
Districtwide Instructional Reform: Using Sociocultural Theory to Link Professional Learning to Organizational Support

CHRYSAN GALLUCCI

University of Washington

No Child Left Behind Act accountability pressures and calls to close achievement gaps between groups of students have challenged school districts to achieve systemwide instructional improvement. These policies create learning challenges for classroom teachers and for school and district leaders. This article engages questions about organizational support for professional learning in the context of reform initiatives. A theoretical lens—called the Vygotsky Space—is used to analyze case study data from a reforming urban school district located in the Pacific Northwest. A job-embedded professional development structure called the Elementary Studio/Residency Model is explored in depth as are the learning processes of one participating teacher. The teacher's professional learning experiences are then connected with leadership actions and institutional supports for learning. The relationship between organizational change and district leaders' attention to practitioner learning and innovation is discussed.

Implementation issues related to recent federal education policy—specifically, the No Child Left Behind Act (NCLB)—make questions related to professional learning and organizational support for learning timely. NCLB and other contemporary education policies, in taking aim on the quality of instructional experiences for public school students in the United States, pose learning challenges for educators across levels of the system.

First, the standards-based reform movement (and now NCLB) has shifted the focus of educational policy over the past two decades to issues of instructional technology and the work of classroom teachers (Elmore 1996; Thompson and Zeuli 1999).¹ Research conducted over this time period documents that ambitious content standards and the associated expectations for student learning also constitute a demanding curriculum for teacher learning (Borko and Putnum 1995; Hawley and Valli 1999; Thompson and Zeuli 1999). That

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the policies have not produced wide-scale change in classroom practice further complicates the terrain, especially for educational leaders (Elmore 2000; Hubbard et al. 2006; Spillane and Zeuli 1999). Thompson and Zeuli (1999) argue that the inconsistent implementation of these policies is related to issues of professional learning; that is, the reforms demand deep, subject-focused, transformative learning on the part of teachers. Such learning, it is argued, should lead to substantive changes in core instructional practices.

Second, the persistent NCLB accountability pressures and calls to close achievement gaps between groups of students have created pressure for school districts to achieve systemwide instructional improvement. School district leaders, it seems, must also learn new ways of doing things in order to respond to these contemporary issues. Federal and state policy demands have increasingly focused district leadership and resources on capacity-building strategies as a lever for ensuring that all students learn at high levels (Hightower et al. 2002; McLaughlin and Talbert 2003). Some researchers have come to call reform in this context a problem of learning; such a stance is described by Hubbard et al. (2006) in their analysis of San Diego City Schools' turn-of-the-century instructional reform agenda. Initiated by top district leaders and characterized by a singular focus on classroom instruction and a multilevel effort to build instructional leadership and teaching capacity, that reform is suggestive of a new wave of centralized strategies directed at instructional improvement and professional learning.

Taken together, the conditions described above raise questions related to professional learning as it occurs in district organizational contexts: What capacity-building structures do educational leaders develop in response to the current policy environment? How are frontline professionals, such as classroom teachers, supported in making changes in their instructional practice? How can professional learning processes inform organizational leaders and contribute to what has been called "organizational learning"—here focused on how the district as a system learns to support professional learning (Copland and Knapp 2006; Leithwood, Leonard, and Sharratt 1998).

The purpose of this article is to describe how an innovative professional development opportunity in one school district led to learning at multiple system levels. The article takes up a set of theoretical issues regarding the sociocultural nature of learning in an organizational context. While maintaining analytic focus on a specific professional development structure, I ex-

CHRYSAN GALLUCCI is assistant research professor at the University of Washington. She is a research associate with the Center for the Study of Teaching and Policy and codirector for a Masters in Instructional Leadership program. Her research and teaching focus on education policy and its connections to issues of professional learning.

plore in some depth the learning processes of an individual teacher (examining what she did, how she did it, and why she did it). Following the suggestion of Spillane and Burch (2006), I then connect that teacher's experiences with the conditions that supported her learning, such as leadership actions, and with district organizational change in the form of new professional development strategies. The article contributes to research on school district instructional improvement strategies by demonstrating that when instructional leaders make classroom practice a focus of their attention, what they learn about teacher professional learning can inform their decisions about the scale-up of capacity-building policies. It extends research on teacher professional development by providing a theoretical framework for analyzing learning processes and connecting those processes to their institutional supports. Finally, the article contributes to contemporary discussions about organizational learning. I draw on sociocultural learning theory and empirical data to show how individual learning processes can become resources for collective learning and organizational change (Boreham and Morgan 2004).

I begin the article with a review of relevant research regarding: (1) teacher learning related to contemporary standards-based reform policies and (2) the role of school districts in the achievement of widespread instructional change and the improvement of learning conditions for all students. I then describe a theoretical framework that juxtaposes organizational theories of learning with sociocultural perspectives on learning. This includes a conceptual model called the Vygotsky Space (Harré 1984) that is useful for the analysis of professional learning and connecting that learning to its organizational (social) context. An empirical case is used to bring the theoretical ideas into focus at a practical level. The final section of the article makes connections to leadership and institutional support for professional learning processes.

Professional Learning in the Context of District Instructional Reform Initiatives

Making connections between professional learning for teachers and organizational supports for that learning is difficult because studies in education tend to look separately at learning processes and at the institutional contexts in which learning occurs (Spillane and Burch 2006). For example, one line of research on teachers' responses to instructional reform initiatives dates back to the early 1990s and to a classic set of case studies (Guthrie 1990). Those studies demonstrated that individual teachers' responses to curricular reform are likely to be modest, even when the teachers themselves believe that they are making significant changes in their instructional strategies (Cohen and Ball 1990). For example, rather than developing deep expertise about how to

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engage students in making meaningful connections between ideas, teachers might, especially initially, focus on the organization and use of particular materials. These early studies and continuing research have established that instructional reform policies tend to produce change that is consistent with teachers' present practice (Spillane 2000b) and that deep pedagogical change requires ongoing learning of a type that is rarely sustained in teachers' professional experience (Hubbard et al. 2006; Spillane and Callahan 2000; Spillane and Zeuli 1999).

Regarding support for professional learning, research suggests that learning environments for teachers need to offer powerful images of teaching and learning, engage teachers as active learners, challenge teachers intellectually, reinforce learning over time, and ensure that learning is relevant to the problems teachers face (Knapp 2003; Wilson and Berne 1999). Further, researchers have long argued that professional learning is most successful when it is encouraged by organizational conditions such as collaboration (Abdal-Haqq 1995; Little 1988). Although collaborative organizational cultures can create beneficial conditions for teacher learning, the nature of professional culture among teachers and its connection to teacher learning have been viewed as problematic (Hargreaves 1994; Little 1982, 1990; Lortie 1975). And, while structural changes in schools (e.g., the size of the school or the amount of time for teacher planning) can positively influence teacher collaboration (Louis and Kruse 1995; Louis et al. 1996), variations between teachers' professional communities can also affect the ways that individual teachers think about their practice (McLaughlin and Talbert 2001).² This variation can mediate their responses to instructional improvement policies, even given supportive structural conditions (Coburn 2001; Gallucci 2003; Spillane 1999).

Taken together, this research suggests that teacher learning in response to contemporary reform policies is complicated by both individual characteristics and organizational conditions. Spillane (1999) has referred to the teacher's "zone of enactment" that "captures the space in which teachers' capacity, will, and prior practice interacts with incentives and learning opportunities" mobilized by the institutional environment (144). Research on organizational learning in school systems identifies characteristics of the institutional environment that can potentially foster and guide positive educational outcomes (e.g., common vision, collaborative culture, strong leadership, and capacity across actors; Coffin and Leithwood 2000; Cousins 1998; Leithwood, Jantzi, and Steinbach 1998; Marks and Printy 2002). Leithwood et al. (1995) likewise found that the district conditions most commonly associated with organizational learning in schools were exercised through leadership actions related to professional development resources. And, although many districts in the current policy environment are creating systems of support (e.g., content coaching aimed at teacher learning about curriculum and instructional ped-

agogy), we know very little about how these supports actually work to produce professional learning outcomes.

There is a growing body of literature that sheds light on the mediating and potentially positive role of district central office leaders on instructional change, especially when their improvement strategies are systemic, coherent, and focused on the professional development of school leaders and classroom practitioners (McLaughlin and Talbert 2003). We know that districts mediate, for example, state policy—ignoring, aligning, misinterpreting, revising, or adapting standards-based reform policies (Chrispeels 1997; Firestone and Fairman 1998; Goertz et al. 1998; Kirp and Driver 1995; Spillane 1996, 1998; Spillane and Thompson 1997). Further, district administrators' interpretation of instructional reforms can shape the understanding of principals and teachers (Burch and Spillane 2004; Spillane 1994, 1998, 2000a) and affect school culture (including inquiry practices, teacher learning communities, and collective problem solving; McLaughlin and Talbert 2003). When school districts focus single-mindedly on instructional improvement and the professional development of leaders and teachers, we have some evidence that they build professional community and make a difference in student outcomes (D'Amico and Stein 2002; Elmore and Burney 1997, 1999; Massell and Goertz 1999; Rosenholtz 1989).

