teaching quality as a problem of school change^{1}

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INTRODUCTION

No Child Left Behind (NCLB) mandates that all schools have “highly qualified” teachers for the core academic subjects—including English, reading or language arts, math, science, foreign languages, civics and government, arts, history, and geography—by 2005–6. Further it makes available special funds for teacher professional development in schools that fail to meet their improvement goals for two years in a row. Yet, a strategy of staffing all schools with fully credentialed teachers, even when coupled with extra professional development funds, will not be sufficient to turn the tide of poor student performance in our nation’s poorest schools and districts. Research on teaching points to the need for social-normative change in schools serving poor students of color, in particular creating collaborative teacher teams focused on improving student learning—what we call “teacher learning communities.”

Drawing on research regarding teachers’ work and educational reform in U.S. schools since the mid-1980s, we argue that building school-based teacher learning communities is key to improving education quality and equity. We point to the promise, challenges, and strategies entailed in this approach to improving teaching quality and consider how the federal NCLB legislation enables or constrains local systems’ capacity to develop school learning communities. Separate sections focus on:
178  •  Joan E. Talbert and Milbrey W. McLaughlin

- How and why teacher learning community is significant in student outcomes;
- The problem of school culture change;
- Strategies for developing teacher learning communities; and
- Challenges for local systems in the context of NCLB.

Evidence for our analysis of teacher communities and challenges for school change comes from several research projects: an OERI-funded study of 16 California and Michigan high schools (1987–92), an NSF-funded study on reform of math and science departments (1993–96), and evaluation research on the Bay Area School Reform Collaborative (BASRC) supported by the Hewlett Foundation (1996–2005). Evidence for our analysis of community-building practices comes primarily from five years of research on a professional development initiative called Students at the Center (SATC) carried out in Chicago, New York, and Philadelphia with funding from the Dewitt Wallace-Reader’s Digest Funds (1996–2001). Together these research efforts inform our analysis of productive strategies for improving teaching in schools serving poor students of color and our critique of NCLB legislation.

WHY INVEST IN TEACHER LEARNING COMMUNITIES?

School-based teacher learning communities are essential to the significant improvements in teaching quality and student achievement envisioned by NCLB legislation. The kinds of professional learning and change in practice that are required to improve teaching and close student achievement gaps cannot be achieved solely through a teacher credentialing program, nor through typical teacher training venues. Available evidence suggests, however, that teacher learning communities are able to significantly improve teaching and learning for the students. Findings from research using national educational data and field-based studies indicate that when teachers collaborate to improve instruction, they can achieve a range of desirable student outcomes, including engagement in class and performance on standardized tests, and a narrowing of inequality in student achievement. Case studies of teacher communities in both high-school departments and in elementary schools reveal the professional practices and norms that distinguish these communities and that account for their success in improving student outcomes.

*Limits of "Training" for Quality Teaching*

The typical teacher credentialing program provides necessary but insufficient grounding for high-quality, equitable teaching in schools. For one, effective professional practice in teaching and in all fields entails sustained learning both
Teaching Quality as a Problem of School Change

through following the development of “best practices” in the profession and through ongoing use of data and evidence from one’s own practice. These kinds of learning for quality teaching can be encouraged and modeled in credentialing programs, but they are inherently part of professional practice rather than of preparation for practice. Further, teaching is situated in particular schools and classrooms with particular students, and effective practice depends upon teachers’ successful adaptation of instruction to student academic needs, capacities, and learning resources. This kind of professional learning is inherently site-situated and not highly amenable to preservice education. Moreover, teachers’ capacity to utilize their knowledge of effective teaching depends upon conditions of teaching in a particular school and district. Effective teaching practices can be inhibited or supported by the curriculum and assessments, by the organization of classes and teachers’ work, and by professional norms and leadership. In short, quality teaching depends not just upon the employment of well-prepared teachers but also upon their continued and situated learning and conditions of their work in particular schools (Ingersoll 2005, for further discussion).

District in-service workshops typically are inadequate to address teachers’ ongoing learning needs. Staff development sessions usually are tied to special projects or “training” on new curricula. These sessions seldom reflect teachers’ particular learning needs but rather the ideas of curriculum developers, state policymakers, or various education experts about what and how teachers should learn. Externally developed professional development opportunities almost never build on teachers’ knowledge of day-to-day classroom challenges, such as adapting to particular students and to local parent communities.

Research shows that externally driven professional development efforts are likely to be episodic in their consequences for practice or education reform. They tend to be pasted onto existing instructional and institutional arrangements with little attention to issues of sustaining improvement or deepening practice (Tyack and Cuban 1996). Further, education reform initiatives and the teacher development resources that accompany them can promote incoherence in both school and district instructional offerings when they derive from different instructional philosophies, use diverse and not always compatible instructional materials, or in other ways represent different approaches to teachers’ classroom work (Newmann et al. 1996). Observers of school reform note that schools and districts often adopt many unconnected special projects or fashionable reforms in response to attractive funding opportunities, resulting in a succession of superficial and short-lived initiatives that do little to support and sustain teacher learning and improvement.

A more fundamental issue concerns the limited effectiveness of such professional development efforts. Although they can provide resources for teacher learning, they are unlikely to result in improved teaching quality without opportunities for teachers to situate new knowledge and practices in their own
classrooms or school contexts. Moreover, the external resources are not enough to develop professionalism in teaching and accountability for all students' learning. As elaborated later, these goals require change in the professional culture of school-based teacher communities (Louis and Marks 1998; McLaughlin and Talbert 2006). Improved student learning depends upon the kinds of professional learning and changed practice that come from teachers working together to improve instruction for the students in their school.

