Collective Sensemaking about Reading: How Teachers Mediate Reading Policy in Their Professional Communities

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Recent research on the relationship between instructional policy and classroom practice suggests that teachers interpret, adapt, and even transform policies as they put them into place. This paper extends this line of research, using an in-depth case study of one California elementary school to examine the processes by which teachers construct and reconstruct multiple policy messages about reading instruction in the context of their professional communities. Drawing primarily on institutional and sensemaking theory, this paper puts forth a model of collective sensemaking that focuses on the ways teachers co-construct understandings of policy messages, make decisions about which messages to pursue in their classrooms, and negotiate the technical and practical details of implementation in conversations with their colleagues. It also argues that the nature and structure of formal networks and informal alliances among teachers shape the process, with implications for ways in which messages from the policy environment influence classroom practice. Finally, the paper explores the role school leaders play in shaping the sensemaking process.

Studies of school reform have often asked how a given reform impacted schools, or how teachers have implemented a particular policy. Yet some researchers have suggested that rather than policy influencing teachers' practice, it is more likely that teachers shape policy. That is, teachers interpret, adapt, and even transform reforms as they put them into place (Cohen & Ball, 1990; Tyack & Cuban, 1995; Weatherley & Lipsky, 1977). As important as this insight is, there has been little systematic research into the processes by which such interpretations and adaptations occur. However, a promising strand of research points to teachers' professional communities as important sites for this meaning making, highlighting the ways in which local teacher communities can form powerful microcultures (Little & McLaughlin, 1993; McLaughlin, 1993; Siskin, 1994) that mediate environmental pressures (McLaughlin & Talbert, in press; Spillane, 1999; Talbert & McLaughlin, 1994).

This article examines the processes by which teachers construct and reconstruct multiple messages about reading instruction in the context of their professional communities. Previous research exploring the ways teachers make sense of policy messages has tended to focus solely on individual interpretation (Cohen & Ball, 1990; Jennings, 1996; Spillane & Jennings, 1997; Weatherley & Lipsky, 1977). A few studies, however, have begun to move beyond individual interpretation, providing evidence that individuals make sense of policy messages in conversation with their colleagues (Spillane, 1999; Hill, 1999) and in ways that are deeply situated in broader social, professional, and organizational contexts (Lin, 2000; Spillane 1998; Yanow, 1996). This paper builds on and extends this line of research. For a year, I followed teachers in one urban California elementary school as they sought to improve their reading instruction, focusing on the ways they collectively negotiated pressures and interpreted and adapted messages from the environment. To understand how this process unfolded, I have drawn primarily on the theoretical and empirical work of institutional and sensemaking theory. I argue that the nature and structure of formal networks and informal alliances among teachers play a powerful
Coburn

role in shaping the sensemaking process and ultimately the kind of sense that is made. The process that emerged was one in which teachers, in conversations with their colleagues in formal and informal settings, co-constructed understandings of messages from the environment, made decisions about which messages to pursue in their classroom, and negotiated technical and practical details of implementation.

Reading instruction in California provides a fertile context for this study because the state is in the midst of its second major shift in reading policy in only 15 years. Following the rise of the movement toward “whole language” instruction in the late 1980s, there has been tremendous activity and controversy since the mid-1990s as the state and the profession have moved toward somewhat different versions of what is frequently called a “balanced” approach to reading instruction. This historical moment has thrown into relief the often subtle and taken-for-granted process of interpretation and adaptation. Uncovering the process by which teachers reconstruct policy messages in their professional communities is crucial. It contributes to our understanding of the relationship between instructional policy and classroom practice. It may also provide insight into ways policy can create conditions for sense-making in schools that enable teachers to engage messages from the environment in ways that encourage them to challenge their assumptions and continue to improve their practice over time.

Bridging Institutional and Sensemaking Theory

Most studies concerned with the relationship between policy and instructional practice focus on how teachers and schools respond to a single policy or a network of related policy initiatives (see, for example, Odden, 1991). Yet in spite of recent movement in state and local policymaking toward congruence (Fuhrman, 1993; Smith & O’Day, 1991), many schools continue to find themselves responding simultaneously to multiple initiatives. Furthermore, many schools and individual teachers are involved in reform efforts outside the formal policy system—various school reform models, work with professional development providers, coursework at universities, and teacher networks, to name just a few. Thus, teachers often find themselves confronted with multiple messages about teaching—normative pressures about how they “should” teach, belief systems about teaching and learning, and specific teaching practices—from a wide range of sources.

Institutional theory provides powerful tools for understanding the complicated relationship between schools and their multifaceted environment. At root, institutional theory is a cultural approach. It emphasizes how norms and cultural conceptions about appropriate reading instruction are constructed and reconstructed over time, carried by individual and collective actors, and embedded within policy and governance structures (Scott, 1995; Scott, Mendel & Pollock, 1996). Institutional theorists suggest that messages in the environment shape patterns of action and belief within schools through regulative means, as they are incorporated into formal policy; through normative means, as teachers feel pressured to adopt certain approaches to maintain legitimacy; and through cognitive means, as reading beliefs and practices attain taken-for-granted status as the natural or common-sense way to do things (Scott, 1995). Messages about reading are thus “carried” by policy at all levels of the system and through reform programs, teacher professional organizations, assessment systems, textbooks and other materials, professional development, community expectations, and individual and collective actors. As a carrier, formal policy (at the state, district, and school levels) is only one of many mechanisms by which messages about reading come into schools.

Traditionally, institutional theory has been applied rather narrowly to schools. Most studies have focused on the influence of the institutional environment on school structures and organization. These studies have largely failed to investigate empirically the connections between the environment and teachers’ work in classrooms, relying instead on earlier theorizing that suggested that schools decouple structural changes from the internal workings of the classroom (Meyer & Rowan, 1977, 1978). Furthermore, many institutional studies of public schools have presented a simplified “outside-in” model in which belief systems, norms, and practices originate in the environment and flow into schools (see, for example, Cuban, 1988; Malen & Ogawa, 1988; Rowan, 1982). This approach neglects the dynamic relationship between the environment and schools’ internal social processes, failing to account for the evidence—highlighted by educational historians
such as Tyack and Cuban (1995)—that teachers actively mediate norms, belief systems, and practices that have diffused from the institutional environment, socially constructing and reconstructing them as they put them into place in their own contexts.

I draw on sensemaking theory for guidance in exploring how teachers have adapted, adopted, combined, or ignored messages and pressures about reading instruction in their professional communities, and how these deliberations have shaped classroom practice. Sensemaking theorists suggest that school and classroom culture, structure, and routines result, in part, from “micromomentary actions” by teachers and other actors in the school (Porac, Thomas, & Baden-Fuller, 1989). Action is based on how people notice or select information from the environment, make meaning of that information, and then act on those interpretations, developing culture, social structures, and routines over time (Porac et al., 1989; Weick, 1995). The meaning of information or events—in this case, messages about reading—is not given, but is inherently problematic; individuals and groups must actively construct understandings and interpretations. They do so by placing new messages and construct understandings of them through the lens of their preexisting practices and worldviews (EEPA, 1990; Jennings, 1996; Spillane & Jennings, 1997; Spillane, 1999).

Sensemaking is not solely an individual affair, but is social in two important respects. First, it is collective in the sense that it is rooted in social interaction and negotiation. People make sense of messages in the environment in conversation and interaction with their colleagues, constructing what I call “shared understandings”—organization- and workgroup-specific culture, beliefs, and routines—along the way (Porac et al., 1989; Vaughan, 1996). Second, sensemaking is social in the sense that it is deeply situated in teachers’ embedded contexts. Norms and routines of organizational subunits such as departments or workgroups (Siskin, 1994; Spillane, 1998; Vaughan, 1996), organizational values and traditions (Lin, 2000; Porac et al., 1989), and broader professional culture (Barley, 1986; Spillane, 1998; Vaughan, 1996) provide another lens through which teachers make sense of new messages, shaping the range of appropriate responses and structuring priorities. Furthermore, these embedded contexts shape sensemaking processes by influencing patterns of social interactions (influencing who is talking with whom about what) and shaping conditions for sensemaking (Vaughan, 1996).

This article focuses on the collective aspects of sensemaking with attention to the way that it is situated in and shaped by teachers’ broader embedded contexts. As such, it makes three key contributions to earlier work in both sensemaking theory and cognitive perspectives on policy implementation. First, by studying teacher sensemaking in action over a long period of time, I am able to unpack some of the main components of the process itself. Earlier research has provided convincing evidence for the claims that teachers reconstruct policy ideas through their preexisting beliefs and practices. This study provides an elaborated account for how that process unfolds, developing a model that identifies key subprocesses. Second, the paper highlights the central role of teachers’ formal networks and informal alliances in the patterns and outcomes of collective sensemaking. Finally, the study brings school-level leadership into the teacher sensemaking equation, exploring the connections between actions by the principal and teacher leaders and the nature and content of teachers’ sensemaking.

Methods

To capture sensemaking, I used a qualitative case study approach, a primary strategy for documenting organizational processes as they unfold (Yin, 1984). Focusing on a single case allowed for the depth of observation necessary to capture the subtle and iterative process by which teachers constructed and reconstructed messages from the environment through social interaction. Although not generalizable, the in-depth observation made possible by the single case provides the opportunity to generate new hypotheses or build theory about sets of relationships that would otherwise have remained invisible (Hartley, 1994). I relied primarily on sustained observation (Barley, 1990) and in-depth interviewing (Spradley, 1979), supplementing these strategies with document analysis. The case study school was selected because it is an urban school in California involved in an ongoing effort to improve reading instruction. Stadele Elementary is
exceptionally racially diverse, and the vast majority of the student body lives in poverty; many are also English language learners. I focused on teachers in the early grades—especially first and second grade—because this is the level of reading instruction that has been at the center of policymaking and debate in recent years.

