

How Principals Influence Instructional Practice: Leadership Levers

By

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Abstract

This chapter presents research from the current decade that contributes to an understanding of how principals and teachers share leadership influence in schools, with a particular focus on how that leadership increases the likelihood of teachers making changes or improvements to their instructional practice. Studies are organized into three categories: first, studies that explore the effects shared leadership has on instruction; second, studies that demonstrate how added teacher leader roles influence instructional practice; and third, studies that pursue the benefits and challenges of collaborative inquiry. Key ideas drawn from the research offer insight for high leverage actions principals can take to encourage shared leadership and improved teaching and learning. The chapter concludes with implications for policy and research.

Those who study leadership in schools often set a goal to demonstrate the influence principals have on student learning outcomes. A recent review of the leadership literature lays out the presumed links in the causal chain between administrative action and the achievement of students (Leithwood, Louis, Anderson & Wahlstrom, 2004). Among school related factors, leadership matters a great deal, explaining perhaps a quarter of the variance accounted for by school factors. Leadership effects, thus, are second only to the influence of teachers and teaching. What's more, these influences are most important in schools where students' learning needs are acute (Leithwood et al., 2004).

The prominence of teaching and leading as factors related to student learning underscores the importance of better understanding the relationship of leadership to teaching. One might ask the question, "How do principals influence teaching practices that matter?" Or, from the perspective of a teacher, "How does the principal influence my decision to abandon current practice in favor of something presumed to be better?" Maybe even more important, "How does the principal influence my decisions and those of my teaching colleagues to commit to work together to improve our common instructional practices?"

This chapter seeks to explain the ways in which leadership makes a difference to the quality of instruction by reviewing research published since 2000 (though admittedly data collection might have occurred earlier). K-12 schools entered the new century with increasing demands on school principals to raise student achievement under intense public scrutiny. Partly as a response to escalating pressure and, perhaps, partly as a defense against succumbing to tests as a singularly important measure of successful achievement, an agenda for research on educational leadership prioritized research on how school leaders could

support and promote teaching and learning (Prestine & Nelson, 2005) and encouraged researchers to investigate leadership from perspectives often used to inquire into teaching (Stein & Spillane, 2005). This review is intended to inform readers of progress made along these lines of inquiry. An earlier review of teacher leadership by Smylie, Conley and Marks (2002) pointed to a shift in how teacher leadership is conceived – from individual roles to a collective or organizational perspective. Authors of the review pointed to the criticality of the principal to the performance and outcomes of teacher leadership. The leadership relationships among principals and teachers are the focus of the review presented here.

The context within which school-based educators work is dramatically different than in earlier years, as accountability has shifted from inputs and processes to outcomes (Lugg, Bulkley, Firestone, & Gardner, 2002). In the studies reviewed in this chapter, researchers indicate the ways in which school leaders respond to accountability pressure and support for accountability (e.g., from the district and state), how they frame the school's response to accountability policies, and how they mediate teachers' individual and collective responses. As the 1990s ended, state accountability systems were maturing. States and districts were instilling reward and sanction mechanisms of various sorts, some working to support development of school's capacities, yet some with unintended consequences for derailing capacity building (Marks & Printy, 2002). No Child Left Behind raised the stakes and began to level playing fields, at least within states, for a baseline achievement level and expected rates of improvement.

Seeking to explain reasons why improving student performance outcomes continue to lag, policy makers and practitioners have questioned whether students have opportunities to learn content material that will enable them to succeed on high stakes tests. Over the last five

years or so, most states have instituted state learning standards for core subjects at all grade levels. The logic is that if students are to reach common outcomes, they need to have access to a common curriculum; hence, state standards indicate what students should be taught so that they might learn. Recently, *Education Week* (Common Standards, 2009) reported that, as of the date this chapter was submitted, 48 states are participating in the Common Core State Standards Initiative. First efforts went to produce draft standards for college and career readiness in math and language arts, with K-12 standards in core subjects expected to follow.

Supporters of standards argue that our current educational policies, without national standards, create an educational system that ensures inequality for all students because the learning opportunities our youth experience in schools are, if nothing else, highly variable. (See the March, 2009, issue of *Educational Researcher* for studies with evidence to this point.) With local districts, often schools, choosing how to implement curriculum, learning expectations for students are vastly different from one school to the next and from one classroom to the next in the same school. These patterns were uncovered, as one example, as part of PROM/SE (Promoting Rigorous Outcomes in Mathematics and Science Education), as researchers examined mathematics and science curriculum and teaching practice in 60 school districts and collected data from over 4,100 teachers. In a set of startling reports (PROM/SE, 2008a; 2008b; 2009a; 2009b; 2009c), researchers reveal systematic sources of inequity in terms of the curriculum and teaching methods students encounter and the amount of time they spend with various topics. PROM/SE researchers maintain the importance of instructional leadership at all levels of the educational system to ensure that district intentions and school-level implementation are aligned in promoting coherent instructional programs and consistent enactment of rigorous standards (2009a). Not only does this research support

national standards, per se, it also introduces the idea of standardization: “aligned,” “coherent instructional programs,” and “consistent enactment of rigorous standards.” The topic of standardization weaves through the research studies in this review, as well as accountability and standards.

The focus of this chapter is the school, particularly how principals interact with teachers to ensure quality teaching. Studies have consistently shown that school leadership influences student achievement through teachers or school culture (Hallinger & Heck, 1998; Leithwood et al., 2004; Marzano, Waters & McNulty, 2005). Simply put, the principal supports conditions that allow other school members to work together toward excellence. Figure 1 displays the links in the causal chain that are the focus of this review. All studies recognize that principals and teachers necessarily collaborate to accomplish productive learning environments, quality instruction and high levels of student achievement. In presenting the research, I seek to maintain the centrality of the principal and parse out levers the principal can use to engage others in accomplishing necessary work. The principal – teacher relationship is generally described as a shared approach to leadership. Shared leadership contributes to the organizational capacity of the school and to the nature of professional community, both of which contribute differentially to instruction, and through instruction, to achievement. In this review, I do not pursue studies that demonstrate effects on student achievement, focusing only on studies, or sections of studies, that add to our knowledge base about how leadership affects instruction. This research is organized in three major sections with studies categorized by Principal-Teacher Influence on Instruction, Distributed Leadership, and Collaborative Inquiry. Each section concludes with Key Ideas, or

themes, that emerge from the set of studies reviewed. I conclude the chapter with remarks that highlight leadership levers that school principals might employ to promote instructional excellence in every classroom.

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Principal – Teacher Influence on Instruction

The set of studies detailed in this section examine leadership relationships among principals and teachers and explores the influence of leadership on various elements of the instructional program, including instruction, curriculum, standards, or assessments.