**Teacher Community Effects on Student Outcomes**

Statistical support for the claim that school-based professional learning communities improve teaching and learning includes: (1) positive effects of teacher learning community measures on student achievement for both regional and national school samples; (2) strong correlations of teacher learning community indicators with teaching practices that predict student learning gains; and (3) strong correlations of teacher learning community and students' experiences of their school and class.

Using data from the National Longitudinal Study of 1988 (NELS: 88), 3 Valerie Lee and colleagues conducted three studies that consistently showed positive teacher community effects on student achievement gains (Lee and Smith 1995, 1996; Lee, Smith, and Croninger 1997). Each study used multilevel modeling techniques designed to estimate professional community and other school effects on student outcomes. All three studies support the hypothesis that students do better academically in a school where their teachers take collective responsibility for the success of all students. Further, these analyses showed that students' socioeconomic status had less effect on their achievement gains in schools with collaborative teacher communities; in other words, academic performance was less strongly related to social class origins than is typically the case in American schools.

Another study using the NELS: 88 database, conducted by Brian Rowan and colleagues (Rowan, Chiang, and Miller 1997), analyzed effects of teachers' ability, motivation, and work situation on students' achievement. This research found that each factor had an independent effect, with teacher control over instructional decisions and common planning time standing out as school predictors. Further, these school conditions correlate significantly with teacher expectations and other classroom instructional variables that predict student achievement.

Research on high-school professional communities finds significant variation in the strength and character of teacher community across subject departments, and these differences are associated with differential student performance in subjects. For example, our analysis of teacher survey data on professional relations and norms for 16 California and Michigan high-schools showed more variation within high-schools than between them (Talbert and McLaughlin 1994). In a
study of students in four case study schools in this sample, we found that student survey ratings of their effort in class and efficacy in the subject were predicted by their teachers' survey ratings of teacher community in the subject department. Using the Longitudinal Study of Youth (LSAY) national database, a national research program that started with 7th graders in 1987, other researchers studied effects of teacher professional community on a range of student academic outcomes in math and science departments. (Yasumoto, Uekawa, and Bidwell 2001). They found that several conditions describing teachers' "professional discussion networks"—communication density, intensity of instructional practice norms, and consistency of practice—intensified the positive statistical effects of good teaching practices on student outcomes. The study provides statistical evidence that teacher learning communities develop knowledge of practice that is beyond the sum of competent and innovative teachers.

Convincing evidence for the claim that teacher learning communities boost student learning also comes from the research of Fred Newmann et al. (1996). In a study from the early 1990s using a national sample of restructured high-schools, they developed elaborate survey and field measures of "authentic instruction," grounded in learning theory, in order to assess effects of instruction on student learning. They also captured teaching norms and teacher interaction through teacher survey measures of "professional community" (shared purpose, collaborative activity in teaching, collective focus on student learning, deprivatized practice, and reflective dialogue). Data for the 24 high-schools in their sample show strong correlations between measures of authentic instruction and student achievement and between professional community and authentic instruction. These relationships show clear connections between how teachers work together and the learning opportunities they provide for their students (see also Louis and Marks 1998).

Our local analysis of teacher community effects on student achievement gains for a sample of schools participating in the Bay Area School Reform Collaborative (BASRC) showed statistically significant effects of a measure of school inquiry practices (Center for Research on the Context of Teaching 2002). Students did better in schools where teachers examined student achievement data together and collaborated to develop and assess interventions. Survey data for a small case study sample of nine schools showed strong correlations between: (1) teacher ratings of collegial inquiry in the school; and (2) student ratings of teacher-student respect, their active role in class, and their academic self-efficacy. Although this sample was small, these data capture the meaning for students of teachers' professionalism and their collaboration to improve teaching.

Available evidence supports the claim that school-based teacher learning communities—school faculties or groups of teachers at a grade level or in a subject department that collaborate to improve instruction for their students—achieve higher quality teaching and learning than is typical in U.S. schools.
How Teacher Learning Communities Improve Teaching Quality

Teacher learning communities enhance students’ outcomes because they provide effective learning environments for teachers, organize instruction to provide equitable student learning opportunities, and nurture and sustain a professional service ethic and mutual accountability for all students’ success. These characteristics were identified through comparative analysis of different kinds of professional communities that we found in schools; learning communities were distinguished from typical weak communities and strong traditional communities (for discussion of contrasting community types see McLaughlin and Talbert 2001).

In professional learning communities colleagues support each other’s learning and together create new knowledge of instructional practices that are effective with their students. Their daily practice embodies standards for effective professional development: (1) focus on instruction and student learning, specific to the settings in which they teach; (2) sustained and continuous, rather than episodic; (3) opportunities for teachers to collaborate with colleagues inside and outside the school; and (4) opportunities for teachers to influence what and how they learn (Hawley and Valli 1999).

Where these conditions for collaborative teachers’ work in schools are established, teacher communities develop practices and norms that depart radically from traditional school cultures (McLaughlin and Talbert 2001, 2006, chapter 2). They share evidence from their classroom instruction and improvement efforts to guide changes in instruction to fit the learning needs of particular students in their school. This kind of knowledge development is inherently a school-based learning agenda, since student mix in terms of social class, race, language, immigration status, and academic skills is highly variable across schools in the nation. At the secondary level, these teacher communities also reorganize the curriculum and instruction to increase student access to advanced courses in a subject area (see Gutierrez 1996, for discussion of how a math department “organizes for advancement”).