At the time of the study, Stadele Elementary was in its second year participating in a school reform program that used whole-school inquiry as a lever for instructional change. As such, it received funding to design its own whole-school “focused effort” and to assess its progress using an inquiry process. The reform effort was led at the school site by a leadership team composed of the principal, a half-time reform coordinator (a released classroom teacher), four classroom teachers representing primary and upper elementary grades, and three resource teachers (two Reading Recovery teachers and the coordinator of parent outreach). The school designed their focused effort to develop standards and grade-level indicators for reading, and to assess student progress toward the standard in reading comprehension. They used the majority of their funding to release grade-level teams for one-half day a month to write standards, develop assessments, and examine their reading instruction. Grade-level efforts were coordinated during bimonthly, full faculty meetings after school and during pupil-free professional development days funded by the state and district. The school also used reform funding to send teams of teachers (often members of the leadership team) to external professional development related to reading instruction and assessment. All of these meetings and professional development opportunities provided ample occasions to observe sensemaking in action.

Observation of informal and formal teacher meetings formed the centerpiece of data collection activities. Over the course of the 1998–1999 school year, I spent more than 130 hours observing teacher conversations during formal meetings and professional development. I spent the majority of time observing grade-level meetings with the first- and second-grade groups (43.5 and 16 hours respectively) and full faculty meetings (43.5 hours). But I also observed in-school professional development, select meetings of other grade-level groups, and required district professional development. In addition, I spent significant time with the leadership team, observing their meetings (13.5 hours) and attending external professional development with them (11.5 hours). In addition to formal meetings and professional development, I observed countless hours of informal conversations during lunch, before and after school, and in the hallways. See Table A1 in the Appendix for complete information on meeting observations. During observations of formal and informal conversations, I paid attention to the nature and content of messages about reading that teachers came into contact with, the content of their conversations with one another, the nature of interaction, as well as evidence of teachers’ worldviews and practice. While most observations (formal and informal) were typed up as field notes, on a few occasions I taped and transcribed key meetings that I was unable to attend.

In order to capture teachers’ worldviews, descriptions of their practices, and perspectives on the reform process, I supplemented observations with semistructured interviews with classroom teachers, resource personnel, and the principal. I adopted a strategy that combined breadth (initial interviews with nearly all first- and second-grade teachers, members of the leadership team, and resource teachers) with depth (intensive interviews and observations with a subset of teachers and resource staff). In all, I conducted 57 interviews with 18 classroom and resource teachers, interviewing some teachers as many as 12 times. I also interviewed the principal three times. Interviews lasted from 45 minutes to three hours. Nearly all interviews were audiotaped and transcribed. See Table A2 in the Appendix for additional information about the distribution of interviews.

To understand the relationship between conversations in teacher meetings and teachers’ reading practices, I observed reading instruction in select teachers’ classrooms. Using information garnered from first-round interviews, I selected for observation teachers who represented the full range of approaches to reading instruction used by teachers in the early grades of the school. I conducted 106 hours of observation in the classrooms of five first- and second-grade teachers and three Reading Recovery teachers. I structured observations to spend full days in a teacher’s classroom for several days in a row in the first half and then again in the second half of the year. Spending a full day, rather than simply observing the time period in the morning a teacher designated as “reading instruction,” was important for two
reasons. First, most teachers actually engaged in a range of reading-related activities throughout the day. Second, shadowing a teacher for an entire day rather than dropping in for a bounded time period proved important for observing teachers’ ad hoc and informal conversations with their colleagues. Observing classrooms for several days in a row provided a sense of the flow and continuity of instruction in the near term, and doing observations at two different times of the year allowed for insight into change over time. See Table A2 for more information about the distribution of observations. Finally, I relied on record data and interviews with district personnel, state personnel, and local professional development providers to understand the nature of the reading environment.

Data collection and analysis occurred simultaneously throughout the study year (Miles & Huberman, 1994; Strauss & Corbin, 1990). I used initial codes to identify emerging themes and highlight areas for additional data collection. After all data were collected, I used NUDIST qualitative data analysis software to code observations of formal and informal meetings in three ways. First, I coded all meeting data using codes describing the nature of teachers’ interaction with messages from the environment. Here, I developed codes inductively through iterative coding (Miles & Huberman, 1994; Strauss & Corbin, 1990). I began with codes that described, with little interpretation, the nature of teachers’ interaction with messages from the environment. By grouping together categories and using the constant comparative method (Strauss & Corbin, 1990), I moved to progressively higher levels of abstraction until I ended up with the following codes: constructing understanding, gatekeeping, negotiating technical/practical details, in-facing, and out-facing. Second, I coded the content of the conversations, creating codes such as “new textbook series,” “district standards,” and “reading comprehension strategies” that corresponded with the specific messages that teachers came into contact with throughout the year. Once the data were coded in this manner, I was able to create longitudinal records of teacher interaction in a given group around a particular message or set of messages, thus tracing the course of teachers’ conversation about them over time. Third, I coded all meeting data for evidence of teachers’ worldviews, descriptions of reading practices, and evidence of groups of teachers’ shared understandings. I coded interview data using similar codes, supplemented with codes for teacher’s history, school context, and the environment (including district, state, and the larger debate about reading instruction). Finally, I coded classroom observations using codes for curriculum, instruction, assessment, and environment.

In developing an account of the processes involved in collective sensemaking, the group or collectivity was a key analytic unit. Thus, I engaged in data analysis that looked across all formal and informal groups, but also compared responses of groups as they interacted with specific messages (keeping in mind that there was overlapping group membership and that not all groups interacted around all messages). To develop a model of the key subprocesses involved in collective sensemaking, I engaged in systematic, inductive coding (described earlier) of all occasions on which formal and informal teacher groups interacted with a range of messages from the environment. Further analysis involved recoding a category at a finer level of detail. For example, I recoded the subprocess “gatekeeping” by doing a content analysis of the reasons teachers made gatekeeping decisions. To understand the relationship between teachers’ worldviews, practices, and shared understanding and these subprocesses, I created and then compared longitudinal records of conversations on particular messages across different and, at times, overlapping groups (Strauss & Corbin, 1990; Miles & Huberman, 1994).

To understand the relationship between collective sensemaking and changes in classroom practice, I compared the content and nature of conversation in formal and informal meetings with evidence of teachers’ responses to messages from classroom observations, at times supplementing this information with evidence of practice from interviews and meeting observations. As it became clear that the relative heterogeneity of worldviews present in a group, whether interaction occurred in formal or informal settings, and the structure of activities in formal meetings were important in both the nature of teacher interaction and implications for classroom practice, I created additional data displays to confirm these patterns, always being alert to disconfirming evidence (Miles & Huberman, 1994). Finally, I explored the role of reform leadership by tracing the language, actions,
and decisions leaders made with the content and processes of interaction in teacher groups.

Several methodological features of the study ensure that the patterns reported here represent patterns present in the research site. These strategies include intensive immersion at the research site (Eisenhart & Howe, 1992; Lofland & Lofland, 1995), systematic sampling of occasions for sense-making (Miles & Huberman, 1994), efforts to explore countervailing evidence (Miles & Huberman, 1994), systematic coding of data (Strauss & Corbin, 1990; Miles & Huberman, 1994), and sharing findings with key informants at the school site and incorporating their insights into the final analysis (Eisenhart & Howe, 1992; Miles & Huberman, 1994).

Messages about Reading in the Environment

In 1995, the state of California launched a reading initiative that moved away from earlier state policy, characterized by some as “whole language,” toward a position that has come to be known as the “balanced approach” to reading instruction. Backed by tremendous material resources, the reading initiative has been exceptionally comprehensive and wide-reaching. Since the publication of the Task Force report *Every Child a Reader* (California Department of Education, 1995), which outlined in broad terms the vision of the balanced approach to reading instruction, the state has passed five bills appropriating funds to purchase instructional materials, as well as four bills to provide professional development for teachers and district leadership on approaches to reading instruction that emphasize “explicit and systematic” approaches to phonics. It has adopted new reading series, developed state standards and curriculum frameworks, and adopted a new statewide assessment system. Finally, the state has provided funding to colleges of education to move preservice teacher education in this direction and instituted a state exam focused on reading instruction that new teachers must now pass in order to become credentialed (California State Board of Education, 1999). These state efforts have had enormous public visibility thanks to extensive media coverage that has tended to lambaste the earlier policy position and call for new approaches to teaching reading emphasizing phonics.

Although the state policy, with its extensive resources and comprehensive reach, created a strong priority for improving reading instruction and pushed the debate in a particular direction, the specific messages about reading instruction embedded within that policy were not always the same ones to reach Stadele Elementary. First, state policy is often reinterpreted and reshaped by policy makers at every level as it works its way through a system to schools (Hill, 1999; McLaughlin, 1991b; Pressman & Wildavsky, 1984; Spilane, 1996). In this case, the district and, to a lesser extent outside professional development providers, played key roles in reconstructing state policy guidelines as they developed district policy and provided professional development to schools. Second, there can be a considerable time lag between policy making at the state level and when messages reach schools (Tyack & Cuban, 1995). Although state policy has consistently promoted a “balanced approach” to reading instruction since 1995, the meaning of that term has shifted from the relatively ambiguous and relatively uncontested notion of “balance” in *Every Child a Reader* to the much more specific and arguably more controversial rendition represented in the 1998 *Reading/Language Arts Framework for California Public Schools* (California Department of Education, 1999). This transition has narrowed the scope of what is considered appropriate reading instruction in state policy. However, many of the messages entering Stadele Elementary School in the 1998–99 school year were representative of the broader definition of balance in earlier policy making, including many approaches that have since been explicitly contradicted by recent state policy.7 And crucially, as institutional theory has emphasized, schools and teachers come into contact with messages from a wide range of sources, many of which are outside the formal policy system—other reform efforts, professional development, preservice education, and connections with colleagues inside and outside of school. Sometimes, these messages are aligned with state policy, sometimes they are not, and sometimes they simply go beyond the bounds of areas addressed by policy.