Studies conceptualize the relationships between principals and teachers in various ways. Many researchers target principals as being transformational or concerned with instructional matters. Transformational leaders motivate organizational members by raising their consciousness about the importance of organizational goals and by inspiring them to put their interest in the school before their own self-interests. Transformational leaders also serve as ideal models, provide intellectual stimulation, and offer individual consideration (Bass & Avolio, 1993). School principals are the most noticeable transformational leaders, since they operate at the level of the entire school, but teachers, too, can motivate their colleagues, though in a narrower span of influence (Printy, Marks & Bowers, 2010). Instructional leaders focus on improving the instructional core – that is, what happens in classrooms between teachers and students as they interact with content (Cohen, Raudenbush, & Ball, 2003; City,

Elmore, Fiarman, & Teitel, 2009). In a broad sense, instructional leadership can encompass anything that ultimately supports classroom interactions, including responsibilities often thought of as management rather than leadership, e.g. scheduling, if they then enhance teaching and learning. Increasingly, researchers and practitioners recognize the essential contribution of teachers to instructional leadership.

Marks and Printy (2003) combine these two theoretical approaches to leadership in an integrated form which highlights the transformational influence of principals as critical groundwork for authentically sharing the work of instructional leadership with teachers. *Transformational leadership* tapped the extent to which principals challenged teachers intellectually, invited them to innovate, led change, supported teachers, and shared power with them. *Shared instructional leadership* measured principal and teacher influence on curriculum, instruction, and assessment. Instruction was measured as authentic pedagogy according to an extensive rubric for class observations and evaluating assessments. Authentic pedagogy represents instruction and assessment that asks students to engage in a subject in a deep way, through extended discussions and written assignments, and to make connections between classroom interactions and the real world.

The study found that instructional leadership shared by principal and teacher did not develop unless the principal intentionally sought and fostered teachers' engagement and innovation through transformational behaviors. Hierarchical linear models (HLM) indicated that where *integrated leadership* (i.e., the principal was transformational and shared instructional leadership with teachers) was normative, teachers presented evidence of high quality pedagogy and students performed at high levels on authentic measures of

achievement. Strong collaborative relationships oriented to improvement appear to be a necessary requisite for quality teaching.

Research by Printy (2008) offers further insight into how principals and teachers interact in ways that are consequential for quality instruction. As conceived for this study, both principals and department chairpersons provide formal leadership that encourages teachers to collaborate in community: as *agenda setters*, leaders establish direction and ensure that goals and expectations are met; as *knowledge brokers* leaders allow teachers to focus on their core responsibilities of teaching and learning, encourage innovation, scaffold teacher learning, and provide adequate resources for their work; as *learning motivators*, school leaders develop strong personal relationships with teachers, acknowledge their contributions, and seek their input before making decisions. Both transformational and instructional focus is evident in these leadership roles.

Teacher community, in this study, represents teachers' participation in activities relevant for improvement at both the classroom and school level. Using reports by teachers indicating with whom they interact, how frequently, and around which issues, Printy assigned more value to participation and interaction outside of the high school teachers' subject departments, arguing that these engagements across boundaries provided greater opportunity for teachers to learn new dispositions, skills, and approaches. She found no difference in teachers' engagement in community due to teaching mathematics or science, but she did find that remedial teachers are more likely to interact with other educators than are general or academic teachers. The instructional measure in this study gauged teachers' use of standards-based pedagogy in science and mathematics, i.e., instructional practices advocated by national disciplinary standards. Findings revealed that science teachers reported

greater use of these practices than did mathematics teachers, generally; however, the group of teachers who reported highest use were academic mathematics teachers and the lowest use was reported by remedial teachers.

Although interactions among high school teachers most commonly occurred within their subject departments, teachers forged broad-based relationships and engaged in activities of schoolwide import under the influence of strong principals and department chairs. It appears that teachers' decisions to try or adopt new instructional practices are influenced significantly by their opportunities to learn, either through participation in various educational arenas or interaction with a broad community. Neither departmental leaders nor principals, however, supported teachers' use of standards-based pedagogy. The HLM models for this work offer evidence that principals are quite distant from instructional decisions and that department chairs might even slow down adoption of non-routine teaching practice.

One part of a larger national look at leadership and student performance investigated influences of principal-teacher relationships on three different measures of classroom instructional practice (Wahlstrom & Louis, 2008). The study measured principal-teacher relationships in two ways: a) sharing decision making and b) teachers' trust in the principal. Professional community gauged teacher-teacher relationships. Researchers asked teachers about their classroom practice in three ways: *Standard Contemporary Practice* (problem-based, discovery-centered); *Focused Instruction* (focus on higher order thinking and using specific activities to maintain student engagement); and *Flexible Grouping Practice* (organizing classroom to differentiate instruction by teacher purpose).

Regression analyses showed that principals at all levels of schooling (e.g. elementary, middle, and high) can influence instruction in some way. For Standard Contemporary

Practice, principal's relationship with teachers is not a factor, though professional community is a strong predictor. Results are consistent at all schooling levels. For Focused Instruction, teachers' trust in the principal is significant at the middle school level. Shared leadership is important at the elementary and high school level. For Flexible Grouping Practice, principals do not appear to exert any influence on teacher decisions while professional community is a strong predictor.

Elements of professional community (e.g., reflective dialogue, collective responsibility, deprivatized practice, and shared norms) have differential effects on instructional practice across schooling levels, and I discuss only the high school results due to space limitations. Two domains of teachers' professional community contribute to focused instruction, collective responsibility and shared norms. These findings suggest that carefully paced teaching succeeds in a school where teachers have the opportunity to make collective decisions that impact instruction and where they have a sense of responsibility that goes beyond the boundaries of their own classrooms. Standard contemporary practice is influenced by reflective conversation within teacher communities and by deprivatized practice. Deprivatized practice is the only professional community domain that influences flexible grouping practice. These latter findings perhaps indicate 1) the power of collaborative inquiry to change how teachers teach and 2) the necessity of collaborative inquiry to depart from staid, teacher centered practice.

Based only on teachers' perceptions, the study provides important insight into teachers' instructional decision making. Shared leadership is more important than teachers' trust in their principal, a finding the researchers suggest represents a sense of legitimacy for instructional practices when decisions are broadly shared; it also reinforces the notion that

flattened power relationships (e.g., influence on school level decisions) can positively affect classroom practice. Professional community is generally a strong predictor for all practice variables, in line with the importance community played in Printy's (2008) study. Focused Instruction, reflecting targeted instruction and learning activities, thus, careful use of instructional time, is the only one of the three constructs amenable to the principal's direct influence (the trust variable). Of the three instructional measures, this one contains elements of instruction that might be easiest for the principal to "see" and provide feedback on.

A mixed method study employing surveys of fourth grade teachers explored principals' support for test preparation strategies and the relationship between test prep and other instructional practices, specifically inquiry-oriented instruction and direct instruction (Firestone, Monfils, Camelli, et al., 2002). *Test Preparation Strategies* included a) being rested and ready to go, b) practicing mechanics of testing including pacing, c) turning story problems into calculations, d) writing open-ended math answers, e) using commercial test prep materials, f) giving practice tests, g) using performance-based exercises with regular curriculum, and h) having students use rubrics to grade each other's work. *Inquiry-oriented Instruction* is constructivist or authentic instruction; students have opportunity to explore ideas in subject areas. *Direct Instruction* is conventional teaching; teachers are active and students practice more than explore. The measure for *Principal Leadership* aligns with transformational leadership: sets vision, motivates, offers learning opportunities, and personal support, and taps instructional leadership in a specific way through support for standards and the state testing regimen. The study also incorporated a measure of teacher's feelings of pressure to conform to demands of the state assessment policy.