Beyond developing and using knowledge to improve instruction, teacher learning communities stand out for the organizational conditions they establish to support and sustain their collaboration and equitable student learning opportunities. In the school-based learning communities we studied, new teacher induction is an important focus for ensuring quality instruction and for sustaining the professional culture of improvement. For example, a math department we studied organizes teaching assignments so that each new teacher is paired with an experienced teacher so that they can coplan course lessons and form a mentoring relationship. Such teacher communities challenge the common practice of assigning new teachers to lowest-achieving students; by rotating course assignments among the faculty they ensure that students have equitable learning opportunities and teachers learn to teach across the curriculum.
Finally, teacher learning communities establish collegial relationships and norms that engender trust, collaboration, and shared accountability for all students' learning. Teachers in these site-based communities support one another in challenging education conventions that undermine the learning opportunities of some students. For example, math teacher communities that detrack their curriculum are often under attack from parents who perceive this as illegitimate and costly to students' college access; teachers' shared commitments and the moral support provided by the professional community are important in their ability to withstand pressures toward the educational status quo. Collegial support and ongoing learning opportunities for teachers in these communities develop and sustain their commitment to the teaching profession.

Although cumulative evidence from field studies and national survey research points to the educational benefits for students of teacher collaboration on instructional improvement, this mode of professional practice is far from the reality in most American schools. And school-based learning communities usually are not the focus of teacher professional development or of various efforts undertaken to reform the nation's schools. Sociological research on teachers' work and education reform initiatives reveals the kinds of radical change in school culture and teachers' professional practice that are entailed in developing teacher learning communities.

THE PROBLEM OF SCHOOL CULTURE CHANGE

In order to develop teacher learning communities it is necessary to reculture schools—change their technical culture, organizational practices, professional relations, and norms. Teachers' instructional routines, the work organization, and collegial relations in typical U.S. schools contrast significantly with those found in teacher learning communities (McLaughlin and Talbert 2001, 2006). Developing learning communities in schools involves confronting prevalent beliefs that teaching is a matter of transmitting knowledge and that some students will not succeed; reorganizing teachers' work so as not to reward experienced teachers with preferred teaching assignments and to create time for collaboration; and challenging the privacy norm that inhibits teacher knowledge sharing and collaboration to improve instruction for all students. Schools with vibrant teacher learning communities replace the constraints of convention with norms and practices that establish teachers' shared commitment and collaboration to continually improve all students' success.

Technical Challenges for Change

Instruction in most schools follows conventions of teaching—text-focused and teacher-directed, with students working alone on routine assignments and graded
"on the curve." Absent conversations about instruction and leadership for improvement, teachers in such professional communities come to understand little about the principles and evidence that ground national and state standards for teaching and learning. They persist with practices that current research evidence deems ineffective. Many teachers water down the curriculum for students with weak academic skills in a well-intentioned attempt to make their class fun or comfortable. In weak professional communities, teachers who work to engage all their students in challenging subject content are the exception.

When well-prepared teachers try alone to change instruction to better serve their students, they often become discouraged and feel constrained by school or department culture and policies. In one of the schools we studied, an innovative social studies teacher who was regarded by administrators to be one of the school's most effective teachers became bored with his teaching career in a weak department and bitter over the fact that he alone was working to improve the quality of student learning. After eight years of teaching, he was planning to change careers rather than to lower his expectations for his students' learning outcomes. The tendency for teachers to leave teaching when they work in a weak school community is captured by survey data showing a strong ($r = .47$) relationship between the strength of teachers' professional community and their commitments to the profession (Talbert and McLaughlin 1994).

NCLB's emphasis on the adoption of research-based curricula and use of standardized tests to measure of student learning may enforce instructional traditions rather than encourage innovation. Teachers pressed to implement a curriculum with fidelity and to coach students for tests may see little room or need to work with colleagues to improve instruction.

**Organizational Challenges for Change**

One challenge for community building in high schools is the common practice in subject departments of tracking teachers according to their subject mastery (Finley 1984; Page 1991; Talbert and Ennis 1990). In typical professional communities, teachers see their own learning in sequential terms, as a series of university courses and advanced degrees. Similarly, they have a hierarchical view of teacher knowledge and expertise for subject instruction that justifies tracking teachers on the basis of their credentials. This practice exacerbates inequalities in student performance, since low-performing students are matched with teachers least prepared to accelerate their content learning. Further, the specialization and stratification of teachers' assignments undermines teacher collaboration on instruction and mutual accountability for student learning and thus the development of teacher learning community.

Lowest-performing schools face a special challenge in building teacher learning communities that come from district patterns of teacher assignment. Typically
new and least-prepared teachers are concentrated in a district’s least desirable schools because collective bargaining agreements usually allow teachers access to job openings on the basis of their seniority. There is no solid evidence that a “critical mass” of well-prepared and experienced teachers is essential to learning communities, yet studies of these communities document the key role that highly skilled teachers play in the induction of new teachers. Conversely, schools where all or most teachers are weak in subject preparation and experience show least progress on change (CRC 2002). How many or what proportion of expert teachers are needed in a school, department, or grade-level teacher community is not clear, but it is likely that some threshold presence of skilled teachers is needed to support the community’s learning and instructional improvement. Although NCLB legislation pressures local systems to establish equity of teacher credentials across schools, it only begins to address the patterns of inequality associated with teacher recruitment and placement.

A related problem of high teacher turnover in the hard-to-staff schools presents a different kind of problem for teacher community development, namely that instability undermines social cohesion and sustained teacher collaboration. Statistical analysis of teacher survey data in a 100-school district shows a strong positive effect of mean teacher experience on teacher community strength (.40), with student poverty level controlled; in this district student poverty was correlated -.66 with teacher experience (CRC 2004).