For all these reasons, I take as the point of departure for analysis not the state-level policy but all of the heterogeneous messages that actually came into the school from all sources during the 1998–99 school year. During that year, Stadele Elementary School came into contact with messages about reading from three key sources: the
Collective Sensemaking about Reading

As it reconstructed state policy mandates, participation in the school reform program, and individual teachers’ connections to the environment. The district disseminated its own standards document accompanied by a core curriculum with model lessons and assessments, provided professional development on the new reading series to all of its elementary school teachers, and increased emphasis on new state standardized tests by requiring schools to use them to guide their priorities for school improvement and measure their progress. The school’s reform effort also served to draw district policy—especially the standards, district assessment kits, and the reading series—more deeply into the school, as the leadership team structured reform activities around these documents. Beyond district policy, the school’s leadership team brought in messages about reading from the broader network associated with the reform effort, including resources from external professional development and feedback from partnerships with other schools. Finally, the team, drawing on the school’s own resources, had the school’s Reading Recovery teachers provide two professional development sessions on giving and analyzing a reading assessment called running records.

In addition to responding to messages carried by district policy or the school’s reform effort, teachers often actively reached out for messages about reading. These messages and the ways they entered the school were quite diverse, from more experienced teachers drawing on resources from older, more traditional approaches, to teachers drawing on experiences in preservice that supported previous state policy (whole language), to teachers bringing in materials they learned about at a conference with a reading researcher whose work helped shape current state policy.

The environment for reading is multifaceted and multilayered. Teachers came into contact with many, many messages about reading from diverse sources stretching far beyond formal policy streams. State policy played an important role by providing funding and normative pressure that created key opportunities for increased activity and policy making at lower levels of the system (Spillane, 1996). It also pushed other sources of messages in the environment in the direction of a “balanced approach.” However, though most of the messages coming into Stadele Elementary were supportive of a “balanced approach” broadly conceived, many were not well aligned with the narrower conception of “balance” found in current state policy. Furthermore, because of the complexity of the environment and the multiple routes into the school, still other messages represented older approaches to reading that, although out of favor in the professional and policy environment, were still carried into conversations by individual teachers.

Collective Sensemaking about Reading

When confronted with new messages, the early-grade teachers at Stadele Elementary tended to turn to their colleagues to make sense of them. In contrast to traditional images of isolated teachers who have few conversations about teaching and learning (Goodlad, 1984; Lortie, 1975), teachers at Stadele Elementary talked with one another about their practice in multiple settings. The reform effort built on a long history of faculty and grade-level meetings, providing funding for additional meeting time and shifting the balance of conversations away from administrative matters toward issues of assessment and instruction. Beyond formal settings, however, most teachers sought out like-minded colleagues to talk about their classrooms. These more informal conversations happened in an ad hoc manner before school, after school, and during lunchtime as teachers asked each other questions, discussed their students, and shared resources. Conversations in these settings represented collective sensemaking to the degree that teachers made sense of new messages about reading in ways that involved social interaction, negotiation, signaling, and communication with colleagues, regardless of whether or not a group of teachers came up with a single decision or interpretation. What is more important is that the teacher sensemaking happened in and was influenced by this social interaction. In this section, I first put forth a model of the process by which teachers adopted, adapted, and at times transformed messages about reading during interaction with colleagues in formal and informal settings. I then argue that collective sensemaking—and, ultimately, the influence of messages from the environment on classroom practice—is shaped by two factors: (1) the patterns of interaction among teachers, specifically who is talking with whom in what setting, and (2) the character of conversation, specifically the extent to which
Coburn

conversations are structured to provide conditions for engagement and reflection.

The Sensemaking Process

In both formal and informal groups, teachers' interaction with messages from the environment followed a pattern similar to that observed in the sensemaking literature. Specifically, however, I identify three clear subprocesses that characterize and facilitate collective sensemaking: (1) constructing understanding through interpersonal interaction, (2) gatekeeping, and (3) negotiating technical and practical details. Each of these three subprocesses was itself influenced by teachers' worldviews, preexisting practices, and shared understandings. That is, teachers brought their worldviews and preexisting ways of teaching reading to interactions with their colleagues. And, as teachers worked together over time, they developed shared understandings. By influencing the subprocesses, teachers' worldviews and practices, as well as groups of teachers' shared understandings, shaped, what teachers selected, emphasized, interpreted, and ultimately brought into their classrooms. Figure 1 provides a representation of this process.

Constructing Understanding through Interpersonal Interaction

When teachers came into contact with new messages about reading instruction, they often spent time with their colleagues constructing an understanding of what the messages meant. Some messages, of course, seemed self-evident, were registered with little conversation or exploration, and seemed to be integrated seamlessly into current understandings. But other messages required quite a bit of conversation for teachers to make meaning of what otherwise would simply have been words on a page or a description of an in-

FIGURE 1. Conceptual model of the sensemaking process.

152
Collective Sensemaking about Reading

structional approach. For example, during one grade-level meeting, teachers were told to assess themselves on a rubric of assessment practices provided to the school by the reform program. The rubric had a particular point of view about appropriate assessment practices for reading instruction, including a heavy emphasis on using assessment to inform practice on a continuing basis, and including students and families as partners in assessment. To use the rubric as a planning tool, grade levels needed to come to an understanding about what these concepts meant. One grade-level group had a long conversation about what it meant to have families as partners in the assessment process:

Teacher I: I think it's when we let parents know what we are doing.

Teacher H: That's progress, not assessment.
I think it means that we have parents helping us come up with the rubric.

Teacher G: If we had parents as partners, we would have parents in here with us today doing this work with us.

Teacher H: A partnership would mean having parents helping us determine how we are going to do assessment.

Teacher J: Parents are supportive of what we're doing.

Teacher H: That's two-way communication; it's not setting up an assessment system. Parents aren't in here deciding what spelling words we will have on the spelling tests.

Here, teachers put forth and modified different interpretations of what it might mean to have families as partners. In a sense, each of these interpretations framed the concept in different ways by linking the language of the rubric "families as partners in the assessment process" to different familiar frameworks—parent involvement as teachers sharing information versus partnership as working together side by side. As the conversation unfolded beyond the excerpt presented above, teachers framed, reframed, and elaborated their various conceptions until they were able to come up with a rendition that provided conceptual "hooks" that allowed teachers in the group to link this idea with what they knew and believed about interaction with parents. Snow and his colleagues (1986) describe this process as "frame alignment." In this case, the group constructed a shared understanding that having families as partners meant having parents working side by side with them on all assessment tasks (as opposed to sharing the results of assessment with parents or involving them in some less intensive way throughout the process). This conception of families as partners, once constructed, then persisted over time. It served as a jumping-off point for teachers' decisions about where to place themselves on the rubric and how to plan for improvement. And teachers in this group referred back to this language and framing when the issue of their relationships with parents came up in later conversations, within and outside of formal meetings.

The individual and collective worldviews represented in a group played a key role in shaping the process by which teachers constructed shared understandings. This phenomenon was illustrated most clearly when teacher groups with very different worldviews and practices constructed different understandings of the same messages. In one example, using a process similar to the one described above, teachers in one group came to a shared understanding of what it meant to use assessment to inform instruction on a continuous basis, another item on the rubric. They framed the concept using their understanding of reading instruction as structured according to a particular sequence of skills. They concluded: "[Using assessment to inform instruction] is the skill work . . . . We plan learning center work based on the skills they need to know and it goes in a particular sequence." For this group, then, using assessment to inform instruction meant knowing where in the sequence a child was and planning lessons accordingly.

In contrast, another group of teachers believed that skills should be taught in response to the needs of children rather than in a set sequence. Based on that belief, these teachers were able to construct an understanding of the same concept in a different way—as developing lessons in response to the particular needs of the student, no matter what the sequence. During the meeting, one teacher summarized the group's understanding in the following way: "So we're saying it's ongoing observation of students . . . you are constantly looking at what they are doing and when you see something they are having trouble with, you plan a minilesson." Here, the configuration of groups was critical. Because different groups were composed of teachers with very different worldviews and shared understandings, teachers
in the group framed the idea of using assessment to inform instruction in very different ways. Significantly, there was little overlap in the range of interpretations offered in the course of conversations in these two different groups.

**Gatekeeping**

During the course of the year, teachers were confronted with an enormous number of messages about reading instruction. Obviously, not all messages could be incorporated, and so teachers' professional communities played a crucial gatekeeping role. Once teachers constructed an understanding of what a given message was about, they either engaged with the idea or approach, or they dismissed it. In this way, teachers essentially selected some messages in and selected others out. In conversations with their colleagues, teachers rejected messages from the environment for a range of reasons, many of which were linked with their worldviews or shared understandings. Unless otherwise noted, each of the following reasons was observed across all teacher groups.