However, while research is increasingly clear regarding the characteristics of “reforming” or “improving” districts, there is limited research that explores in depth how the professional learning of practitioners within these systems is connected to their organizational contexts or to organizational decision making (Spillane and Burch 2006; Stein and Coburn 2007). There is still much to be learned about how instructional improvement initiatives and processes of individual and group capacity building unfold and result in organizational capacity that is larger than the sum of its parts—the outcome of what has been called district “system learning” (Copland and Knapp 2006; Knapp et al. 2003).

In the next section of this article, I explore the utility of a theoretical lens—called the Vygotsky Space—for understanding these processes. I draw on sociocultural theories of learning and a conceptual framework originally described by Harré (1984) to explore teacher learning processes and sources of organizational support for professional learning.

Sociocultural Learning Theory and Organizational Change

Two aspects of the problem about how professional learning comes to be supported in district organizational contexts are explored in this article: one is about how professionals learn (theories of learning and development), and

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the other is about the development of effective institutional support for that learning. Ideas about organizational learning inform the latter. In this section, I explore theories about how organizations learn (i.e., how they learn to support the growth of professionals within the organization) and propose a framework based on sociocultural views of learning that is useful for exploring the questions about capacity building posed earlier in the article.

The term “organizational learning” was first mentioned in organizational theory as early as 1958 (March and Simon) and became popularized in the discourse on knowledge, in organization studies, in the 1970s (Gherardi 2000). The term, as defined by Leithwood and colleagues, generally implies that the organization as a collective learns and that individuals learn from each other and from the group (Leithwood et al. 1995; see also Argyris and Schön [1996] and Senge [1990]). Organizational change could be considered an outcome of organizational learning and, in this context, what a school district actually does (in the form of new policies, structures, or procedures) in response to what it learns about how to accomplish instructional improvement through support for professional learning.

Ideas about how organizations (e.g., school districts) learn have suffered from a lack of definition (What is organizational learning?) and a bifurcation between “descriptive,” or theory-driven, academic endeavors and “normative,” or practice-oriented, approaches (Argyris and Schön 1996; Popper and Lipshitz 1998; Robinson 2001; Schein 2006). On the one hand, academics have doubted whether organizations actually can learn and have failed to reach agreement on whether the term (organizational learning) actually has meaning (Weick 1991). On the other hand, practitioners too seldom look deeply or critically at how organizations learn even as processes such as “learning from experience” are prescribed (Popper and Lipshitz 1998). Academics and practitioners alike have struggled with the problem of theorizing and documenting how individual and collective change processes actually take place and how those processes contribute to something that is labeled as learning at the organizational level.

To date, most attempts to explain organizational learning have relied on traditional theories of individual learning and development. Theorists have drawn from behavioral perspectives (e.g., Cohen and March 1974; Cyert and March 1963) that treat change in organizations in terms of what people or the organization as a whole does or from cognitive theories (e.g., Argyris and Schön 1978, 1996; Leithwood, Jantzi, and Steinbach 1998; Weick 1995) that link organizational change with notions of how people make sense of and, then, reconstrue their organizational environments. These formulations have produced rational-technical models that follow patterns such as information management (e.g., data search, interpretation, and use) or sense-making loops that include experience, reflection, conceptualization, and experimentation

(Huber 1991; Kolb [1984], quoted in Popper and Lipshitz [1998]). A danger with these analyses identified in the literature is that they can ignore complications such as internal conflict, ambiguity, and cultural resistance to change (Hubbard et al. 2006; Schein 1985, 1993, 2006). As such, they struggle to explain dimensions of learning that involve negotiation among groups of individuals, relying instead on general descriptions of change variables.

Some research in organizational studies responds to these critiques. Most relevant to this discussion are ethnographies of everyday work and technical practice that have taken up questions of organizational learning and change. Prominent here is the research agenda of the Xerox Palo Alto Research Center (e.g., Orr 1996, 2006; Suchman 2000). For example, in a much-cited study of Xerox copy machine technicians, Orr (1996) raised the question: What might be learned by studying work practice instead of accepting the word of management about how work is done? Studies in this vein generally draw on social theories of practice, and they bring working (generally considered as resistant to change), learning (often abstracted from practice), and processes of innovation into relationship with one another to demonstrate their interdependency (Brown and Duguid 1991).³ This view of organizational learning is useful regarding the problem of how school districts learn to support teachers' professional learning. It focuses attention to the frontline practice of individuals (and groups of individuals) and suggests that learning occurs in the context of their practice (Wenger 1998). In addition, it implies that something might be learned (with organizational implications) when leaders pay close attention to work practices.

Sociocultural theories of learning that have emerged over the past two decades (Engestrom 1995, 2001; Lave and Wenger 1991; Rogoff 1994; Wenger 1998) characterize learning in ways that are relevant to a social practice stance on organizational learning. These theories begin with the assumption that learning is situated in everyday social contexts and that learning involves changes in participation in activity settings or communities, rather than the individual acquisition of abstract concepts separate from interaction and experience (Rogoff et al. 1995). Taking learning as an inherently social phenomenon, sociocultural theories suggest that analyses of collective learning move from individual's heads (Simon 1991) to units of participation, interaction, and activity (Engestrom 1999; Lave and Wenger 1991; Rogoff 1994). Sociocultural theories of learning imply "the simultaneous transformation of social practices and the individuals who participate in them, and thus the social and individual dimensions of learning are mutually constitutive" (Boreham and Morgan 2004, 308).

For this article, I draw on Vygotskian sociohistorical notions of development that describe learning and change as the internalization and transformation of cultural tools that occur as individuals participate in social practice (Her-

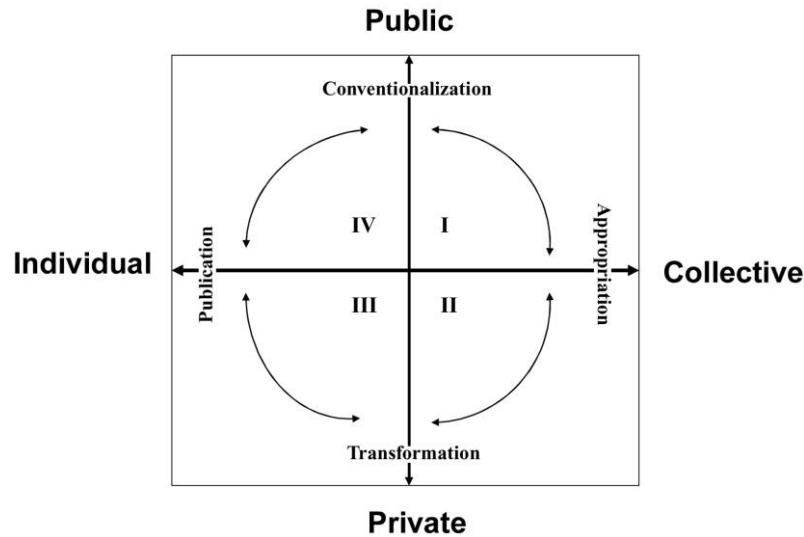


FIG. 1.—Vygotsky Space (adapted from Gavelek and Raphael 1996; Harré 1984; McVee et al. 2005).

renkohl and Wertsch 1999; Vygotsky 1978). For Vygotsky, human thinking develops through the mediation of others (Moll 2001). Although Vygotsky's writing likewise implies that individual development contributes to collective (cultural) change, this aspect of his framework has not been extensively developed (Engestrom 1999). I use a conceptual framework developed by Harré (1984) and elaborated by Gavelek and his colleagues to organize this analysis (Gavelek and Raphael 1996; McVee et al. 2005).⁴ Although the framework was originally developed to characterize how individual development is achieved through participation in social processes (Harré 1984, 1986; Harré et al. 1985), in this article I use it to trace the connections between district professional development structures as sources of and support for individual learning processes, individual and collective participation in those processes, and subsequent district decision making regarding new and revised supports for professional learning. The framework has the potential, then, to describe individual learning processes and to connect those processes to sources of organizational support.

The Vygotsky Space represents learning in terms of relationships between collective and individual actions and between public and private domains of action (see fig. 1). Interactions between these dimensions are conceptualized as four phases of a process through which cultural practices are internalized by individuals, transformed in the context of individual needs and uses, and

then externalized (shared) in ways that may be taken up by others. The process is viewed heuristically as cyclical and evolutionary—in the sense that learning and change operate in a cumulative and transactional way at both individual and collective levels (i.e., the learner may be functioning at any given time in any of the quadrants). The iterative stages of this ongoing process include:

- Individual appropriation of particular ways of thinking through interaction with others.⁵
- Individual transformation and ownership of that thinking in the context of one's own work.
- Publication of new learning through talk or action.
- The process whereby those public acts become conventionalized in the practice of that individual, in the work of others, or both.