Other organizational challenges for change concern limited opportunity for teacher collaboration in normal school schedules. The importance of organization resources of time and place for teacher collaboration on instruction has been documented repeatedly in research on school communities, yet school and district schedules generally allocate very limited time for teachers to work together on instruction; what time is made available is usually very early in the day or once a week after school. The considerable pressure that NCLB places on lowest-performing schools to raise test scores is likely to shift their use of time further away from teacher collaboration, as after-school tutoring and test preparation take more time. In effect, the federal legislation may have the unanticipated consequence of further undermining these schools’ capacity to improve educational outcomes for their students.

Social-Normative Challenges for Change

A tradition of autonomy in teaching works against the formation of teacher learning community in schools. When instruction is considered private practice, teachers resist the idea of collaborating with colleagues on instruction. In general, teachers avoid even discussing teaching and student learning, let alone working together on instructional problems or opening their classrooms to colleague observation and feedback (Little 1982; Lortie 1975; Smylie 1994). The vision
of teacher learning communities as sites for improving instruction and student outcomes goes against norms of collegial relations in U.S. schools. School change efforts thus must include strategies to reverse privacy norms in teaching.

Further, school communities sometimes lack a strong service ethic or commitment to serving all of their students, which is a core organizing principle of teacher learning communities. Even when accountability systems press schools to close achievement gaps, teachers sometimes believe that their lowest-achieving students are not able to meet educational standards. School change thus entails changing teachers' beliefs about students' abilities to learn and about the capacity for high-quality instruction to make a difference in the performance of all students.

Public beliefs about effective education often work to enforce traditions and thus to discourage teachers from joining with colleagues to adapt instruction to students and to design curriculum to achieve greater equity in student learning opportunities. Among the social-normative challenges for changing school professional culture then is addressing parent conceptions of teaching quality and equity.

In emphasizing teacher credentials as the standard for judging teaching quality, NCLB may enforce autonomy norms within the teaching profession and discourage the development of a faculty's collective responsibility for student achievement. It signals to the profession and to the public that quality teaching is a matter of individual preparation and expertise, rather than an organizational outcome rooted in collaboration and mutual accountability.

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Research on the challenges and contexts of educational improvement points to conditions that enable or constrain the development of teacher learning communities in schools, but evidence on how they develop is scant. Context resources for teacher learning communities such as grade-level standards for subject instruction, on-site professional development time, and external professional networks—are insufficient for their development because they do not bring about change in the culture of teaching. Nor does changing the structure of schools or mandating teacher collaboration create learning communities. In a national study of restructured schools, Fred Newmann et al. (1996) concluded that a school's culture determined effects of structural change on instructional practices, rather than the reverse. In other words, while existing teacher learning communities made good use of structural changes that supported their collaborative work, restructuring of schools did not change the culture of teaching.

DEVELOPING TEACHER LEARNING COMMUNITIES

Changing the culture of American schools toward learning communities requires skilled support of teacher collaboration and learning and strategic administrative
Teaching Quality as a Problem of School Change  •  187

leadership. Our research on reform initiatives to create school learning communities and literature on community building in business organizations suggest two broad propositions about the processes of changing school culture:

- A teacher community of practice develops through joint work that is guided by a facilitator who creates an effective learning environment for teachers; and
- Teacher learning communities develop, spread, and survive where school administrators and leaders support the culture change process.

The first proposition concerns technical facets of developing a teacher learning community—the “curriculum” and practices for high-quality learning in teacher groups; the second pertains to organizational and normative facets of teacher community building.

Engaging Teachers in Joint Work and Supporting Their Learning

In all instances of significant school culture change that we found, a facilitator from within or outside the school was involved in developing teacher learning community. This finding is consistent with evidence from research in business organizations that a skilled “community coordinator” is key to developing a community of practice (Wenger, McDermott, and Snyder 2003, p. 80). This individual’s role centers on organizing the group’s work (that is, determining the focus and boundaries for joint work) and establishing an effective learning environment for the group.

Getting teachers started on a course of collaborating to improve student learning takes a skilled leader or facilitator to create the impetus and focus of joint work. Because traditions and conditions of teaching push toward autonomy, teachers need a compelling reason to begin collaborating to improve instruction. They also need to learn how to work with colleagues on a problem of instruction and how this work helps them be successful with their students. A skilled facilitator—from inside the school, from the district office, or from an outside teacher educator or reform organization—catalyzes and guides these change and learning processes.

Entry for Joint Work Community-building facilitators that we studied used several different entry points and curricula for developing teacher communities of practice. Each focused teachers’ joint work on a particular facet of instruction—assessment data, individual students, and subject discipline. Each entry point offers particular opportunities and challenge for changing a school’s professional culture, each requires particular kinds of facilitator knowledge and skills, and each is more or less compatible with NCLB legislation.
Using student assessment data as a vehicle for community building is a promising start toward teacher conversations about, and collaboration on, improving teaching and learning. With skilled facilitation, teachers work together at the grade level, subject department, or school levels to assess student performance in various content areas and analyze data to identify areas that need enhanced instruction. Typically, they examine patterns associated with student groups that differ in race and language status and those that are associated with strands of the curriculum or outcome standards. Through this process, teachers identify students and content areas for interventions designed to improve learning outcomes and close achievement gaps. As the community matures, teachers learn to improve their instruction through cycles of inquiry and collaboration on interventions.

