

Foundations of a Sociocultural Perspective on Teacher Performance Assessment

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In this chapter, we are concerned with the theories of learning underpinning models of assessment for preservice teachers in urban contexts. One fundamental premise in this chapter is that teacher performance assessment ought to document teacher learning. In outlining this perspective, we draw specifically on the sociocultural perspectives on learning and development that have grown primarily out of the work of Russian psychologists Vygotsky, Leont'ev, and Luria (Cole, 1996; Daniels, 2001; Tharp & Gallimore, 1988; Werstch, 1985b). A sociocultural perspective is our chosen stance on learning because it offers a socially just approach to learning and assessment, concurring with Oakes and Lipton's (1999) rationale that "sociocultural theories are important at the turn of the twenty-first century, because they shift the burden of low achievement from culturally and linguistically diverse groups ... to where it belongs: on schools and the larger society" (p. 78).

Unfortunately, more often than not, deficit thinking permeates the discourse around issues of instruction and assessment in urban settings (Tharp, 1997; Valencia, 1997). In adopting a sociocultural framework, we highlight the inequities with which practicing urban teachers and teacher

candidates must grapple in such settings—for example, dearth of resources, less qualified corps of teachers, a legacy of less-demanding instructional practices and curriculum materials (Anyon, 1980; Artiles, 1996; Darling-Hammond, 1994; Krei, 1998; Means, Chelemer, & Knapp, 1991; Oakes, 1986). As such, researchers and policymakers have drawn attention to the differences in teacher absenteeism, resource allocation, and teacher qualifications in urban settings to highlight the structural inequities underpinning teaching in urban schools and to unpack the cultural–historical precursors of pedagogical practices in such settings (Bruno, 2002; Kozol, 1992; Wayne, 2002). As Zeichner (chap. 1, this volume) illustrated, debate about teacher performance assessment has a long history in U.S. education. In a contemporary context, the public’s concern about both teacher quality and teacher testing is reflected in the 2,100 articles published in *The New York Times* between 1996 and 2001 on these two topics (Cochran-Smith, 2001). Our focus, in this chapter, is how, in more recent times, learning theories have influenced models of teacher performance assessment, and how in turn these theories can be used to understand and reframe dominant teacher performance assessment approaches in the context of contemporary urban education.

A number of assumptions about teaching and teacher education guided us in writing this chapter. First, teacher assessment in urban schools needs to take into account the unique, complex, interactive challenges of urban contexts, as described by Peterman and Navarro (chaps. 3 & 8 respectively in this volume). Second, teacher assessment must be grounded in explicitly articulated visions of both teaching and teacher and student learning. Third, teacher assessment systems operate as powerful “message systems” with far-reaching influences on definitions of good teaching, resource allocation, professional development, perceptions of competence both individually and collectively by teachers, and instructional and curricular choices (Cochran-Smith, 2001).

We emphasize throughout the chapter a concern for issues of equity, as our work is situated in urban, multicultural contexts where disenfranchised groups of students are typically educated. Our goal is not to advance a detailed socio-cultural model of teacher assessment; instead, we outline the theoretical tenets of such an approach and discuss their implications. The chapter is divided into five sections. First, we emphasize the way equity pervades matters of curriculum, pedagogy, and assessment, and that the implications of the dominant teacher performance assessment systems have not been sufficiently examined in the context of urban teacher education. Second, we briefly address the limitations of influential approaches to teacher assessment, testing out their implicit theories of learning. That is, we examine the assumptions underpinning behavioral and cognitive approaches to assessment. Third, we provide an introduction to three assumptions of

sociocultural learning theories: (a) the social origins of learning, (b) a situated view of teaching, and (c) a view of teacher performance assessment that examines the genesis and transformation of teaching performance. Fourth, based on these assumptions about learning, we identify and outline three implications for teacher performance assessment. Fifth, we describe a sociocultural approach to teacher performance assessment based on the work of the Center for Research in Education, Diversity and Excellence (CREDE), at the University of California, Santa Cruz (CREDE, 2002; Dalton, 1998). Finally, we identify three challenges in enacting a sociocultural-based teacher performance assessment system: the cost–benefit given the necessary investment, the complexities of engaging in intensely collaborative assessment processes, and the broader educational change agenda implied in a sociocultural approach to teacher performance assessment.

