

Using Sociocultural Theory to Link Individual and Organizational Learning Processes: The Case of Highline School District's Instructional Improvement Reform

An Occasional Report

by
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ABSTRACT

This paper engages questions about the relationship between individual and collective learning processes as they relate to organizational change. It explores the power of sociocultural learning theories for addressing such questions and for understanding how educational organizations learn. A theoretical lens—called the Vygotsky Space—is utilized to analyze data from a reforming urban school district located in the Pacific Northwest. The Vygotsky Space represents individual and collective learning in terms of changing relations between two contextual parameters of social interaction. The first distinguishes between individual and collective learning activities; the second between public and private displays of learning. A job-embedded professional development structure called the Elementary Studio/Residency Model is described, and the learning processes of one participating teacher and her colleagues are explicated. The paper concludes that organizational learning is found in the *relationship* between individual and collective learning and suggests that leaders play a critical role in connecting those processes to organizational goals.

INTRODUCTION

All learning takes place inside individual human heads; an organization learns only in two ways: (a) by the learning of its members or, (b) by ingesting new members who have knowledge the organization previously did not have (Simon, 1991, p. 125).

Individuals act in collective practices, communities, and institutions. Such collective practices are not reducible to sums of individual action; they require theoretical conceptualization in their own right (Engestrom, 1999, p. 11).

The above quotations juxtapose a critical set of questions regarding learning in complex social organizations such as schools and school districts. Can learning in educational organizations be treated as an extension of (or addition to) individual learning? What is the relationship between individual and collective learning in educational systems? Do rational processes such as information gathering and the use of data in decision-making fully explain learning as it relates to collective change? What more can be understood when we take interactions between individuals, activity systems, or communities of local practice as the units of analysis in studies of organizational change? The goal of this paper is to explore the power of sociocultural theories of learning for addressing such questions and for understanding how educational organizations do (or do not) learn and change—in essence, reform themselves.

Implementation issues related to No Child Left Behind (NCLB) make these questions timely. The persistent challenges of responding to accountability pressures and closing the achievement gap on a wide scale have created considerable interest in the dynamics of instructional improvement within school districts. This paper focuses on these processes, characterizing reform as a problem of learning and change (Hubbard, Mehan, & Stein, 2006). Data collected in a mid-sized, urban school district are utilized to demonstrate how organizational change is related to processes of individual professional learning. The dynamics of learning and change are considered in terms of two dimensions: (1) the relationship between individual and collective learning processes and (2) movement between public and private contexts of practice. In addition, the paper considers how collaboration between school district leaders and an external support organization can help create the conditions that support organizational improvement in complex educational systems.¹

The paper begins with a discussion of the reform problem: how school districts can become learning organizations, achieve widespread instructional change, and improve learning conditions for all students. I then describe a theoretical framework that draws on sociocultural and organizational theories of learning to make the relationship between organizational learning in school districts and individual professional change visible. From there, I use an example documented in recent research to bring the theoretical ideas into focus at a practical level. The final section of the paper discusses the need to simultaneously analyze units of individual and organizational change and makes connections to leadership and external support for these learning processes.

Supporting District Systems as “Learners”

The research regarding school district systems as learning organizations is limited; most attempts to understand how districts “learn” have studied a ‘slice of the pie’ such as the relations between central office leaders and schools or teachers (Burch & Spillane, 2004) or how leaders and teachers make “sense” of new instructional policies (Coburn, 2001; Burch, 2002). These studies are helpful in signaling potentially important dynamics of change (e.g., how central office leaders’ conceptions of learning impact their efforts to support the learning of teachers; how school-level conditions and professional relations affect teachers’ perceptions of changing curricular policies). However, they are less helpful in explicating how changes for individual professionals relate to collective learning among and by organizational actors and, beyond that, how their learning may affect the structures, policies, and practices that define the system as a whole. Earlier work has described these organizational processes of change as “system learning” (Knapp, Copland, & Talbert, 2003). System learning, given this formulation, is viewed as transcending the learning of individuals although potentially guided by individuals, especially those in leadership positions.

The much cited reports on instructional reform in two school districts—New York City Community School District 2 and San Diego Unified School District—are useful examples regarding the potential for organizational learning in educational systems. Though these lines of work did not use the term “system learning,” studies of the instructional improvement process conducted in District 2 (see for example, Elmore & Burney, 1997; Stein & D’Amico, 2002) and San Diego (Darling-Hammond et al, 2005; Hightower, 2002; Hubbard, et al, 2006) suggest that “theory-based reforms” require organizational, cultural, and political conditions that are conducive to adult learning.² Drawing on sociocultural theories of learning, some of these researchers describe supports that foster system-wide change, such as creating coherence and shared language around curriculum and instruction, addressing the learning needs of some adults by pairing them with others who possess the relevant expertise, and developing system capacity to scaffold adult learning. This work gets closer to helping us understand the problem of what districts as systems “learn” about instructional improvement. However, there is still much to understand about *how* this learning is appropriated, publicized, or institutionalized within district systems; and how individual actors’ participation in events, activities, or relationships relate to organizational learning.

A related body of literature explores the relationship between capacity for instructional improvement in school districts and external assistance for creating, supporting, and sustaining such capacity. External groups, variously referred to as “intermediaries” (e. g., Burch, 2002; Honig, 2004; Corcoran, 2003), “reform support organizations” (Annenberg Institute for School Reform, 2003), and “external change agents” (e.g., Huberman & Miles, 1984) have been major players in district instructional reform in recent years. While highly varied, many of these external efforts focus on the systemic improvement of schooling often with a particular focus on the quality of teaching and student learning (e.g., Christman, 2001; Smylie & Wenzel, 2003; Kronley & Handley, 2003; Corcoran, 2003). As such, they have properly recognized that the districts they work with need extensive help creating and maintaining systems of support for learning about instructional improvement. In recognition of the demanding nature of the changes districts are attempting (Annenburg Institute for Reform, 2003), these external groups generally offer long-term support, often for up to five years, and sometimes significantly longer.³

Whether district instructional reforms are led internally or guided by external providers, there is limited research that addresses how professional learning (of leaders or other practitioners) within these systems is connected to the organizational context within which it occurs. In the next section of this paper, I explore the utility of a theoretical lens—called The Vygotsky Space—for understanding the connections between individual learning and organizational change. I draw on sociocultural theories of learning and a conceptual framework originally described by Harré (1984) to explore how school districts can transform individual learning experiences into collective sources of knowledge, thereby supporting organizational change.

Sociocultural Learning Theory and Organizational Change

Ideas about how organizations (such as school districts) learn suffer 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 (Robinson, 2001; Popper & Lipshitz, 1998; Argyris & Schön, 1996). 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 have not looked deeply or critically at *how* organizations learn even as processes such as “learning from experience” are prescribed (Popper & Lipshitz). Academics and practitioners alike have struggled with the problem of theorizing and documenting how individual and collective 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 *human* learning and development. Theorists have drawn from behavioral perspectives (e.g., Cyert & March, 1963; Cohen & March, 1974) that treat change in organizations in terms of what people or the organization as a whole do, or from cognitive theories (e.g., Argyris & Schön, 1979, 1996; Weick, 1995; Leithwood, Jantzi, & Steinbach, 1998) that link organizational change with notions of how people make sense of, and then reconstrue, their organizational environments. Traditional theories of learning, however, are not well-suited to explanations of *collective* phenomena—they are about individuals, not groups. They tend to produce rational formulas that follow patterns such as information management (e.g., data search, interpretation, and use) or sense-making loops such as experience, reflection, conceptualization, and experimentation (Huber, 1991; Kolb, 1984 in Popper & Lipshitz, 1998). These analyses ignore the fact that organizations (such as schools and districts) are complicated places, characterized by internal conflict and ambiguity and influenced by external political forces (Hubbard, et al 2006). Technical-rational explanations of organizational learning overlook human complexities and cultural resistance to change. As such, they struggle to explain the negotiative dimensions of learning among groups of individuals relying instead on descriptions of change in organizational structures and rules.