Building a teacher learning community around the use of student assessment data entails developing valid measures of student learning and providing technical training in data analysis and interpretation. A facilitator capable of leading teachers’ joint work with student assessment data therefore is one who is knowledgeable about assessing subject-specific learning outcomes and is skilled in data analysis. Our research on BASRC’s efforts to promote evidence-based practice across many schools and districts suggests further that a successful facilitator would have authority in the district and be a reputable educator in the region, because he or she must play a liaison role with the district assessment office and broker teacher groups’ access to professional knowledge and networks outside the school.

This entry focus is encouraged by NCLB legislation and state accountability systems that press school administrators and teachers to use data on student learning to evaluate and improve instruction. Yet, teachers generally have little preparation or experience in analyzing student assessment data for the purposes of making instructional decisions, and many oppose the use of standardized test data for accountability (Ingram, Seashore Louis, and Schroeder 2004). Thus, although context conditions are ripe for this community building tack, teachers’ readiness for this work is generally quite weak.

Using individual students as entry focuses teacher’s joint work on intense study of individual children and their academic and personal development. Looking at an individual student’s work in a teacher group can be a particularly powerful vehicle for developing shared understandings and trust for collaboration. Because the focus is on a particular student’s learning, rather than directly on teaching, it offers teachers a safe entry to discourse on instruction. Also, it builds upon their shared professional commitments to serving their students and connects with their interest in particular students in their classroom. By analyzing student work with colleagues, teachers deepen their understanding of individual learners in their classroom and how to better support their growth. Conversations around student learners may open the door to new collegial discussions about norms and ethics of teaching. In particular, they bring into focus the whole child and
the learning needs of students who struggle most in traditional school settings. This work thus can leverage a stronger service ethic in the school community and strengthen teachers' commitments to serving all students.

In order to effectively build teacher learning community around this kind of joint work, a facilitator must have considerable experience using one or more protocols for the study of a child in order to guide the conversation in fruitful directions and anticipate habits of mind or dynamics that can undermine the group's learning and progress. Our research on this entry strategy suggests that facilitators specialize in using one or another protocol according to preferences based on the power of their prior learning experiences in teacher groups.

NCLB's emphasis on standardized tests and student achievement in the core academic subjects—over the holistic assessment and broad view of individual development featured in this kind of teacher community work—discourages this approach to community building. Nevertheless, looking at individual students' work is a popular strategy for developing a teacher learning community and over recent decades educators have developed a wide variety of protocols to support the work (MacDonald et al. 2003). Protocols focus teachers' inquiry and discourse on individual students and thus develop their clinical diagnostic skills, much as physicians' joint consultation around a patient case helps them to make professional judgments about care and develop shared standards of practice.

Using a subject discipline as entry to community building engages teachers in learning content more deeply, and promotes understanding of how to better support student learning in the subject. Typically teacher groups are formed at grade levels in elementary schools or in subject departments in secondary schools; a facilitator guides the group's learning around particular content areas or curriculum topics. The joint work includes such practices as developing and teaching a lesson and sharing observations, using a standards-based rubric to assess student work and discuss ratings, analyzing student misconceptions in a curricular topic. Through participation in a teacher community focused on subject instruction, teachers learn content more deeply and learn how to better see and guide students' understanding in the discipline. They also experience how knowledge develops in work with colleagues on content instruction and come to see themselves as members of subject professional communities within and beyond their school (see Stein, Silver, and Smith 1998, on identity forming processes in mathematics teaching).

Facilitators effective in developing teacher communities of practice around subject disciplines thus need both deep content knowledge and pedagogical content knowledge and skills for working with both students and teachers. Typically they have extensive experience as learners and leaders in teacher groups; for example, as participants and leaders in the summer institutes of the National Writing Project or other organizations with a strong track record of developing teachers' leadership for educational improvement in a discipline.
Since facilitation around subject instruction moves between the classroom and teacher group sessions, these facilitators also need to develop skills in guiding teachers’ learning in the classroom.

Although NCLB’s focus on subject matter knowledge as the crux of teacher quality supports a subject focus for community building, investment in school-based learning is discouraged by the legislation’s emphasis on credentials as the criteria of teachers’ content knowledge and the university as locus for learning. At the same time, however, national networks of subject-rooted professional development organizations, such as the National Writing Project, university-based math projects, and subject professional associations that focus on the development of programs and teacher leadership for school-based professional development, comprise resources that support this strategy.

Regardless of which facet of instruction is used to begin teacher collaboration in a school, the quality of leadership for learning and change is critical to the success of this strategy. In all cases we studied where teacher learning communities developed through joint work, the facilitator created and sustained an effective learning environment for teachers.

Quality of Teacher Learning Environments  Skilled teacher community facilitators guide the group’s learning and improvement practices in ways that reflect research-based principles of effective learning environments (Bransford, Brown, and Cockings 1999). Like an effective classroom teacher, they establish a learning environment for the teacher group that is:

- Knowledge-centered, focusing learners on problems and practices designed to deepen their conceptual knowledge and skills in a content domain;
- Learner-centered, attending to individual learners’ interests, cultural backgrounds, prior knowledge and skills;
- Assessment-centered, creating opportunities for learners to get ongoing feedback on their performance to guide their learning; and
- Community-centered, involving peers in joint work that draws upon each person’s knowledge and skills to build new understandings and practices.

Regardless of the facet of classroom instruction they use to focus teachers’ joint work—subject discipline, students, or assessments—skilled facilitators nurture these conditions for learning. Those we observed brought to their work with school communities not only protocols and other tools to scaffold teachers’ joint work, but also a deep understanding of, and experience in guiding learning in groups.

