Investigating School Leadership Practice: A Distributed Perspective

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While there is an expansive literature about *what* school structures, programs, and processes are necessary for instructional change, we know less about *how* these changes are undertaken or enacted by school leaders in their daily work. To study school leadership we must attend to leadership practice rather than chiefly or exclusively to school structures, programs, and designs. An in-depth analysis of the practice of school leaders is necessary to render an account of *how* school leadership works. Knowing what leaders do is one thing, but without a rich understanding of *how* and *why* they do it, our understanding of leadership is incomplete. To do that, it is insufficient to simply observe school leadership in action and generate thick descriptions of the observed practice. We need to observe from within a conceptual framework. In our opinion, the prevailing framework of individual agency, focused on positional leaders such as principals, is inadequate because leadership is not just a function of what these leaders know and do. Hence, our intent in this paper is to frame an exploration of how leaders think and act by developing a distributed perspective on leadership practice.

The Distributed Leadership Study, a study we are currently conducting in Chicago, uses the distributed framework outlined in this paper to frame a program of research that examines the practice of leadership in urban elementary schools working to change mathematics, science, and literacy instruction (see **http://www.letus.org/ dls/index.htm**). This 4-year longitudinal study, funded by the National Science Foundation and the Spencer Foundation, is designed to make the "black box" of leadership practice more transparent through an in-depth analysis of leadership practice. This research identifies the tasks, actors,

actions, and interactions of school leadership as they unfold together in the daily life of schools. The research program involves in-depth observations and interviews with formal and informal leaders and classroom teachers as well as a social network analysis in schools in the Chicago metropolitan area. We outline the distributed framework below, beginning with a brief review of the theoretical underpinnings for this work—distributed cognition and activity theory—which we then use to re-approach the subject of leadership practice. Next we develop our distributed theory of leadership around four ideas: leadership tasks and functions, task enactment, social distribution of task enactment, and situational distribution of task enactment. Our central argument is that school leadership is best understood as a distributed practice, *stretched over* the school's social and situational contexts.

Theoretical Roots

To develop our distributed theory of leadership practice, we appropriate concepts from distributed cognition and activity theory that underscore how social context is an integral component, not just a container, for intelligent activity. Investigating purposeful activity in its "natural habitat" is essential for the study of human cognition (Hutchins, 1995a, 1995b; Leont'ev, 1981; Pea, 1993). An individual's cognition cannot be understood merely as a function of mental capacity because sensemaking is enabled (and constrained) by the situation in which it takes place (Resnick, 1991). The interdependence of the individual and the environment shows how human activity as *distributed* in the interactive web of actors, artifacts, and the situation is the appropriate unit of analysis for studying practice. Cognition is distrib-

uted through the environments' material and cultural artifacts and through other people in collaborative efforts to complete complex tasks (Latour, 1987; Pea, 1993). For example, Hutchins (1995a) documents how the task of landing a plane can be best understood through investigating a unit of analysis that includes the pilot, the manufactured tools, and the social context. In this case, the tools and social context are not merely "aides" to the pilot's cognition but rather essential features of a composite. Similarly, tools such as calculators enable students to complete computational tasks in ways that would be distinctly different if the calculators were absent (Pea, 1993). In these cases, cognitive activity is "stretched over" actors and artifacts. Hence, human activity is best understood by considering both artifacts and actors together through cycles of task completion because the artifacts and actors are essentially intertwined in action contexts (Lave, 1988).

In addition to material tools, action is distributed across language, theories of action, and interpretive schema, providing the "mediational means" that enable and transform intelligent social activity (Brown & Duguid, 1991; Leont'ev, 1975, 1981; Vygotsky, 1978; Wertsch, 1991). These material and cultural artifacts form identifiable aspects of the "sociocultural" context as products of particular social and cultural situations (Vygotsky, 1978; Wertsch, 1991). Actors develop common understandings and draw on cultural, social, and historical norms in order to think and act. Thus, even when a particular cognitive task is undertaken by an individual apparently *in solo*, the individual relies on a variety of sociocultural artifacts such as computational methods and language that are social in origin (Wertsch, 1991). How-

ever, a focus on the distributed nature of the context of action may lead us to overlook the traditional importance of individual agency and judgment in the study of leadership. Maintaining the tension between agency and distribution presses us to acknowledges that while individual cognition is distributed in the material and social situation, some intelligent activity may be distributed more than other intelligent activity (Perkins, 1996).