These treatments of organizational change also have a tendency to assume a stable object of learning—but in work settings, the *what* of learning is often not well defined and the processes of *how* learning occurs may not be stable across organizational actors (Engestrom, 2001). Research on organizational learning in school systems has made great strides toward identifying *characteristics* of schools that can potentially foster and guide change such as common vision, collaborative culture and shared decision-making, strong leadership, and capacity across actors (Leithwood, Leonard, & Sharrat, 1998; Marks & Printy, 2002; Cousins, 1998; and Coffin & Leithwood, 2000). The purpose of this study, however, is to

describe the relationship between individual learning and innovation in schools and school systems and the ways that organizations observe, learn, and change from those processes.

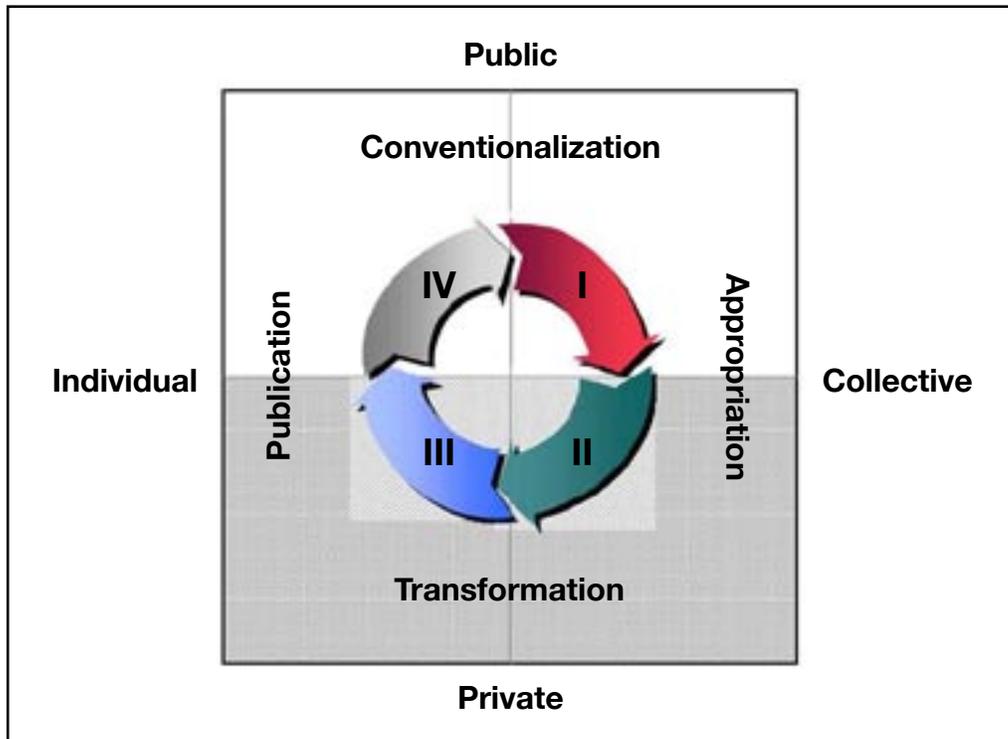
The sociocultural theories of learning that have emerged over the past two decades (Lave & Wenger, 1991; Wenger 1998; Engestrom, 1995, 2001; Rogoff, 1994) characterize learning in ways that are relevant to understanding the problems of organizational change at the heart of school district reform efforts. 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, Baker-Sennet, Lacasa, & Goldsmith, 1995). Following from the quotation that began this paper, Engestrom (1999) makes the point that even when individual action is the privileged unit of analysis, collective practice with its inherent irrationalities is often left as an external, contextual “envelope.” Taking learning as an inherently social and collective phenomenon, sociocultural theories suggest that analysis move from individual’s heads (Simon, 1991) to units of participation, interaction, and activity (Engestrom, 1999; Rogoff, 1994; Lave & Wenger, 1991).

For this paper, I draw on Vygotskian notions of development that describe learning and change as the internalization and transformation of cultural tools that occurs as individuals participate in social practice (Vygotsky, 1978; Herrenkohl & Wertsch, 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 & Raphael, 1996; McVee, Dunsmore, & Gavelek, 2005). Although the model was developed to characterize how individual development is achieved through participation in social processes, I find it useful for clarifying the complex processes of collective learning we are observing in improving school districts. The framework holds promise for making important connections between individual professional development and the elusive phenomenon referred to as organizational learning.

The “Vygotsky Space” represents individual and collective learning in terms of changing relations between two contextual parameters of social interaction (see Figure 1 below based on Harré, 1984; McVee, Dunsmore, & Gavelek, 2005). The first of these distinguishes between individual and collective learning activities; the second distinguishes public and private displays of learning. 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, 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. The iterative stages of this ongoing process include:

- Individual *appropriation* of particular ways of thinking through interaction with others (QI-QII)
- Individual *transformation* and ownership of that thinking in the context of one’s own work (QII-QIII)
- Publication of new learning through talk or action (QIII-QIV)
- The process whereby those public acts becomes *conventionalized* in the practice of that individual and/or the work of others (QIV-QI).

Figure 1. The Vygotsky Space



Note: Based on Harré, 1984; McVee, Dunsmore, & Gavelek, 2005.

I use the Vygotsky Space in this paper to clarify how collective events such as district-wide leadership seminars or school-level coaching sessions serve as instances for the introduction of new ideas about leadership and/or instructional practice (Quadrant I). The new concepts and practices discussed at these public events are subsequently taken up and interpreted by individual professionals (central office leaders, school principals, coaches, teachers)—a process that the model refers to as appropriation (Quadrant II). 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, professionals’ attempts to take up new ideal or material tools presented in the public arena create what Engestrom (2001) refers to as “disturbances” in existing practice. In these contexts principals or teachers work to resolve these tensions by reinterpreting the concepts and practices within their own work contexts. These situations constitute sites for individual learning and innovation —transformation of existing ideas and practices (Quadrant III).

If the learning process stopped at this point, there would be limited opportunity for individual learning processes to connect to broader or collective learning processes. This often happens. However, if these transformed ideas and practices are demonstrated or discussed by individual professionals—either in small groups that share aspects of responsibility for practice (what Wenger has described as “communities of practice”) or in more formal settings such as demonstration lessons arranged for groups of educators—then, there is potential for the learning cycle to connect to the larger collectivity or organization (Quadrant IV). Whether such public demonstration of learning and change stays at the individual or small group level or results in broader institutionalized change may depend on many factors. If new learning is instantiated at a “system” level (whether at a grade level, a school level, or at

the broader district level), then these new ideas and practices may function as a new set of conventions for practice (back to Quadrant I).

Here, I present a detailed example of how this process appears to be working in one Northwest school district and raise several points regarding what supports or actions might be required of leaders or of external support providers to ensure that professionals in the system move through these cycles of learning and that such instances of learning and change are taken up by the organization as opportunities for institutionalizing instructional improvements.