Case studies of facilitators’ work with teacher groups inside and outside the
school setting and with individual teachers in their classrooms revealed ways in which these principles work to guide teacher learning and improved instructional quality. For example, a math facilitator's work with teachers was learner-centered, in that her knowledge of each teacher as learner guided her decisions about how to facilitate change in math instruction. She established an assessment-centered learning environment for teachers by providing feedback on individual and team work and prompting teachers' reflection on instruction with tools that scaffolded ongoing self-assessment in math instruction (McLaughlin and Talbert 2006, for further evidence).

NCLB legislation, on the surface, appears out of sync with quality standards for teacher learning environments. It implies a view of teaching as curriculum implementation—transmitting a research-based program and testing students for prescribed content knowledge—and learning as mastering curriculum content. Thus, teacher preparation and professional development (earmarked by NCLB for teachers in low-performing schools) would presumably focus on teacher mastery of curricula to be taught and tests to be administered. This view of what teachers need to learn for quality instruction does not warrant the kind of in-depth, ongoing learning in teacher communities that high-quality facilitators support. District and school administrators thus need to promote high standards for professional development and invest resources in those who can provide it for their teachers and schools.

Although well-designed group activities and protocol are necessary to spur change in teaching culture toward community practice, they are not sufficient. In our research we found teacher communities where practice was procedural and learning was shallow—what Chris Argyris (1982) termed "single loop learning," even when the group had skilled guidance in using a particular protocol. Absent strong leadership for school culture change, it appears that conventional norms of teaching prevail and joint work remains on the margins of professional practice.

**Leading School Culture Change**

Community building is not just about creating or defining new work for teachers to do collaboratively and establishing principles for learning in the community, that is, technical conditions and processes of change. It is also about addressing the organizational and normative challenges for change highlighted earlier.

Because of their positional authority, school administrators set the stage for starting and sustaining the community development process. They can use organizational resources and persuasion to leverage teachers' initial involvement in facilitated work to build communities of practice. And they can broker resources from within and outside the system. School administrators who made a difference for teacher learning community development in schools we
followed, for example: created collaboration time and defined how it would be used; assigned teachers to courses and classes to achieve students’ equitable access to high-quality instruction; used base budget slack and categorical funds to support teacher community work and innovation; identified and hired skilled teacher educators and facilitators outside the system; invested in developing a wide range of student assessment data and supported its use by teachers and teacher teams to improve their instruction; and supported teachers’ participation in local, state, and national professional networks and high-quality off-site professional development.

In leading school culture change, administrators and other school leaders address norms of professional practice in the school—and in subcommunities of the school defined by subject departments or interdisciplinary learning communities (SLCs) in high schools. They create focus, vehicles, and legitimacy for teachers to depart from private classroom practice and support them to engage conflicts between conventional routines and innovations to improve educational quality and equity. Research and reflection on effective school-change practice has identified several stages of administrative leadership entailed in moving from typical schools to school learning communities (CRC 2002; McLaughlin and Talbert 2006; Mohr and Dichter 2001). School leaders play particular roles in supporting faculty transitions from what we call “novice” to “intermediate” to “advanced” stages of learning community. During the “novice stage” of community development, change focuses on building social trust and norms for group decision making. At the “intermediate stage,” change centers on sustaining collaborative work when the pay-offs are uncertain and the faculty fears that its work is unproductive. Once an advanced or mature school learning community has developed, the principal’s role shifts to sustaining the community and its work. Effective leadership practices address the challenges for change at each stage (for further analysis see).

Many schools involved in initiatives that aim to develop a teacher learning community do not move from the novice to the intermediate stage, and most do not transition to an advanced stage after several years (McLaughlin and Mitra 2003). They become stuck at a stage of collaborative work that falls short of teacher learning community practice. This reality highlights the need for clearer understanding of the problem of change. The stagnated development of a teacher community reflects in part the weak leadership for change among school administrators and their limited opportunities to learn how to be effective in these roles. It also testifies to the complex challenges entailed in developing teacher learning communities widely in U.S. schools.

School leadership for change also involves managing disappointing outcomes, regardless of the stage of professional community development. A community learns through examining the mismatch between goals and performance—that is, they confront the “brutal facts” about student learning in their school (Shon
1983). However, candid description and discussion of shortfalls in student learning can trigger angry responses from parents and community. This anger erodes teachers’ willingness to highlight disappointments as well as celebrate successes. Making failure public has presented an ongoing challenge for schools working to develop teacher learning communities.

NCLB legislation that labels some schools as failing generally pulls schools away from long-term investment in building professional capacity. Many BASRC schools that worked to move their schools out of “underperforming” status, for example, were distracted from an agenda to develop collective responsibility for improving student achievement and instead focused on implementing subject curricula with “fidelity” and adding test-prep routines. Schools’ efforts to boost scores quickly worked against community development and innovation when they turned the spotlight on individual teachers’ classroom outcomes and curriculum implementation as the primary reform strategy.

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Developing teacher learning communities entails reculturing schools. And the knowledge and skills of teacher community facilitators and administrators are essential to schools’ capacity to change teachers’ deep-seated beliefs and practices that inhibit instructional innovation and to engender organizational learning. These capacities for school change depend, in turn, on conditions and investments of local and state policy systems in developing a focused and coherent strategy to develop professional communities in schools that are capable of continually improving their students’ learning environments (Gamoran et al. 2003; McLaughlin and Talbert 2006). In this view, all local education stakeholders are implicated in a learning agenda to improve teaching quality and equity in the nation’s schools, since system leadership for change depends upon the support of their community partners. Necessary investments to improve teaching quality—by federal, state, and local education authorities—go well beyond the scope and level defined by No Child Left Behind legislation.

