly. We organize our discussion around the entailments for practice and development work, for policy, and for research.

Implications for practice and the development of practice

Taking a multilevel distributed framework to the practice of educational leadership has been the focus of our discussion of teaching in Chapter 2, to the practice of educational leadership in the schoolhouse in Chapter 3, and beyond in Chapter 4. Here we focus on both the practice of leadership, and especially on developing that practice. To engage effectively with the multilevel distributed framing to educational leadership, suggests that aspiring leaders acknowledge the following points and findings:

- With a few notable exceptions[100], efforts to develop educational leadership tend to be role bound and individual-centered. Educational leadership development programs, whether pre-service or in-service, rarely distinguish leadership practice from developing leaders. We believe programs need to focus more on developing leadership practice. Developing leadership teams in schools and educational systems on the hope that improvements to leadership practice will follow maybe short sighted.
- Whether one is a school or system leader, one needs to understand that it is not all about 'me' (the individual); the practice of educational leadership is about the individual in interaction with others as enabled and constrained by aspects of their situation. For aspiring practitioners of an effective multilevel distributed process, this is difficult but critical.
- Teaching and learning are always the core focus as both the object and the subject of educational leadership; they are the outcome but also the substance of educational leadership. Educational leadership development must also focus more on preparing leadership teams to engage in the twin processes of diagnosis and design thinking.[101]

[100]DeFlaminis, Abdul-Jabbar, & Yoak, 2016

[101]Breakspear, Peterson, Alfadala, & Khair, n.d.

Implications for policy

Educational policymakers in several countries are paying more attention to leadership, perhaps in part because of a growing concern about the quality of teaching and inequalities in students' opportunities. Educational policymakers in some countries are introducing certification requirements for school leaders, in particular school principals and head teachers. Several governments have introduced legislation that hold the school principal or head teacher accountable for school performance, often as measured by a handful of metrics, typically student performance on standardized tests and attendance. Policymaking on educational leadership tends to target leadership in the schoolhouse, and mostly fixates on the school principal or head teacher. Our multilevel distributed framework suggests that caution is in order regarding these policy initiatives; if policymakers sincerely wish to legislate action to improve educational leadership (whether they should or not is a different issue), they should adopt a more comprehensive approach as outlined and described in our text.

With respect to policymaking that addresses certification, preparation, and advancement of educational leaders, a systemic approach that focuses on both the educational system and schoolhouse leadership together is essential. A comprehensive policy approach to leadership advancement should attend to everyone from teacher leaders to school administrators, and system leaders. Moreover, it should accommodate non-linear movement among positions so that, for example, a deputy head or assistant principal with an opportunity to take a system leadership position could also have the flexibility to move back to a school leadership position.

Implications for research

Embracing and applying a multilevel distributed framework for educational leadership suggests that we explore critical sources of leadership beyond the schoolhouse door. Sources of leadership throughout the educational sector are directly meaningful for improving teaching. Research should also seek to understand interdependencies among the various sources of leadership practice. As researchers, we should also:

- Recognize that most schools are part of an educational system or systems, and that we should examine educational leadership as part of a broad educational system;
- Appreciate the challenges school systems face in working to transform themselves into educational systems, and examine the results and outcomes of leadership practice during transition;
- Adopt a multilevel mindset, examine leadership as a practice that extends over the broader educational system, and note how leadership responsibilities are distributed and managed across levels; and
- Recognize how educational sectors differ around the world, and exploring these differences by systematically considering their influence and impact on educational leadership as a multilevel distributed practice.

Conclusion

A research agenda that considered these suggestions would help transform research on educational leadership and generate new findings beyond the work of a handful of developed western countries where much of the empirical knowledge has been developed. Our multilevel distributed framework, as an approach, may present some basic problems given the variety of ways educational

leadership in the schoolhouse differs around the world depending on how schools are situated in both educational systems and sectors.

More importantly, by closely focusing on such differences in educational systems and educational sectors around the world, we could learn a great deal about the practice of leadership as it is distributed both vertically and horizontally in schools, systems, and sectors. We are confident that such a research approach would generate practical knowledge for educators as its primary focus would be the particular circumstances of leadership in educational systems and sectors in under investigated regions globally, rather than attempting to make conclusions based on findings from a very narrow and distant set of western systems.

Another area of investigation might be to examine how the practice of educational leadership evolves as school systems work to transform themselves into educational systems. As systems focused on the administration of schooling move to instructionally focused systems working to support and coordinate teaching and learning, they face unique challenges especially consequential for the work of educational leadership. Such work could focus on both national and cross-national comparison of transformation pathways from school to educational systems and the roles played by leadership.

One might envision research on leadership in diverse educational systems or sector environments where both the systems and the educational sectors were sampled to maximize variation on a few key dimensions thought critical to the practice of educational leadership.[102] Similarly, one could study leadership in educational or school systems (e.g., IB, Montessori) operating in several national educational sectors to explore how the practice of leadership is differently defined and constituted according to how the particular system operates in various educational sectors. Such work would allow for comparing how the work of leadership is formed, similarly and differently, in the same educational or school systems operating in different national educational sectors.

[102]Spillane et al., 2019. One model for such work involving several south-east Asian nations is Allan Walker's and Phil Hallinger's centered on instructional leadership but designed to capture the unique educational sectors in which instructional leadership is practiced. Research teams from several countries conducted the research in their home countries but used common instruments and met to discuss emerging findings.