CONTEXT AND METHODS OF STUDY

The data presented here are drawn from an ongoing qualitative study of the partnerships between the Center for the 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 ten school districts. The goal of CEL's work in these districts is the elimination of the achievement gap through the improvement of instruction. CEL 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.⁴ CEL intervenes in school districts at multiple levels of the system. For example, CEL assists the districts to build leadership capacity through district-wide study group sessions (generally attended by district leaders, principals, and instructional coaches). These sessions are tailored to specific district needs, but generally cover topics such as: recognizing the attributes of powerful instruction, building pedagogical content knowledge, using standards and student data to inform curricular planning, and assessing and guiding the professional development of teachers. The content of the group sessions is connected with practice through leadership coaching. For example, CEL contracts with instructional leadership consultants who shadow district and/or building leaders, teaching and demonstrating skills such as setting expectations and communicating them to staff, leading data-based inquiry, or planning professional development events. Closer to classroom levels of the district systems, CEL supports a variety of study group sessions for instructional coaches and teacher leaders as well as providing job-embedded coaches for these professionals (see Appendix A for further description of these activities and CEL's theory of action).

The Study Design

In the fall of 2004, a qualitative research study into the CEL-school district partnerships was initiated by a team of researchers at the University of Washington. We began our study with a pilot investigation 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). This paper draws on data collected in Highline School District (the pilot district) during the 2005-2006 academic year.

Over the first two years of our study in Highline, we talked with and observed five central office instructional leaders who interacted regularly with CEL consultants regarding their leadership practices, two other district leaders, and four district content area coaches. The study also selected participants in five schools—three small high schools and two elementary schools—that were recommended by CEL

and central office informants as engaged in the partnership work. Within each school, we sampled the building leaders, the literacy coaches, and two or three teachers, selecting informants who were described as having key roles in the instructional improvement work that was central to the district's partnership with CEL.

All of these informants participated in individual, semi-structured, and audio-taped interviews conducted once or twice a year since the fall of 2004. In some cases, participants were interviewed up to four times a year (e.g., we interviewed the CEL Project Director for the Highline partnership several times a year). Most interviews were about 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.

In addition, we observed events related to the Highline/CEL partnership work, for example, district and building level planning meetings, district level leadership seminars, coaching cycles, building-level professional development sessions and building level "walkthroughs" (classroom visits with administrative staff). Multiple artifacts, such as evaluation tools and documents from planning and administrative meetings, as well as from classrooms, were collected throughout the data collection period.

Following each round of data collection, each member of the research team read a portion of the data corpus and identified key categories and themes within those data. As we stabilized the categories and themes, we subsequently coded all interviews and field notes using the HyperResearch qualitative data analysis program. I analyzed the data presented here separately using the sociocultural learning constructs discussed above (for example, I looked for instances of appropriation, transformation of practice, and/or publication as defined by the Vygotsky Space). I analyzed all the data related to the reform work at the elementary school level in Highline school district during 2005-2006, and, for this paper, I explicated one example—describing a particular professional development structure designed by the district for professional development in all elementary schools and selected classrooms.

Highline School District

Highline School District (HSD) is a mid-sized, diverse district located in the first ring of Seattle's south-end suburbs. The district serves a student population of approximately 17,700 students. Over 50% of these students participate in the federal Free and Reduced Price Lunch Program. Although White students currently make up 43% of the student population, this majority group has decreased in size dramatically over the last twenty years. The majority of the student population in Highline is composed of the following ethnic groups: 21% Asian students, 20% Latino students, and 14% 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 continue to struggle in many areas, especially mathematics (see Appendix B for district-level test score data over the past three years). The district's relatively new central office leaders send clear signals regarding a district-wide commitment to instructional improvement, and in 2004 the school board set a goal that 9 out of 10 students in the district will meet standards, graduate on time, and be prepared for college or career by 2010.

The example described in this paper 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% of the children at Oak Park are White and 40% of the students are Latino, 24% are of Asian/Pacific Island descent, and 16% are African or 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 (see Appendix B).

Oak Park Elementary was described to us in 2004 as a "goer" school—a term meant to suggest that the school principal was a strong leader and that the building literacy coach and at least some teachers at the school were on-board and engaged with the instructional improvement work characteristic of the Highline/CEL partnership. During 2005-2006, I attended several professional development events held at the school and visited the school for two to three other full school days. I was in Oak Park classrooms on approximately six or seven days between January and June of 2006. I interviewed the principal, two literacy coaches (one primary and one intermediate), and three teachers and had multiple opportunities to talk informally with all of these informants as well as the central office leaders and CEL consultants who worked with them. The focus of my investigations during this time was the professional development structures that were being developed within Highline and how they were affecting the work of the professionals within schools and classrooms. I utilize the Vygotsky Space here to describe what I observed at Oak Park Elementary.

MAKING INDIVIDUAL AND COLLECTIVE LEARNING PROCESSES VISIBLE

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 result of that trip, especially the leaders' observations of an embedded external coach from Teachers College, was a professional development structure that Highline called the Elementary Studio/Residency Project.

Highline School District 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. An early document described this unique model to elementary teachers:

Although both **studio** and **residency** teachers will be involved in six half day in-services throughout the year, the difference will be the placement of the work. **studio** teachers will have the consultant in their classroom working with their students in model lessons as well as teaching lessons along side the consultant. **residency** teachers will participate with the consultant and the studio teacher in planning and debriefing as well as trying on the work back in their classroom. The consultant will not be working directly with the **residency** students.

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 and paired with a literacy coach—it was these professionals, 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 (e.g., many 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. The half-day seminars included the CEL external consultant and the team members from each of the 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 an unfamiliar term in Highline. Beginning in the summer of 2004 and extending through the 2004-2005 school year, another CEL consultant worked with a small group of 9th 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 for example 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 began to catch the attention of other building and central office leaders in Highline School District. 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 I

The studio/residency model represented a new set of “conventions” 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 limited set of willing teachers as co-participants. 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 read aloud or independent reading) was presented by the host school (see Appendix C for a description of the components of literacy instruction that are referred to throughout this section). Following a discussion of that topic (with ample opportunity for the external consultant to infuse expertise into the conversation), the group often went to the studio teacher’s classroom for a demonstration lesson. Sometimes a video segment was shown to the group featuring the studio teacher and/or the literacy coach modeling some aspect of instructional practice.

At one of the elementary studio schools, the principal selected a competent 2nd grade teacher, Caryn, as the studio teacher. She was a 30-year veteran who had a strong voice among her colleagues. Utilizing interview and observational data collected from January through June 2006, I draw on Caryn’s experience as a studio teacher to demonstrate how change occurs through ongoing transaction between public and private learning activities and individual and collective learning processes.

For the previous 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 set-up 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 Lea 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 conferenced with two of Caryn's students. Following the observations, the entire group of participants discussed each student's strengths and needs and potential instructional activities 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 conferenced 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 suggests that new instructional ideas and practices were being introduced to the studio/residency participants. 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 II

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 and practices (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 because my kids will do whatever...they're great kids. They have trust in you.

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. Even in the context of that studio seminar, Sheryl shared the following with her colleagues (recorded in field notes):

When I first went into Caryn's room, I sat in the back and scripted. Then I showed her the list...here's what I hear. Now, I see our coaching as side-by-side. Now, I would be sitting beside her with the student. So, I see myself moving closer to the teaching. Then, for conferring, I see the implications for having intentionality, for careful choice of texts, and for scripting the conversation with the student. I'll be stepping in as it looks like I could help.