*Does not apply to their grade level.* Notions of grade-level appropriateness exert powerful normative pressure. In the course of conversation, groups of teachers rejected messages about what they “should” be doing from the district standards, professional development, and assessments based on their sense that the particular approaches were not appropriate to their grade level. However, teachers in different groups often constructed somewhat different conceptions of what was appropriate for a given grade level. For example, after attending professional development on reading comprehension strategies, two teachers in the first grade decided during a lunchtime conversation that higher order comprehension strategies were inappropriate for first graders. They then made gatekeeping decisions on this basis. In contrast, two other teachers—a first- and a second-grade teacher—came to see the strategies as appropriate to both first grade and second grade and decided to meet after school to talk about ways to bring the approach into both of their classrooms.

*Too difficult for their students.* During formal and informal conversations, teachers drew on their sometimes extensive experience to assess whether students in their classroom would be able to handle a particular activity or master a particular skill or strategy. In interaction, teacher groups drew from their individual experiences and expectations to construct and abridge their shared conception of what is realistic for “kids in this school” to know and be able to do. In so doing, they often overruled professional developers or new district standards as suggesting something they considered too difficult for their students.

*Philosophically opposed.* Individual teachers often brought activities and resources to formal and informal conversations with colleagues. In groups of teachers with divergent views—especially grade-level groups—resources brought by individuals were sometimes rejected by others in the group because of philosophical opposition. For example, in one grade-level group, one teacher’s repeated suggestions that they use a reading comprehension assessment that used story excerpts and multiple-choice questions were rebuffed by the rest of the group, which saw the assessment as “too traditional.” Interestingly, what was considered philosophically problematic varied from group to group. Had this teacher been a participant in the other grade-level group, it is more likely, given the composition of the group, that her suggestions and resources would have been incorporated into group activities.

*Completely outside the bounds of comprehensibility.* Teachers also rejected messages about reading in conversation with their colleagues because they involved approaches that seemed inconceivable—so far outside of the bounds of what they saw as appropriate—that they were not even worth considering. In one example, early-grades teachers attended a district professional development day on the new reading series run by trained teacher leaders in which one teacher leader suggested individualized instruction as a possible way to teach reading. Later, as teachers in one grade-level group reflected on the professional development, they came to agree that individualized instruction was entirely inappropriate. One teacher expressed this shared sentiment as she said to her colleagues, “How can you possibly teach reading without putting kids in groups? That’s crazy!” Again, different groups of teachers found different messages about reading inconceivable, depending upon the worldviews represented in the group and the nature of the shared understandings they had developed over time.
Collective Sensemaking about Reading

Other reasons were influenced by what teachers were already doing in their classrooms, or what Sarason calls “preexisting regularities” (Sarason, 1971):

Doesn’t “fit.” Most teachers in the school had well-developed and quite complicated structures for teaching reading in their classrooms—ways of organizing time and children, materials that they used, and kinds of activity structures. During formal and informal conversations, teachers discussed whether or not and how new materials or approaches would fit with their individual and shared approaches. When these conversations did not produce a way to work new messages into preexisting programs, teachers selected those approaches out.

Unmanageable. Teachers rejected messages or approaches when they jointly decided that it was not possible to successfully implement them in the classroom because of time and other constraints, burdens of record keeping, or concern for behavior management issues.

Finally, teachers rejected messages when there weren’t adequate knowledge resources available to the group.

Didn’t feel they understood it. When there was no one in a group who understood particular language in the standards, particular approaches offered in professional development, or particular assessment instruments, the group tended to skip over them. For example, while putting together their assessment program, teachers in both grade-level groups came across assessments that reflected newer understandings of phonics and phonemic awareness that they didn’t understand. Teachers in the group weren’t sure why they would want to assess such a thing and they could not figure out how to administer the assessment. It perhaps comes as no surprise that without understanding the assessments, and without finding the resources for greater understanding within their proximal communities, these groups sought out different assessments to include in their assessment system.

Negotiating Technical and Practical Details

Sensemaking theorists talk about the ways in which interpretation is externalized in action (Porac et al., 1989; Weick, 1995). For teachers at Stadele Elementary, this link between meaning making and action was far from straightforward. For those messages that they did not dismiss during gatekeeping, teachers talked with colleagues to work out the technical and practical details involved with moving an idea, a particular approach, or teaching materials into the classroom. This attention to the technical and practical not only represented a significant percentage of teachers’ conversations with one another, but was also crucial in order for teachers to translate abstract ideas embedded in messages from the environment into concrete action in the classroom. This translation can be particularly challenging given both the complexity of reading instruction and the complexity of the classroom. Teachers’ conversations about technical and practical details ranged from coming to understand how to use particular aspects of the textbook series in the context of a particular teacher’s reading program; to working out timing, format, and record keeping for assessments; to exploring different ways to group students; to discussing what kind of paper to use for a particular activity. The conversations tended to be iterative, brought up again and again over time, sometimes after one or more teachers had tried a practice or used some materials in the classroom.

As with other parts of the sensemaking process, how teachers translated messages about reading into classroom practice was shaped by worldviews, preexisting practice, and shared understandings. Preexisting practice and the structural constraints at the school played an especially important role in framing how teachers worked out the technical and practical details. For example, both grade-level groups spent a lot of time figuring out how to create time to give individualized assessments given classroom management concerns (what will the other children be doing?), scheduling of other school events that cut into reading time, and the pressing need for test prep activities.

In addition, conversations about technical and practical details provided yet another occasion for interpretation and meaning making. In one grade-level group, teachers’ different mental models for how children learn to read created points of disagreement as they figured out the technical details of administering running records. Running records are a form of assessment that provides insight into both a child’s reading process (what strategies the child is using to decode) and a child’s reading level (what books the child can
read on an “instructional” level) (Fountas & Pin- nell, 1996). In deciding upon a common procedure for administering the running records, the teach- ers got into an argument about whether to use a story with pictures or to use text excerpts without pictures:

Teacher G: I know. We could do running records on this (referring to a series of leveled text excerpts developed for another purpose included in the district assessment compendium). Teacher I: I want to use something with pictures because that is an important part of reading. Teacher F: I agree. That’s what I don’t like about [the standardized test]. There are no pic- tures and that is an important part of reading. Teacher G: But this [the text excerpts without pictures] is words and sounding out words. It is really interesting to see which kids can look at it and really sound out words.

Teacher G’s preference for using text without pictures was rooted in an instructional model stressing the primary importance of attention to phonics (graphophonic cues) in decoding print—a view that was evident in interviews and observa- tions of her classroom. In contrast, Teachers I and F saw reading as involving a broader range of strategies for decoding, including attention to picture cues—also reflected in their interviews and classroom observations. Ultimately, Teacher G’s view prevailed and the group ended up doing running records on text excerpts without pictures. In this instance, the process of interaction and ne- gotiation unfolded in a manner somewhat differ- ent from earlier examples. Teachers in this group found themselves unable to construct a way of administering the running records that accom- modated teachers’ very different underlying be- liefs about what it is important to assess in reading. Instead, they constructed a compromise position in which they agreed to administer the running records three times a year for school as- sessment purposes without pictures, while ad- ministering them however they wanted the rest of the year. Teacher I later explained that after a year of conversations made challenging by the diverse worldviews represented in the group, she decided it was easier to give in for grade-level as- sessments and just continue to do her own thing in the classroom. For this teacher, group inter- action shaped her routines, but not her underlying view of the reading process. In contrast, the de- cision did influence the assessment practices of two teachers in the group with less well devel- oped views on the nature of reading instruction. After giving running records without pictures for the grade-level assessment, these teachers re- ported that they continued to use running records in their class in this manner on an ongoing basis. But perhaps the main point here is that while working out the technical details of implementation, conceptions among these teachers of how children learn to read shaped how they put run- ning records into practice. While I have separated the three subprocesses involved in collective sensemaking for the sake of conceptual clarity, in practice few conversations marched through these steps in a straight- forward manner. Rather, sensemaking in formal and informal settings was both highly iterative and recursive. Teachers returned to issues over and over throughout the year, modifying their inter- pretations, reconsidering technical and practical concerns, and often making new gatekeeping decisions as they came into contact with addi- tional messages from the environment or experi- mented with new approaches or materials in their classrooms.

Factors Affecting Sensemaking

While the basic process of sensemaking re- mained similar among and between different groups of teachers, patterns of teacher interaction and the conditions for the conversation were cru- cial for shaping if and how messages from the environment influenced teachers’ worldviews and classroom practice.

Patterns of Interaction: Making Different Sense of the Same Messages

Whom teachers talked with in what setting mattered because teachers in different groups often made different sense of the same messages. Teachers worked together both in formal settings when they were asked to work on tasks related to the reform effort, and in informal settings when they chose to talk with one another about their classrooms. It was significant that teachers found themselves working with very different people in different settings. In formal settings, teachers were most often grouped by grade level. But when teachers chose whom to talk with on their own, they tended to self-select into informal networks with similar worldviews and ap- proaches. For example, teachers in the first
grade stratified into two separate groups—a group of older, more experienced teachers who favored direct instruction and worksheet activities, and a group of new teachers who favored facilitative kinds of teaching and interdisciplinary, active learning activities. In another example, new teachers tended to reach out to one of three Reading Recovery teachers for guidance, because this teacher had a reputation for innovative and progressive teaching when she had her own classroom at the school several years earlier. In a school that tended to have pedagogical splits along generational lines, new teachers gravitated to an older, experienced teacher whom they perceived to have compatible worldviews and approaches, as well as expertise in early reading instruction. There were also a few teachers in the early grades who had few, if any, ties with other teachers in informal settings. In the absence of strong collegial ties, sensemaking appeared to happen in a more isolated fashion.