Framing a Study of Leading Practice: A Distributed Perspective

In keeping with the theoretical underpinnings outlined above we develop a perspective on leading practice that attends to leaders' thinking and action *in situ*. Leadership involves the identification, acquisition, allocation, coordination, and use of the social, material, and cultural resources necessary to establish the conditions for the possibility of teaching and learning. This definition supports a *transformational* perspective on leadership, defining it as the "ability to empower others" with the purpose of bringing about a "major change in form, nature, and function of some phenomenon" (Bennis & Nanus, 1985; Burns, 1978; Leithwood, Begley, & Cousins, 1994). It also allows us to consider the managerial dimensions of leadership involved with maintaining the conditions necessary to help an organization achieve current goals (Cuban, 1988). Here, we are specifically concerned with developing a distributed leadership framework for thinking about leadership as practice as it relates to the transformation of teaching and learning. By taking leadership practice in a school as the unit of analysis, rather than an individual leader, our distributed theory of leadership focuses on how leadership practice is distributed among both positional and informal leaders.

Macro Functions and Leadership Tasks

Our distributed perspective on leadership is grounded in activity rather than in position or role. Hence, we begin with a consideration of the *tasks* around which school leaders organize their practice, considering both the large-scale organizational tasks (*macro functions*) as well as the day-to-day work (*micro tasks*) that are essential for an understanding of school leadership prac-

tice. The school improvement literature identifies several functions that are thought essential for instructional leadership, including constructing and selling an instructional vision; building norms of trust, collaboration, and academic press; supporting teacher development; and monitoring instruction and innovation (Firestone & Corbett, 1988; Heller & Firestone, 1995; Purkey & Smith, 1983; Sheppard, 1996). Approaching an analysis of school leadership practice through these leadership functions rather than the work of formal or informal leaders is essential when one adopts a distributed leadership perspective.

Macro functions, however, because of their relatively large grain size, limit access to the practice of leadership. To access leadership practice we must identify and analyze the tasks that contribute to the execution of macro functions. For example, understanding a leadership function like "constructing a school vision" involves the identification and analysis of many short-term or *micro* tasks. It is essential to identify these micro tasks because it is through studying the execution of these tasks that we can begin to analyze the *how* as distinct from the *what* of school leadership. The macro function of building norms of collaboration within the school may involve micro tasks such as creating opportunities in the school day for teachers to work together, as well as creating in-service opportunities for teachers (Goldring & Rallis, 1993). Similarly, micro tasks such as classroom observations and distinguishing summative and formative evaluation can help realize the macro functions of supporting teacher development and monitoring instruction (Little & Bird, 1987).

A central objective of the Distributed Leadership Study is to understand the links among the macro functions and the micro tasks of school leadership and to explore their relations to instruction and instructional change. For example, at one of our study sites, Carson elementary school, the school's administration uses standardized test scores and a breakdown of student performance in particular skill areas to focus instructional improvement efforts on specific student learning needs. This analysis of student performance, used for teacher development and monitoring instructional innovation, involves a number of interdependent tasks, including the scheduling and administration of student

tests, analysis and interpretation of test results, identification of instructional needs and priorities based on test data analysis, and dissemination of strategies to address those needs. Each of these leadership tasks can be further broken into other sub-tasks. Leadership functions and micro tasks provide a framework for analyzing practice that enables us to attend to the daily work of school leaders without losing sight of the big picture. Pursuing a task-centered approach, grounded in the functions of leadership within the school, offers a means of accessing the distribution of leadership practice.

Enacting Leadership Tasks

To investigate leadership practice it is necessary to move beyond an analysis of the micro tasks and to explore their enactment. Analyzing leadership practice involves understanding how school leaders define, present, and carry out these micro tasks, exploring how they interact with others in the process. It has to do with what school leaders do, the moves they make, as they execute micro tasks in their daily work. Inattention to work practices is commonplace (Wellman, 1995, cited in Suchman, 1995), especially leadership and management practices in schools (Hallinger & Heck, 1998; Heck & Hallinger, 1999) and other organizations (Eccles & Nohria, 1992). This inattention to leadership practice is surprising considering that *the ways in which* school leaders enact leadership tasks may be what is most important when it comes to influencing what teachers do (Blasé & Kirby, 1993; Lambert, 1995; Smylie & Hart 1999).