I use the Vygotsky Space to clarify how collective events such as district-developed professional development sessions can serve as instances for the introduction of new ideas about instructional practice (quadrant 1). The new concepts and practices discussed at these public events may be taken up and interpreted by individual professionals (e.g., coaches and teachers)—a process that the model refers to as appropriation (quadrant 2). Practitioners may have various reactions to these new ideas—some might readily “try on” the new practices; others might question or even reject them. However, in some cases, teachers might work to reinterpret the concepts and practices within their own work contexts, thus, transforming their practices (quadrant 3). As the new ideas and transformed practices are demonstrated or discussed by teachers—either in small informal groups or in more formal settings such as demonstration lessons arranged for groups of educators—there is potential for individual learning (the process of their learning or the outcome of their learning) to connect to others in the organizational setting (quadrant 4). In cases where the individual's learning is taken up by others (whether at a grade level, at a school level, or by central office actors), it has the potential to affect future practice or policy (back to quadrant 1).

The Vygotsky Space helps clarify how individuals learn in the context of socially organized activities. Studies of organizational learning in educational settings identify relevant structural variables (e.g., leadership action or use of resources) that can affect the organizational conditions for professional learning. However, Orr (2006) reminds us that “organizations” have a tendency to pay “little attention to the work” when designing organizational supports (1812). This article demonstrates that when school district leaders pay attention to the work associated with learning new classroom practices, they also learn. That learning can inform the development of organizational supports for professional learning.

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Context and Method of Study

To investigate professional learning in the context of its organizational supports, I draw here on data from an ongoing qualitative case study of the partnerships between the Center for Educational Leadership (CEL) at the University of Washington and three urban or semi-urban school districts. As a university-based external support provider, CEL operates on a fee-for-service basis in approximately 22 school districts in five states. CEL describes the goal of its work as the elimination of the achievement gap through the improvement of instruction. The organization asserts that such improvement will only occur at scale when district and building leaders understand what powerful instruction looks like—so they can lead and guide professional development and target and align resources for long-range capacity building.⁶ CEL intervenes in school districts at multiple levels of the system providing support, for example, for leadership development and instructional coaching by contracting with a variety of nationally recognized consultants.⁷

The Study Design

In the fall of 2004, a group of researchers at the University of Washington initiated a case study of CEL's work in one local school district, and, in the fall of 2005, we extended our research activities into two additional school districts (one located north of Seattle and one in the Los Angeles area) using a comparative case study design (Yin 2003). This article draws on data collected in Highline School District (HSD) during 2005–6.⁸ Data from Highline were selected for this analysis because of the unique characteristics of a professional development model the district developed in the context of their partnership with CEL. The model was intended to facilitate learning at multiple levels of the system; a key feature was participation by district and building leaders as well as classroom teachers. Ongoing analysis of data collected over a period of one year in the district suggested that this structure provided opportunities for individual and organizational learning, and, therefore, it was a useful “case” for examination of the practical and theoretical issues addressed in this article.

Over the first two years of our study in Highline, we talked with and observed central office instructional leaders who interacted regularly with CEL consultants regarding their leadership practices, and, in addition, we interviewed the district superintendent, two other district leaders, and four district content coaches. We also selected participants in five schools—three small high schools and two elementary schools—that were recommended by CEL and central office informants as being engaged in the partnership work.⁹ For this analysis, I concentrate on the data collected in the elementary schools

because the professional development model was developed with elementary schools in mind. Within these elementary schools, research participants included the school principals ($N = 2$), literacy coaches ($N = 4$), and teachers ($N = 5$). We interviewed and observed teachers who were selected by the district and their school principals for participation in the professional development model. In addition, we interviewed the CEL staff and consultants who participated in activities related to the professional development sessions described in this article.

All of these informants participated in individual, semistructured, and audiotaped interviews conducted once or twice a year during 2005–6. Most interviews were approximately an hour in length. We asked informants to describe the kinds of activities that they were engaged in related to the Highline/CEL partnership, the kinds of things that they were learning from that work, and how their work was changing as a result. All of the interviews were transcribed verbatim by an outside professional transcriptionist.

In addition, we observed professional development events related to the Highline/CEL partnership work (with a focus on the participants listed above), such as monthly district-level leadership seminars, coaching cycles, building-level professional development sessions, and building-level “walkthroughs” (classroom visits with administrative staff). Multiple artifacts such as relevant documents from professional development sessions were collected throughout the data collection period.

Data analyzed specifically for this article included interviews with the Highline assistant superintendent for teaching and learning (two interviews) and two elementary directors (four interviews) plus one school-level interview each with the elementary principals, the literacy coaches, and the teachers.¹⁰ In addition, I analyzed interviews with a CEL consultant and the CEL project director (three interviews), for a total of 20 interviews. I also analyzed field notes collected during 2005–6 at a total of 12 events for whole or half school days and observation notes from two to three additional days spent at each school in the spring of 2006. I used artifacts collected during field observations to help develop my understanding about those events. Finally, I analyzed videotaped recordings (taped by the district) of four additional half-day sessions of the professional development activities described in this article.

Steps taken in this analysis included (1) an initial read and open coding of all the relevant data (Emerson et al. 1995) during which I noted instances of “learning” on the part of individuals, aspects of participation in learning events, or evidence of support for professional learning; (2) the development of a code list based on my initial read of the data and constructs derived from the Vygotsky Space; and (3) focused coding of the data using codes such as those described in table 1. Instances of (for example) “approximation” or “trans-

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TABLE 1

Code List

Code	Definition
Public event	PD activity attended by multiple actors. Purpose of event is to discuss/teach about literacy instruction. Could be developed by district or school personnel. Could occur at district, school, or classroom location.
Appropriation	Evidence that individual takes up (is interested in, seems to understand, talks about wanting to learn more, etc.) an idea or a practice from a PD event. Observed during PD event and then (at a later time) evidenced in talk among colleagues or during interviews.
Transformation	Evidence of change in classroom instruction. Evidenced in talk (observed among colleagues or discussed in interviews) or in practice (change over time in observed classroom practice).
Publication	Evidence that a new practice and a new understanding about practice are demonstrated in public setting (could be demonstration lesson in classroom attended by multiple actors; could be videotaped lesson discussed at PD event; could be discussion among colleagues about new practice).
Conventionalization*	Evidence that the new practice or new ideas about practice or professional learning are taken up at an organizational level (by leaders) in the form of new policy or new structures for PD that are put in place by either school principals or central office leaders.
Leadership action	Evidence that leaders have taken action to support professional learning across the Vygotsky Space quadrants. Examples include use of resources, selection of participants in PD events, design of PD models, and contracting with external experts.

NOTE.—PD = professional development.

* In other uses of the term it also could mean conventionalized in one's own practice.

formation” were then analyzed together in order to build coherent case analyses across all the references in our data that related to these concepts.

I brought to these analyses the ideas regarding social practice and the social theories of learning that are outlined above (see also Gallucci 2003). I was interested in exploring the connection between sociocultural theories of learning and conceptions of organizational learning that had been described in educational literature (Leithwood 2000). Earlier reading of the data collected for the larger research project had prompted my thinking about the Vygotsky Space as a potentially useful heuristic for making explicit the relationship between individual professional learning processes, such as those I was ob-

serving for teachers and literacy coaches, and the organizational changes we were tracking in the school districts. I analyzed the experiences of one teacher (called Caryn in this article) because she was the focal teacher during the professional development sessions at one of the two elementary school research sites during 2005–6 and, therefore, we had a robust account of her learning processes as well as the organizational supports for her learning. This made her case a useful one for illustrating the theoretical concepts discussed in this article. Her experience is not intended to generalize to all teachers in the district or even to all teachers within our sample.¹¹ Further, Caryn’s case could be considered unique in that her work was the object of discussions at the professional development sessions. Other teachers—even those who participated in the same sessions as Caryn—had qualitatively different opportunities for learning because they were observers of someone else’s work. Finally, what Caryn learned regarding reading instruction was important for her practice, but it was the process of how she learned and was supported in that learning that is the focus of this article.

Highline School District

HSD is a midsized, diverse district located in the first ring of Seattle’s southend suburbs. The district serves a student population of approximately 17,700. Over 50 percent of these students participate in the federal Free and Reduced Price Lunch Program. Although white students currently make up 43 percent of the student population, this group has decreased in size dramatically over the last 20 years. The majority of the student population in Highline is composed of the following ethnic groups: 21 percent Asian students, 20 percent Latino students, and 14 percent black students. The demographic numbers hint at the diversity of the district; however, they do not completely describe it; when clustered in one large group, Highline students represent 81 different nationalities and speak 70 different languages.