EQUITY ISSUES: SITUATING TEACHER PERFORMANCE ASSESSMENT IN THE IDEOLOGIES OF MESSAGE SYSTEMS

Equity issues pervade instruction, assessment, and curriculum practices in teacher education and can place teachers and teacher candidates in urban settings at an educational disadvantage. Moving beyond the immediate concern with preservice teacher performance assessment, the current accountability climate across the United States often results in a punitive stance toward urban schools. Nowhere is this more obvious than in the use of school report cards or league tables to compare schools' performance, as reflected in student test scores on annual state mandated tests (Conway, Goodell, & Carl, 2002). Such raw rankings and their simplistic interpretations now constitute a normative discourse in U.S. society, although they give a seriously distorted picture of the performance of teachers and students in urban settings (Amrein & Berliner, 2002). Largely forgotten in the public furor and the allied misuse of such high-stakes test results by the real-estate buyers and sellers, the media, and politicians is that students' performance is largely accounted for by socioeconomic background factors (e.g., family income, parents' education). The background factors have been evidenced in various value-added or multilevel analyses of student performance (Bryk & Raudenbush, 1992; Raudenbush, 1988, 1993). Furthermore, Zvoch and Stevens (2003) noted, based on a multilevel longitudinal analysis of urban middle schools, that

... assessments of school performance depend on choices of how data are modeled and analyzed. In particular, the present study indicates that schools with low mean scores are not always "poor performing" schools. Use of student growth rates to evaluate school performance enables schools that would otherwise be deemed low performing to demonstrate positive effects on student achievement. (p. 38)

In a similar fashion, we are concerned that urban teacher education candidates may fall afoul of a normative discourse that is content to sideline issues of context, the social capital of their students, and vastly superior funding of suburban schools (Berliner & Biddle, 1996). In light of these equity concerns, we now examine curriculum, evaluation, and pedagogy as “message systems.”

Bernstein (1971, 1973, 1977, 1982, 1996) has argued that curriculum, pedagogy, and evaluation mechanisms act as powerful “message systems” in education (Gipps, 1999). Each, in their own way, controls what and whose knowledge is valued and taught, how it is taught to particular groups, and most importantly, that “the education system . . . always works in the interests of particular dominant social groups” (Gipps, 1999, p. 362). Over the last decade in the United States, assessment has become *the* policy instrument of choice for many politicians and educational policy makers—that is, the message system (Delandshere & Petrosky, 2004). Although assessment has been used as a policy mechanism in one form or another for the last 50 years (Linn, 2000), teacher education in the 1990s can be labeled the decade of teacher evaluation (Porter, Youngs, & Odden, 2001). This is clearly evident in initiatives by various organizations such as the Interstate New Teacher Assessment and Support Consortium (INTASC), Educational Testing Service (ETS) through its PRAXIS exams and assessments, and the National Board for Professional Teaching Standards (NBPTS). Each organization, mainly responding to state legislature demands for teacher accountability, designed teacher assessment instruments supported by extensive validity and reliability studies (Porter et al., 2001). Contemporaneously, teacher assessment and evaluation has generated considerable debate in the last 15 years (Ambach, 1996; Cochran-Smith, 2001; Curry & Cruz, 2000; Darling-Hammond, 1997; Feiman-Nemser & Rosaen, 1997; Ladson-Billings, 1998; Pecheone & Stansbury, 1996; Shulman, 1987, 1988). What has been missing in this debate is an analysis of the assumptions that inform these policy initiatives. For instance, what assumptions about learning underpin various teacher performance assessment message systems? What are the images of the good teacher embedded in these message systems? To what extent do these assumptions about learning and images of the good teacher take into account the challenges of urban teaching?