Sheryl began to think about her role as Caryn's coach and as a leader. 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.

She began to coach Caryn on the process of conferring with students during independent reading. She noted later that spring that she was still "*doing more of a co-conferring rather than a coaching of the teacher as she's conferring.*" There was evidence by May, however, that Caryn (and Sheryl) had made significant changes in their reading instruction and coaching practices.

Transformation of Practice: Quadrant III

When I visited Caryn's classroom later in the spring, I observed her teaching a mini-lesson to her students with Sheryl coaching at her side.

- The students just returned from recess.
- Caryn quickly gathers them around her on the floor in front of the blackboard.

"This is a mini-lesson 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 says, "We went over that yesterday."
- She glances at Sheryl. "Oh, write the definition? Might be a good idea."
- Sheryl says, "Could we review those terms just to help me? "Culprit," "suspect"?"
- Caryn asks the students and several volunteer the definitions of the words.
- The students transition to independent reading; Caryn and Sheryl began conferring together with individual students.

Several aspects of this lesson were new to Caryn's teaching practice. First, she learned about the "mini-lesson" from reading of *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 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 3rd 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 and Sheryl were transforming their work in response to the ideas and practices presented during the studio/residency events. Their learning was demonstrated in talk and in action at the studio sessions and in their work together.

Publication of New Ideas and Practices: Quadrant IV

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 2nd 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.

[The consultant says to the others: See the move that Caryn made? She got him into a more accessible book that was still interesting content.]

This set-up 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 2nd grade?
- How do you keep students motivated and interested?

Her specific purpose for the conference was to find out if the student had understood 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. There were about 10-12 adults in her room watching while she conducted two conferences with Sheryl at her side. This time Caryn began with a whole group mini-lesson how to use sticky notes during independent reading (e.g., to note character traits, keep track of events, or summarize chapters). She said to her students, *"When I conference with you, you can use your sticky notes to organize your thinking."* As the lesson proceeded, students moved to desks and comfortable places around the room to read their books. Caryn and Sheryl demonstrated two individual conferences with children for the adult observers.

As she worked, Caryn kept notes on a clipboard set up with a 4x6 inch notecard for each student. She paused between student conferences to demonstrate this record keeping system for the visitors.

Documenting Caryn's (and Sheryl's) learning processes as they moved (often back and forth) through the quadrants of the Vygotsky Space is one useful way to make the relationship between these individual and collective processes visible. One can trace Caryn's learning from her early internalization and appropriation of concepts and practices that she heard about at the studio/residency sessions (Quadrant II); to her transformation of these ideas and practices in the context of her own teaching (Quadrant III); and, finally to the publication of her learning through her demonstration lessons (Quadrant IV). 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. Early in the year, Caryn said she would participate in the studio work *"as long as I don't have to teach in front of all those people."* She had come a long way by the end of the year when she eagerly invited a group of strangers into her classroom to show them how she conducted individual reading conferences with children.

A variety of factors are likely to influence what and how individual learning processes might be taken up by the collective (at school or district levels) including, for example, organizational supports and structures (Popper & Lipshitz, 2001) and leadership actions (Leithwood, 2000). Beyond the specifics of what Caryn learned about how to teach reading, the job-embedded professional development model (a structural support) and the public nature of the learning process (a cultural shift requiring leadership) were aspects of her learning processes that bear further explanation.

CONVENTIONALIZING JOB-EMBEDDED AND PUBLIC LEARNING PROCESSES

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 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 become conventionalized at broader levels of the system.

Designing Public Spaces for Learning: Quadrant I

Caryn didn't 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 orchestrated and designed by district leaders in partnership with their CEL consultants. Although the district leaders might not have explained it as such—this organizational structure supported the various forms of knowledge identified by Cook & Brown (1999) as important tools of *knowing* in practice.⁵ Cook & Brown describe knowledge (that is, *what* people *know* either individually or together) as interacting with *action* in situated contexts in what they call a "generative dance" that leads to organizational innovation (p. 383). Recognizing and supporting the interaction between what people know and how they use that knowledge in practice is a significant challenge of instructional leadership.

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 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 famous New Zealand developer of Reading Recovery) and had, for several years, consulted in both New York City Community District #2 and in San Diego. Although they did not know her work prior to the fall of 2005, practitioners in Highline came to appreciate Lea's personal style and solid expertise—even some who were 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.*"

The studio/residency model was designed as a public venue for potential learning. As noted earlier, the sessions included district leaders, building leaders, instructional coaches, and classroom teachers among the participants. The focus of the sessions, however, was on one teacher's classroom practice. By placing specific problems of practice on the table for examination, the structure brought into play all the aspects of knowledge that Brown & Cook suggest would "dance" with professional knowing-in-practice. So, as well as Lea's explicit knowledge about reading instruction, Caryn's tacit knowledge about

teaching was on display. Her individual knowledge was interacting with the group's ideas about how to teach reading and all of these forms of knowledge were brought to bear on Caryn's actual work. New learning was a potential for any of the participants at the sessions. And, although district leaders created the original design for the studio/residency model, principals were responsible for how the work proceeded at the building level.

Local Leadership for Individual and Collective Learning: Quadrant II-III

We've 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 Highline School District (Gallucci, Boatright, Lysne, & Swinnertson, 2005). Data collected during 2005-2006 suggested that these and other leadership practices were critical for supporting individual and collective learning processes and connecting them to the district's instructional improvement initiatives. Related to the studio/residency work in elementary schools, Caryn's principal (1) selected the studio/residency participants, (2) supported individual and small group learning through ongoing dialogue, and (3) reallocated resources to support the work.

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" (that is, 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 are 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 to have experienced cycles of change. She would be a good test case for how much traction or gravity there really is 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 gambled that Caryn—who was a previously resistant teacher—would influence other primary grade teachers in the building.

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 work 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." He further 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

who she had observed regarding independent reading. These leadership actions created conditions that supported the transformation of Caryn and Sheryl's practices through support for their ongoing dialogue and exposure to new ideas.

Encouraging Publication: Quadrant IV

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 practices. By nature, job-embedded coaching is situated in practice and focused on solving problems of that practice. The studio/residency model, however, was 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 beyond abstractions into practical activities and beyond individuals to communities of professional practice (Brown & Duguid, 1991). The learning of individuals was legitimized by the formalized structure of the studio/residency model and organizationally amplified beyond one classroom (Nonaka, 1994).

Organizing for Learning: Conventionalization and the Movement from QIV back to QI

The infusion of high quality external expertise was an important aspect of the public venue that stimulated learning and change for Caryn and others who worked closely with her. But, contact with this experience was limited to the professionals present at the studio/residency sessions. As the CEL Project Director for the Highline partnership explained:

Part of the rub of creating this together is that this isn't just about the teachers. It's about the coaches and it's about the principals and it's about central office. You've got these levels of the system and issues about instructional content, and what are the coaching moves that have to happen, and the leadership. So, it's multi-tiered.

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—either with building coaches, in other content areas such as mathematics, or in their leadership work with principals.

As follow-up to their learning regarding 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 during the summer (2006) and into their plans for the upcoming year—ensuring that (1) external expertise was connected to actual work practices; (2) job-embedded coaching continued to be conventionalized as the standard for professional development work in the district; and (3) professional learning processes continued as public events. They created new structures and policies such as:

- An embedded coaching model for elementary summer school modeled on the high school summer school professional development model and the studio/residency 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.
- A new policy for future whole group professional development sessions with elementary principals (around instructional leadership). District-wide sessions would be conducted by the same consultant who provided external expertise and job-embedded coaching in the schools at studio/residency sessions (for 2006-2007). This policy was intended to connect whole group leadership instruction with work taking place in schools and classrooms.