Academically, students in Highline have made steady gains in reading and writing over the past several years, but they continue to struggle in many areas, especially mathematics. For example, although reading scores on state tests at grade 4 had improved from 63.7 to 72.9 percent of students who scored at or above state standards in reading over a three-year period (from 2003 to 2006), in mathematics the gains were from 43.1 to 44.4 percent. The district’s relatively new central office leaders sent clear signals regarding a districtwide commitment to instructional improvement, and in 2004 the school board set a goal that nine out of 10 students in the district will meet state academic standards, graduate on time, and be prepared for college or a career by 2010.

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The example described in this article is drawn from data collected at a Highline elementary school that we call Oak Park Elementary. This K–6 school has a highly diverse student population of approximately 640 students. Only 19 percent of the children at Oak Park are white, and 40 percent of the students are Latino, 24 percent are of Asian/Pacific Island descent, and 16 percent are African American students. Nearly a third of the students are English language learners, and the languages represented by the Oak Park families include Spanish, Vietnamese, Somali, Cakchiquel, and Punjabi. Oak Park’s student achievement scores on state exams have steadily increased in reading over the past several years. The percentage of students in grade 4 who met standards, for example, had risen from 57.3 to 78.7 percent between 2003 and 2006.

The findings reported below are purposely descriptive and are intended to demonstrate the social nature of individual learning processes and to connect those processes to institutional supports for professional learning.

A Case of Professional Learning in the Context of School District Instructional Reform

In the spring of 2005, CEL took a group of central office leaders from Highline to a middle school in New York City, where they spent three days in a sixth-grade classroom. There they watched a Highline teacher and a literacy coach “in residence” with the New York teacher regarding reading and writing instruction. The leaders observed an embedded external coach from Teachers College at Columbia University working with the classroom teacher. They returned to Highline and began plans for a new professional development structure that they labeled the Elementary Studio/Residency Project.

HSD contracted with CEL during the summer of 2005 for an external literacy consultant to work as an on-site job-embedded coach at the studio/residency sessions. Schools were selected as studio schools based on central office leaders’ assessment of their readiness to lead the instructional improvement work. At each of these schools, a focus “studio” teacher was selected (a joint district leader/principal decision) and paired with a literacy coach—it was the teacher and the coach, with their principal, who would select the specific content for the embedded coaching sessions. Other members of the studio school team included a “residency” teacher and another literacy coach (some schools in Highline had two literacy coaches, one primary and one intermediate). Residency schools were matched by district leaders with studio schools, based on similar demographics and their potential to learn from each other. A team of professionals from each residency school (including the principal, the literacy coaches, and one or two teachers) traveled to the studio

school to observe and participate in the coaching activities (thus they were in residence at the studio school). The seminars occurred on six half days across the school year (sometimes two were concurrent). They were attended by the CEL external consultant and the team members from each of two paired schools as well as a central office leader and a central office literacy coach (a total of about 11–15 participants at each session). The school district provided substitute teachers to release the participating teachers from their classrooms.

The term “job-embedded coaching” was not unfamiliar in Highline. Beginning in the summer of 2004 and extending through the 2004–5 school year, another CEL consultant worked with a small group of ninth-grade language arts teachers at one of the district’s high schools. The consultant coached alongside the teachers, working with them in the context of their teaching practice and demonstrating aspects of the readers/writers workshop model (based on the work of Lucy Calkins at Teachers College, Columbia University; see Calkins 2001). Designed to build capacity among willing teachers and to create existence proofs that could be used to demonstrate high-quality practice to others, this form of professional development caught the attention of other building and central office leaders in HSD. Following their visit to New York, two directors of elementary education designed the studio/residency model as an attempt to extend embedded coaching further into district instructional improvement efforts.

A Sophisticated Space for Public/Collective Learning—Quadrant 1

The studio/residency model represented a new set of ideas for elementary schools in Highline regarding the public nature of professional learning and the embedded nature of instructional coaching. Central office leaders communicated to all elementary school leaders and literacy coaches that they were expected to participate in this new professional development model with a small set of willing teachers as coparticipants. Typically these events occurred in the conference room at the host school with the professionals—from classroom teachers to district supervisors—sitting together around a large table. At each session, a problem of practice related to reading instruction (e.g., usually focused on a component of balanced literacy, such as a “read aloud” or independent reading) was presented by the host school (Calkins 2001). Following a discussion of that topic, the group often went to the studio teacher’s classroom for a demonstration lesson. Sometimes a video segment featuring the studio teacher, the literacy coach, or both modeling some aspect of instructional practice was shown to the group.

At one of the elementary studio schools, the principal selected a second-grade teacher, Caryn, as the studio teacher. She was a 30-year veteran who

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had a strong voice among her colleagues and was considered a competent teacher by others in her building. Using interview and observational data collected from fall 2005 through spring 2006, I describe Caryn's professional learning as a studio teacher. Her experiences are illustrative, but not generalizable, regarding what district and building leaders observed as they participated in the studio/residency sessions.

For two years, Caryn had been resistant to the school district's instructional improvement initiatives. She described her early stance toward the work: "I'd been teaching for a long time, and, although I liked the philosophy behind this reading initiative, what I didn't believe in was the reading coaches. I said, 'Why are we taking good teachers out of classrooms and having them coach teachers who probably already know what they are doing?'" When approached by her principal in the summer of 2005, however, Caryn decided to "put her money where her mouth was" and step up to be the studio teacher. That fall, she found that being the focus of the public, professional conversation was terrifying.

It was a really weird experience because, first of all, a teacher is never taken out of her classroom for something like this. I've never been in a setup like this before in my life. Professional development is: you go somewhere and listen to someone talk all day long and then try to do it in your classroom. But, we were in this big meeting room, and there were a whole bunch of people I didn't know, and I was sort of the center of attention. . . . It was really, really uncomfortable. Well . . . I'm like, *whatever*, as long as I don't have to teach in front of all these people.

During the first three half days of the studio/residency work at her school, Caryn observed as the external consultant demonstrated read alouds with her students or conferred individually with targeted students during independent reading. At one of the fall sessions, for example, the team from Caryn's school posed the following questions for the seminar discussion:

- Why do so many students who struggle to read fluently succeed in making meaning from text in a read aloud setting?
- What other strategies help students increase their reading fluency?
- What, in Lea's opinion, accounts for the discrepancy Caryn notices between a student with low fluency and high comprehension and vice versa?
- How can a read aloud serve the purpose of helping students increase their fluency as well as develop higher level thinking skills about text?

The questions set the lens for participants to observe as the external consultant conducted individual conferences with two of Caryn's students. Following the observations, the entire group of participants discussed each student and po-

tential instructional strategies that Caryn might try with them. To this point, Caryn participated in these events primarily as a team member, even though her students and her classroom were the objects of discussion.

In January 2006, things changed. At this session, her team presented a brief video segment that featured Caryn conferring with one of her students. In the segment, the child sat down beside Caryn with a bag of books and, at Caryn's request, selected and began reading a book. Caryn asked him questions such as what he liked about the book and showed him the blurb on the back of the book.

The following excerpt recorded in field notes describes the conversation that took place with the external consultant following the video segment.

Lea: There are two ways that I could reflect on what I saw. . . .

There were some big ideas that came out as I scripted. Help me understand, though, what was your *intention* was when you conferred with Tommy?

Caryn: Good. I don't think I have enough intention. I just want to talk to the kid.

Lea (turning to Caryn's principal): What I just did was ask an open-ended question.

Principal (to Caryn): You just gave an honest answer. Getting to that point is huge. Some might give a textbook answer, and then it's a different issue. Willingness to be honest can't be taken for granted.

Lea (to principal): But, that's what we want to foster. That is a leadership issue.

Lea (to Caryn): Would it help if I asked, "What did the child learn in that conference?"

Caryn: I have *no* idea. There was no direct instruction going on. I don't really go in with intention.

This example shows that new ideas about practice were being introduced to the studio/residency participants (even to the principal). I follow Caryn's story as she and her colleagues began to react to what they were seeing and hearing in these public settings.

Appropriation of New Ideas and Practices—Quadrant 2

As I observed Caryn (and others) responding to the activities taking place during the studio sessions, I interpreted this as the individual internalization of new ideas about practice (Vygotsky 1978). Caryn, for example, described her early observations of the consultant working with her students as validating ("this is what I do") but also disarming ("I have no idea what she's talking about"): "I'm like, yeah, this is read-aloud. This is the way I do it. This is a

no-brainer for me. She validated kind of what research has been telling us for years—to read aloud to kids. This is no big deal. . . . But, to have them turn and talk. That was a new concept. . . . That was good for me to see because it validated some of the stuff I was doing and then pointed out to me stuff what I wasn't doing, like independent reading and conferencing. *That* I couldn't understand just by reading about it." But, regarding her experience when the video of her teaching was shared at the studio event in January, Caryn told me: "So then we started on the independent reading with conferencing. We videotaped. And Lea said, 'Caryn, what's your purpose here?' I go 'I don't know.' . . . I mean, isn't the purpose to get them to read? And, I'm thinking inside my head, does she want more? I'm not understanding where she's going with this. And I go, 'Actually, I don't have any idea! What *am* I doing with this kid, anyway?'"