To explore task enactment, it is important to distinguish between "espoused theories" of practice or "canonical practice" on the one hand, and "theories in use" or "non-canonical practice" on the other (Arygris & Schon, 1974; Brown & Duguid, 1991). Organizational policies can reflect ideal or desired ways of enacting tasks (espoused theories or canonical practice) rather than what people actually do (theories in use or non-canonical practice). Hence, espoused practices, while often readily accessible, serve as insufficient guides to leadership practice, suggesting that an investigation of leadership practice must involve both observing practice as it unfolds and asking practitioners about the observed practice. For example, Orr (1996)

shows how the espoused theories (training manuals, troubleshooting guides, and decision-trees) of a copy-machine repair organization tell a fundamentally different, more rationally ordered story of work than the emergent, discretionary work of the repair technicians. He found that repair workers supplement espoused practices with a rich, shared cultural library of case stories used to diagnose and resolve problems. Theories of practice that are found in formal accounts, official policies, and job descriptions are often abstracted from day-to-day practice, providing overly rationalized portrayals of ideal practice in which the challenges and uncertainties of unfolding action are smoothed over in the telling (Brown & Duguid, 1991; Weick, 1979). To gain insight on leadership practice, we need to understand a task *as it unfolds* from the perspective and through the "theories in use" of the practitioner. And we need to understand the knowledge, expertise, and skills that the leaders bring to the execution of the task.

A Distributed Perspective on Leading Practice

The conceptual underpinnings for our work suggests that studying the enactment of leadership tasks becomes more complicated if human activity is not simply a function of individual skill and knowledge but stretched over people and the situation. Enacting leadership tasks is often distributed across multiple leaders in a school, including principals, assistant principals, curriculum specialists, reading or Title I teachers, and classroom teachers. Our ongoing research in 13 Chicago elementary schools suggests that the execution of leadership tasks is often distributed among multiple leaders. Recall the efforts by Carson elementary school's administration to use test scores to focus instructional improvement efforts on specific student learning needs, and the various tasks involved in that effort. Consider the tasks of analyzing and interpreting student test results and identifying instructional needs and priorities based on this data analysis. The execution of these tasks involves three leaders at Carson—Ms. Roland (the school counselor), Dr. Johnson (the school principal), and Ms. Brown (the assistant principal), each of whom brings different skills and knowledge. Ms. Roland has substantial knowledge of the exam data and how to

interpret it. Dr. Johnson shares much of this knowledge but also has a rich understanding of the school's overall instructional program, which she has played an integral role in building over the past 5 years. Finally, as a former elementary school teacher with more than 20 years of experience, Ms. Brown brings her knowledge of classroom practice to the task. Working together, these leaders study the "item analysis" for each grade level, identifying language arts and mathematics skills students have difficulty with, and crafting a professional development program designed to help teachers revise their practice and address these needs. The leadership tasks in this example are co-enacted by the three leaders.

The collective properties of the group of leaders working together to enact a particular task, as in the above example, lead to the evolution of a leadership practice that is potentially more than the sum of each individual's practice. Consequently, to understand the knowledge needed for leadership practice in these situations, one has to move beyond an analysis of individual knowledge and consider what these leaders know and do together. Depending on the particular leadership task, school leaders' knowledge and expertise may be best explored at the group or collective level rather than at the individual leader level.

In another school in our study the principal and the language arts coordinator meet with individual teachers each quarter to discuss the teachers' instructional plans in math and language arts. These two leaders each bring different knowledge and skills to these tasks. The principal brings her knowledge of the district's accountability measures around math and literacy and also draws on her background as a math science coordinator at her former school. The language arts coordinator brings her knowledge of literacy content and instructional strategies as well as a familiarity with the reading series she recently ordered for the school. Considering these leaders' collective knowledge enables an understanding of leadership practice that would not have been possible if either leader were considered alone. Leadership practice is co-enacted by these two leaders whose different areas of expertise and knowledge are interdependent in constituting the practice. In this example, the practice of leading is "*stretched over*" (Rogoff,

1990) the work of the two leaders. Hence, the leading practice is "in between" (Salomon & Perkins, 1998) their interdependent practices. The interplay between the practices of multiple leaders is essential to understanding how leadership is stretched over actors.

Even when school leaders work separately but interdependently in pursuit of a common goal, leadership practice can be stretched across the practice of two or more leaders. Consider by way of example the work of teacher evaluation at another school in our study. At this school the principal and assistant principal work together on the task of evaluating instruction, which they see as a critical tool in their efforts to forge instructional change. The assistant principal, who maintains a friendly and supportive relationship with teachers, visits classrooms frequently and engages in formative evaluation by providing regular feedback to teachers on instructional issues. He talks to teachers prior to his observation to determine areas of focus, observes their classroom instruction, and follows up with a post-observation conversation. The principal, on the other hand, functions more as an authority figure having a much more formal relationship with her staff, who refer to her as "Doctor." She engages in summative evaluation, visiting classrooms one to two times per year and making final determinations about the quality of teachers' instructional practices. The assistant principal shares his learning with the principal, and the two use their collective observations to develop a rich understanding of teachers' practices. This separate but interdependent practice allows the principal to avoid making judgements based on the "horse and pony" shows that she feels are an ineffective basis for evaluating teachers. Working separately but interdependently, these two leaders co-construct a practice of leading instructional change through the evaluation of teaching practice. While they have a shared goal, they practice separately but interdependently. This practice of leading instructional change through the teacher evaluation process is stretched across the separate but interdependent work of these two leaders.