Policies and structures such as these place new “conventions” related to embedded coaching and the public nature of professional learning into public view (Quadrant 1) setting the conditions for new cycles of change. Not all innovations made at the local level (such as those developed, deliberated, and piloted at Caryn’s school) are adopted and consolidated over time, or at larger levels of system organization. Some remain appropriately situated in the instructional work of small groups of practitioners. But, if leaders—either at the school or district levels of the system—are attentive to instances of internalization (QII) and actively support transformation (QIII) and publication processes (QIV), then the learning that occurs among individuals and local communities of practice is not only encouraged, but may result in new conventions that lead to system-wide change.

Highline leaders, encouraged by their observations of change at local levels, consolidated their own learning in the creation of structures and policies that began to institutionalize particular concepts and practices across the organizational system. As the Assistant Superintendent in Highline said recently, *“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.’”*

At the district level, the two Elementary Directors (the ones who originally visited New York and then developed the studio/residency model) were paying attention to principals such as Caryn’s and learning from them.

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] 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—new public spaces for learning—based on what they learned. In the upcoming year, they planned to loosen the reigns for principals that “really get it” giving them added responsibility to structure the content and the process at the school level. The new motto for the work was *“District-Sponsored—Building-Owned.”* This year’s Studio/Residency Schedule represents these new system-wide conventions (see Appendix D for new documents

developed by these leaders that describe the responsibilities of participants in the 2006-2007 Studio/Residency work). The following appeared in a recent written document to building leaders.

The aim of the studio/residency model is to create leadership learning opportunities embedded within examples of instructional practice. District staff and third party consultants (CEL, TDG) will sponsor this work, but it must be **owned at the building level** under the sponsorship of the building principal. Before each visit, principals will communicate and plan the instructional focus with their partner school. Principals will open and close each visit and facilitate the adult learning throughout the consultation day. Following each visit, principals will act on next steps identified during the consultation and ensure that systems are in place to continue the work.

There are building leaders in Highline who have not been as successful with leading professional development in Highline schools. The Elementary Directors are developing a stronger set of supports for these leaders even as they attempt to hold them increasingly accountable for leading reform efforts. For example, a recent organizational change will place one district literacy coach in close proximity to the work with struggling principals especially related to the expectation that these principals guide and support professional growth for teachers.⁶

We'll be doing the follow-up work in between visits [by the district coaches] so that we can be focused on a narrower set of schools and really have deliverables. There are going to be clear next steps and they need to follow up before we come the next time. I think we've lacked deliverables for them and [the district coaches] had so many to work with that they couldn't get traction so we've hired another person and split them up.

The central office leaders were paying attention to the innovations occurring in classrooms and schools around the district. Several leadership actions facilitated their own learning: (1) they were present and participating at all the studio/residency sessions; (2) they took notes and published them via email accounts that went to participating principals; (3) they collected end-of-the-year evaluations of the sessions from all participants; and (4) they asked for additional feedback from building leaders. Their participation in these learning activities aided them in the development of a new iteration of public spaces for continued professional development (Quadrant I) thus connecting local and individual professional learning processes to broader organizational change initiatives.

DISCUSSION

This paper explores the utility of adopting sociocultural perspectives for clarifying organizational learning processes in complex educational settings. I raise several questions early in the paper about the relationship between individual and collective learning and wondered what explicit attention to the social nature of development could add to current understandings regarding organizational change. I argue that moving from a reliance on traditional views of learning to sociocultural theories would enhance those current conceptualizations. A framework developed originally by Harré (1984) and labeled The Vygotsky Space by Gavelek and his associates (Gavelek & Raphael, 1996; McVee, Dunsmore, & Gavelek, 2005) was used to analyze data collected recently in a reforming school district. This framing drew our attention to two important dimensions of learning and development—the first distinguishes individual and collective learning activities and the second, public and private displays of learning.

These dimensions were not described by Harré as *dichotomous*, but rather as continuous dimensions of learning as it occurs within the social world.

The paper describes how learning emanated from a series of professional development events created by Highline School District 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 (Quadrant I of the Vygotsky Space model). Caryn and others struggled to understand some of these ideas and practices but began to consider them for their own work (Quadrant II/Appropriation). Over time, supplied with other contextual tools and messages, Caryn transformed and adopted some of the practices for her own teaching (Quadrant III/Transformation). She then displayed her learning for public view through demonstrations and conversations (Quadrant IV/Publication). School and district leaders took up the conventions around the embedded and public nature of professional learning—setting new policies and developing new structures for the coming year (Quadrant IV to Quadrant I) thus creating potential for new cycles of change.

What does this explanation suggest about the phenomenon referred to as *organizational learning*? Fundamentally, the analysis highlights what Cook & 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 to organizational levels. New meanings and new social practices are negotiated among individual learners within communities of practice—in the context of social interaction and activity (Wenger, 1998; Brown & Duguid, 1991). In other words, the significance of new knowledge and changes in practice are determined by their usefulness in specific situations. Through productive inquiry in these contexts, bits of knowledge shared (for example) by an external expert can become dynamic affordances for addressing the frustrations of practice and facilitating new insights (Cook & Brown, 1999).

Organizational learning processes proceed through *participation* by individuals and groups of individuals in both public and private activity settings (Caryn came to the studio sessions; she read books about reading instruction at home in the evenings; she discussed her reading with Sheryl). These dimensions of learning were embedded here in the world of Caryn's instructional practice. *Learning* was not separate from work—and, private activities (such as reading) were intimately connected to interactions between Caryn and her colleagues and to the innovations developed for her instructional practice (Brown & Duguid, 1991; Wenger, 1998).

How is it, then, that these processes become *organizational*? Brown & Duguid suggest that it *is* this work among individuals in communities of practice that organizational leaders need to harness.

This means to harness innovative energy in any enacting organization or alliance must ultimately be considered in the design of organizational architecture and the ways communities are linked to each other. This architecture should preserve and enhance the healthy autonomy of communities, while simultaneously building an 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 should be allowed to circulate (p. 54).

The case presented here contests the notion that all learning takes place in individual heads (Simon, 1991) demonstrating that both individual *and* collective development are important aspects of organizational learning. It is the *relationship* between the two that is critical, and often misunderstood. One

aspect of learning is frequently privileged (such as what individual's know) and considered as separate from what individuals do alone or together that supports their learning. This was Vygotsky's great insight regarding development—that individual learning is built from the collective (through interaction with cultural tools) and that collective development is likewise influenced by individual change. The Vygotsky Space makes the relationship between individual and collective learning visible in the internalization of ideas and concepts, the transformation of practice, and the publication of individual learning in public/collective settings. The Highline case is instructive in that it demonstrates how instructional leadership can connect local innovation and learning with organizational change processes through something Harré (1984) called conventionalization.

Central office and school leaders developed the organizational structure that supported professional development among individuals and communities of practice and provided a forum for distributing that learning across settings in the service of school district instructional improvement goals. The Elementary Director who attended the same studio/residency sessions as Caryn, for example, wrote email 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 this local experience at an organizational level when they created new professional development structures based on what they had learned from the studio/residency work.