Caryn described going up to her principal at a break in that session and saying, "I have no idea what she's talking about. Do you?" Her principal told her, "No." The situation had created what Engestrom (2001) referred to as a contradiction between Caryn's present practice and what she perceived the consultant to be asking of her. Her discomfort precipitated a period of investigation into these new practices: "But, because that happened to me, I learned a great deal. 'Cause do you think I'm going to look stupid again? No. Okay, so I'm like 'oh my gosh, she's coming back.' So, I read a lot about it. I went and visited another teacher in our building, third grade, who was doing a really nice job. Then I came back to my room and I tried other things. I could feel it wasn't working, but I'd change it again."

Caryn was not the only person who took away a set of new ideas about practice from this episode. Her literacy coach, Sheryl, was also caught off guard by the consultant's probing questions. She began to think about her role as Caryn's coach and as a leader in the context of the studio/residency work. She talked about walking down the hall with her principal after the session. He said to her, "If that ever happens again [referring to the way that Caryn struggled with the question about intention], we need to step in immediately." Sheryl took that comment as a call to step up to her role of supporting Caryn: "Okay, then, let's find out about intention, let's think about that. We're running along here on the surface doing what we've been shown this looks like, but without an underlying understanding of intent and purpose. That's where I was, right there along with Caryn." This example suggests that collective learning was beginning to occur among this group of colleagues as the studio teacher, her coach, and the principal tried to sort out what the external consultant was teaching them. There was further evidence by May that Caryn had made significant changes in her reading instruction and coaching practices.

Transformation of Practice—Quadrant 3

When I visited Caryn's classroom later in the spring, I observed her as she taught a minilesson to her students with Sheryl coaching at her side. The students just returned from recess, and Caryn quickly gathered them around her on the floor in front of the blackboard.

Caryn: This is a minilesson, and it's going to be fast. You know those sticky notes that I've been asking you to write? Sometimes I can't read them. So I made you a sample [of how to write them].

She showed them the sample and how to write their own name on one side of the sticky and the name of the book on the back side. Sheryl asks about the term "suspect" that is written on the board.

Caryn: We went over that yesterday. [She glances at Sheryl.] Oh, write the definition? Might be a good idea.

Sheryl: Could we review those terms just to help me? Culprit, suspect?

Caryn asked the students, and several volunteered the definitions of the words. The students transitioned to independent reading; Caryn and Sheryl began conferencing together with individual students.

Several aspects of this lesson were new to Caryn's teaching practice. First, she learned about the minilesson from reading *The Art of Teaching Reading* (Calkins 2001)—one of the texts that she and Sheryl began reading following the January studio session—and she was practicing them in the context of her reading instruction. Second, Caryn and Sheryl were sitting side by side in this lesson; Sheryl felt comfortable offering some suggestions "in real time." And Caryn had developed several new (albeit initial and somewhat imitative) strategies for conducting conferences with students. "So what my kids do . . . now that we're at the end of second grade, they have to be reading a chapter book—except for my two lowest readers. When they're done with a book, they write their name on the board, but they can't interrupt me during independent reading. Then, they will stay in my room at recess, and those kids will check out a new book. There are all sorts of systems; I don't have it down perfectly. . . . And I have a clipboard with their names. Did you see that?" I asked her how she decides who to conference with: "I just go right in order. I talked to a lot of teachers about this. How do you decide who to conference with? Do you take your low-performing kids everyday? And I talked to the third-grade teacher, and she said, 'I think every single kid deserves to be conferenced.'" When asked if these were new procedures for her, Caryn replied, "All of it."

Caryn was beginning to transform her work in response to the ideas and practices presented during the studio/residency events. She was negotiating

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the meaning of the new practices through talk and in her actions at the studio sessions and in her work with Sheryl.

Publication of New Ideas and Practices—Quadrant 4

During a visit to the school for the last studio session in April, I observed Caryn's learning in a larger public venue. A new video was shown that morning—Caryn, with Sheryl coaching her on the side, was in a reading conference with another student. Prior to watching the video, Caryn and Sheryl talked about what the rest of the group would see:

Caryn: This is a good example of how conferring with one student can help you with all students. He wasn't moving ahead to heavier chapter books. We [Sheryl and I] got together and charted his strengths and gaps [something that had been demonstrated several times by the consultant during the studio sessions]. I thought, isn't this good enough? [The student was a high performing reader.] I had been lulled into a false sense of progress with him.

The external consultant talks here about how easy it is to not have a concrete sense of what it means to be "at standard" for the end of second grade. What would a proficient reader think and write about regarding a real book?

Sheryl (to Caryn): You had an idea about a book for him?

Caryn: He had *Star Wars*. It was thick and difficult. I conferenced with him on that book to get some information. I gently tried to say, "You aren't really reading the book." I suggested we go to the library, and he picked out a book suggested by the librarian.

Consultant (to the others): See the move that Caryn made? She got him into a more accessible book that was still interesting content.

This setup for watching the video provided Caryn with an opportunity to demonstrate her new understandings about the purposes of independent reading and about her previous complacency regarding student text selections. The video itself showed Caryn (with Sheryl) conducting a conference with the student regarding his new book. This time Caryn had intention regarding this student; she showed that in the questions she posed before the video was played:

- What would progress look like for this child?
- What would you expect that a proficient child could read, discuss, and write about at year end in second grade?
- How do you keep students motivated and interested?

Her specific purpose for the conference was to find out what the student had understood about his new book. Caryn began the conference by giving the child positive feedback about his reading progress. She asked him some conversational questions about the book (“I didn’t understand; why was he in a race? What’s that about?”). During the conference, Sheryl stepped in a few times to model the use of more open-ended questions such as, What do you think that means? About a month later, Caryn again demonstrated student conferencing and independent reading—this time in her classroom before a group of her colleagues and a visiting team of professionals from another school district.

These data do not demonstrate that Caryn had perfected the new instructional practices, but they do show how the studio/residency professional development model supported her learning.¹² One can trace Caryn’s learning from her early appropriation of concepts and practices that she heard at the studio/residency sessions (quadrant 2) to her transformation of these ideas and practices in the context of her own teaching (quadrant 3) and, finally, to the publication of her learning through her demonstration lessons (quadrant 4). It would be a mistake to assume that Caryn’s learning as it is illustrated using the Vygotsky Space was a linear process. During the year that she participated in the studio/residency sessions, Caryn moved back and forth between private and public settings—and, as Cook and Brown (1999) suggest, between exposure to explicit new ideas, what she already knew about teaching (her own tacit knowledge), and her actual teaching practice—as she tried on new aspects of reading instruction.

A variety of factors are likely to influence what and how individual learning processes are supported, such as organizational structures (Popper and Lipshitz 1998) and leadership actions (Leithwood 2000). Beyond the specifics of how (and what) Caryn was learning about reading instruction, the job-embedded professional development model (a structural support) and the public nature of the learning process (a cultural shift requiring leadership support) were aspects of her learning process that bear further explanation.

Connecting Professional Learning to Its Organizational Context

Given Highline’s organizational goal to build capacity among its leaders, to improve instruction, and to create powerful learning conditions for all students, the question of how learning processes such as those described here connect to organizational support for change is critical. Several conditions supported Caryn’s learning and made it more or less likely that the new ideas and practices she took up would inform policy at broader levels of the system. Using the Vygotsky Space model, I describe these conditions and the actions

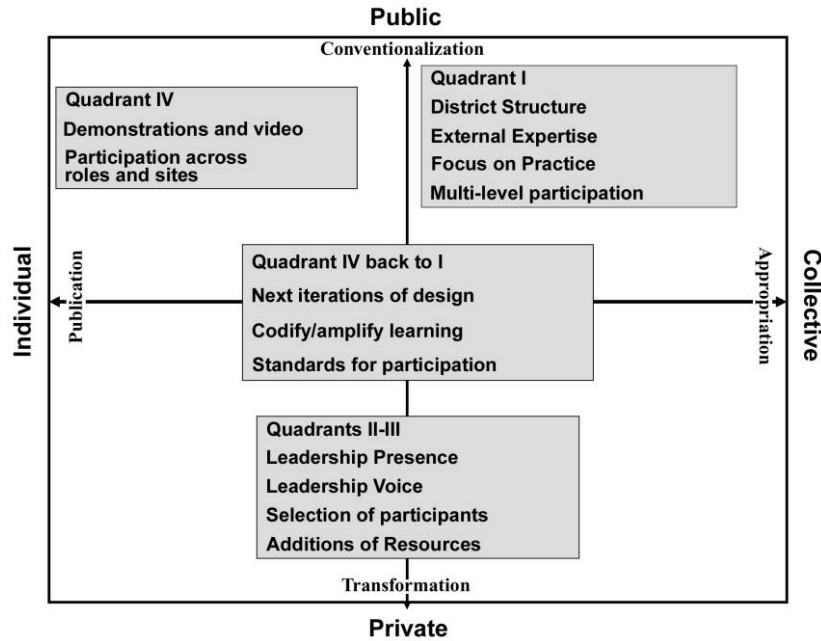


FIG. 2.—Connecting professional learning to its organizational context using the Vygotsky Space.

that supported Caryn’s learning processes (fig. 2 depicts examples of the organizational supports for Caryn’s learning as they are described in the following text).