Leadership Practice and Leadership Tools

Leadership practice is situated in an environment saturated with artifacts that rep-

resent in reified forms the problem-solving initiatives of previous human action. Artifacts and tools are externalized representations of ideas and intentions used by practitioners in their practice (c.f. Norman, 1988). Rather than treating material artifacts, tools (e.g., curricular frameworks, teacher observation protocols, etc.), and organizational structures as backdrop for leaders' practice, we see them as defining components of that practice. The material situation does not simply "affect" what school leaders do, it is *constitutive of their practices.*

In our research work, we often find it difficult to talk about leadership practice without reference to tools, artifacts, and organizational structures of various sorts. To illuminate how situation might be constitutive of leadership practice consider teacher supervision protocols, which many local school systems mandate for summative evaluations. Understanding the practice of teacher evaluation involves exploring the mediational properties of these evaluation protocols. Consider two very different evaluation protocols. Imagine "Protocol A" consisting of a checklist of generic teaching processes of the sort identified by the "process-product" research tradition, including items such as wait time and teachers' use of praise. In contrast "Protocol B" is subject-matter specific, including, for example, items on mathematics teaching such as "how the classroom task represented doing mathematics," and "how students were required to justify their mathematical ideas." These forms draw observers' attention toward different aspects of the teaching situation, thereby resulting in potentially different kinds of teacher evaluation practice. Leaders may negotiate with forms in order to identify the aspects of practice they see fit to note, but the point still remains that the forms act as a defining element of the observation practice. The form or protocol is not simply an accessory or aide that the leader uses to execute the evaluation task in a priori manner; rather, it is a defining element of the leadership practice.

Similar to designed artifacts, leadership practice is stretched over organizational structures. A distributed perspective presses us to consider organizational structure as more than a vessel for leadership activity and more than accessories that leaders use to execute a particular task using some predetermined strategy or practice. For example, the prevailing "egg-carton" organization of schools isolates teachers in their classrooms (Lortie, 1975). Such individualized and privatized arrangements for teachers' work contribute to defining leadership practice, *not* simply hurdles external to that practice that leaders must overcome in order to enact a particular task using some predetermined practice. In proposing that organizational structures are constitutive of leadership practice we are not arguing that they *determine* that practice. School leaders are another constituting element because they notice, apprehend, and use organizational structures in a variety of ways. While organizational structures constitute school leaders' activity, it is also the case that these structures are created and recreated by the actions of leaders and others who work in schools. For example, in one Chicago elementary school in our study, which had been characterized by limited dialogue among teachers and mostly privatized classroom practice, the principal established breakfast meetings in order to create a forum for teachers to exchange ideas about instruction. Over time this opportunity for dialogue contributed to breaking down the school's "egg-carton" structure, creating new structures that supported peer communication and information sharing, arrangements that in turn contributed to redefining leadership practice at the school. In this case, leaders' practice both redefined and was defined by organizational structure. From a distributed perspective, organizational arrangements are constitutive of leadership practice, not simply ancillary.

Leaders do not work directly on the world; their actions in and on the world are mediated by artifacts, tools, and structures of various sort. Hence, investigations of leadership practice must investigate leaders, to use Jim Wertsch's words, "*acting in conjunction with mediational means*" (1991, p. 33). Leadership practice is a product of the interaction of leaders and tools of various sorts.

Leading Practice and Teaching Practice

While the distributed leadership framework addresses the practice of school leadership in general, our concern here is with leadership for instruction. Hence, if we are to explicate relations between leading prac-tice and instructional practice it is necessary to ground our efforts in a framework for examining instruction. Such a task is complicated by a number of factors. First, classroom instruction is a vast, complex, and multidimensional practice including the questions teachers pose for students, the materials teachers use, the ways students interact with each other and the teacher, and classroom management. Viewing instruction as a multidimensional practice suggests several pathways for thinking about relations between leadership and instructional innovation. School leaders can engage in a variety of instructional leadership tasks that might target students (e.g., parents, discipline), teachers (e.g., evaluation, professional development), and materials (e.g., curriculum development, technological resources). Second, although most elementary teachers do not have well-defined subject-matter specializations and do not work in situations where organizational arrangements (e.g., departmental structures) directly support subject-matter identities, subject matter is an important context for their practice (Stodolsky, 1988). Hence, leaders lead instruction in particular school subjects and the subject matters in such work.