The Vygotsky Space provides a framework for understanding the challenge of leadership to create structures and supports for the learning of individuals across district systems in ways that relate to organizational goals. One role of instructional leaders is to recognize and harness local learning in ways that facilitate organizational change. This case suggests that central office and building leaders can accomplish this by:

1. Conventionalizing (or, institutionalizing) the structures that are found to facilitate learning, using what is learned from observations of local practice to design next iterations of public spaces for continued professional development.
2. Codifying what is learned at local levels in order to legitimize and share new knowledge across members of the organization.
3. Through presence in local settings (either central office presence in schools or principals' presence in classrooms), 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.
4. Developing standards for leadership and for participation in these public settings that ensure impact beyond compliance at the local and individual level. For example, in Highline, the central office leaders placed more reliance on principals to lead the studio/residency work, while providing increased supports for struggling leaders. Deep engagement at the local level was an expectation of participation in these highly resourced settings.

This case also suggests an important role for external support providers such as the Center for Educational Leadership. Organizations such as CEL are uniquely situated to help school districts make connections between individual innovation and organizational systems of support for instructional improvement. Sitting outside the daily fray of school district pressures and complexities, 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 conventionalizing important aspects of innovative practice; or (4) bring to leaders attention emerging communities of practice that can function as beacons of 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 individual and collective learning processes.

APPENDIX A

CEL Partnership Prospectus

Leadership as learning: Closing the achievement gap by improving instruction through content-focused leadership

The Center for Educational Leadership (CEL) exists to eliminate the achievement gap that divides students along the lines of race, class, and language. CEL believes that the achievement gap will be eliminated only when the quality of instruction improves, and that instruction will only improve at scale when leaders better understand what powerful instruction looks like in order to lead and guide professional development, target and align resources, engage in on-going problem solving and long-range capacity building. It is one of CEL's mantras that "you can't lead what you don't know."

This prospectus outlines a professional development partnership between a school district and the Center for Educational Leadership at the University of Washington. Partnerships are based on the belief that powerful instructional leadership is the nexus for improving student achievement. Though each partnership is tailored to the particular context of the district(s) involved, the overall theory of action guiding the work has three basic footings:

The first footing is about **helping the system to get smarter about powerful instruction** and the leadership necessary to guide that instruction. The second footing involves working directly with content coaches and teacher leaders at school sites with the aim of **connecting new learning to classroom practice**. The third footing is about **ensuring the necessary policies, practices, and structures are in place to support powerful instruction** by working directly with district level leaders to examine their own district contexts. Whether in literacy or math, sustained, in-depth examination in one content area grounds leadership practice squarely within the work of instructional improvement; this ensures that the three footings of CEL's theory of action are closely aligned.

The focus on leadership for instructional improvement has two distinct, but mutually reinforcing dimensions: (1) defining the instructional practices, structures, and routines that are conducive to powerful student learning and to the adult professional development that supports it; (2) honing the leadership practices and routines which support, nurture, and push the development of such practices across the district.

With these two dimensions in mind—"instructional practices" and "instructional leadership"—the Center for Educational Leadership provides the following:

Helping the System Get Smarter about Powerful Instruction

General Study Group Sessions for School and District Leaders

The *General Study Group Sessions* serve as a central component of the professional development partnership. The purpose of these sessions is two-fold: (1) to study high-quality instruction in a specific content area (literacy or mathematics) and (2) to define and refine the communication and instructional leadership strategies conducive to improving student achievement through high-quality instruction.

Participation in *General Study Group Sessions* is an expectation for all K-12 principals, assistant principals, literacy coaches, key teacher leaders, and central office leaders. The configuration of each study group depends on the size and needs of the particular district(s) involved. All *General Study Groups* are initially designed for district-wide participation. Over time, however, the configuration of the *General Study Groups* may change to meet the evolving needs of a district. Some districts, for example, have organized *General Study Groups* around particular grade-level bands (i.e. elementary and secondary).

General Study Groups meet for a series of one day sessions across the school year and are conducted by leaders in the field of literacy/mathematics instruction and instructional leadership. The goal of *General Study Group Sessions* is to support school and district leaders, instructional coaches and/or teacher leaders in their own learning of quality instruction and instructional leadership. Specifically, these sessions are aimed at helping participants:

- Recognize, articulate, and teach the critical attributes of powerful instruction
- Build pedagogical content knowledge
- Hone skills for curricular planning informed by knowledge of standards, curricular resources, pedagogical content, and ongoing assessment of student needs
- Develop shared language for talking about teaching and learning
- Develop specific leadership skills that can assist in the movement towards more powerful and effective instruction
- Cultivate an interdependent professional community for teachers and leaders
- Become more effective at planning, coaching, and collaborating with teachers in developing powerful instruction

The format of each session generally includes presentations of exemplary instructional practices; demonstrations of strategies with adult and student groups; time for individual/team/school planning with support of CEL coaches; sharing of professional development tools, resources, and texts to support the work.

While each *General Study Group Session* is built upon the needs of the district(s) and the work of the previous sessions, the scope of the *General Study Group Sessions*—regardless of content area focus—includes specific knowledge and skills which serve as the foundation for *Leadership and Instructional Coaching*. These include:

Instructional Practice

Learning Environment/Conditions for Learning
How People Learn/Developing Pedagogical Content Knowledge
Teaching in the Zone of Proximal Development
 Supporting Students Towards Increasing Independence
 The Role of Modeling
 Meeting the Needs of English Language Learners
Data Based Inquiry
Assessment Driven Instruction
Using Standards to Inform Curricular Planning and Instruction
The Crucial Role of Talk in Learning

Instructional Leadership

Communication
 Developing a “Teachable Point of View”
 Setting Clear Expectations
 Framing the Work—articulating rationale for priorities, creating a sense of urgency, writing instructional letters, crafting openings and closings for meetings
Data Based Inquiry
 Using School Based Data to Determine Student and Teacher Needs
 Using Data as a Leverage Point

Planning for Professional Development to Support Teachers' Growth
Identifying Teachers' Learning Styles and Needs
Crafting Feedback for Teachers
Developing the systems and structures to nurture and support professional learning
Identifying and Working with Teacher Leaders

Leadership Coaching

To apply the learning from *General Study Group Sessions* to leadership actions at the district or school level, *Leadership Coaching* is a key component of the professional development partnership. All principals and their district office supervisors receive coaching from accomplished instructional leaders. The exact number of *Leadership Coaching* days is negotiated as part of the overall partnership contract, but a minimum of four days per person is recommended. The configuration of the leadership coaching is also negotiated as part of the contract. In some districts, principals receive coaching in dyads or triads. In other districts, coaching is one-on-one. In all cases, leadership coaching is school and district embedded, carried out in the actual context of leaders' work.

Facilitated instructional walkthroughs are one element of leadership coaching. Leaders utilize information from walkthroughs to deepen pedagogical content knowledge, analyze classroom instruction, ascertain the strengths and needs of teachers, support teacher growth, and plan professional development opportunities for individual, small groups, and whole staff learning.

Connecting New Learning to Classroom Practice

Specialized Study Group Sessions for Coaches and Teacher Leaders

Approximately one day per month (commonly following the General Study Group Session) serves as an opportunity for additional study focused on the work of content coaches and/or teacher leaders. These sessions are intended to deepen their understanding of the content introduced at the General Study Group Sessions and to prepare them to work with colleagues at their own sites.