CHALLENGES FOR LOCAL SYSTEMS IN THE CONTEXT OF NCLB LEGISLATION

NCLB legislation has brought teaching quality to the fore of our nation’s education reform agenda. However, the federal legislation misses the mark in its emphasis on preservice training and credentials as criteria of high-quality teachers and the best vehicle for improving educational quality and closing achievement gaps among students. Although responsive to research-based evidence that well-prepared teachers are unequally distributed across U.S. schools and districts, the federal legislation fails to address both the significant ongoing learning demands of teaching and the ways in which schools typically undermine teaching quality and equity.
Some school and district leaders feel pressed to respond quickly to state and federal accountability systems and perceive a trade-off between pursuing the goal of building teacher learning communities and responding to these external accountability demands. Norms of collective responsibility and collaborative teaching practice develop slowly, yet high-stakes accountability systems demand fast, significant improvement in student achievement. The press for immediate gains in test scores pushes a pace of change that can undermine the development of school learning community. A community of practice preoccupied with test scores may chose to stick with known practices and make the most of them, rather than adopting or creating new modes of instruction. Leaders are challenged to find a balance that protects the community from the consequences of failure, but also furthers experimentation and the use of data to evaluate change. Organizational theorist James March (1991) terms this tension the "exploration/exploitation tradeoff" and sees the proper balance between them as a primary element in system survival and success.

The development and vigor of teacher learning communities across a school system depend upon a local learning agenda to support this vision of school change. Districts need to develop strategies to promote and sustain school-based learning communities and responses to NCLB that use opportunities and minimize the potentially negative consequences of the legislation. The national agenda to improve teaching quality and equity requires the mobilization of resources for change and professional learning at all levels of the system. Table 9.1 indicates the general nature of system resources for changing technical, organizational, and social-normative conditions of school culture toward professional learning communities.

Technical Resources

Technical resources include coherent instructional policies, professional development, and a robust assessment system.

Coherent Instructional Policies Teacher communities of practice are more likely to develop and to learn ways of improving instruction when the local system has instructional policies that are aligned to standards for student performance and when administrators convey coherent, consistent messages to schools about, for example, high-quality learning outcomes in mathematics at the 4th grade level. Yet, public school teachers practice in a complex policy environment of regulations, rules, resources, expectations, past investments, and community expectations whose incoherence can undermine effective instruction and collaboration (Berends, Bodilly, and Kirby 2003). District leadership plays a key role in managing the policy environment to create coherent messages and supports for instruction (McLaughlin and Talbert 2002).
Teaching Quality as a Problem of School Change • 195

Table 9.1 Developing a school-based teacher learning community: Functions, challenges, and resources for change

<table>
<thead>
<tr>
<th>Facet of teacher’s work and context</th>
<th>Developing teacher learning community in schools</th>
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<tr>
<td>Technical</td>
<td>Functions</td>
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<tr>
<td>Knowledge development and use</td>
<td>Instructional routines and policies that constrain innovation</td>
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<td>Instructional design for equity</td>
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<td>Organizational</td>
<td>New teacher induction; mentoring</td>
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<td>Equitable teacher assignment</td>
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<td>Social-normative</td>
<td>Cohesion and mutual accountability</td>
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<td>Support for breaking institutional norms</td>
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**Professional Development** The development of teacher learning communities depends upon the system’s vision for high-quality and equitable teaching and upon its knowledge of how professionals learn. An effective local learning system to support school communities of practice includes a cadre of facilitators skilled in guiding school change and employed to provide on-site technical support of teachers’ collaboration and learning to improve instruction.

The development of skilled practitioners to nurture school change and teacher learning requires change in the typical district’s professional development system and partnering with local professional development organizations, higher
education, or intermediary reform organizations. As we noted earlier, it is likely that NCLB inhibits change by directing resources toward traditional training focused on curriculum implementation.

**Robust Assessment System** An assessment system that supports analysis of a range of student outcome data aligned with grade-level standards is a key technical resource for a learning system. This is the basis for learning at all levels of the district system and for communication and accountability between levels. A data system that provides a comprehensive account of students' progress toward academic outcomes and guidance for instruction includes both formative and summative data generated on a regular basis. Formative assessments provide teacher communities with information on student performance and outcomes of their instructional innovations. They also point to needed changes and guide student-focused instruction by identifying areas of need for individual students in a class. Summative measures and data document patterns of achievement within and across schools by such student demographics as ethnicity, economic status, and English language proficiency are data that provide teacher communities, school administrators, and district staff and administrators with evidence of their progress on both quality and equity goals. A learning system has the technology to deliver information in a timely, user-friendly manner so that everyone from the area manager to the classroom teacher can access up-to-date information.

NCLB demands the use of assessments data for local accountability and thus is a potential catalyst for system change. However, it is up to each local agency to develop the kind of assessment system that can track all children's performance on standardized tests and all students' learning needs within a discipline and grade level.

**Organizational Resources**

The allocation of district resources of all kinds—base budgets, titled funds, personnel, equipment, and space—determines the system's capacity to develop teacher learning communities in schools. District administrators think about and allocate resources differently when these decisions are made with an eye to supporting vital teacher learning communities as opposed to ensuring compliance with bureaucratic regulations or accommodating political pressures.