MODELS OF LEARNING UNDERPINNING TEACHER ASSESSMENT APPROACHES

Zeichner (chap. 1, this volume) traces the historical roots of teacher performance assessment and makes clear the complex political and social forces influencing its development. From the perspective of learning theory, over

the last 40 years, three approaches to learning have underpinned systems of teacher assessment systems: the behavioral, the cognitive, and the sociocultural perspectives (see Table 2.1).

The assumptions about learning and development that underlie these theories have shaped¹ the nature of the assessment instruments, influenced the phase(s) of teaching chosen to assess (i.e., preactive, interactive, and postactive phases of teaching), guided the use of the instruments, and most importantly, conveyed powerful messages about the nature of both good teaching and, by implication, learning to teach (Conway, 2002).

Behavioral Perspective

The behavioral approach to learning depicts learning to teach as the accumulation of discrete behaviors that can be learned in a sequential and hierarchical fashion from simple to complex. This position assumes a building block model of learning to teach, where it is necessary to learn the simplest behaviors prior to the more complex. Consequently, from this perspective, complex teaching behaviors are best broken into their component parts, with the simplest being taught first and the complex skills best left until teachers have fully mastered the more rudimentary teaching skills. The beginning teacher (i.e., the learner) remains relatively passive as the environment—orchestrated by teacher educators—strengthens or weakens various stimulus–response pairings. Three flaws of this perspective are that, first, it presents learning to teach as something that can be broken into sub-component elements; second, it uncouples the link between skill and context; and third, it depicts teaching as a collection of general pedagogical skills only. In terms of teacher assessment, rather than assessing teaching in a holistic fashion, the focus is on discrete behaviors. The reductionist nature of a behavioral approach to assessing teaching was particularly evident in its focus on only the interactive phase of teaching, as only overt behaviors were viewed as the target of assessment. Furthermore, because the link between skill and context was broken, assessors assumed that the observed teaching behaviors transferred across teaching contexts and across various content areas. Skills are seen as portable, abstracted from contexts in which they were learned. The behaviorist paradigm for teacher assessment results in rating scales focused on discrete and hierarchically sequenced teacher behaviors, such as those used in the Florida Beginning Teachers Assessment. Embodied in these scales was a vision of the good teacher as manager of

¹We use preactive, interactive, and postactive phases of teaching, drawing on Jackson (1968). These terms have been useful to educational researchers in partitioning teaching temporally. Clark and Peterson (1986), in their extensive review of research on teacher thinking, adopted these categories and noted Jackson's use of this tripartite categorization.

TABLE 2.1
Behavioral and Cognitive Learning Theories and Teacher Assessment

Learning as ...	<i>Behavioral</i>	<i>Cognitive & individual constructivist</i>
	... change in behavior	... change in thinking
Teacher education pedagogy seeks to make, strengthen, and then link discrete behaviors	... link new knowledge with old, ... challenge misconceptions as teacher candidates in active construction of knowledge, ... develop efficient and self-regulated information processing and decision making ... reconstruct teacher beliefs
What is assessed?	Overt and discrete teaching behaviors	Teachers' schemas and constructions (including misconceptions) about teaching, subject matter, students and other aspects of teaching (i.e., teachers' "purposive action"/teacher behavior)
Nature of assessment instrument and use	Checklist of teacher behaviors divided into various domains of teaching competence with focus on frequency of observed behaviors	Checklist and/or open or focused observation notes; Formal and/or informal interview about teaching and related planning and evaluation
Phase(s) of teaching chosen to assess or target	Interactive phase of teaching	Preinteractive, interactive, and postinteractive phase
View of teaching and learning to teach	Teaching is a behavioral matter and learned as the accumulation of discrete behaviors across a variety of teaching domains	Development of efficient information processing, knowledge base for teaching, and/or construction of valid conceptions of teaching teacher behaviors/action in the classroom and underlying thinking.
Example in case of teacher assessment	Process product research (Good & Brophy, 1986)	Teacher Assessment Project (TAP) (Shulman 1987); PRAXIS III

environmental contingencies based on rules of reward and punishment (Clark, 1995; see Table 2.2).