OLS regression results indicate that principal support of standards is a consistent, significant predictor of using test-preparation, and is significantly more important than feelings of pressure due to the state tests. Principals in this study generally focused on testing and achievement and provided support and encouragement to influence what teachers do. Using test preparation strategies encouraged modest changes toward inquiry-oriented practice such as teaching concepts before computation, using manipulatives, problem-solving, writing about math. An important contextual fact is that the tests in the state were not high-stakes at the time of the study and that teachers generally perceived them as relatively sound. In such situations, having students prepare for a solid, representative test can actually be sound educational practice.

A very recent study takes a different approach in looking at leadership effects on instruction by demonstrating reciprocal effects for the relationship between shared or distributed leadership and school academic capacity (Heck & Hallinger, 2009). *Distributed Leadership* is tapped by measuring the extent to which school leaders: a) make collaborative decisions focusing on educational improvement, b) emphasize school governance that empowers staff and students, encourage commitment, broad participation, and shared accountability for student learning, and c) emphasize participation in efforts to evaluate the school's academic development. *School Academic Capacity* (4 scales) looks at: a) standards emphasis and implementation, b) focused and sustained action on improvement; c) quality of student support, d) professional capacity of the school. The study results (structural equation models) supported reciprocal effects in that the initial level of distributed leadership is related to change in academic capacity over 4 years, and the initial level of academic capacity is related to subsequent change in distributed leadership. The study supports the position that

shared leadership creates changes that are embraced and owned by the teachers who are responsible for implementation in classrooms.

A final study in this section employs surveys of elementary and secondary urban, suburban, and rural schools. The study explores the relationships between principals' knowledge and beliefs about literacy and their instructional leadership as perceived by literacy teachers, confirmed through a path model. The analysis incorporated measures of teachers' perception of their principal's knowledge and beliefs related to literacy and writing. *Knowledge and Belief for Literacy* asks about the extent to which the principal: a) understands and can talk about best practice in writing instruction, b) discourages "canned" writing programs, c) reads and studies journals and research about writing and literacy, and d) does not emphasize state accountability testing at the expense of good writing instruction. A second measure, *Intervention for Literacy Instruction*, asks about the extent to which the principal: a) provides time in the master schedule for writing workshop, b) provides resources and supplies including access to technologies, c) provides time to talk about and exchange ideas about writing, d) communicates with parents and community about the writing process, e) provides quality staff development opportunities focused on writing process instruction, f) writes and celebrates literacy, g) serves as an audience for student writing, h) finds outlets for the publication of student works, and i) encourages writing across the curriculum. Additionally, teachers gave a wholistic perception of the principal's leadership as it relates to writing for inclusion in the analysis.

McGhee and Lew determined that principals who strengthen their knowledge and beliefs by participating in writing projects can act in ways that help teachers do their best work. Those high in knowledge and belief were likewise high in quality actions and

interventions. Open-ended responses from teachers provided additional insight into how principal-teacher relationships matter. Teachers are more inclined to “do writing” if they are encouraged and have opportunities for staff development, and their students receive encouragement and opportunities to share their writing successes. Knowledgeable principals provide an appropriate infrastructure for supporting teachers’ work and they help teachers adapt quickly when needed. Some teachers wrote negatively about principals, particularly those who emphasized test preparation.

A study by Wills and Sandholtz (2009) provides insight into a condition where the principal, though supportive, is fundamentally laissez-faire. In a context where both the principal and the teachers perceived test-based accountability as relatively strong, the principal supported teachers’ authority over curriculum and instruction. He viewed the need to improve student performance on tests as a collaborative effort among teachers and administrators, and he relied on teachers’ expertise and judgment to improve learning. The researchers frame the issue as a tension between *Professional Instructional Practice* or *Standardized Instructional Practice*. As described by researchers, professional practice grants professionals autonomy and freedom of action to adapt their service to particular client needs and circumstances. In schools, professional autonomy enables teachers to make curricular and instructional decisions to meet the diverse needs of students in their classrooms. Standardized practice emphasizes the technical core, particularly the transmission of knowledge, using a set curriculum and specified time allocations. In this view, knowledge is considered to be a fixed body of information that is transferred from the teacher or text to the students.

In the case of the fifth grade social studies teacher who is the subject of Wills and Sandholtz's case study, the principal was not engaged with the teacher at all around social studies instruction, perhaps solely because of his stance toward instruction, but also likely due to the fact that social studies is not a "tested" subject. As described in the study, the teacher felt the impingement of reduced time to social studies because of the heightened attention on literacy and mathematics. Seeking to maximize her teaching time and optimize students' learning, she adopted an elaborated note taking scheme for social studies from which she rarely departed. Researchers conclude that the dilemmas imposed by test-based accountability served to circumscribe the teachers' professional authority, even with full support of the principal.

The study did point out that teachers met in grade level teams to discuss appropriate implementation of new strategies for supporting student learning, but that details of implementation subsequently varied across classrooms based on an individual teacher's assessment of the best approach for his or her own students. Researchers noted that the school's approach to focusing on student learning – and the resulting differentiated instructional approaches – took more professional time planning than if they had used standardized methods. The overall amount of time spent on instruction in language arts and mathematics left little time for other subjects, not only in classrooms, but in collegial decision making.

Key Ideas

- Strong leadership relationships among principals and teachers both enable and result from shared work. Importantly, these relationships are characterized by a clear focus

- on instructional matters and are motivated by transformational influence, generally originating in the principal.
- Insight, guidance, and support from teaching colleagues in professional communities assist teachers in making instructional choices. Teachers' decisions to try or adopt new instructional practices (e.g., reform oriented or constructivist designs) are influenced significantly by their opportunities to learn from other educational colleagues.
 - Principals generally influence instructional decisions indirectly through conditions they construct or enable, such as providing arenas for interaction or collaboration or by emphasizing the importance of standards and legitimizing state accountability testing (which might limit the targets of their influence to tested subjects).
 - The only category of instruction where principals have direct influence is focused instruction, referring to programs where timing is a priority and focused activities predominate.
 - Principals are more likely to support instructional directions when they have knowledge about the initiatives or have had the opportunity to learn about them.
 - Broad based collaboration practiced by the principal, teachers, and others engaged in school improvement benefits from and contributes to a school's academic capacity.
 - Given the current accountability environment, some subjects might be swept off school-wide agendas.

Distributed Leadership

The set of studies discussed in this section have the common characteristic of incorporating formal teacher leader roles as a critical source of instructional leadership. These studies do not specify measures of instructional practice in their analyses as did the studies reviewed earlier; rather they explore overall levels of leadership defined as “instructional” with the assumption that raising the level of leadership will have commensurate benefits in raising the effectiveness of instruction. The leadership theory most frequently applied to this set is distributed leadership, though specification of the theory ranges from very definite to much more general.