Designing Public Spaces for Learning: Quadrant 1

Caryn did not just wander into a “public space” where she had the opportunity to learn some new information about reading instruction. The studio/residency model was carefully designed by district leaders in partnership with their CEL consultants. One aspect of designing the studio/residency structure was infusing it with new sources of expertise about reading instruction. Wenger (1998) talked about the role that external sources of new knowledge play in stimulating social learning processes. The CEL consultant described here brought high-quality, external expertise into these settings. She had developed her practice as a protégé of Marie Clay (the New Zealand developer of Reading Recovery) and had, for several years, consulted in both New York City Community District Two and San Diego. Practitioners in Highline came to ap-

preciate Lea's solid expertise—even some who were initially resistant to the district initiatives around literacy instruction (such as Caryn). Caryn expressed her growing confidence in Lea late in the year when she said, “The only way I will do it [a public demonstration lesson] is if Lea comes and watches me first.”

As noted earlier, the studio/residency sessions included district and building leaders among the participants. The focus of the sessions, however, was on classroom practice. By placing specific problems of practice on the table for examination, the structure brought into play explicit expertise about reading instruction, Caryn's tacit knowledge about teaching, and the group's ideas about how to teach reading, thus setting the occasion for interplay between expertise and practical experience (Cook and Brown 1999). Participation in these events by the elementary directors and district coaches (over 50 sessions across all the elementary schools over the year) was an unusual opportunity for organizational leaders to observe and learn from the experiences of practitioners. And, although district leaders created the design for the studio/residency model, principals were responsible for how the work proceeded in each school.

Local Leadership for Individual and Collective Learning: Quadrants 2–3

We have identified in previous reports on Highline's reform efforts that leadership practices such as “being present” at key professional development events and “using leadership voice” (e.g., openings and closings at public events, written communications) were skills that principals were learning in HSD (Gallucci et al. 2006). Related to the studio/residency work in elementary schools, Caryn's principal took several other specific leadership actions: (1) he selected the studio/residency participants, (2) he reallocated resources to support extended professional learning, and (3) he supported individual and small group learning through ongoing opportunities for dialogue.

Caryn's principal was strategic, for example, in his selection of Caryn as the studio teacher. He talked about how the language of “going with the goers” (i.e., targeting resources for professionals who were early adopters) had never actually “set well” with him.

Actually, there is some wisdom, I think, that leaders can and should pay attention to [among those who are resistant to change], especially if they've been around awhile. . . . If we were ever really going to be successful with the initiative, it couldn't just be with what were often very young people in the profession that maybe haven't seen the cycles of change. So, selecting Caryn was about selecting someone who I thought would be receptive to the work but who was also veteran enough

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to have experienced cycles of change. She would be a good test case for how much traction or gravity there really was around this work. . . . She would filter out the faddish aspects of it, and she would connect with the pieces that would ring true. And if they ring true to her, she would have the credibility with others to give this another look, more of a try. And that's been the best result of the residency model. There was some gravity to it.

By selecting Caryn as the demonstration teacher, the principal set up the potential for a “field of interaction” between Caryn, her instructional coach (Sheryl), and other teachers with whom they worked, thus, creating the possibility for the sharing of experiences and perspectives across these practitioners within the school organization (Nonaka 1994). In this case, the principal strategized that Caryn, who had social capital and influence among her colleagues, would affect the thinking of other primary-grade teachers (Spillane et al. 2003).

The principal was also strategic regarding resource allocation. He held back monies that would typically be allocated for professional development activities prior to the start of the school year so that he could “take advantage” of opportunities as they arose. Consequently, he was able to contract with Lea for eight extra days of job-embedded coaching at the school as it became apparent to him that she was “the perfect person to show us how to bring kids to the table in this coaching work in a more intentional way.” This increased the number of teachers who were exposed to Lea's expertise. For example, when Lea worked with a small group of kindergarten students on interactive writing (Calkins 2001), the teacher was able to observe the sessions along with Sheryl (Caryn's literacy coach). That teacher described one thing that she felt she had learned from Lea: “Watching her do the interactive writing the way she does . . . it is a little different than the way I do it. But I realized when they write sentences I wasn't having them repeat them over and over like she did. . . . I started doing that, and they read it much better now because they know it. They remember. So I've taken a lot of those things.”

The principal also planned to send two groups of teachers and coaches to Teachers College during the summer of 2006—one of the groups included himself, Caryn, and the third-grade teacher that she had observed regarding independent reading. Taken together, these leadership actions created conditions that supported the transformation of Caryn's (and others') practice through support for ongoing dialogue and exposure to new ideas. They are likewise suggestive of organizational learning at the school level as the principal and his leadership team took advantage of what they learned at the studio sessions to allocate resources that extended these learning opportunities across other teachers and coaches.

Encouraging Publication: Quadrant 4

Following traditional models of professional development, individuals are typically exposed to new ideas in one setting and expected to try those ideas on in another setting (usually their classrooms). Often, organizational leaders have had limited knowledge about whether or how those new ideas were implemented. The Highline studio/residency model overcame some of the limitations of traditional models not only because leaders were present at the sessions but because the model encouraged the public display of new knowledge and new practices. Leaders participated with Caryn during the sessions, they watched her teaching on videotape, and they visited her classroom while she demonstrated new instructional strategies. By intention, job-embedded coaching is situated in practice and focused on solving problems of that practice. The studio/residency model was also designed to bring problems and their solutions to a public venue that involved more than one teacher and coach—in fact, it extended beyond one school. The model used local practice and individual learning as a resource to foster organizational learning, moving learning processes beyond abstractions into practical activities and beyond individuals to communities of professional practice (Brown and Duguid 1991). The innovations made by individuals were supported and legitimized by the formalized structure of the studio/residency model and had the potential (given particular leadership actions) to amplify organizationally beyond one setting (Nonaka 1994).

Creating Organizational Support for Learning: Movement from Quadrant 4 Back to Quadrant 1

One of the key questions for Highline central office leaders was how the studio/residency work connected to the rest of the district's professional development work—with building coaches, in other content areas such as mathematics, or in their leadership work with principals. They wanted to extend these kinds of opportunities to more people and to other areas of professional learning. As follow-up to their experience with the first year of studio/residency work, the Highline elementary directors extended the embedded coaching model into other aspects of the district's professional development work. Their plans for the upcoming year were intended to (1) create tighter connections between sources of external expertise and the work of teachers and coaches and (2) continue the design of professional development as public activity. For example, they developed new structures and strategies such as what follows:

- An embedded coaching model for elementary summer school was based on a model used at the high school level and the new studio/residency

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model. Two CEL consultants were hired to work with pairs of summer school teachers in classroom contexts and at pre- and post-debrief sessions that included elementary literacy coaches.

- Future district-level professional development sessions with elementary principals (around instructional leadership) would be conducted by the same consultant who provided job-embedded coaching in the schools at studio/residency sessions (for 2006–7). This strategy was intended to create tighter connections between the consultants work with leaders and the instructional improvement activities taking place with coaches and teachers.

These changes represent organizational outcomes of what the Highline central office leaders had learned about professional development from their participation in the studio/residency sessions. Encouraged by their observations of change at local levels, they consolidated their own learning in the creation of new supports to facilitate the institutionalization of particular aspects of professional development across the district system. As the assistant superintendent in Highline noted, “I don’t think we can go back. Our principals are starting to say [about other kinds of professional development], ‘That experience doesn’t measure up.’”

The two district elementary directors (the ones who originally visited New York and then developed the studio/residency model) also paid attention to principals such as Caryn’s and learned from their observations of their leadership.

One of my big take-aways is what we’ve seen in the schools that are being really successful. They are the schools that own the work. They’ve made it their own by the way they lead it. They’re not deferring to the district. It’s their work, but they’re fitting it within the system, so that our arrows are all pointing in the same direction. . . . What we’ve tried to do in this document [plans for next year’s studio/residency work—see app. table A1] is create some scaffolds, if you will, or some guidelines regarding what it looks like when it’s successful, so that other people who may not come to the table with all those skills themselves can say, “Oh, that’s what you want me to do.” So, without micromanaging, how do we build the support systems for people who need support in how to lead this work?