Specialized Study Group Sessions are designed to address an additional body of knowledge specific to the work of content coaching and professional development planning. Coaches and teacher leaders learn how to organize, develop, and sustain study groups in their respective schools and districts; how to structure coaching work with teachers; how to grow and utilize lab-site classrooms within and across schools; how to work with principals to plan for, stage, and deliver professional development; how to utilize video tapes and other resources for their own and others' learning and professional growth.

Instructional Coaching

Instructional Coaching or *Content Coaching* is an essential vehicle for connecting the learning from Study Group Sessions to classroom practice. The specific number of and configuration of coaching days is negotiated as part of the overall partnership contract; CEL Project Directors work with district leadership to make decisions about how to invest coaching resources to achieve the greatest impact.

CEL coaches spend approximately 1-4 days a month "on the ground" in schools with school and district teacher leaders. These coaching days extend the work of both the *General* and *Specialized Study Group Sessions* by providing teacher leaders with additional opportunities to "try on" new teaching strategies and to work with teachers in their classrooms—all with the support of an outside coach who models in classrooms, debriefs with teachers, co-teaches, co-plans, observes and provides feedback. *Instructional Coaching* may focus on developing pedagogical knowledge in a particular content area (literacy or math) or in the area of coaching and professional development itself.

Creating Existence Proofs

Whether through observing a coach model a lesson in a classroom, visiting schools with demonstrated success, or participating in professional development residencies in the classrooms of exemplary teachers, people need to see images of what is possible in order to develop a sense of urgency and

deepen their commitment to the challenge of improving student achievement everyday, in all classrooms. When teachers see their own students—or students like them—engaged in rigorous, standard-bearing work, it elevates the expectations for what is possible.

To this end, CEL works with each partnership to design a plan for cultivating expertise among teachers, and creating existence proofs within each district. Some districts, for example, develop lab-site classrooms as places where teachers and coaches can “try on” new instructional strategies with support.

While districts are growing the necessary expertise within their systems, the Center for Educational Leadership connects them with a network of schools and districts across the country engaged in similar work. CEL orchestrates a variety of opportunities to learn from the experience of others through visitations to and residencies in exemplary schools and classrooms.

Ensuring the Necessary Policies, Practices and Structures Are in Place to Support Powerful Instruction

Leadership Conferences

The purpose of the *Leadership Conferences* is to provide an on-going venue for the application of the principles and practices learned with the *General Study Group* and *Leadership Coaching*. Regular meetings are scheduled over the school year with key central office leaders and principal representatives. These meetings are planned in consultation with the Project Director(s) from the Center for Educational Leadership. The extent to which the *Leadership Conferences* are facilitated by CEL representatives depends on the nature of the partnership; districts take on increasing responsibility for planning and leading the *Leadership Conferences* over time.

The aim of the *Leadership Conferences* is to (1) further flesh out and develop the school district’s professional development plan; (2) coordinate this effort between and among schools; (3) identify the systems level policies, practices and structures that need changing in order to improve instruction. The content of *Leadership Conferences* addresses how the district might develop its own “green house” for cultivating expertise among teachers, how to identify and utilize current teacher leadership that exemplifies high-quality instruction, and ongoing examination of their own instructional leadership skills.

Project Management

Each partnership is unique and the professional development needs of a district continually evolve with new learning. For this reason, each district partnership is managed by at least one Project Director from the Center for Educational Leadership. Initially, this person is instrumental in working with district leaders to develop the partnership contract, and to conceptualize how the various components will manifest and reinforce the three footings outlined above. The Project Director is the main interface between the district and CEL coaches and representatives.

As district leaders develop their understanding of powerful instruction and the district-wide implications for leadership, they become more adept at refining long-term goals and problem solving along the way. Over time, project management involves monitoring, reflecting on, negotiating and reconceptualizing the partnership work in response to identified goals. For example, the Project Director may work with district leaders to develop other learning opportunities such as specialized residencies in CEL’s partnership schools, professional development attached to summer school for students, and intervisitations among partnership districts.

There is significant flexibility regarding how the various components of the partnership play out over time, provided that the basic footings of the theory of action are not compromised. While the Center for Educational Leadership remains open to the number of actual content and coaching days, as well as the specific content to be addressed, the partnership is contingent upon a district commitment to invest in learning opportunities and structures to help the system get smarter about instruction, connect new learning to the classroom, and ensure the necessary policies, practices and structures are in place to support powerful instruction.

APPENDIX B

District and School Test Score Data

Highline School District (WA)

Washington Assessment of Student Learning (WASL) Scores – All students

Data reports percentages of students with scores at or above state standards.

2005-06 WASL Results								
Subject	3 rd Grade	4 th Grade	5 th Grade	6 th Grade	7 th Grade	8 th Grade	9 th Grade	10 th Grade
Reading	57.0%	72.9%	64.5%	53.7%	50.3%	63.1%		72.6%
Math	50.9%	44.4%	38.0%	34.5%	32.3%	34.2%		39.2%
2004-05 WASL Results								
Subject	3 rd Grade	4 th Grade	5 th Grade	6 th Grade	7 th Grade	8 th Grade	9 th Grade	10 th Grade
Reading		69.4%			61.2%			66.8%
Math					37.9%			38.3%
2003-04 WASL Results								
Subject	3 rd Grade	4 th Grade	5 th Grade	6 th Grade	7 th Grade	8 th Grade	9 th Grade	10 th Grade
Reading		63.7%			49.3%			59.6%
Math		43.1%			30.0%			34.6%

Source: Washington State Report Card. <http://reportcard.ospi.k12.wa.us/> (retrieved 10/10/2006).

Oak Park Elementary School (a pseudonym)
Highline School District (WA)
WASL Results – All students, school-wide

Data reports percentages of students with scores at or above state standards.

2005-06 WASL Results				
Subject	3rd Grade	4th Grade	5th Grade	6th Grade
Reading	51.4%	78.7%	54.3%	43.8%
Math	43.4%	42.7%	25.7%	25.0%
Writing		52.7%		
Science			10.0%	
2004-05 WASL Results				
Subject	3rd Grade	4th Grade	5th Grade	6th Grade
Reading		60.3%		
Math		34.2%		
Writing		38.4%		
Science			12.9%	
2003-04 WASL Results				
Subject	3rd Grade	4th Grade	5th Grade	6th Grade
Reading		57.3%		
Math		33.0%		
Writing		38.8%		
Science			9.7%	

Source: Washington State Report Card. <http://reportcard.ospi.k12.wa.us/> (retrieved 10/10/2006).