For a very specific articulation of distributed leadership, I turn to Spillane (2006). He starts with the general understanding that “leadership refers to activities that are either understood by, or designed by, organizational members to influence the motivation, knowledge, affect, and practice of other organizational members in the service of the organization’s core work” (Spillane, 2005, p. 384). More than influence, the distributed perspective is first and foremost about leadership practice, defined specifically, as a product of the interactions of school leaders, followers, and their situation. Distributed leadership practice is co-performed in interactions of leaders, followers, and aspects of the situation such as tools and routines (Spillane, 2005; 2006; Spillane & Diamond, 2007).

From the Distributed Leadership Study, Spillane and colleagues have generated quite a number of papers exploring leadership in elementary schools. The study included in this review explores the ways in which the practice of leadership varies in elementary schools depending on the school subject, touched on above (Printy, 2008). Spillane applies the construct of social structure to guide his inquiry, looking particularly at the *institutional structure* (positions, routines, administrative attention, resources, and norms) and the

relational structure (social networks). Spillane's findings continue themes identified in the first section of reviews, particularly the indirect influence administrators exert on teachers' instructional choices through structuring routines or arenas for interaction.

In the eight study schools, institutional structures for leadership included roles, such as subject coordinators and lead teachers, and routines such as leadership team meetings, grade level meetings, curricular committee meetings, school improvement planning meetings, and so on. On paper, that is, formally, the distribution of resources for different subjects (e.g., literacy, mathematics, science) appeared similar. The "lived" organization, however was much different; as enacted, the leadership devoted to literacy was much greater relative to other subjects. A comparison of the number of formal leaders and administrators involved in literacy routines showed the priority given to that subject in all schools. The involvement of administrators – signaling more support – was starkly different by subject. For instance, in one school, literacy was the focus of 54% of formal leadership routines while mathematics was discussed in only 14% of routines. Responsibility for leadership taken by regular classroom teachers also differed by subject, with many teachers involved in major roles in literacy meetings, but no evidence of such in mathematics meetings.

The school's normative culture supported the variations described above. Both formal and informal leaders saw literacy as more central to the curriculum since skills in literacy would support learning in other subjects. Leaders also located the school as the location for primary expertise in literacy when they turned outside the school to locate expertise in mathematics. This last point was borne out by analysis of advice networks. Teachers were more likely to seek out others for advice about literacy than about mathematics instruction. Interaction patterns in the literacy networks were denser and the conversations about literacy

were richer, more lively, characterized by dialogue, and ventured into specifics about classroom teaching and student learning than those around mathematics. Notably, school administrators did not figure prominently in subject-specific advice networks.

Mangin (2007), adopting a social-constructivist perspective in line with distributed leadership, provides an exploratory qualitative study that highlights the importance of elementary principals in supporting the work of school-based mathematics instructional coaches. She notes that, while these added formal roles are intended to relieve principals of some instructional leadership responsibility, the fact that teacher leaders often require the backing of their principal to work effectively, may add, unintentionally, another component to the principal's work. Emerging in the context of greater instructional accountability, teacher leader roles (e.g., coach) are intended to improve teaching practice. School's capacity to provide high quality, embedded professional development may be facilitated by the creation of formal, school-based teacher leadership roles that provide ongoing and context specific instructional guidance. In most cases, teachers already in the schools moved into these positions.

The researcher explored principals' *level of knowledge* of the teacher leadership role as: a) familiarity with the role, b) knowledge of role enactment, and c) awareness of the teacher leader's long- and/or short-term goals. She measured principals' *level of interaction* with the teacher leader by a) frequency of interaction, and b) quality of interaction. Highly supportive principals, those with both high levels of knowledge and interaction, revealed two primary methods for supporting instructional coaches. First, they communicated an expectation of instructional improvement, while simultaneously acknowledging the teacher leader as a useful instructional resources. Second, they communicated an expectation that

teachers would interact with the teacher leaders. An additional finding is that district communication about the role can enhance both principals' knowledge of and interaction with coaches. Improved conditions for coaching, Mangin suggests, would result from involving principals in teacher leadership role design, soliciting input in the hiring process, creating arenas for interaction with their supervisors, clarifying the principal's role in implementation, and offering professional development related to teacher leadership.

Clearly, Mangin's findings align with Spillane's in the fact that the position of mathematics coach locates expertise inside the school and this in and of itself might conflict with cultural or normative understandings of elementary teachers. In schools where coaches were more successful, administrators took deliberate steps to institutionalize structures and challenge normative assumptions by clearly communicating expectations to teachers to tap the coaching resource on the path to improvement.

The distributed leadership perspective provides the impetus for examining the *configuration* and *activation* of leadership roles in the context of elementary schools' adoption of comprehensive school reform (CSR) models in a study by Camburn, Rowan and Taylor (2003), though the researchers use the term "distributed" more generally than does Spillane. The CSRs represented in the study included: America's Choice, Accelerated Schools Project, and Success For All. The study sought answers to three basic questions: Do CSRs prompt a greater number of formally designated leadership positions? How are various leadership functions distributed across these roles? Do the patterns of function and dispersal suggest patterns that previous research has shown to bring successful programmatic change and instructional improvement?

Those who study CSRs recognize the ways in which these programs scaffold leadership development by, for example, providing additional opportunities for teachers to take on leadership and using a variety of strategies to communicate expectations for collective work. The models also have different ways of arranging joint work, building deep knowledge of curriculum and teaching, and generally promoting improvement (Camburn et al., 2003; Peurach, forthcoming). Notably, CSR programs also place new demands on existing leaders, particularly on principals. Often instrumental in bringing the program to the school, principals need to monitor the focus on goals, manage human and fiscal resources, and coordinate with the district office in a way supportive of the CSR program.

Key findings of a set of HLM models indicate that leadership in these elementary schools is provided by a relatively small team of individuals (3-7 people), each of whom attends to a *specialized* leadership function. In contrast, principals take a *generalist* leadership position, performing a broader range of functions than other leaders, and at higher levels, thus creating an apparent benefit through overlapping, or redundant, leadership roles. CSRs also activate leadership through professional development, thus, a large amount of development was clearly associated with high levels of instructional leadership. These effects were strongest when programs prompted leaders to reflect on their developing practice. As an activating agent, professional development surpassed the importance of clearly defined role expectations.

Other researchers have looked at leadership effects in CSR schools. Datnow and Castellano (2001), investigated leadership in six SFA schools that had adopted the program for reading two years previously. As conceived by SFA, the principal is the shaper of culture and the manager of reform, while teacher facilitators are responsible for teacher learning and

implementation of the instructional program; both facilitators and principals carry responsibility to interact with the external SFA design teams. SFA takes an aggressive approach to changing teaching and learning for elementary literacy. The highly specified program comes with comprehensive implementation guidelines and all materials. Teachers follow SFA lesson plans with active pacing of activities for 90 minutes.