Cognitive Perspective

In contrast to a behavioral perspective, the cognitive perspective on teacher assessment offers a more complex view of teaching as a demanding intellectual activity encompassing teacher candidates' performance, as well as their beliefs and knowledge about teaching, students, learning, subject matter, and a range

TABLE 2.2
Images of the Good Teacher in Theories of Learning

	<i>Behavioral</i>	<i>Cognitive</i>	<i>Sociocultural</i>
Image of the good teacher	Manager of environmental contingencies, that is, rewards and punishments	Executive decision maker and knowledge broker	Leading learner in a knowledge-building community of learners
Image of learning to teach	Developing skill in discrete and sequential hierarchical behaviors and rating scales congruent with these assumptions	Purposive action, involving preactive, interactive, and postactive phases of teaching	Activity system, becoming a member of a community, learning to participate in a community of practice
Advantages	Direct measure of teaching—not just a proxy	<ul style="list-style-type: none"> • Expands target of assessment, that is, beyond interactive • Attuned to link between skills and context (e.g., INTASC and NBPTS portfolio and case assessment exercises) • Encompasses general and domain specific teaching knowledge 	<ul style="list-style-type: none"> • Assessment of solo and assisted performance → focus on potential not only achievement → does not conflate potential with achievement • Explicit meaning making focus where reflection is viewed as a social practice • Integrates social and individual dimensions of learning within the history of institutions
Problems and constraints	<ul style="list-style-type: none"> • Teaching can be broken into subcomponent elements • Uncouples link between skills and context • Teaching as only a collection of general pedagogical skills • Focus only on the interactive phase of teaching 	Like behavioral, 'bounded individual' view of learner; privileging solo learner (e.g., INTASC, PRAXIS, and NBPTS view of teachers' own culture?)	<ul style="list-style-type: none"> • At odds with the dominant deficit- and punitive-focused approaches to assessing teachers and teaching (and students) in urban settings • Language and constructs of SC perspective sometimes seen as very abstract with unclear implications for the practice of assessment?

of other domains pertinent to teachers' thought processes and knowledge bases. The cognitive view of teaching encompasses both information processing and constructivist approaches to teaching. The target of assessment expands beyond but includes the interactive phase of teaching, encompassing the preactive (e.g., planning) and postactive (e.g., reflection, self-assessment) phases of teaching as valid domains for assessing teacher candidates' "purposive actions," knowledge, and beliefs. Commenting on the way cognitive approaches to learning pushed assessment beyond reductionist designs based on behavioral learning, Shepard (1991) notes that:

Tests ought not to ask for demonstration of small, discrete skills practiced in isolation. They should be more ambitious instruments aimed at detecting what mental representations students hold of important ideas and what facility students have in bringing these understandings to bear in solving their problems. (p. 9)

The cognitive perspective presents a number of improvements on the behavioral perspective on assessment. First, it expands the scope of teaching phases that are the target of assessment to include the preactive and postactive, inasmuch as these additional dimensions of teaching are central in ascertaining the intellectual work of teachers. Second, the cognitive perspective links skills to context. For example, applying a cognitive view of teaching, INTASC and NBPTS designed portfolio and case assessment exercises to deliberately tap into the contextual dimension of teachers' work (Darling-Hammond & Snyder, 2000). Third, the cognitive view of teaching encompasses not just general pedagogical skills but knowledge specific to representations of content areas, including what Shulman (1986) terms pedagogical content knowledge, subject matter, and other knowledge domains. Finally, the cognitive model supports a range of assessment tasks designed to unveil the teacher candidate's thought processes and knowledge about teaching over time—for example, portfolios, cases, exhibitions of performance, and action research. A cognitive perspective on teacher performance assessment is, of course, concerned with teachers' behaviors, but is also attentive to the thought processes guiding these behaviors. As such, the focal concern of a cognitive perspective is "purposive action." The image of the good teacher embodied in the cognitive perspective is that of the executive decision maker and knowledge broker (Clark, 1995).