Just as a leadership perspective that focuses on individual capacity is insufficient for understanding practice, instruction is best understood as constituted in the interaction of teacher, students, and material— what Cohen and Ball (1998) term the *instructional unit.* Teachers' intellectual resources (e.g., subject-matter knowledge) influence how they understand and respond to materials and students. Students' experiences, understandings, dispositions, and commitments influence what they make of teacher direction and materials. Materials including books, curricula, as well as the intellectual tasks that structure classroom work mediate teacher and student interactions. Each element is mutually constitutive of instruction. Taking up the issue of instructional improvement, Cohen and Ball argue that "the capacity to produce worthwhile and substantial learning—is a function of the interaction among elements of the instructional unit, not the sole province of any single element" (1998, p. 5). In this view, instructional capacity does not reside only in improving teacher knowledge or better educational materials.

This interactive conceptualization of instruction and instructional capacity has implications for instructional innovation and efforts to lead that innovation. First, while intervening on any one element of the instructional unit can potentially affect other elements, these other elements also mediate such interventions. Thus, new curricular materials can potentially influence teachers and students, but their potential to effect change in instruction is also dependent on the teachers and students who use the materials. Second, efforts to improve instruction that target more interactions among more elements of the instructional unit may be more effective.

Conclusion

In this article we have argued for scholarship that investigates leadership practice; specifically, the practice of leading classroom instruction. We articulated a distributed perspective, grounded in activity theory and distributed cognition, to frame such investigations. In our scheme, leadership practice is not simply a function of an individual leader's ability, skill, charisma, and cognition. While individual leaders and their attributes do matter in constituting leadership practice, they are not all that matters. Other school leaders and followers also matter in that they help define leading practice. Further, the situation surrounding leaders' practice—material artifacts, tools, language, and so forth—is also a constituting element of that practice and not simply an appendage. Leadership practice (both thinking and activity) emerges in and through the interaction of leaders, followers, and situation. Attending to situation as something more than a container for leaders' practice, we argue that sociocultural context is a constitutive element of leadership practice, fundamentally shaping its form. In our distributed view, leadership practice is constituted in the interaction of leaders and their social and material situations.

The distributed leadership perspective developed here has implications for research on school leadership and efforts to improve the practice of leadership. With respect to empirical research on leadership, it offers a theoretically grounded framework for studying day-to-day leadership practice, enabling investigations of practice to go beyond documenting lists of strate-gies that leaders use in their work. In other words, it frames inquiry into leadership activity so that we can move beyond leaders' and teachers' accounts to develop more integrative understandings of leadership as a practice. A distributed perspective also suggests that leadership activity at the level of the school, rather than at the level of an individual leader, is the appropriate unit for studying leadership practice. To study leadership practice we need to study leaders in action with a variety of mediational means. Further, focusing either exclusively on one or more formal leaders or on teacher leaders is unlikely to generate robust insights into school leadership practice.

The distributed perspective also suggests ways of thinking about intervening to change school leadership practice. Rather than proposing to develop, articulate, and disseminate a context-neutral, task-generic template for the moves that leaders should make, it argues for the development of rich theoretical knowledge from practice that is context sensitive and task specific. Some may wonder about the wisdom of developing another theory of leadership considering that the value of leadership theories to practice are in doubt (Holmes & Whynne, 1989; Willower, 1980). But, theory can have very practical application because it can offer new perspectives on familiar activity, thereby enabling reflection and informing action (Hughes & Busch, 1991). In this view, the distributed leadership perspective provides a frame that helps researchers build evocative cases that can be used to help practitioners interpret and think about their ongoing leadership practice. By making the "black box" of school leadership practice more transparent through the generation of rich knowledge about how leaders think and act to change instruction, a distributed perspective can help leaders identify dimensions of their practice, articulate relations among these dimensions, and think about changing their practice. The distributed perspective, and the empirical work that might be generated from research using this frame, offers a tool for helping leaders to think about and reflect on their practice, rather than an abstraction that provides a blueprint for that practice (Argyris & Schon, 1974; Hoy, 1996; Schon, 1983).

Finally, the distributed perspective also suggests that intervening to improve school leadership by focusing exclusively or chiefly on building the knowledge of an individual formal leader in a school may not be the most optimal or most effective use of resources. If expertise is distributed, then the school rather than the individual leader may be the most appropriate unit for thinking about the development of leadership expertise. In addition, reformers might also think about how the tools they design represent expertise for leadership, enabling or constraining leadership activity.

NOTE

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