They designed future iterations of the studio/residency work based on what they learned about the relationship between district control over these capacity-building strategies (which required considerable district resources) and principals’ discretion over the activities. In 2006–7, they loosened the reins for principals that “really got it,” giving them added responsibility to structure

the content and the professional development process at the school level. At the same time, they tightened the reins for principals they perceived to be struggling by assigning district coaches to work more directly with those leaders on planning and leading the sessions. The new motto for the studio/residency model was “District-Initiated—Building-Owned.” A set of documents reified this new approach by delineating the responsibilities of all participants in the studio/residency sessions (see app. table A1). The documents were the product of group thinking and reflection on the part of district leaders and their CEL partners that took place during the spring and summer of 2006.

Discussion

This article explored the utility of adopting sociocultural perspectives for exploring professional learning processes as they occur in organizational settings. I raised several questions early in the article about capacity building as a strategy for addressing the learning demands inherent in contemporary reform contexts in U.S. public school districts. Taking a reform-as-learning stance on these issues, I situated the study between what we know about the challenges of teacher learning in these contexts and research on the role of school districts related to instructional improvement initiatives. The study adds to what we currently understand about these issues by demonstrating how close examination of teacher learning in a reforming school district can inform leadership action and system-level change.

In framing the study, I argued that sociocultural theories of learning support investigation into these matters. A framework developed by Harré (1984) and used in research on literacy instruction (Gavelek and Raphael 1996; Kong and Pearson 2003; McVee et al. 2005; Moll 2001) was used to analyze data collected in a reforming school district. This framework drew our attention to two important dimensions of learning and development—the first distinguishes collective and individual action, and the second, public and private domains for action (Moll 2001). These dimensions were not described by Harré as dichotomous but rather as continuous dimensions of development as it occurs within the social world.

The article described how learning emanated from a series of professional development events created by what HSD called the Elementary Studio/Residency Project. We followed Caryn and her colleagues as they heard about new ideas and watched new practices regarding reading instruction. Caryn and others struggled to understand some of these ideas and practices but began to consider them for their own work. Over time, supplied with other contextual tools and messages, Caryn transformed and adopted some of the practices in her own teaching. She then displayed her learning for public view

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through demonstrations and conversations. School and district leaders also learned some things about how to support professional learning—and their learning informed the development of new strategies for the following school year. Over time, the district's approach to building professional capacity changed in some fundamental ways.

The analysis of the studio/residency professional development model is illustrative of what Cook and Brown (1999) describe as a generative dance between institutional knowledge and tacit knowing—demonstrating the generative power of practice to create new insights that can be shared in local contexts and amplified at organizational levels in the form of new policy. The significance of new ideas is ultimately determined by their usefulness in specific situations. Through productive inquiry in the context of practice, such as in the studio/residency model, knowledge shared (for example) by an external expert such as Lea can become an affordance for addressing the frustrations of practice and facilitating new insights such as those adopted by Caryn (Cook and Brown 1999). Professional learning in this example was not separate from work—and private activities (e.g., reading) were intimately connected to interactions between Caryn and her colleagues (communities of practice) and to the innovations developed for her instructional practice (Brown and Duguid 1991; Wenger 1998).

Brown and Duguid suggest that it is this work among individuals in communities of practice that leaders need to harness in the service of organizational change. The means to harness such innovative energy should be considered in the design of organizational architecture or (in the case discussed here) in organizational supports for professional learning. This architecture should preserve and enhance the healthy autonomy of professional communities, while simultaneously building interconnectedness through which to disseminate the results of separate communities' experiments. In some form or another, the stories that support learning in working and innovation, they suggest, should be allowed to circulate (1991, 54).

The Highline case is instructive in this regard. It demonstrates how central office instructional leadership can learn from paying close attention to professional learning and innovation in the context of practice—the actual work of teaching—and subsequently translate that learning into organizational supports for change (Orr 2006). Highline central office and school leaders developed the studio/residency structure to stimulate professional learning among practitioners following their observations in another school district. They then allocated the resources to support this capacity-building strategy in the service of school district instructional improvement goals. The elementary directors attended the studio/residency sessions in order to demonstrate their support for the model, and they used what they observed to set the occasion for continued professional learning across levels of the system. For

example, the elementary director who attended the studio events at Caryn's school wrote e-mail summaries of what she observed in those settings and distributed them to the school principals who participated in the sessions. In this way, she codified these experiences by telling stories and developing narratives that could be used by the principals to extend professional learning among others within the schools. She externalized and amplified local ways of knowing each time she told a story about what she observed (Nonaka 1994). Likewise, she and other central office leaders transformed and legitimized local experience at an organizational level when they created new professional development structures based on what they had learned during the first year of the studio work.

The Vygotsky Space is a useful heuristic for examining the studio/residency model, especially for describing and illuminating learning processes that occurred for individual participants such as Caryn. The framework suggests that learning is a social process, that individuals can take up new ideas through participation in public activities, transform those ideas in the context of their own practice, and demonstrate their learning through public talk or action. The Vygotsky Space makes public and private aspects of teachers' learning processes visible and thus demonstrates the Vygotskian notion that individual development and cultural change processes are entwined. Although the framework hints at processes of organizational support for teacher learning through the concept of conventionalization, it was not developed as a "model" of organizational change (Harré 1984). Concepts taken from the literature on organizational learning in educational settings (e.g., the importance of leadership actions and the allocation of resources to support professional learning) augmented this analysis by focusing attention on the actions of leaders. One could say that leaders in this example transformed practitioner learning into opportunities for the learning of other organizational actors by creating supportive structures, encouraging publication, and reallocating resources.¹³

This analysis has several limitations and is not intended to generalize beyond the circumstances discussed here. The case itself (i.e., the studio/residency model as it was enacted at one school and the details about the experience of one teacher) is presented as illustrative of several practical and theoretical considerations. Using case data, I examine individual teacher learning in the context of a systemic instructional reform initiative in her school district. The case suggests that the embedded and public nature of her learning experiences were supportive of her own learning as well as that of some of her colleagues. Her school is an example of what Rosenholtz (1989) referred to as a learning-enriched environment, in that the principal took advantage of one professional learning opportunity to create others. The case likewise illustrates how what individuals learn can come to be shared with other organizational members and contribute to organizational change. District instructional leaders rec-

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ognized and then harnessed local learning in ways that facilitated organizational changes in the form of new professional development policies. This case suggests that the central office and building leaders accomplished this by:

1. Taking advantage of structures that were found to facilitate learning by using what they had learned from observations in other districts and of local practice in their own schools to design next iterations of public and work-embedded spaces for ongoing professional development.
2. Codifying what they learned at local levels of the system in order to legitimize and share new knowledge across members of the organization.
3. Moving informal structures such as the work of teachers and coaches in communities of practice into more formal structures through the reallocation of resources to support the work of these communities (facilitated by leaders' presence in local settings) .
4. Developing standards for leadership and for participation in these public settings that ensured continued impact beyond compliance in particular local or individual cases. For example, in 2006–7 the Highline central office leaders placed more reliance on principals to lead the studio/residency work, while providing increased supports for some leaders evaluated as struggling principals. Deep engagement at the local level was an expectation of participation in these highly funded settings.

What the case does not illustrate are the complications that underlie the story and the daily fray of school district central offices and multiple leadership responsibilities (e.g., Highline's elementary directors struggled to maintain this level of participation during 2006–7). The case is suggestive of an important role for external support providers such as the CEL. Organizations such as CEL are uniquely situated to help school districts make connections between individual innovation and organizational systems of support for instructional improvement. Actors who operate outside the formal organization can (1) link the learning of teachers or instructional coaches explicitly to leadership, (2) provide sources of expertise and support for processes of transformation and publication, (3) guide district leaders in amplifying important aspects of innovative practice, or (4) bring to leaders attention emerging communities of practice that can function as beacons for improving instructional work. Caryn's case provides a convincing argument for the way that sources of external expertise can enhance development and guide leadership for professional learning processes.