APPENDIX C

Balanced Literacy Approaches

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Read Aloud

- Teacher provides a model of how to use reading strategies to construct meaning of text
- Students construct meaning through conversations about the text
- Teacher reads text to students, modeling proficient oral reading
- Expands access to text beyond student's independent reading ability
- Immerses students in a variety of genre, language patterns, vocabulary, and rich literature at a level beyond what students can read independently
- Teacher observes, assesses, and reflects upon student strengths and needs before, during, and after Read Aloud to inform planning and teaching

Shared Reading

- Teacher demonstrates how to use reading strategies to construct meaning of text
- Students construct meaning through conversations about the text
- Students follow along as the teacher reads the text and may read with the teacher
- Students have opportunities to "try on" or practice using the reading strategies with teacher support
- Text may be at a reading level above what students can read independently
- Text is accessible to all students (i.e. enlarged or individual copies)
- Teacher observes, assesses, and reflects upon student strengths and needs before, during, and after Shared Reading to inform planning and teaching

Guided Reading

- A small group of students read, think and talk about the meaning of a specific text with guidance from the teacher and other students as needed.
- Students talk to each other and the teacher to deepen their own understanding about the meaning of the text
- Students use reading strategies demonstrated in Shared Reading, Read Aloud, and Word/ Language Study with guidance from the teacher and other students as needed
- Text is at students' instructional level
- Students with similar reading strengths and needs are grouped based on teacher assessment
- Teacher observes, assesses, and reflects upon student strengths and needs before, during, and after Guided Reading to inform planning and teaching

Independent Reading

- Students construct meaning of text that they read independently
- Students use strategies taught in Read Aloud, Shared Reading, Guided Reading, and Word/ Language Study
- Students may interact with peers and teacher to deepen their own understanding of text
- Students select texts that match their interest and independent reading level
- Teacher confers with individuals to monitor progress of their ability to use strategies as they read on their own
- Teacher observes, assesses, and reflects upon student strengths and needs before, during, and after Independent Reading to inform planning and teaching

APPENDIX D

Highline School District Elementary Studio–Residency Protocols District Initiated–Building Owned 2006-2007

BEFORE				
Studio/Residency Teacher	Coach	Principal	District Office	Consultant
<ul style="list-style-type: none"> Meet with the coach to discuss the focus of the work. Participate in the e-mail conversation with the consultant about what has been tried, the focus of the staff and student behaviors/results observed (at least ten days prior to the studio day). 	<ul style="list-style-type: none"> Decide and communicate objectives and outcomes for the process. 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 the focus of the staff and student behaviors/ results observed (at least ten days prior to the studio day). Communicate and plan with partner school about: <ul style="list-style-type: none"> Focus of the day Subs Schedules Utilize resources to optimize participation (subs, schedules). In consultation with the teacher, principal and consultant, prepare an agenda for the day including goals and schedule. 	<ul style="list-style-type: none"> Participate in the e-mail conversation between the teacher and the consultant about what the teacher has tried the focus of the staff and student behaviors/results observed (at least ten days prior to the studio day). Communicate and plan with partner school about: <ul style="list-style-type: none"> Focus of the day Subs Schedules Consult with the teacher, coach and consultant in preparing an agenda for the day including goals and schedule. At the systems level, remove obstacles and scheduling roadblocks to facilitate the learning of the group. 	<ul style="list-style-type: none"> Be knowledgeable (receive e-mails) of collaboration between the school –staff and the consultant contribute to the discussion as appropriate. 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. 	<ul style="list-style-type: none"> Respond to school e-mails prompting thinking and focus. 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.

(cont.)

DURING				
Studio/Residency Teacher	Coach	Principal	District Office	Consultant
<ul style="list-style-type: none"> • If appropriate, participate in job alike conversations about the content of the work and next steps. • Participate throughout the consultation day. • Teach along side the consultant/coach or by themselves. • Articulate thinking and decision making, share knowledge of students as learners. Bring data and samples of student work to the consultant visit. • Ask questions and ask for support as needed throughout. • Be flexible in creating a class schedule to facilitate the learning of the group. 	<ul style="list-style-type: none"> • If appropriate participate in job alike conversations throughout the consultation day. • Model thinking, asking questions. • With the knowledge base about the teacher's strengths and skills, facilitate or prompt the teacher around the work. • Focus on and identify the coaching moves being modeled by the consultant through job alike conversations • Analyze the strengths and needs of the teacher to apply to further coaching work. • Demonstrate lessons by themselves as well as along side the consultant or teacher. • Consider the needs of other teachers participating in the consultant visit. 	<ul style="list-style-type: none"> • Frame the work (opening and closing—facilitate all voices in articulating their learning (together or alternate). • Participate throughout the consultation day. • Facilitate the identification of next steps with action plans, timelines and responsibilities. • Facilitate the group dynamics. • If appropriate, participate in job alike conversations • Work with videographer in identifying components of the consultant day to ease use of video. 	<ul style="list-style-type: none"> • Participate throughout the consultation day. • Model thinking, asking questions. • With the knowledge base about the coach's/principal's strengths and skills, facilitate or prompt the coach/principal around the work. • Focus on and identify the coaching moves being modeled by the consultant to apply to work—articulate the coaching moves observed during the visit. • Observe for and analyze the strengths and needs of the coach and principal to apply to further work. 	<ul style="list-style-type: none"> • Demonstrate lessons with the eye on building independence. • Provide and support buildings with material suggestions. Be flexible with the choice of materials based on the needs of the building. • Work collaboratively with the teacher and coach in designing the instruction for the day. • Facilitate and guide new learning about the work before, during and after the lesson. • Introduces pertinent reading or resources to further the learning. • Articulate rational about the teaching moves and the decisions made with references to other educators in the literacy field. • Know and operate under the gradual release model. • Be transparent in thinking.

AFTER				
Studio/Residency Teacher	Coach	Principal	District Office	Consultant
<ul style="list-style-type: none"> • Share ideas with grade level partners and staff. • 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. 	<ul style="list-style-type: none"> • 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 and coaching cycles, video). • Work with the teacher and principal to plan for upcoming consultant visits. 	<ul style="list-style-type: none"> • Act on the next steps identified during the process. • Ensure that systems are in place to continue the work (classroom observations, team teaching, residencies). • Apply learning with Professional Development opportunities (early release, grade level meetings; book clubs). • Try out and approximate coaching moves identified. 	<ul style="list-style-type: none"> • 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. • Catalogue the videos. (Sue White) 	<ul style="list-style-type: none"> • Act on the next steps identified during the process. • Be transparent in thinking. • Continue dialogue with teacher, coach, and principal to continue the learning.

ENDNOTES

- ¹ I use the terms *external support organization* or *external support provider* interchangeably to describe entities such as “reform support organizations” that typically reside outside school districts but focus on providing external resources and knowledge to stimulate these systems to educate all children to high standards (Corcoran & Lawrence, 2003).
- ² Resnick & Glennan (2002) refer to “theory-based reforms” as those reforms that are draw upon decades of cognitive research on teaching and learning.
- ³ For all their apparent promise, the track record of such arrangements in terms of accomplishing organization-wide change is mixed. The long-term relationship between the Merck Institute and four partner districts, for example, shows evidence of change in district culture and instructional practice, within the domain of science and mathematics teaching (Corcoran & Lawrence, 2003). The Chicago Annenberg Challenge, on the other hand, was unable to demonstrate that schools and districts, guided by the Annenburg theory of action, consistently improved learning outcomes (e.g., Smylie & Wenzel, 2003). Other studies of philanthropic investments in district reform, such as the Pew Charitable Trust’s network of districts pursuing standards-based reform, report similarly inconclusive findings (David & Shields, 2001). A recent study of the Institute for Learning (a part of the Learning Research and Development Center at the University of Pittsburgh) and its relations with three school districts cautions that conditions, such as support of central office leaders, capacity of the intermediary organization, and alignment across reform initiatives, can impact the instructional improvement outcomes (Marsh, et al., 2005).
- ⁴ 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 cognitively demanding curriculum.
- ⁵ Cook & Brown (1999) distinguish between organizational knowledge (knowledge that people possess) and the knowing that is found in individual and group practice. Knowledge and knowing are seen as mutually enabling (not competing) in the process of generating what we refer to as organizational learning—“the “generative dance” between knowledge and knowing is a powerful source of organizational innovation” (p. 381).
- ⁶ Each Elementary Director has evaluation responsibilities, as well professional development responsibilities, for about 10-11 schools. They are responsible for other central office functions as well (such as Title 1, Curriculum support, etc.).

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