Frequently, the approach to teacher learning and development underpinning teacher assessment systems is insufficiently articulated. Porter et al. (2001), for example, analyze the conceptions of teaching and student learning underlying the INTASC, PRAXIS, and NBPTS assessments, but do not pay similar attention to conceptions of teacher learning underpinning each assessment. Porter et al. (2001) note that there are significant similarities among the three assessments despite the fact that the NBPTS

standards refer to experienced teachers, INTASC focuses on preservice, and PRAXIS deals with early career teachers. We can see in these examples that a conception of the generality of teaching skills is still an important underpinning of teacher assessment.

Sociocultural Perspective

We argue that a sociocultural perspective offers a sound alternative to the behavioral or cognitive views as a foundation for urban teacher assessment because it integrates and systematically accounts for individual, social, and cultural–historical forces in learning. Indeed, a sociocultural model of teacher performance assessment can make a significant contribution to assessing the teacher in his or her cultural context. Unlike either behavioral or cognitive conceptions of learning, a sociocultural model is fundamentally social in nature (Cole, 1996; Daniels, 2001; Gipps, 1999; Wertsch, 1991). Such a perspective on teacher performance assessment explicitly attends to the constitutive relational and cultural nature of teaching. The emphasis on the social genesis of learning, thus, situates the learner in a sea of relationships and cultural symbols that shape and are shaped by the learner. From this perspective, while learning to teach, candidates draw not only on the knowledge, beliefs, and skills they have acquired, but also on the cultural and historical legacy of previous generations of teachers—that is, the knowledge embedded in their society’s cultural tools and signs. For example, teachers rarely choose the physical layout of the school or classroom in which they teach, yet the architecture of teachers’ workplace affords and constrains certain ways of teaching in its communication of particular thinking habits about what is knowledge and teacher–student relationships. In essence, the architecture of teachers’ workplaces is a relational facet of an institutional epistemology, an observation that sociocultural theory affords, which is overlooked by both the behavioral and cognitive theories. Sociocultural theory also affords an expanded view of assessment as a cultural practice (Gipps, 1999, 2002) and is consistent with Moss’ (1998) interpretive measurement model. Her interpretive model of measurement has, according to Porter et al. (2001), guided INTASC’s portfolio scoring procedures.

Moss’ (1998) hermeneutic approach “provides a means of combining information across multiple sources of evidence and of dealing with disabling biases that readers may bring” (p. 206). This hermeneutic approach involves a dual dialectic.² In a hermeneutic form of teacher assessment, evalu-

²The hermeneutic tradition as an approach to reading texts focuses on interpretation of the text in terms of an iterative process of focusing on the whole and then the parts. For example, in reading and understanding a sentence, one might focus on a specific word, then zoom out to focus on the whole sentence and maybe the entire paragraph and then back again to the word. The tension between the whole and parts constitutes a dialectic. *(continued)*

ators keep two things in mind: First, the different facets of a teacher candidate's performance as well as the whole performance, and second, the teacher candidate's foreknowledge, preconceptions, and biases in the context of the teaching performance being evaluated. Finally, Moss's hermeneutic approach to assessment favors a dialectic and more reflexive stance by the teacher educators and others who evaluate teachers. These are particularly valuable qualities in the light of equity concerns we raised earlier in interrogating assessment as a powerful message system because it allows for ongoing dialogue that challenges inequities and makes visible the assumptions about teaching and learning that promote individual development within a complex, challenging setting.

TEACHING AS A CULTURAL ACTIVITY: A SOCIOCULTURAL PERSPECTIVE ON TEACHER PERFORMANCE ASSESSMENT

A sociocultural perspective defines teaching as a cultural activity embedded in the practices of local activity systems. This means teacher educators need to pay attention to the social contexts of teaching, to the ways teaching is mediated by the intellectual or ideational tools and material artifacts of a culture (e.g., the physical design of schools and classrooms, the format and content of textbooks, images of teaching as portrayed in the popular media and conversations between people in society, curricular documents, and the images of good teaching embedded in evaluation scales and assessment rubrics), and to the historical and institutional contexts of teaching practices.