The researchers found that strong principal support is critical to implementation of the program, though they also found variation in the press for fidelity according to a principal's leadership style. In all schools, SFA provided opportunity for principals to bring sharper focus to teaching and learning. The reform increased principals' activity in classrooms and their knowledge about reading instruction, and more time spent with reading instruction increased credibility of principals with teachers. Yet, responses show that principals relied on facilitators to lead the reform. In these schools, principals often buffered teachers from comments of SFA design/implementation teams, particularly when they were critical. In general, ambiguity about roles was problematic to both principals and teacher facilitators. Also, SFA schools were often out of synch with the district, which caused difficulty particularly around issues of human resources.

These findings are somewhat at odds with findings of Sykes, Printy and Bowers (2007) who spent two years in one small urban district working with six elementary that had been using SFA for six years. The leadership dynamics orchestrated through the SFA program were definitely present, with facilitators taking the lead instructionally. Principals' curricular expertise varied somewhat across the schools, but all (even battle-scarred veterans) called attention to the opportunity for their own learning afforded by the reform in their six schools. It is possible that the extended time in the program and the fact that all the schools

were in the same district (i.e., not solo schools) accounted for the discrepancy with the Datnow and Castellano study.

Most interesting to the researchers, however, was how the schools in this district worked with the SFA design team – in short, as equal partners for improving their instructional program. Admittedly, the first years of implementation were challenging for all school personnel, but after the initial learning curve, teachers began making suggestions for changes and improvement targeted at helping their own students achieve more. During the time of the study, several schools were piloting a new SFA computer product. Researchers also observed an unexpected “learning orientation” on the part of facilitators and principals, and efforts to share new insights across the six district schools. The program also led district officials to expand a number of SFA routines and structures to the middle school and, more modestly, to the high school. Criticized as being rigid and de-professionalizing teachers, the SFA program was indeed structured, but the invitation to teachers to adapt and experiment was evident. Toward the point of instructional improvement, teachers with long tenures in the school noted that they now had instructional repertoires that were successful with their urban students and that had enabled them to nearly eliminate achievement gaps due to race or economic conditions.

Edison Schools, another CSR provider, present a quite different organizational context for studying distributed leadership (Marsh, Hamilton, & Gill, 2008). Edison promotes “capacity, motivation, and opportunity” for a world-class education through two means: a) providing resources and assistance in support of a coherent and comprehensive school design, and b) implementing accountability systems that aim to ensure that the resources and assistance for the design are in place and used as intended. Teacher leaders

have multiple leadership opportunities through career ladders; both principals and teachers can earn bonuses tied to the accountability system. Principals receive multiple, recurring professional learning opportunities to develop instructional leadership, conceptualized as spending substantial time visiting classrooms, analyzing achievement data to diagnose instructional challenges and design interventions, and taking an active role in site-base professional development for teachers.

Rather than designing a total curricular program, Edison's design teams selected instructional programs they viewed as best supported by rigorous research (e.g., Everyday Mathematics in elementary grades) with some supplementary Edison-designed programs. Edison's curriculum goes beyond basic skills in reading and math to include explicit components in writing, social studies, science, art, music, world language, and fitness/health. Edison has sought to balance the need for standardization (considered essential for scaling up the model nationwide) and the need for flexibility (considered essential for promoting buy-in and adaptation to local norms as well as state-level policies.)

Drawing on observation and interview data in 23 Edison schools, Marsh and Hamilton, using instructional leadership ratings and instructional implementation scales designed for the study, found that principals to whom they gave high instructional leadership ratings led schools where teachers earned significantly higher scores on the instructional implementation scales. Other findings suggest that Edison schools with weaker instructional leaders were more likely to subsequently end their contractual relationship with Edison than were schools with strong instructional leaders.

Using the theoretical frame of distributed leadership in much the same way as Spillane, a final study of schools using formal teacher leader roles draws on observation and interview

data in four elementary schools and one high school (School 5). Anderson, Moore, and Sun (2009) describe the schools' instructional expectations and designs as follows:

- *School 1:* Alternative teaching methods are normative. Teacher leaders monitor how teachers implement and provide follow-up support. The principal has expertise in interpretation of assessment data.
- *School 2:* School has adopted targeted programs to meet student needs (e.g. expository writing, early reading), drawing on external experts.
- *School 3:* Teachers practice lesson study to solve problems and improve instruction.
- *School 4:* Teachers only guidance is to implement the curriculum.
- *School 5:* Teachers are encouraged to use more active and interactive teaching strategies focused on higher order learning objectives. Teacher leaders encourage, model and coach teachers. The principal, who has lengthy experience as a teacher, controls professional development resources carefully.

Insights from researchers looking across the five schools point to the importance of expertise as the foundation for principals' instructional leadership and ability to manage the instructional program, calling particular attention to expertise in data use in one case and teaching in another. With expertise, the principal is more centrally involved in modeling, facilitating, monitoring, and supporting, as well as making connections with other experts, including teachers, for coaching or professional development. In the condition of having expertise, principals orient investment and learning toward the end of knowledge creation. Without expertise, principals made connections with external experts, toward the end of knowledge dissemination. A final observation by Anderson, Moore, and Sun is that the

principals were more directive than collaborative when they had greater expertise and when they thought teachers were complacent.

Key Ideas

- Increasing the number of formal roles related to instructional leadership increases the number of school members paying attention to teaching and learning, and might cause informal leaders to engage in rich conversations and in decision making committees. Additional formal roles are the norm with CSRs.
- The presence of added formal leaders places new demands on principals; often principals and instructional facilitators or coaches experience ambiguity about their roles and authority. Professional development appears critical in reducing these ambiguities, equipping principals to support new formal leaders, and positioning schools to capitalize on the additional resources.
- The new demands and the training encourage principals to spend more time in classrooms, adding legitimacy to their own instructional leadership. Whether principals, formal teacher leaders, or informal teacher leaders, instructional leaders are looked to as leaders on the basis of their knowledge and expertise.
- The institutional (rational) and social organization of instructional leadership within any school is likely to vary across subject areas, knowledge of which might enable principals to challenge existing norms or support various subject teachers differentially.
- Schools that configure instructional leadership differently than other schools in their districts might face numerous challenges to implementation due to institutional and social norms.

- Research on leadership practice might reveal significant differences in implementation based on how all the above identified factors interact, over time.

Collaborative Inquiry

A recent article in a publication for principals began with the following: “By promoting teacher learning in collaborative teams, a principal is far more likely to improve student achievement than by focusing on formal teacher evaluation” (Dufour & Marzano, 2009, p. 62). Professional learning communities (PLCs) are highly promoted in educational policy and practice. New books on collaborative inquiry with the goal of improving teaching and learning are appearing with regularity. (Among the best are Boudett, City & Murnane, 2007; City, Elmore, Fiarman & Teitel, 2009; and Militello, Rallis, & Goldring, 2009). The final set of studies in this review takes a look at collaborative inquiry projects in three quite different contexts.