**Resource Alignment** A learning system stance directs administrators to map the totality of district resources from public and private sources for professional development and to assess both their coherence and equitable distribution. Key to building teacher learning communities is the integration of resources to provide support for school change and high-quality learning opportunities across the system.
**Equitable Teacher Assignment** In addition to recruiting and developing highly qualified professionals, the equitable placement of the most skilled teachers and administrators in district schools is of central importance to the system’s capacity to improve teaching quality and equity. Creating incentives for these teachers and principals to take on assignments in the most difficult schools and providing intensive supports for their success are among the organizational strategies that districts can use to develop strong learning communities in schools serving the lowest-performing students.

**Capturing Clinical Knowledge** Organizational designs for capturing local knowledge of effective professional practice also support the development and learning of school-based teacher communities. Strong learning communities in district schools are resources for system learning when they are charged and authorized to develop and share knowledge of their improvement practices and effective instructional designs. The use of teachers’ clinical knowledge for school and district system improvement is powerful because it provides concrete, situated illustrations of principles for professional practice. A local learning system brokers both clinical and research-based knowledge of effective practice and provides teachers and school leaders with access to skilled professionals within and outside the system.

**Social-Normative Resources**

District leadership for developing school-based teacher learning communities—and more broadly a local learning system—provides essential normative and political support for change. Managing organizational change to support professional learning includes modeling an inquiry stance and creating a data culture. It also takes political leadership to protect the investments required by a learning system. As one district’s technology director put it: “The technical part—that’s fairly standard. The toughest piece is changing the culture of the way people do things…” (quoted in Mieles and Foley 2005, 28).

**Leadership for Professional Change** Moving to a local learning system that uses data to inform decisions requires profound changes in teachers’ and principals’ professional culture, as highlighted in this chapter. Changes involve not only expectations that educators will use a variety of evidence to make decisions about practice but more significantly that practice will be deprivatized, that is, moved into the public view of colleagues and the community (e.g., Petrides and Nodine 2005). Leadership to motivate and support this kind of cultural shift has been rare in American school districts because a learning posture and uncertainty associated with it can be perceived as out of line with the popular image of a confident, competent leader. NCLB’s accountability pressures and threats
may have increased administrators’ tendency to avoid taking an inquiry stance. Yet, without this leadership, the candid, evidence-based reflection on practice essential to instructional change carries risks for both teachers and principals. The relative scarcity of this kind of district leadership, more than inadequate technology or knowledge resources, impedes the development of comprehensive and fully functioning district learning systems.

**Political Leadership** System leaders face the challenge of building stakeholders’ support for radical change in school culture and in approaches to teacher learning and educational improvement. These stakeholders include everyone from parents to members of the school board, the business community, and the civic elite. An engaged public plays an indispensable role in school reform and support for public education (Hill, Campbell, and Harvey 2000), and the agenda to build teacher learning communities in schools presents particular challenges for public engagement (McLaughlin and Talbert 2006). These challenges include involving the public in learning and debate around the equity agenda for instructional change and shifting views of professional learning to include teacher collaboration in school communities. Parents and community members need opportunities to move beyond old notions of education and teachers’ work to understand basic tenets and challenges of new professional practice in schools.

Stakeholder support for teacher learning and change is ultimately critical to the success and survival of teacher learning community. Civic support of specific reform efforts and of the public schools plays a crucial part in teachers’ sense of being valued for their efforts. Conversely, community ignorance about local needs, teachers’ professional goals, and plans for more effective classroom practices is a barrier to getting parents and the community behind teachers’ efforts. In many instances, stakeholders simply have no information about what teachers are up to. But beyond that, prevalent ideas about “the way things used to be,” outmoded mental models of school, often thwart teachers’ initiatives and learning goals.

Engaging public support for teacher learning communities hinges on the development of political consensus for the equity goals that motivate such communities and new understandings about how teachers learn together to improve student achievement. Although NCLB puts forth a competing conception of teacher quality, it has framed the challenge of improving teaching quality in schools where students perform poorly. System leaders thus might use the federal legislation as an opportunity to leverage school culture change and a local learning system to improve teaching quality and equity.

Notes

1. This chapter is a revised version of a paper presented at the No Child Left Behind Conference of the American Sociological Association’s Section on Sociology of Education, Philadelphia.
August 12, 2005. Research summarized here was funded by the U.S. Department of Education, the National Science Foundation, the Dewitt Wallace-Readers Digest Fund, the William and Flora Hewlett Foundation, the Annenberg Foundation, the Johnson Foundation, and the Stuart Foundation during the period 1987–2005. Opinions expressed do not necessarily reflect those of the granting agencies. We are grateful to the many organizations, educators, administrators, and research colleagues who contributed to the body of research that grounds our analysis and to two anonymous reviewers of an earlier draft of the chapter.

2. NCLB legislation defines a highly qualified teacher as one who has a college degree, a teaching certificate, and competence in each of the subjects being taught (demonstrated by having a major or an advanced certificate in the subject or by passing a test in the subject). See Ingersoll (2005, this volume) for further discussion.

3. NELS:88 is a federal research program that follows a national sample of students who were 8th graders in 1988 through their education and into the workforce. During 1988–92, the program surveyed students and teachers and tested students every two years, yielding data for students and their teachers at 8th, 10th, and 12th grades.

4. This analysis used a school survey measure of "inquiry practices" and estimated its effect on 2001 SAT-9 scores after 1998 SAT-9 scores were controlled. Results were consistent for two samples of BASRC schools: 18 schools for which mean teacher survey ratings were analyzed and 52 schools for which a reform coordinator's ratings were used. For details, see Center for Research on the Context of Teaching (2002). Bay Area School Reform Collaborative: Phase One (1996–2001) Evaluation. Stanford, CA: Stanford University. These evaluations and the instruments they employed are available at: http://www.stanford.edu/group/CRC/.

REFERENCES