Over time, as teachers worked closely with one another informally, their practice and worldviews became increasingly similar within each group through a process of reciprocal influence. The tendency to seek out like-minded teachers in informal settings created a situation of pedagogical diversity in formal settings and relative homogeneity in informal settings. It also meant that the differences between informal groups were often greater than those between formal ones.

Because different groups were composed of different teachers with contrasting worldviews, preexisting practices, and shared understandings, teachers in different formal and informal groups interpreted and actualized messages from the environment in substantively different ways. For example, drawing heavily on their preexisting reading practices and assumptions about the appropriate way to teach reading, teachers in different informal networks made different sense of the reading series and ended up using it in entirely different ways. After considerable discussion and some experimentation, one pair of teachers, in a clear example of gatekeeping, rejected the reading series entirely because they felt it did not fit with the way that they structured reading instruction in their reading groups. Rather than introducing sequenced phonics and comprehension skill work prior to the story, as these teachers were used to doing with earlier reading series, the new series emphasized activating students’ background knowledge prior to the story and then teaching skills on an as-needed basis in the context of the story. Having decided in conversation with one another that “you can’t teach kids to read using [the new reading series],” the two teachers continued to use the old reading series for their reading groups.

In contrast, two teachers in another informal group who taught reading in the context of larger thematic units, saw the textbook as a source of stories to use with their themes rather than a curriculum to follow. As such, the particular lesson structure advocated by the textbook was less important than the nature of the stories. They decided to use the textbook, but shared wisdom with each other about how to pick and choose stories that fit with their themes, bringing the new reading series into each of their classrooms in a way that adapted it to their preexisting program rather than guiding their program by the reading series. Not all teachers made sense of the new reading series in conversation with their colleagues. But those who did showed evidence of the mutual influence in their approaches to and understanding of the textbooks. A trio of teachers who worked together ended up using the new reading series, following it in order. Two other teachers used the supplementary set of phonics readers, but not the main textbook.

The degree of heterogeneity in a group also played a role in the ways teachers interacted with messages from the environment. Informal settings, because of their pedagogical homogeneity, were more supportive, but also more conservative. As teachers with similar worldviews and practices interacted to make sense of a message—especially those teachers who had a long history of working together—they relied more on shared understandings to construct understanding. Thus, they did not engage in the kind of framing and re-framing that tended to surface, question, and at times shift assumptions. But while the diversity of approaches and perspectives in formal settings theoretically offered the opportunity for teachers to challenge one another’s worldviews and learn from each others’ approaches to reading instruction, when the range of worldviews and practices in a group was too large, teachers had difficulty communicating across them. This happened in both grade-level groups around different issues. When it happened, coming to a shared understanding of messages from the environment, mak-
ing gatekeeping decisions, and working out the technical details of implementation was challenging, involving much negotiating, arguing, and convincing in conversations that stretched over many meetings. As was the case in the running record example, when groups could not construct an understanding or negotiate technical and practical details in ways that made sense to all involved, and when there was external pressure for a joint solution, groups constructed negotiated responses that reflected the construction of more dominant members of the group. As illustrated earlier, individuals who did not subscribe to group decisions often did not make changes in their classrooms.

Conditions Supporting Deep Engagement: In-facing and Out-facing Conversations

Conversations differed markedly in the degree to which they fostered deep engagement. This engagement was significant because without it, teachers were more likely to summarily dismiss messages without exploring them and were less likely to engage with their colleagues and messages from the environment in ways that caused them to question their worldviews, practices, and shared understandings. Activities in formal settings at Stadele Elementary did not always provide the conditions for this deep engagement. Activities associated with the reform effort were often highly structured, with “assignments” from the leadership team including guiding questions and products related to the reform effort. While some assignments seemed to engage teachers (especially those directly related to developing and scoring assessments), teachers often found it difficult to see the connection between activities and the work they were doing in their classrooms (especially school-level planning activities, assigned discussion topics, and self-assessments regarding process). In the words of one teacher: “What we’re supposed to do isn’t necessarily the direction we choose, so sometimes it’s hard to get a fire under us.” Or teachers did not understand why they were being directed to do certain things. For example, during one meeting, grade-level groups were instructed to “reflect” on questions raised about the school’s reading instruction by outside “critical friends” who visited the school to observe for a day. The questions, while somewhat different from activities they had performed in the past, seemed very similar to the group:

Teacher G: [reading the question] “How is reading comprehension assessed at your grade level?” Haven’t we answered this already?
Teacher K: I am so bored with this!
[They brainstorm answers to the question, drawing upon a list of activities that they have repeated to each other in response to other assignments in recent weeks.]
Teacher I: Anything else?
Teacher G: We have it all here. It’s the same stuff.
Teacher I: I’m confused about what they really want.

When teachers did not see the connections between activities and their classrooms, conversations in teacher groups tended to shift toward “out-facing” ends as teachers completed tasks to please the administration, the district, or the funder. Out-facing conversations were characterized by superficial dialogue, signaling using appropriate language, and symbolic implementation (often akin to the decoupling highlighted by early institutional theorists [Meyer & Rowan, 1977, 1978]). Of the 27 discrete assignments or activities I observed during formal meetings, teachers responded to 12 with out-facing behavior. In one example, although initially engaged in writing indicators for the district reading standards, teachers in both grade-level groups began to see less and less connection between the standard-writing activity and their classroom practice. By the time they came to the decoding standards, both grade-level groups simply copied district indicators as their own with minimal discussion or consideration. Perhaps it is not surprising, then, that observations of teachers’ classrooms showed little evidence that teachers were influenced by the work they did writing decoding standards. Approaches to decoding remained as they had prior to standard writing and, in many cases, were quite different from the approaches emphasized in the standards. Thus, teachers implemented standards writing symbolically, creating a document that some later posted on their walls while changing little about their approach to teaching reading.

In contrast, conversations in informal settings were almost by definition “in-facing,” as teachers chose to talk to one another about matters closer to their practice. These conversations were characterized by careful consideration and a closer link between conversations and what teachers
brought into their classrooms. An analysis linking in-facing conversations in informal settings to classroom observations, for example, provides evidence of a pattern of multiple, consistent, incremental changes in classroom practice related to teachers’ interaction with their colleagues around messages about reading (see Coburn, 2001). In addition, a minority of in-facing conversations caused teachers to question their worldviews, practices, and shared understandings. For example, when one early-grades teacher became dissatisfied with the way she organized her class during reading groups, she began talking with a second teacher about alternative strategies, a conversation that stretched over many months.

The second teacher described an organizational system for rotating students through reading groups and learning centers that she had adapted from professional development. This approach grouped students homogeneously for reading groups and heterogeneously for learning centers. The first teacher was hesitant because the approach was complex and she felt that homogeneous grouping was inequitable. However, during the course of repeated conversations, the second teacher was able to answer the first teacher’s concerns by arguing that using homogeneous grouping for reading groups was equitable because students learn best when they are reading at their instructional level. The second teacher also worked with the first teacher to figure out how to make the approach fit with the particular context of her reading program and students. Thus, in conversation with the second teacher, the first teacher rethought and subsequently reshaped the fundamental organization of her classroom during reading instruction. During the course of the study year, I identified three such occasions on which teachers questioned their preexisting practices and worldviews in fundamental ways during conversations in informal settings.

Some activity structures or assignments in formal settings did elicit in-facing conversations. Of the 27 observed activities, 15 provided conditions for in-facing conversations. But as in informal settings, conversations in which teachers interacted with messages from the environment in ways that caused them to question their worldviews or practices were rare: I identified five instances in which teachers began to rethink their practices in more than incremental ways during formal meetings. Most of these instances happened as teachers jointly scored student assessments. In one example, one grade-level group’s deliberations while scoring student assessments led them to question taken-for-granted assumptions about the nature of reading comprehension. Over the course of several meetings they asked: “What is reading comprehension anyway?” “How do story maps promote reading comprehension?” “How should we address multiple problems and solutions that children identify in the story?” “What kinds of teacher questions really help children develop improved reading comprehension?” When questions were raised that teachers did not have answers for in their collective knowledge and experience, they tended to turn to available external sources (such as the district standards and the reading series) and engaged these ideas in ways that shaped their shared understandings, worldviews, and reading practices. Teachers questioned their worldviews and practices in formal settings when activities were linked to classroom practice, when teachers were not so far apart in worldview and practices that they could still communicate with one another, and when they did not feel pressured to get through tasks quickly to meet impending deadlines.

Throughout the sensemaking process, then, teachers in Stadele Elementary worked with their colleagues in various ways to adapt, adopt, combine, or reject messages about reading from the environment. What sense teachers ultimately made—the way in which they constructed understanding, made decisions to select some approaches and not others, and worked out technical and practical details necessary to enact the interpretation—was deeply shaped by whom teachers were working with and the conditions for conversation. The conditions for conversation were crucial because without the opportunity for deep engagement, without the time and structure to delve into and construct an understanding of messages from the environment and figure out ways to integrate new practices or ideas into the complex world of the classroom, it was unlikely that messages about reading touched classroom practice. Furthermore, because the way in which messages influenced the classroom was heavily framed by teachers’ worldviews, preexisting practices, and shared understandings, whom teachers were making sense with shaped how messages influenced teachers’ beliefs and practices.
Perhaps because teachers most often found conditions for engagement in informal settings among colleagues with similar worldviews and practices, they often responded in ways that reaffirmed and reenacted preexisting practices and beliefs. But at the same time, new shared understandings that resulted from negotiation, the dialogue between colleagues that at times surfaced deeply held assumptions, and the new approaches, ideas and materials that were incorporated in the classroom also reshaped worldviews, practices, and shared understandings. In this way, some messages from the environment did influence classroom practice, albeit in ways that were more incremental than that imagined by most policymakers.