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About Northwestern

Northwestern University

Northwestern University, founded in 1850, is a research university based in Evanston, Illinois, with campuses in Chicago, Illinois and Doha, Qatar. Throughout its history, Northwestern has harnessed expertise across disciplines to produce research that addresses society's most challenging problems. Across twelve schools and colleges and over 50 research institutes and centers, Northwestern creates new and innovative knowledge in the physical sciences, material sciences, arts, humanities, and social sciences.

ABOUT WISE

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WISE

The World Innovation Summit for Education was established by Qatar Foundation in 2009 under the leadership of its Chairperson, Her Highness Sheikha Moza bint Nasser. WISE is an international, multi-sectoral platform for creative, evidence-based thinking, debate, and purposeful action toward building the future of education. Through the biennial summit, collaborative research and a range of on-going programs, WISE is a global reference in new approaches to education. The WISE Research series, produced in collaboration with experts from around the world, addresses key education issues that are globally relevant and reflect the priorities of the Qatar National Research Strategy. Presenting the latest knowledge, these comprehensive reports examine a range of education challenges faced in diverse contexts around the globe, offering action-oriented recommendations and policy guidance for all education stakeholders. Past WISE Research publications have addressed a wide range of issues including access, quality, financing, teacher training and motivation, school systems leadership, education in conflict areas, entrepreneurship, early-childhood education, twenty-first century skills, design thinking, and apprenticeship, among others.

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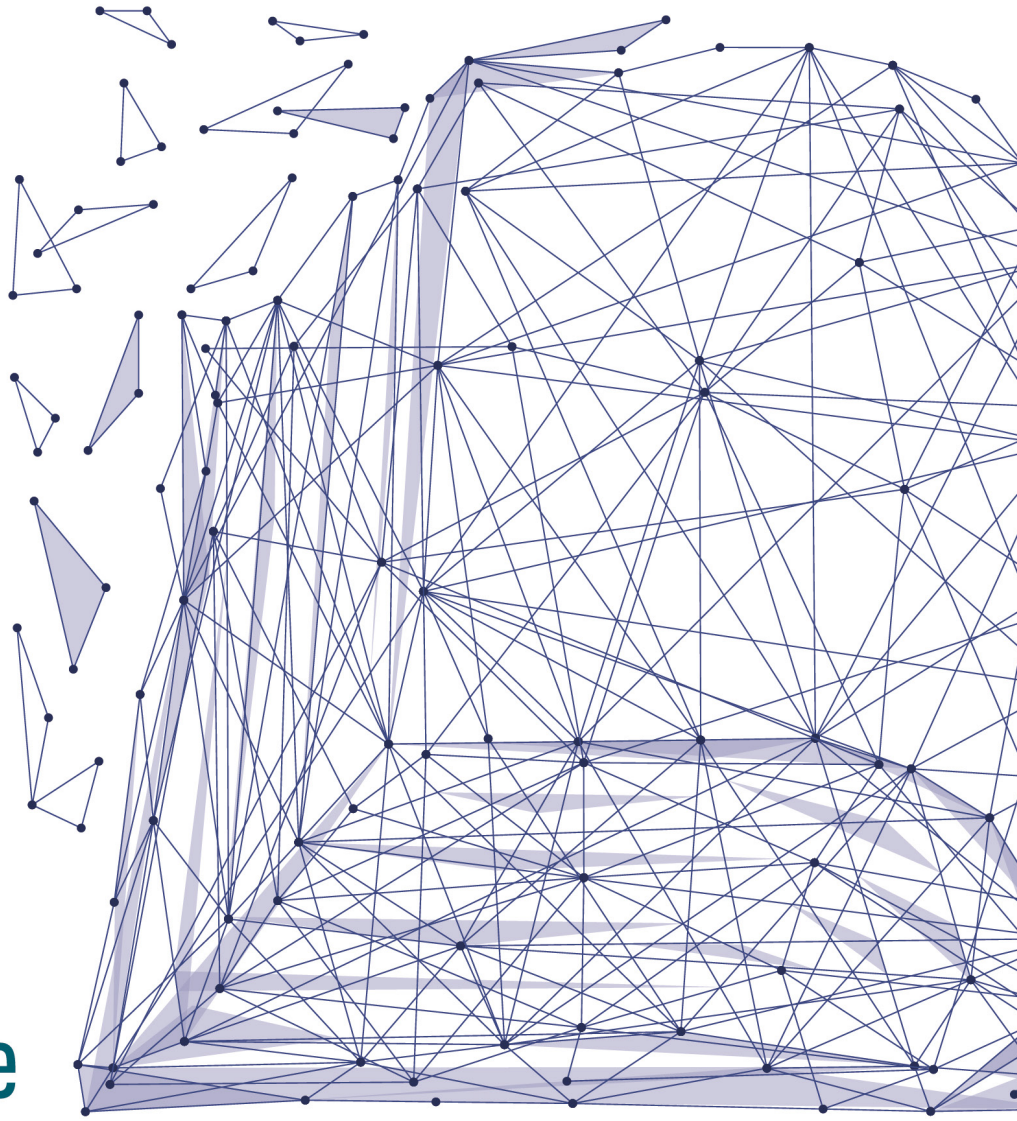

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