Copland (2003) details the school renewal efforts of a set of schools among 85 in the Bay Area School Reform Collaborative (BASRC). The drivers of BASRC’s theory of change were distributed leadership, continual inquiry into practice, and collective data based decision-making at the school. Analysis of qualitative and quantitative data sources for a set of schools taking the lead in the reform (after four years) suggest that the use of an inquiry process is centrally important to building capacity for school improvement, and a vehicle for developing and distributing leadership. BASRC, through inquiry, sought to develop three important conditions: a) a culture of collaboration, trust, professional learning and accountability; b) strong consensus regarding important problems facing the organization; and c) rich expertise at the school for improving teaching and learning. The Collaborative

developed an inquiry strategy to help schools pose, investigate, and respond to questions about policies and practice, and, as planned, to give all stakeholders a voice in the process. The Cycle of Inquiry, the engine of change, takes school members through stages of inquiry, with the intention of closing achievement gaps: a) Identify problems; b) Refine the focused effort; c) Identify measurable goals; d) Build a consensus workplan; e) Take action; and f) Analyze results and Reflect.

Among the multitude of questions Copland pursued over time were those related to stages of development for inquiry practice. Schools made progress moving through three broad categories. In the *Novice* category, school teams struggled to “do it right” when they were daunted by the process of collecting and analyzing data and did not trust that their efforts would be useful to inform their practice. These schools had no data systems in place. Teachers were anxious about what the data would show about their school or their individual practice. *Intermediate* schools had developed a level of comfort in working through the cycle and were beginning to achieve small wins. Data use was normal practice for decision making, but primarily with quantitative data. Schools ran the danger of becoming complacent or short-circuiting the cycle with a quick fix to the problem. *Advanced* schools understood how the process of inquiry informed both the work they did with students and the resources they needed to achieve their goals, causing them to demand more support. In community, teachers created knowledge at the school site so dependence on outside experts declined, except for targeted technical assistance. Importantly, inquiry cycles were in play at multiple levels in these schools, and classroom cycles connected back to whole-school cycles. As a result, teachers shared promising practices among the entire school community and adapted school structures to better support teachers’ classroom practices. Understanding the power of

inquiry encouraged a level of standard practice, so that individuals looking at a common problem had a common base of experience on which deep dialogue could draw.

Looking to the principal, Copland inquired about what happens when schools intentionally broaden and share leadership and visioning, planning, decision-making and accountability is de-centered away from administrators. He found that principals, along with formal teacher leaders, were *catalysts for change* early in reform work and that the teacher leaders (reform coordinators) carried much of the early workload and remained essential. Principals *protected the vision* by hiring the right people and encouraging those not supportive of the school's direction to leave. With flattened authority relationships, some schools moved to rotating lead teachers (three year terms) instead of principals and others put co-principals in place. Schools that made the most progress and experienced the deepest cultural change often had a long history of reform work: individuals had necessary skills and commitments to students and parents that strengthened their work, and principals encouraged, nourished and reminded others of their shared vision, taking the *lead in supporting inquiry*. Advanced schools also often had broad-based leadership teams that served to frame problems and delegate problem solving to other groups. Key challenges to the reform were leadership turnover and teacher overload.

In comparison with the broad look at inquiry based reform, above, two other studies look more deeply into how communities approach inquiry. Young (2006) explores teachers' data use in grade-level teams (in one of the BASRC schools). She frames the study within the policy logic of using data for instruction that assumes teachers and schools analyze assessment results to investigate their instructional practices. Teaching, then, is an evolving process: teachers become proficient by adjusting routines based on systematic input and

reflection. Young points to the importance of *agenda setting* by school and district administrators and of *grade-level team norms* as being facilitating or hindering factors in teachers' efforts to infuse data analysis into their instructional practice. In brief, pre-existing norms and leadership strength shape whether data conversations occur and at what depth.

Drawing on case studies of four schools in two districts, the researcher studied data use in the context of literacy since federal, state, and local policies insititutionalize diagnostic and formative assessments, thus assuring a data pool from which teachers could draw. A typology of Team Norms identified teachers' orientations to their work along two continua, the first from "story swapping" to "joint work," and the second, from "team discord" to "team cohesion." Teams characterized by team cohesion and joint work feel that members are interdependent and have a sense of mutual accountability to themselves and to students. Another typology for Leadership targeted principals and formal leaders' agenda setting (low to high) and collaboration (low to high). In one case, the researcher identifies how the principal's agenda for data use (e.g., focus on instruction, collaborate, multiple measures, mutual accountability) can positively shape group norms. In another, the principal's agenda (e.g., a directive to use data, but not supported with planned and purposeful activities) distracted from the team's normal collaborative mode of working and felt to teachers like accountability pressure rather than activity that would benefit their classroom practices. The implications for principals, as agenda setters, are to establish a clear rationale and expectations for data use that focuses directly on instructional improvement (not compliance) and to scaffold data use through modeling, structuring time, and providing appropriate resources. This last point entails maintaining data systems and allocating specific responsibilities to individuals who have the skills and the time to carry them out. Some of the

challenges to using data that surfaced in the study include teachers' need for professional development in data literacy, disagreements about what constitutes valid data, fear surrounding data use, and the belief that using data is synonymous with doing the "district's" work. Data use encouraged teachers to make their classroom public; yet teachers could also appropriate the rhetoric of data use to rationalize existing practice. As Young points out, data use is a vehicle for improvement, but the rational system of structuring and formalizing data use runs up against the social system of norms, beliefs, and values.

The final study in this review looked carefully at the development of teachers' inquiry communities across schools in a medium sized urban district (Wood, 2007). A new transformational superintendent inspired the beleaguered district to improve; her action plan included fostering distributed leadership by building strong learning communities in every school. Her interest was in building capacity – which she understood as embedding capacities in teachers' regular work. She made uncompromising demands of her faculty and staff – but she also made clear efforts to institutionalize conditions that would enable the work. She wanted to see “common intellectual standards of practice” so that every school, every teacher, and every student could improve.

The school's professional development partner, the National School Reform Faculty (NSRF), trained significant numbers of the district's administrators and faculty as internal coaches to facilitate communities in their district. The facilitation training gave the educators the means to develop collaboration skills with others to create new cultures where practitioner expertise could contribute to the creation of new knowledge. A primary method for facilitation was to use protocols, which, generally defined, are prescribed procedures that support disciplined professional conversations. Within a short period of time, the protocols

took hold and began appearing in meetings other than learning communities throughout the district (e.g. school faculty meetings) and seemed to improve not only process but also substance of meeting.

The results that Wood reported, again, point to the collision between the rational system and the social system. Although the initiative sought to establish learning communities to mobilize practitioner expertise and build collective responsibility—all for the sake of student learning—most participants did not claim a connection between their collaborative work and student learning. Within the groups, more time was devoted to community- building efforts than to critical inquiry aimed at improving practice. Additionally, while the district made considerable headway institutionalizing structural dimensions of the initiative, efforts to enhance teacher efficacy appeared to be constrained by high-stakes accountability policies requiring compliance. District leadership, though seeking a promising context for change, unwittingly caused conditions that threatened to undermine the initiative.