Role of Reform Leadership

Sensemaking in teacher microcommunities was deeply situated in the larger school context. In particular, the principal and others in the school who took leadership in the reform effort played a key role in shaping the sensemaking process by influencing where sensemaking happened, by bringing in and privileging certain messages about reading and not others, by being strong voices in the construction of understanding, and by structuring the collaboration in formal settings.

Shaping Where Sensemaking Happened

As described earlier, teachers in Stadele Elementary School spent a lot of time talking with their colleagues about teaching and learning in both formal and informal settings. However, in spite of calls for increasing opportunities for teacher collaboration in schools (Little, 1982; Louis & Marks, 1998; McLaughlin, 1993; Newmann & Associates, 1996), not all schools have as many formal opportunities for teachers to work together or the culture of collegiality that fostered the high level of informal interaction found at this school (Hargreaves, 1994; Little, 1990). To the extent that reform leadership at the school shaped the opportunities teachers had to talk with each other about issues of teaching and learning, it can be argued that they shaped the degree to which this sensemaking happened in professional communities rather than on an individual level.

The current levels of collegiality and collaboration at Stadele Elementary were fostered over many years as current and former principals placed a priority on teachers' work together and encouraged a culture of collegiality outside of formal settings. Teachers with long histories in the school remembered a time when teachers were more isolated from one another, with few if any formal opportunities to collaborate. This pattern changed in the mid-1980s with the arrival of the previous principal and the advent of participation in a court-ordered desegregation program that mandated a high degree of professional development. With the principal's leadership, teachers began to meet for the first time in formal grade-level groups to work on joint projects and began to share experiences in professional development that encouraged them to talk about teaching and learning. The school began to build a culture of collegiality that eventually moved beyond formal settings to widespread informal settings. Even when that principal left the school and some of the grade-level projects subsided, this culture of collaboration in informal settings flourished and continued. When the school became involved in the new reform project, the leadership team again placed a priority on teacher collaboration, using a substantial percentage of their reform money to fund released time for teachers to work with one another on reform goals.

Bringing in and Privileging Messages from the Environment

Reform leadership played a major role in bringing in and privileging some messages from the environment and filtering others out. The principal, and to a lesser extent other members of the leadership team, had greater access to messages from the environment than most classroom teachers. They were the ones who attended district meetings and networking events associated with the reform effort. Similarly, the Reading Recovery teachers on the leadership team were connected with both the broader Reading Recovery network and reading leadership at the district. Through these connections, the principal and other reform leaders learned about new materials, belief systems, and ideas and made key decisions about which messages to pass on to the staff and which to filter out.

In one example, members of the leadership team attended professional development on reading instruction that featured speakers on topics including explicit, systematic phonics instruction and reading comprehension strategies instruction (that also promoted teaching phonics in context). The
Collective Sensemaking about Reading

leadership team decided to provide professional development to the staff only on what they learned about reading comprehension strategies, filtering out the messages about decoding. Furthermore, when they provided the professional development, they highlighted some approaches and ideas (e.g., the six strategies for reading comprehension used by proficient readers highlighted in the professional development) but not others (e.g., the particular pedagogical approach to teaching these six strategies).

But beyond bringing in messages from the environment, the principal and leadership team also focused schoolwide professional development and designed meeting activities in ways that privileged certain messages over others. For example, they made the decision to have professional development on running records after seeing so many other schools using running records to assess their students. Similarly, the principal and leadership team structured activities in grade-level and whole group meetings in ways that focused attention on district standards and assessment resources. For example, while putting together grade-level assessment programs, teachers were prompted to select assessments that were part of the core curriculum and the reading series. As a result of the way the leadership team privileged certain messages, teacher groups focused their attention in their work together on such things as running records, district assessments, and the standards rather than other myriad messages that came into the school.

Framing Messages

Some voices are more influential than others in the process of constructing the meaning of messages about reading from the environment (Isabella, 1990). The principal and the reform coordinator framed messages from the environment in ways that shaped conversation not only in whole group meetings when they were present, but also in grade-level meetings when they weren’t. For example, the principal repeatedly framed the meaning of the new reading series as one of many tools that could be used to meet the standards, positioning the standards as the curriculum rather than the textbook. In one meeting she said: “There is the core curriculum and the standards, and then there is the adoption [reading series]. With the adoption, [the district] picks the materials that are closest to the standard, but no publisher can be the be-all or end-all. . . . There are other options. . . . You’re supposed to teach to the standards. The adoption is one way to support it, but not the only way.” Teachers repeated this construction of the meaning and significance of the reading series vis-à-vis the standards as they discussed with each other how to use the reading series. In a sense, the principal’s construction authorized teachers to use the reading series in a wide range of ways, or not at all, as long as they geared their instruction to the standards.

And, as discussed earlier, there was enormous diversity in the way teachers came to use the reading series, including several teachers in each grade level who chose not to use the reading series at all. In addition to the reading series, the principal and reform leadership played a key role in framing other messages from the environment: the nature of standards, the purpose of doing assessment, the appropriate response to standardized-test pressure, and approaches to teaching reading comprehension strategies.

Structuring Collaboration

Finally, reform leadership played a key role in structuring activities in ways that created very different opportunities for teachers to engage deeply with messages from the environment. Reform leaders often structured collaboration by creating activities or guiding questions for teachers to follow in grade-level groups or the whole school. As discussed earlier, some activity structures seemed deeply linked to classroom practice, while others seemed more distant. Some activities encouraged and enabled teachers to challenge their own and others’ worldviews and approaches to reading instruction, while others did not. Whether reform leaders were able to make formal settings productive places for teachers to engage with ideas from the environment in ways that made a difference in the classroom depended on three factors. First, it depended upon the degree to which reform leaders were able to create authentic activities with enough flexibility that teachers were able to draw connections between the activities and their classrooms. Second, it depended upon their ability to provide enough support to encourage teachers to engage with information that at times challenged preexisting ways of doing things. Finally, formal settings were productive places when there was enough time for teachers to revisit and rethink new practices.

161
Reform leaders played an important role in shaping the sensemaking process as it unfolded in both formal and informal teacher groups. They created conditions that enabled teachers to talk with one another and, at times, created the structures that encouraged teachers to critically examine their worldviews and practices. But beyond that, reform leaders also played a powerful role in shaping the direction of sensemaking by creating pathways that brought particular messages from the environment into teacher conversations, by privileging certain messages over others, and by framing interpretations in powerful ways.

Conclusion

For the last two decades, research on the relationship between policy and practice has noted the ways that policy developed at higher levels of the system gets reconstructed at the school level (see McLaughlin, 1991a, for a review). Although several studies have attempted to understand this phenomenon by looking at individual teachers' practice (EEPA, 1990; Jennings, 1996; Spillane & Jennings, 1997; Weatherley & Lipsky, 1977), relatively few studies have explored the role of teachers' professional communities (Spillane, 1999, and Hill, 1999, are notable exceptions). Yet in schools where teachers interact with one another in either formal or informal settings, these conversations can play a powerful role in mediating between messages from the environment and what teachers bring into their classrooms.

By examining the nature and content of teachers' conversations with one another in one urban elementary school, this article analyzes the process by which teachers construct and reconstruct messages from the environment in their professional communities. I argue that patterns of interaction and the conditions of conversation in formal and informal settings influence the process by which teachers adopt, adapt, combine, and ignore messages from the environment, mediating the way messages from the environment shape classroom practice. Other researchers have argued that professional communities are not unitary (McLaughlin & Talbert, in press; Siskin, 1994; Talbert & McLaughlin, 1994). This study goes further, highlighting the important role of teacher interaction outside of formal organizational structures—interaction that can be highly influential in the ways that teachers make sense of messages from the environment. Recognizing that the teacher community is multifaceted and dynamic is important because teachers in different formal and informal communities can make different sense of the same thing. Individual teachers' worldviews and preexisting practices, and groups' shared understandings shape how teachers construct understandings, select some messages in and others out, and negotiate the technical and practical details necessary to translate abstract messages into concrete action. Finally, this up-close examination also shows that formal policy is only one of many sources of messages and pressures about reading that teachers come into contact with. To focus on formal policy alone is to misrepresent all that teachers are responding to and grappling with as they work to improve their practice.

This portrayal of collective sensemaking—both as playing a key role in shaping the ways messages about reading actually become a part of classroom practice and as a complex process unfolding differently in many parts of the school—raises key questions for policy. From a policymaker's perspective, it may seem that schools and teachers—in reconstructing and reinterpreting policy messages—are subverting the intent of policy or thwarting implementation. After all, teachers did not always make sense of messages from the environment with colleagues in ways that policymakers might have hoped (see Hill, 1999, for another example of this phenomenon). But another way to look at it is that this sensemaking is both necessary and unavoidable. Policy and other sources of messages about reading are by nature abstract (also see Hill, 1999, on this point). Messages about reading come into schools in the form of ideas, materials, and descriptions of practices. Yet teachers' work by nature involves action. Teachers are faced with multiple messages and pressures to improve reading instruction and must find ways to make meaning of them, translating abstract ideas into action in the context of their classrooms.