A sociocultural perspective on teacher assessment offers a number of advantages over alternative perspectives grounded solely in behavioral or cognitive views of learning: (a) the emphasis on the potential rather than the limitations of learners, (b) the capacity to reflect and support learning to teach, and (c) the assumption that a human activity, such as teaching, is culturally embedded. In adopting a sociocultural approach on teacher assessment, we focus on the holistic assessment of teaching, a natural outgrowth of Vygotsky's concern for the holistic analysis of psychological activities.

Social Origins of Learning: Present and Potential Performance

Vygotsky's (1978) concept of the zone of proximal development (ZPD) is his most widely known contribution to a theory of human learning and development and has generated considerable research attention (Allal & Pelgrimes Ducrey, 2000; Brown & Ferrara, 1985; Tharp & Gallimore, 1989; Tudge,

²(continued) The dual dialectic here refers to Gadamer's (1987) advocacy of a particular stance he thought readers ought to adopt in reading any text; that is, simultaneously embracing the tension between the whole and the parts of the focal text, as well as the tension between their own frames and preconceptions as a reader and possible alternative frames.

1992; Tudge, Putnam, & Valsiner, 1996). The ZPD refers to the difference between what a person can do with and without the assistance of a more knowledgeable other or supportive external tool. The ZPD has implications for assessment especially in regard to learning as dynamic rather than static and for teaching as a support for learning. As such, the ZPD draws attention to the constraints of conventional assessments that rely on the evaluation of an individual's competence unaided by either a more knowledgeable other or external tools. Conventional assessments typically measure the lower bound of performance. In contrast, rather than focus on the limitations of learners in a solo or unassisted assessment scenario, a sociocultural approach to learning seeks to understand the potential of a learner in the context of assisted performance at the upper bound of the ZPD.

Sociocultural theory assumes that individuals learn to participate in cultural practices initially through the support of more knowledgeable others in goal-directed human activity—for example, learning to teach (Claxton & Wells, 2002). Eventually, as the person (e.g., student teacher or novice teacher) becomes more familiar with the expectations, routines, structures, and rituals of a given activity system (e.g., classrooms, schools), he or she takes on more responsibility. As such, learning in sociocultural theory can be seen as the transformation of participation. At the point where an individual (e.g., student teacher) begins to use the strategies, skills, and knowledge of the social context (e.g., school) in conventional and/or novel ways, one infers that he or she has appropriated the culture, that is, learned something. We use the term *activity system* here, drawing on the work of Finnish psychologist, Yrjö Engeström (1999), who defined an activity system as consisting of “object oriented, collective, and culturally mediated human activity” (p. 9). The adoption of the activity system as the unit of analysis is an important feature of the framework articulated in this chapter as it compels us to transcend the mind–society duality through an understanding of a person's performance as mediated by both individual and structural forces (Engeström, Miettinen, & Punamäki, 1999).

The assessment of changing participation, with and without assistance, in activity systems is the primary implication of the sociocultural perspective on learning for teacher assessment. According to Rogoff (1997), there are a number of strategies for evaluating changing participation. In terms of performance assessment of student, beginning, or experienced teachers, the assessment of changing participation might involve evaluation of the following:

- roles teachers play;
- changing purposes for involvement, commitment, to the endeavors and trust of the unknown aspects of it;
- flexibility and attitude toward change in involvement;

- interrelations of different contributions and contributors to the endeavor and readiness to switch;
- relation of participation in this activity and other activities;
- relation of change in the community's practice (Rogoff, 1997, p. 280).

When teacher educators pay attention to participation and its changing nature in activity systems, they are pressed to reframe their notions of thinking such that it is viewed as a collaborative undertaking rather than something that unfolds solely in the psyche of individuals. The essentially cultural nature of learning to teach and the adoption of an assessment approach congruent with this understanding is paramount. Relying solely on the thinking of teachers individually and outside of the social contexts, within which they engage professionally, more than likely masks and inhibits professional growth. Whereas most teacher education and assessment focuses on the individual learner, a sociocultural perspective elevates the social context as a focal assessment target.