Key Ideas

- Principals and teachers enact shared leadership through collaborative inquiry, specifically targeting problems and learning together to solve them. The process of inquiry contributes to mutual accountability as hierarchical authority relationships are flattened and lateral relationships are strengthened. Teachers who participate in collaborative inquiry demand more support from principals and the district.
- Broad-based participation in inquiry enables the collective to draw on the expertise represented in the group in constructing new knowledge. Collaborative inquiry

- creates conditions in which all members feel they have a voice and in which all members need to contribute to a consensus work plan for improvement.
- One of the biggest impediments to reform is the collision between the formal, rational organization (e.g. tasks, requirements, regulations, and routines) and the informal, social organization (norms, values, and beliefs. Principals walk a fine line in terms of making sure that expectations are met and pushing ahead on improving performance while acknowledging people's concerns and preferences. Knowledge creation requires trust, safety, and tolerance for error while seeking innovation and taking risks. Principals should avoid taking over teachers' collaborative time in order to accomplish other tasks (e.g., completing paperwork).
 - Principals play a key role in recognizing where expertise is lacking and providing necessary professional development support. Areas of need might be around enacting inquiry, data literacy, and content knowledge.
 - Educational professionals need support in learning to relate to each other in new ways. Tools to guide conversations, such as protocols, enable disciplined professional conversations and improve school climates. Better social relationships, however, must facilitate improvement, not be the end point.
 - Alignment of improvement efforts at embedded levels of the organization is essential for quality teaching. Principals set direction through visioning and establishing the agenda for reform. Collaborative inquiry at the level of teacher teams has a greater payoff when it connects to schoolwide improvement initiatives. Learning across units and levels is facilitated by the principal, who creates arenas or mechanisms for information sharing and knowledge dissemination.

- Standardization of instructional methods facilitates teachers' inquiry into practice.

Common expectations, common methods, and common experience serve as the base for conversations about what works with particular students and what doesn't.

- Principals can minimize the "this too shall pass" response of veteran teachers who have seen programs come and go by taking a long view toward improvement and intentionally connecting current efforts to past reform. Articulating how skills developed in the past help teachers play a role in new efforts is important in developing a sense of program coherence.

Conclusions

The three categories used to organize this research – Principal-Teacher Relationships, Distributed Leadership, and Collaborative Inquiry – highlight the essential, shared nature of leadership that appears to influence the kind and quality of an instructional program (largely teaching, but also focus on standards, curriculum and materials, and assessment). With the exception of instruction where time is a critical component, principals do not directly influence teachers' instructional choices or classroom practices. Research results point to the necessity for principals and teachers to work together to accomplish the school's vision and goals for instruction. Whether or not such instruction is likely to improve student learning is beyond the scope of this chapter, as this set of studies does not explore the relationship between instruction and student performance (with one exception). Drawing from the research reviewed, in the concluding section I point to six levers that leaders can use to mobilize collective attention to improving teaching and learning.

1. **Develop mutually accountable relationships.** Transformational leaders are catalysts for change; they mobilize others to act in new ways as a result of their intellectual influence, their communication of moral urgency for improvement, and their personal consideration for others. Principals who enter teachers' worlds in classrooms seize opportunities for powerful interactions with teachers around instructional concerns. As a result, principals gain new insight as to the challenges teachers face and into the resources they need to get better. By providing such resources, principals communicate their accountability to teachers, thus contributing to the emergence of trust from teachers who know what they can expect their formal leader to support them. In working closely with teachers on issues of instruction, principals develop greater expertise (e.g., using data, planning professional development) and thus increase their warrant for instructional leadership.

Similar dynamics play out among teachers' relationships as well. Teachers who interact with teachers outside of their normal spheres of influence encounter new ideas and insights or new challenges and critique to consider as concerns their instructional practice. Particularly when ensuing conversations relate to the actual conduct of work, teachers begin to seek each other out for information and advice on doing things differently, and presumably, better. Both principals and formal teacher leaders in the role of instructional facilitator, content coach, or department chair create the kinds of conditions in schools that enhance teachers' learning opportunities. As teachers and principals work together on the "work," that is, on teaching, they

count on each other and they begin to demand things of each other as mutual accountability deepens (Wenger, 1998).

Principals attend to mutually accountable relationships with districts, as well, to ensure that instructional priorities at the school house align with district intentions. This condition will maximize the likelihood that the district will not pull teachers away from collective efforts for improvement by demanding compliance oriented activity.

- 2. Focus on building capacity to improve student learning.** Shared, or distributed, leadership might be generally described as a condition in which principals and teacher leaders share common goals and understandings about how to make progress and share the workload in carrying out requisite functions for improvement. Academic capacity can be understood as the degree to which school members can actually implement focused and sustained action for improving teaching and learning. The reciprocal relationship between leaders' shared values and beliefs and the efforts they expend to improve student performance (Heck & Hallinger, 2009) point to reinforcing mechanisms for sustaining reform over time.

As agenda setters, principals set the direction for collaborative work and establish goals for collaboration. They target resources for improvement and signal their expected and appropriate use. For instance, principals provide guidance for how teachers should use data to inquire into and modify their teaching and assessment

practices. Principals also encourage teachers to draw on the assistance of formal teacher leaders. Principals frame policy messages that come into the school, which, in turn, shape the school's response to heightened expectations for student performance. Schools highlighted in the research offer evidence of principals using standards to focus and adjust instruction toward improvement. In another case, test preparation strategies served to enhance inquiry oriented instruction rather than to detract from it.

- 3. Use routines and protocols to reduce ambiguity.** As principals and teachers move into unfamiliar instructional leadership relationships, ambiguities about the proper exercise of their roles naturally result. Principals increasingly enter classrooms as partners in inquiry and teachers step out of classrooms to engage in leadership activity that spans the school. Principals who fail to tread lightly or who can not recognize the proper balance between hierarchical and professional control of the organization risk being able to capitalize on the synergies that result from sharing leadership (Talbert, 2009). The studies reviewed offered ample evidence of stalled improvement activity when the formal, rational organization collides with the social, normative arrangements of teachers' communities.

These challenges demand that educators learn to talk with each other in different ways and to specify the proper sphere of their action and influence. Protocols offer guidance for ways for educators to participate in safe professional conversations when the situation warrants. Routines that regularize processes for accomplishing work that needs to be done repeatedly help to clarify who does what and when. Such

tools can reduce tension and smooth progress when tasks are not routine – generally newly devised to accomplish different outcomes (McBeth, 2008). Protocols and tools can improve school climate dramatically; better relationships, however, must not be the end point. Professional development also proves essential to reducing ambiguity and instilling confidence in leaders of all ranks.

- 4. Recognize when you have expertise and when you need it.** In instructional arenas, the primary warrant for leadership is expertise. Principals will be more successful instructional leaders when they have deep content knowledge in a subject or in a related area such as using data to inform instruction. Principals will also need to arrange for other formal leaders to interact with teachers in subject areas outside of their own expertise. Additionally, principals should understand what kinds of professional development will best scaffold teachers' learning around content (Stein & Nelson, 2003).