Conversations with colleagues may facilitate this process. For teachers at Stadele Elementary, that the sensemaking happened with colleagues, as opposed to individually, enabled them more readily to integrate new ideas into the highly situated context of their classrooms. Work with other teachers helped them grapple with multiple and sometimes conflicting messages. It brought access to greater resources and expertise. It helped them make decisions about which of the plethora of messages to pursue. And, perhaps most im-
important, it helped them to construct what Spillane (1999) calls the “practical knowledge” necessary to turn abstract ideas into something workable in their classrooms.

Furthermore, sensemaking in communities has the potential to provide conditions for teachers to engage with messages from the environment in ways that encourage them to question their assumptions, challenge their frames, and continue to improve their practice over time. Through interaction, teachers gained access to a range of interpretations and ways of negotiating the technical and practical details that went beyond their own experiences and worldviews. Via the collective negotiation of a range of interpretations, they often developed new constructions of messages and new strategies for integrating approaches into their classrooms that extended, elaborated, and, in a few cases, transformed preexisting individual and group worldviews and practices.

But not all conditions for collective sense-making provided teachers opportunities to learn and grow. When conversations were structured around activities with little connection to the classroom, with time frames that did not allow for in-depth conversations, or occurred in groups of teachers with such divergent worldviews and practices that communication became difficult, teachers were often unable to engage with messages in more than superficial ways. Furthermore, conversations at times encouraged a tendency for teachers to reconstruct messages in ways that reinforced preexisting worldviews and practices, encouraging stability of practice rather than change.

Given that the process of reconstruction may be a central part of moving ideas into practice, the question for policy is: How can policy encourage conditions for collective sensemaking in schools that promote learning and growth? The experiences of teachers in Stadele Elementary offer some insight into this question.

First, policy can find ways to encourage a collaborative culture in schools. Informal networks among teachers are largely unacknowledged by the policy world. Yet they have enormous potential to play an influential role in teacher sense-making. It is their flexibility, their spontaneity, their voluntariness, and their situatedness that make informal groups such powerful and supportive contexts for teacher sensemaking (Hargreaves, 1994). A key question for policy, then, is how to encourage and enable this kind of culture, without imposing the kinds of “contrived colle-giality” (Hargreaves, 1994) that may be associated with mandated collaboration. The experiences of Stadele Elementary suggest that the formal policy system can support informal networks by providing funding for shared experiences of high-quality sustained professional development focused on teaching and learning. At Stadele Elementary, these shared experiences over a long period of time provided teachers with a common language, common experiences, and much fodder for conversations that extended beyond formal meetings into informal networks. Furthermore, the experiences of Stadele Elementary echo previous research that suggests that the principal plays a key role in setting a tone of openness and communication and a focus on teaching and learning that encourage a culture that moves away from isolation toward mutual support around matters of instruction (Hargreaves, 1994; Louis, Marks, & Kruse, 1996).

Second, policy can find ways to foster conditions for in-facing collaboration in formal settings. The challenge for policy is how to create the conditions that enable teachers to work with one another in formal settings in ways that promote the kind of in-facing conversations often found in informal settings, but also draw upon the power of the diversity of worldviews and the connection to reform efforts often found in formal settings. Echoing research that suggests the crucial role of structured time for teachers to meet (Louis et al., 1996), the experiences of teachers in Stadele Elementary suggest that the policy world can encourage productive collaboration by providing sufficient funding for teachers to work with one another without too many demands for what teachers are to do during this time (Stokes, 1997). Stadele Elementary supported teachers working with one another by using grant funds that were finite and relatively short term. But even with these additional funds, pressures to complete assignments often cut short conversations just as they began to move to a deeper level. Increased expectations that teachers will work together on “joint work” (Little, 1990) without resources and time to support that work in a meaningful way may lead to the kind of out-facing conversations that prevent teachers from engaging deeply with ideas or questioning preexisting ways of doing things.

Third, beyond resources for time, the experiences of Stadele Elementary suggest that reform leaders should structure collaboration around...
authentic activities that have clear connections to the classroom. Fourth, teachers in formal settings often have diverse worldviews and ways of teaching. At Stadele Elementary, this pedagogical diversity led to conflict or avoidance of difference in ways that contributed to out-facing conversations. Teachers need structures and support that help them engage in conversation across diversity, to help make diverse settings opportunities to learn from one another and push thinking rather than places to disengage and avoid conflict (Achinstein, 1998).

Finally, policy can find ways to provide greater access to knowledge resources. Too often, policy and professional development fail to provide sufficient resources to help teachers understand new approaches or materials in sufficient depth to be able to make the kinds of principled professional judgments necessary to bring them into their classrooms (Cohen & Hill, 2000; Spillane & Jennings, 1997). Documents, compendiums of assessments and model lessons, textbook series with scant professional development, and one-shot workshops continue to be all-too-common ways that policy attempts to influence teacher practice (Cohen & Hill, 2000; Little, 1993). Access to external knowledge resources may be especially important when policy is promoting instructional approaches that are likely to be unfamiliar to teachers. At Stadele Elementary, external knowledge resources became increasingly influential when teachers did not feel they had knowledge resources available in their proximal communities. Furthermore, Spillane (1999) suggests that connections to individuals with deep knowledge of reform practice may be a key attribute of collective settings that encourage teachers to move beyond incremental changes in practice.

But beyond providing sufficient support and depth to professional development accompanying messages about reading coming from the environment, teachers also need access to greater knowledge resources at the school site on an ongoing basis. This calls for finding ways that policy can support the continuous development of collective knowledge resources at the school so that teachers not only have places to turn at the school site when they find themselves with questions about their practice, but also can continue to expand and extend their worldviews and repertoire of approaches to reading instruction over time.

Notes

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Vaughan (1996) defines worldview in the following way: “Each person—the butcher, the parent, the child—occupies a different position in the world, which leads to a unique set of experiences, assumptions, and expectations about the situations and objects she or he encounters. From integrated sets of assumptions, expectations, and experience, individuals construct a worldview, or frame of reference, that shapes their interpretations of objects and experiences. Everything is perceived, chosen, or rejected on the basis of this framework” (pp. 62–63). For the purposes of this study, “worldview” should be distinguished from the more conventional notion of “belief” in several ways. First, “worldview” moves away from any static associations the term “belief” might carry, highlighting the ways individuals’ histories and particular sets of experiences shape the ways of thinking or cognitive frames they use in interpreting events and information. Furthermore, these events and information, in turn, shape worldview over time. Second, the concept of “worldview” acknowledges the influence of professional norms in the institutional environment and shared understandings that are deeply situated in the particular organization or workgroup.

Stadele Elementary is a pseudonym.

The student body at Stadele Elementary School is very diverse: 55% are Asian (of whom the majority are Chinese), 28% are Latino, 13% are African American, and 3% are white. Sixty-seven percent of all students qualify for free or reduced-price lunch, and 48% are classified as English language learners. The teaching faculty is also racially diverse. Of 33 classroom teachers, 48% are white, 33% are Asian (Chinese and Filipino), 12% are African American, and 6% are Latino. All five resource teachers are white and the principal is Asian American.

Reading Recovery is a pull-out tutoring program in which trained Reading Recovery teachers work one-on-one with the first-grade students who are assessed as the lowest readers.

There are trade-offs involved in such in-depth observations. On the one hand, this kind of observation provided a depth of understanding of teachers’ worldviews and practices as well as access to teachers’ informal relationships with their colleagues in a way not possible from one or two short observations. On the
other hand, investing heavily in observing fewer teachers meant that I was unable to observe all teachers in the early grades. But although I did not observe all teachers, I gained much information about their classroom practices through interviews and, perhaps more important, through extensive meeting observations. Observations of teachers engaged in joint work related to classroom instruction proved an especially fruitful source of information about teachers’ worldviews and practices. Activities such as developing scoring student assessments often revealed teachers’ assumptions about appropriate reading instruction and the nature of student learning, as well as the details of their practice, in a way that interviews did not. My confidence about the information gained about worldviews and practices in this manner for teachers whom I did not observe was bolstered by the high level of correspondence between classroom observations and what teachers said in meetings among the teachers I did observe.

Reconstruction of state messages happened in some cases in spite of aggressive efforts by the state to control the messages about reading. For example, the state attempted to control the content of professional development funded with state monies. Under AB1086, professional development providers had to submit professional development plans to the state to be approved in order for districts to contract with them. However, districts could bypass this approval process by creating their own professional development. Stadele Elementary’s district took this other route, developing professional development for all K–3 teachers in a way that reinterpreted the state’s heavily skills-based emphasis.

For example, during the year of the study, teachers at Stadele Elementary School received professional development for the new reading series that was adopted by the state in 1996 using criteria developed by the state in 1994. While it could be argued that the new reading series represented a “balanced approach” in its broadest sense, key parts of the reading series and the 1994 criteria contradict the rendition of the balanced approach in current state policy in significant ways. These differences can be illustrated by comparing the 1994 criteria with criteria adopted in 1999 for the 2002 adoption (which are more representative of current state policy). These two documents differ in their view of appropriate reading materials to use (predictable texts versus decodable text); whether skills are to be taught in context or in isolation; whether skills should be presented in a prescribed sequence or on an as-needed basis; in the emphasis on a model of reading emphasizing three cuteing systems versus a model of reading emphasizing the graphophonic system; and in promoting a model of instruction in which teachers are facilitators guiding student construction of knowledge versus a model of reading in which teachers provide direct instruction and students then practice skills by reading (Curriculum Commission, 1999; Curriculum Development and Supplemental Materials Commission, 1994). In spite of the ways in which the new reading series contradicted state policy in 1998, textbooks were one of the key routes by which teachers in this district were connected with state policy messages, illustrating the time lag.