The implications of sociocultural theory for teacher performance assessment in diverse cultural settings have been specified in detailed rubrics by the Center for Research on Education, Diversity, and Excellence (CREDE, <http://www.crede.ucsc.edu/>). Central to these rubrics are concepts based on an assisted performance conceptualization of learning (Tharp & Gallimore, 1988) that explicitly operationalize units of analysis beyond the individual teacher. Consistent with sociocultural theory, an emphasis on teachers' capacity to enact constructs such as joint productive activity deliberately focuses assessment toward teachers' and students' socially negotiated actions rather than teachers' discrete behaviors. We elaborate on CREDE's sociocultural-based "Standards for Effective Pedagogy" later in this chapter.

The ZPD and Ideal Form of Teaching

Shepel (1995) suggests that: "A child is from the very early stages two individuals—he himself and the other (the desired ideal of himself)" (p. 430). Shepel argues that the "relationship between individual 'ideal form' and cultural 'ideal form' is an abstract notion of the ZPD of a historical child" (p. 430). In terms of teacher performance assessment, his distinction between "individual ideal forms and cultural ideal forms" presents a challenge at two levels in efforts to enact what Cole (1996) has identified as "bringing the end point forward" (p. 183). Specifically, assessment should be based on an ideal view of teaching and thus, we should create conditions and situations of such an ideal state of affairs (i.e., we should bring the end point forward), not only to promote the formation of professional identity (i.e., teachers' cultural ideal) but also to assess their performance. This means teacher edu-

cation programs should articulate a vision of what a socially just vision of teaching in urban schools should look like, as well as the roles teachers are expected to play in such a vision. It also means that preservice programs' curricula, pedagogy, and field experiences should be interrogated and re-constructed so that teacher candidates engage individually, as well as with the assistance of more capable others, in the use of those ideal forms of professional practice.

At the level of individual ideal forms, the challenge for teacher educators includes but reaches beyond engaging prospective teachers in interrogation of their beliefs to developing a vision of ideal forms. In addition, generative ideal forms must be construed in a manner that invites and inspires rather than solicits mere imitation. As such, images of good teaching in urban or educationally disadvantaged contexts, or what Shepel (1995) calls ideal forms, are a good example of the cultural and social mediation of teachers' conceptions of teaching.

A Situated View of Learning: The Mediation of Action Through Use of Artifacts

"... the central fact about our psychology is the fact of mediation" (Vygotsky, 1982, cited in Wertsch, 1985, p. 15). The belief in the cultural and social mediation of individual cognitive processes is the distinctive feature of Vygotskian theory (Cole & Wertsch, 1996; Wertsch, 1985a). For Vygotsky, our intellectual development takes place on the shoulders of previous generations (Bruner, 1986). The cultural tools, both material and psychological (e.g., speech, literacy, mathematics, art) that have been created over time reconfigure our nature as human beings. However, a conceptual challenge to Vygotsky's claim of the social origins of mental functions was that infants appear to have quite well developed powers of attention and perception. In addressing this anomaly, Vygotsky distinguished between lower psychological functions (LPF) and higher psychological functions (HPF). The former was unmediated and the latter culturally mediated.

Vygotsky's premise that higher psychological functions are culturally mediated draws our attention to how cultures mediate teaching, that is, how artifacts may mediate the internalization of cultural practices such as indicatory gestures, "doing school," or various teaching practices. Here, we again point to the preactive, interactive, and postactive phases of teaching and how each encompasses different components of reflective thinking. As most teacher education programs in the United States now espouse a reflective practitioner model of teacher education, even though the meaning of these may be considerably different from institution to institution, we turn to the ways in which reflection is mediated in teachers' development and, in turn, how it can be the focus of assessment.