Principals also need to recognize teachers' expertise and to showcase teachers by drawing on their capacities for embedded, ongoing professional development. Taking a central role in presenting professional development often activates formal and informal teacher leadership. When sufficient expertise to meet a problem does not reside in the school, principals will have to locate it externally, set expectations for what will ensue after the initial learning, and allot resources to ensure successful implementation.

- 5. Anticipate challenge and address it skillfully.** Teachers' discretion and norms of autonomy are legendary excuses for why teachers don't collaborate in a way that actually improves the instruction that takes place in classrooms every day. The cases reviewed here support the notion that changing practice in order to improve student learning remains a challenge. Teachers' normal sphere of concern is their own classroom, whereas principals are oriented to the school and to the environment. Principals can approach the need to improve from a learning perspective; that is, recognize that teachers need to learn in order to make consequential changes. Particularly when learning has to take place at the level of the collective, there has to be a public acknowledgement of problems and a shared consensus for how to approach the problem. Absent common commitment, instructional practice will be decided by each teacher in each classroom and the instruction at the school level will be characterized by high variability and unequal opportunities for students.
- Principals make a difference when they set a clear agenda, shape a collective vision for instruction in the school, properly support teachers' learning, and provide necessary resources to help teachers make decisions about how to improve the interactions among students and teachers (and content) in classrooms.
- 6. Support knowledge creation.** Principals who take a long view know that school improvement doesn't happen easily or quickly. With this perspective, principals can reduce teacher overload or burnout by connecting current reform efforts to past efforts, often by highlighting dispositions and skills that teachers carry from an earlier

time into current contexts. Rather than importing knowledge, savvy principals will focus on knowledge creation, and they will depend on the redundancy created when others are placed in formal leadership positions to help the school learn. Having a multitude of instructional leaders allows some to take a balcony view and learn from patterns of interaction. As an example, a teacher leader I once observed realized that students had difficulty with estimation because they did not have a chance to learn about it. She facilitated a small change to a daily instructional routine in classes across the district in order to quickly and easily address the deficiency. In the process, she added to the knowledge base of all teachers, perhaps not so much about how to teach estimation, but when. Watching this teacher reinforced how important expertise is as a predictor of developing new knowledge.

An apparent paradox about knowledge creation emerged in the studies reviewed for this chapter. Teachers' agreement to common or standardized practice contributes to instructional conditions that make learning – thus knowledge creation – easier or more likely. When teachers identify common problems and have a common base of experience from which to launch their conversations, they are better able to discern what works or what doesn't in terms of student learning. They can vary specific interventions guided by careful use of assessment data. This, in fact, is a central premise of some CSRs such as SFA. Shared instructional practice, where teaching and student learning results are public, afford educators the opportunity to engage in deep and consequential conversations and learning engagements that are impossible

when teachers make autonomous decisions for their classrooms. (See Gawande, 2006, for a comparable discussion about treating cystic fibrosis.)

Implications for Policy and Research

The policy implication I wish to highlight in this chapter relates to the consequent demands on teacher and principal preparation programs to prepare graduates of their programs to meet the challenges and benefit from ideas that emerged through this review of the literature. Preparation for professional practice as an individual teacher is a necessary but insufficient approach to equipping pre-service teachers to excel as educators in today's schools. Given descriptors of Gen Y teachers as hungry for collaboration and feedback (Miller, 2009), teacher preparation institutions should seize opportunities to prepare and socialize new teachers to interaction and public practice with perhaps less emphasis on individual skill refinement. Building understandings of collective autonomy, shared responsibility, and mutual accountability will pay off in continuous improvement. Once teachers arrive at the schoolhouse, however, principals will play a big role in whether or not the schools welcome them into cultures that benefit from shared leadership. Principals will need to have been exposed to these new orientations and dispositions in their own preparation programs. They will also need requisite structures, resources, and tools in place to further support teacher inquiry and learning.

The more research reveals about conditions that influence teachers' instructional decisions, the more there is to learn. Several studies reviewed here point to differences in how shared leadership influences instruction variably at different levels of schooling. Other studies show variation in sources of leadership influence according to the subject. Explaining

why these differences exist is important for providing guidance for how leaders work with teachers in schools. Shaping more productive social relationships among educators is critical since research continually shows that emergent tensions among individuals can scuttle well-intentioned initiatives. Finally, school educators need to better understand the opportunities for learning and knowledge creation afforded when teachers agree to try common instructional practice as a starting point from which they can then experiment with targeted interventions for students' specific learning needs. There are no easily imported solutions reported here. Learning, innovation, and improvement of the instructional program require long-term, shared engagement.

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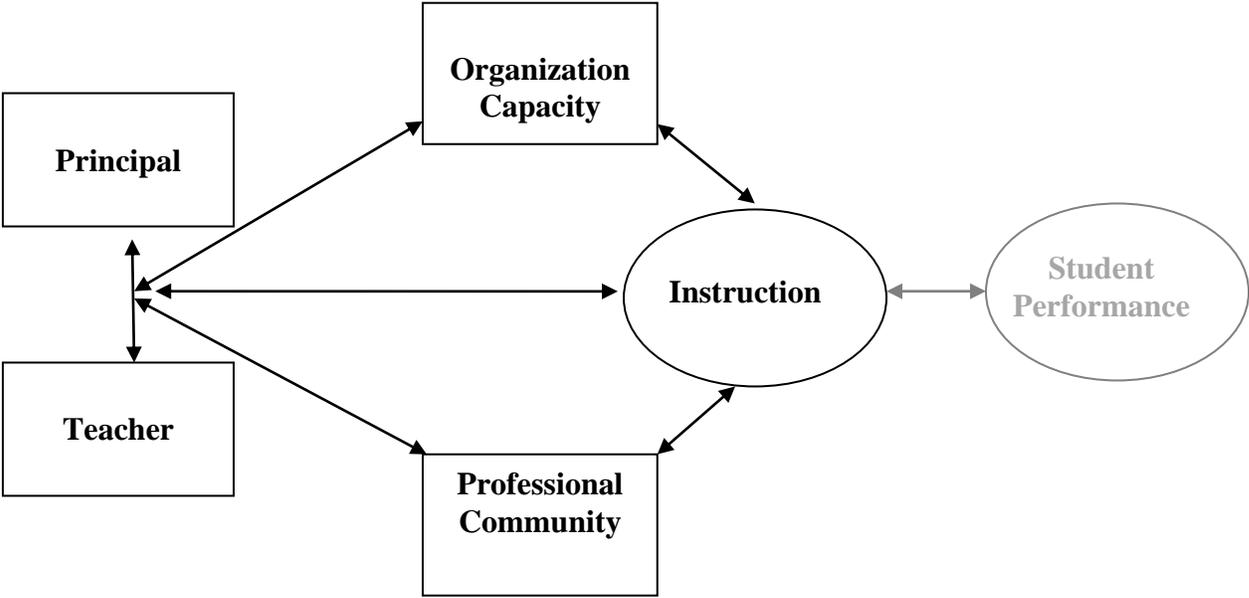


Figure 1: Conceptual Model for Review of Research