Teachers at this school had worked in formal grade-level groups during previous reform initiatives and had been involved in the reform project since the previous year (with few changes in personnel). Some of the informal groups had a much longer history of working together—in one case stretching at least 15 years. Thus, when new practices, ideas, or approaches entered into teachers’ conversations with one another, they entered conversations that had a history, with norms of interaction and shared understandings that had developed over time.

Hill (1999) reports a similar pattern in her study of a district committee’s efforts to write district mathematics standards that were aligned with the state standards.

Interestingly, the different models of reading present in this grade level group roughly correspond to the current disagreements in the policy world about what kinds of skills and strategies teachers should use to foster early decoding. Like teacher G, state policy emphasizes the primacy of graphophonic information and counsels teachers to focus on that information first and foremost: “Students understand basic features of reading. They select letter patterns and know how to translate them into spoken language by using phonics, syllabication, and word parts” (California Department of Education, 1999, p. 61). Other approaches, including that put forth by Reading Recovery, paint a picture of a reading process by which children attend to a range of cues including graphophonic (visual), semantic (meaning), and syntactic (structure): “There are many different strategies for reading . . . (1) Strategies that maintain fluency, (2) strategies that detect and correct error, and (3) strategies for problem solving new words. Each function involves a network of cues provided by meaning, language structure or syntax, and visual information. The important thing about these cues, however, is that readers access and use them” (Fountas & Pinnell, 1996, pp. 149–150, emphasis in original text).

It is important to note that running records actually have highly elaborated procedures for administration and analysis—procedures that place a central importance on using real books, pictures and all. However, these procedures were covered quickly in the two 1-hour workshops that teachers participated in. Without having this information at their disposal, teachers ended up creating their own procedures, which tended to differ considerably from the approach promoted in the professional development. I don’t mean to imply, however, that greater access to training would have led
to greater fidelity to the process. Teachers at another school in this study with considerably more training in running records also altered procedures because of time and management concerns, but did not alter them quite to the same extent as teachers in Stadele Elementary School.

12 Of the 29 meetings I observed in which teachers were intentionally grouped for activities, they were grouped in cross-grade groups for five of them and in grade-level groups for the remaining 24.

13 Johnson and his colleagues (1998) report a similar finding in their multilevel study of the implementation of a literature-based reading program in four elementary schools in four districts.

14 The relationship between Reading Recovery teachers and classroom teachers in informal networks highlights the importance of teachers' perceptions of each others' worldviews and practices in developing informal networks. As one anonymous reviewer for this article suggested, and my interview and observational data confirm, the Reading Recovery teachers in the school had very similar ideas about the nature of teaching reading and nearly identical approaches to doing Reading Recovery, perhaps because of the intensity and ongoing nature of their professional development and the closeness with which they worked with one another. Yet new teachers reached out disproportionately to one of the three Reading Recovery teachers based on their perception that her practice and beliefs were different from the other two.

15 Here, the relevant unit of analysis is the activity or assignment that structured conversation in teacher groups during formal settings. It is important not to conflate "activity" with meeting time. There were sometimes multiple assignments in a given meeting and, for that matter, meetings without formal assignments or activities at all. Similarly, it is important not to confuse activity with message. Teacher groups often drew on multiple messages about reading in the course of a particular activity.

16 The development of teacher community was a central goal of the reform organization. However, Stadele Elementary placed particular emphasis on it, making decisions about funding in ways that placed a central emphasis on creating meeting time for teachers.

17 For example, grade levels were repeatedly directed to the reading series and district materials for information and guidance on assessment: "Look at the [reading series] assessment kit and the assessment of the district standards binder and discuss running records as a form of assessment at your grade level" (released-day assignment sheet, 10/27/98) and "Choose a basic assessment piece for reading comprehension. It should be something you can give to your class two to three times a year to measure reading comprehension, both recall and higher level thinking skills. Suggestion: Use an assessment piece already provided by the [reading series] assessment kit" (released-day assignment sheet, 12/1/98). And, following district professional development on assessment, "Which, if any, assessments did you learn about that you are interested in implementing at your grade level for the whole class, just for struggling readers? . . . Which, if any, of the assessments do you think we could choose schoolwide, K–2, 3–5?" (released-day assignment sheet 3/25/99).

18 At the same time that the principal's construction of the reading series vis-à-vis standards authorized diverse approaches to reading instruction, it also bounded this diversity by linking it to outcomes specified by district standards—outcomes that, in turn, were assessed by standardized test scores. During the year of the study, the school was grappling with district standards for the first time. In a school with a strong tradition of teacher autonomy and multiple and diverse conceptions of what "good" reading instruction entails, the notion of standards was controversial. As teachers in the school discussed the nature and implications of standards for their classrooms, a small number of teachers voiced the opinion that gearing instruction to standards was a form of standardization that encroached on their autonomy. Others, including most of the teachers in the early grades, supported the notion of standards as a mechanism to create clear grade-level expectations and align instruction across grade levels. Over the course of the year, in conversation and interaction with the standards, the teachers and the school leadership worked to negotiate the perceived tensions between standards and professional autonomy—a tension that has also been the topic of debate in the policy world (see Darling-Hammond, 1997, for a review). While they had by no means resolved this tension by the end of the school year, through this process of interaction the faculty had begun to construct a conception of standards as providing goals or loose guidelines that can be met through many different approaches to teaching. In this sense, they redefined professional autonomy as the autonomy to make decisions about the means to get to outcomes defined by standards. Significantly, this stance towards standards was, in turn, made possible by a district that saw it as the principal's role to make decisions about textbook use and how the school actualized the standards.

19 Professional norms of autonomy and privacy in teaching leave many teachers ill prepared when collaboration surfaces differences and conflict. Achenstein (1998) argues that schools must establish explicit norms for interaction that value and indeed embrace differences in opinion, and use inquiry and decision-making structures that provide processes for teachers to talk about, explore, work with, and mediate their differing worldviews and practices. One such structure for inquiry—and there are many—is the Tuning Protocol, developed and used by the Coalition of Essential Schools to guide teacher inquiry and collaboration (Allen, 1995).
APPENDIX

TABLE A1
Distribution of Meeting Observations

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hours of observation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formal settings</strong></td>
<td></td>
</tr>
<tr>
<td>First-grade meetings</td>
<td>14.5</td>
</tr>
<tr>
<td>Second-grade meetings</td>
<td>16.0</td>
</tr>
<tr>
<td>Other grade-level meetings</td>
<td>13.5</td>
</tr>
<tr>
<td>Full faculty meetings</td>
<td>43.5</td>
</tr>
<tr>
<td>Leadership team meetings</td>
<td>13.5</td>
</tr>
<tr>
<td>In-school professional development</td>
<td>15.0</td>
</tr>
<tr>
<td>District professional development</td>
<td>3.0</td>
</tr>
<tr>
<td>External professional development with leadership team</td>
<td>11.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>130.5</td>
</tr>
<tr>
<td><strong>Informal Settings</strong></td>
<td></td>
</tr>
<tr>
<td>Informal meetings</td>
<td>Ongoing</td>
</tr>
</tbody>
</table>

TABLE A2
Distribution of Interviews and Classroom Observations of Teachers

<table>
<thead>
<tr>
<th>Individual</th>
<th>Teaching level</th>
<th>Years of experience</th>
<th>Sex/Race</th>
<th>Leadership team?</th>
<th>Number of interviews</th>
<th>Hours of classroom observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2nd grade</td>
<td>29</td>
<td>F/Asian</td>
<td>N</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>B</td>
<td>2nd grade</td>
<td>7</td>
<td>M/white</td>
<td>N</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>C</td>
<td>2nd grade</td>
<td>4</td>
<td>F/Asian</td>
<td>N</td>
<td>12</td>
<td>33</td>
</tr>
<tr>
<td>D</td>
<td>2nd grade</td>
<td>5</td>
<td>F/white</td>
<td>Y</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>E</td>
<td>2nd grade</td>
<td>3</td>
<td>F/Asian</td>
<td>N</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>F</td>
<td>1st grade</td>
<td>36</td>
<td>F/white</td>
<td>N</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>G</td>
<td>1st grade</td>
<td>34</td>
<td>F/white</td>
<td>N</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>H</td>
<td>1st grade</td>
<td>3</td>
<td>F/African American</td>
<td>N</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I</td>
<td>1st grade</td>
<td>1</td>
<td>F/white</td>
<td>N</td>
<td>7</td>
<td>25</td>
</tr>
<tr>
<td>J</td>
<td>1st grade</td>
<td>3</td>
<td>F/Asian</td>
<td>N</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>K</td>
<td>1st grade</td>
<td>2</td>
<td>F/Latina</td>
<td>N</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>M</td>
<td>K</td>
<td>33</td>
<td>F/white</td>
<td>Y</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>R</td>
<td>Reading</td>
<td>31</td>
<td>F/white</td>
<td>Y</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>S</td>
<td>Reading</td>
<td>14</td>
<td>F/white</td>
<td>Y</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>T</td>
<td>Reading</td>
<td>17</td>
<td>F/white</td>
<td>N</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>U</td>
<td>4th grade</td>
<td>34</td>
<td>F/white</td>
<td>N</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>V</td>
<td>4th grade</td>
<td>34</td>
<td>F/white</td>
<td>N</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>W</td>
<td>Reform coordinator</td>
<td>7</td>
<td>F/white</td>
<td>Y</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>X</td>
<td>Principal</td>
<td>5</td>
<td>F/Asian</td>
<td>Y</td>
<td>3</td>
<td>N/A</td>
</tr>
</tbody>
</table>
References


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