Appendix

TABLE A1

Highline School District Elementary Studio/Residency Protocols: District Initiated—Building Owned, 2006–7

Studio/Residency Teacher	Coach	Principal	District Office	Consultant
Before: Meet with the coach to discuss the focus of the work	Decide and communicate objectives and outcomes for the process	Participate in the e-mail conversation between the teacher and the consultant about what the teacher has tried and the focus of the staff and student behaviors/results observed (at least 10 days prior to the studio day)	Be knowledgeable (receive e-mails) of collaboration between the school staff and the consultant—contribute to the discussion as appropriate	Respond to school e-mails prompting thinking and focus
Participate in the e-mail conversation with the consultant about what has been tried and the focus of the staff and student behaviors/results observed (at least 10 days prior to the studio day)	Meet with the teacher to discuss the focus of the work Initiate and participate in the e-mail conversation between the teacher and the consultant about what the teacher has tried and the focus of the staff and student behaviors/results observed (at least 10 days prior to the studio day) Communicate and plan with partner school about: Focus of the day Subs Schedules	Communicate with the teacher, coach, and consultant in preparing an agenda for the day including goals and schedule	Ask clarifying questions Arrange for videographer—unless the buildings indicate a need to cancel (Pat will verify with each school prior to each consultant visit) Communicate with buildings which members will be participating from district office	Initiate deep reflection in the planning process Assist in the completion of the agenda Be transparent in thinking Prepare articles and professional development ideas to share with buildings
	Communicate and plan with partner school about: Focus of the day Subs Schedules Use resources to optimize participation (subs, schedules) In consultation with the	At the systems level, remove obstacles and scheduling roadblocks to facilitate group learning		

TABLE A1 (Continued)

Studio/Residency Teacher	Coach	Principal	District Office	Consultant
	teacher, principal, and consultant, prepare an agenda for the day including goals and schedule			
During:				
If appropriate participate in job-alike conversations about the content of the work and next steps	If appropriate participate in job-alike conversations throughout the consultation day Model thinking and asking questions	Frame the work (opening and closing—facilitate all voices in articulating their learning; together or alternate)	Participate throughout the consultation day Model thinking and asking questions	Demonstrate lessons with an eye on building independence Provide and support build-ings with material sugges-tions; be flexible with the choice of materials based on the needs of the building
Participate throughout the consultation day	With the knowledge base about the teacher's strengths and skills, facili-tate or prompt the teacher around the work	Participate throughout the consultation day	With the knowledge base about the coach's/princi-pal's strengths and skills, facilitate or prompt the coach/principal about the work	Work collaboratively with the teacher and coach in designing the instruction for the day
Teach alongside the con-sultant/coach or by themselves	Focus on and identify the coaching moves being modeled by the consultant through job-alike conversations	Facilitate the identification of next steps with action plans, time lines, and responsibilities	Focus on and identify the coaching moves being modeled by the consultant to apply to work—articu-late the coaching moves observed during the visit	Facilitate and guide new learning about the work before, during, and after the lesson
Articulate thinking and decision making; share knowledge of students as learners; bring data and samples of student work to the consultant visit	Analyze the strengths and needs of the teacher to apply to further coaching work	Work with videographer in identifying components of the consultant day to ease use of video	Observe and analyze the strengths and needs of the coach and principal to ap-ply to further work	Introduce pertinent reading or resources to further the learning
Ask questions and ask for support as needed throughout	Demonstrate lessons by themselves as well as alongside the consultant or teacher			Articulate rationale about the teaching moves and the decisions made with references to other educa-
Be flexible in creating a class schedule to facili-tate group learning				

<p>Share ideas with grade-level partners and staff Be open to having interested teachers observe the work they are learning through this process Act on the next steps identified during the process—supported by the coach Work with the coach to plan for upcoming consultant visits</p>	<p>Consider the needs of other teachers participating in the consultant visit</p>	<p>Act on the instructional next steps identified during the process with district coach and teacher Try out and approximate coaching moves identified Apply learning with professional development opportunities (early release, grade-level meetings, coaching cycles, and video) Work with the teacher and principal to plan for upcoming consultant visits</p>	<p>Act on the next steps identified during the process Ensure that systems are in place to continue the work (classroom observations, team teaching, and residencies) Apply learning with professional development opportunities (early release, grade-level meetings, and book clubs) Try out and approximate coaching moves identified</p>	<p>Act on the next steps identified during the process Ensure that systems are in place to continue the work (classroom observations, etc.) Try out and approximate coaching moves/conversations identified District coach: apply learning with professional development opportunities (early release, grade-level meetings, and coaching cycles) Give feedback to principal and coach based on strengths and needs observed Catalog the videos (Sue White)</p>	<p>tors in the literacy field Know and operate under the gradual release model Be transparent in thinking</p>
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Notes

1. Standards-based, or systemic, reform was conceived of as an attempt to build policy coherence by aligning three areas of educational policy: (1) curricular standards and aligned assessments of student progress; (2) standards for teacher education, licensure, continued professional development, and evaluation; and (3) support for schools to restructure time and other conditions for teacher and student learning (Knapp 1997; Smith and O'Day 1991). State governments took an unprecedented lead in the 1990s in establishing new curricular frameworks, related statewide student assessments, and systems for holding schools accountable for raising student outcomes. NCLB (2001) added several federal requirements, in particular policies holding state education systems accountable for meeting improvement goals across all groups of students in the P–12 systems on specific time lines leading up to 2014.

2. Professional community (and by implication, collaborative culture among teachers) was defined by Louis et al. (1996) as movement toward five elements of teaching practice, including shared values, a focus on student learning, collaboration, deprivatized practice, and reflective dialogue (760).

3. I use the term “practice” throughout this article in two ways. First, I use it in the practical and colloquial sense of the term to refer to teachers’ classroom practice—e.g., the curriculum and the pedagogy of what teachers do as they interact in instructional settings with students. Second, I use the term in a theoretical sense to refer to social practice. Drawing on Wenger (1998), e.g., I define “practice” as “doing in a historical and social context that gives structure and meaning to what we do. In this sense, practice is always social” (47). Wenger notes that inherent in practice is the social negotiation of meaning, and, therefore, practice should be understood as a process of learning. Some researchers include in discussions of socially organized (work) practices the organizations themselves (Suchman et al. 1999). Gherardi (2000) defines practice as “both our production of the world and the result of this process. . . . Practice is a system of activities in which knowing is not separate from doing” (215). Organizations, in this view, are systems of practices (Gherardi 2000). Boreham and Morgan (2004) remind us that well-known social theorists (e.g., Garfinkel, Bourdieu, and Giddens) make central the idea that social order is constituted by the enactment of social practices.

4. See Gredler (2007) and McVee et al. (2007) for a critique and author response to McVee et al. (2005).

5. Harré’s discussion of appropriation as internalization contrasts with interpretations of appropriation as the use of cultural tools and the process of making them one’s own in the context of talk or action—Harré describes such transformation as a process that follows appropriation (Herrenkohl and Wertsch 1999; Rogoff 1995). In the context used here, Harré’s distinction is useful—it helps us see the ways that new ideas about practice are taken up and discussed by individuals and groups of practitioners and then later transformed and integrated into teaching practice.

6. CEL draws on Brandt (1998) to define “powerful instruction” as instruction that engages students in learning environments that enable all students to be taught and, with effort, to master a cognitively demanding curriculum.

7. See the CEL Web site for a prospectus that outlines the organization’s district partnership work and theory of action regarding educational reform (<http://www.k12leadership.org>).

8. During 2005–6, Highline was in the second year of what is now a four-year relationship with CEL. CEL’s work in the district began in the content area of literacy and has since expanded into the area of mathematics (in large part due to the fact

that Highline is a district “in improvement” in mathematics—a state designation that indicates the district has not met NCLB “adequate yearly progress” in that content area). The accountability pressure, and analysis of districtwide test score data, led Highline to expand capacity-building efforts to include teachers of mathematics. For more information, refer to research reports on the Highline/CEL partnership available at <http://www.k-12leadership.org>.

9. Given limited field resources, we chose to study schools (and the professionals within them) who were considered to be highly engaged with CEL-supported activities. Our purpose was not to evaluate the CEL/district partnership but to investigate what professionals were learning regarding leadership and instructional practice and to share what we learned with other educators. Therefore, within each district (following a typical qualitative case study design) our overall samples were small and selective; they were based on informants’ suggestions about productive sites for research about external support for district-led instructional improvement. All three districts began their work with CEL in the content area of literacy.

10. Including the data described in this report, we conducted a total of 65 semistructured individual interviews in HSD between fall of 2005 and winter of 2007. These included 13 interviews with CEL staff and consultants, 11 interviews with central office leaders, 15 interviews with building principals (across 11 schools, including six elementary schools and three high schools), interviews with building literacy coaches in eight elementary and middle schools (some were groups interviews), and interviews with 12 teachers at two elementary schools and three high schools. In addition, we conducted multiple (over 45) observations of events related to the Highline/CEL partnership work, such as embedded coaching activities, district leadership and coaching seminars, school-level staff meetings and other planning meetings, and classroom-based coaching activities. Multiple artifacts were accumulated throughout this data collection period, such as Web-based documents, district-generated documents related to summer school and studio/residency plans, and artifacts distributed at various professional development events (e.g., see Gallucci and Boatright 2007). Individual district interim reports completed for the broader study can be found on the CEL Web site at <http://www.k-12leadership.org>.

11. Our data suggested that there were many teachers such as Caryn who had useful experiences with the particular professional development model described in this report and some that apparently did not. We had interview and observational data on four to five teachers who participated in the model at two schools (and limited observational data on other teachers who attended the sessions from other schools). Caryn’s case serves as an in-depth example of what the leaders observed as they participated in over 50 of these sessions during the year, across all the elementary schools in the district. The elementary directors agreed that her example was illustrative of what they observed at many but certainly not all schools nor for all teachers.

12. As noted earlier, it is well documented that teachers tend to implement structural aspects of new instructional models before they develop deeper conceptual understanding of the practices (Hubbard et al. 2006; Thompson and Zeuli 1999).

13. Kenneth Leithwood, e-mail message to author, October 2006.

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