From a teacher educator's viewpoint, the culturally mediated semiotic emphasis in Vygotsky's thinking, as the basis of preservice teachers' reflection, draws the teacher educator into a circle of meaning making with the prospective teacher. The teacher educator, in being attentive to the importance of the social context for learning, can seek to create contexts in which awareness and mastery of cultural tools (e.g., reflection) can take place (Hoffman-Kipp, Artiles, & López-Torres, in press; Moll, 1990). In this scenario, the role of reflection is twofold; it is both the goal of teacher education and the process itself:

Reflection is the ability to make one's own behavior an object of study; to manage it via the ideal ability to regard oneself as the other. Reflection in this case works as an ideal artifact, a cultural tool, cardinally changing human consciousness. (Shepel, 1995, p. 434)

In seeking to promote reflection among teacher candidates, one can think of the work of teacher educators as "applied developmental work" (Nakkula & Ravitch, 1998). As such, student teacher reflections are seen as one basis for assessment, but also as a means of fostering teacher development. The teacher educator is challenged to identify and create social contexts—means of assistance—to support reflection. In doing so, teacher educators inevitably invite the student teacher into a conversation about his or her own development as a teacher (Conway & Clark, 2003):

Reflection means asking basic questions of oneself. The basic and comprehensive question during reflection is "What am I doing and why?" ... On the other hand, to reflect means to stop acting, but at the same time, it is one of the most powerful actions ... reflection is a "becoming space" for the new thinking and imagining. (Shepel, 1995, p. 434)

In this conversation about the development of self as a teacher, "this slightly distorted self-evaluation," the centrality of meaning making is brought to the fore. Meaning making could be mediated by various data generation exercises encompassing portfolio artifacts, journal entries, or conversations among teacher candidates and others involved in teacher education (Hoffman-Kipp et al., in press).

Historical Analysis: Tracing the Genesis and Transformation of Performance

A third tenet, and key methodological insight, in Vygotskian theory is that human activity must be studied in transition for it to be understood; that is, the analysis of human development ought to focus on processes of change instead of an exclusive focus on outcomes (Artiles, Trent, Hoffman-Kipp, &

López-Torres, 2000). In this regard, Vygotsky was interested not only in the normal unfolding of activity but in its unfolding under conditions of disruption or interruption (Moll, 1990). An activity system perspective draws our attention to the social, historical, and political milieu within which assessments take place (Engeström et al., 1999; Leont'ev, 1981). Typically, teacher assessment involves the appraisal of an individual teacher's performance, thus, the spotlight is on the individual teacher. A sociocultural perspective shifts the unit of analysis from the individual to the activity setting. This shift from individual teacher to the activity system is a potentially valuable contribution to understanding teacher assessment systems because it offers a timely reminder that teaching and its assessment are embedded in the cultural and political contexts of social institutions. As such, the various tensions, contradictions, and conflicts as well as the patterns of resolutions, reinforcements, and accords that arise from this embeddedness are potentially instructive (D. Gibson, personal communication, 2001).

IMPLICATIONS FOR TEACHER PERFORMANCE ASSESSMENT IN URBAN SETTINGS

The three basic tenets of sociocultural theory summarized in the preceding section have explicit implications for teacher assessment. Integrating Moss' (1998) hermeneutic approach with a focus on its dual dialectic and sociocultural theory we have identified three principles for designing a teacher assessment system: (a) providing means for assisting performance; (b) evaluating changes in participation of teacher candidates over time; and (c) meaning-making processes as central to teacher assessment (see Table 2.3).

Provision of Means for Assisting Performance

The provision of means of assisting performance is a central implication of sociocultural theory as a means of both supporting learning and assessing the learner. A sociocultural approach is attentive to both solo and assisted performance, in contrast to the exclusive focus on solo performance in conventional assessment systems. In urban settings, the provision of means to assist performance inevitably raises questions of equity. These are likely to be raised by both teacher candidates and their assessors. This equity raising dividend of adopting assisted performance as a working principle is desirable and would help foster a "dual dialectic" (Gadamer, 1987), whereby teacher educators question their judgments and preconceptions in the light of local capacities. A frequent response to the challenges of teaching in urban settings is to dilute the quality of curriculum and pedagogy for students (Oakes & Lipton, 1999). From an equity stance, the frequent problem of curricular and pedagogical dilution in urban settings begs the question as

TABLE 2.3
Rubric Based on CREDE Standards for Effective Teaching and Learning—Standards I and IV

	<i>Not Observed</i>	<i>Emerging</i>	<i>Developing</i>	<i>Enacting</i>	<i>Integrating</i>
	The standard is not present.	The teacher designs and enacts activities ... where one or more elements of the standard are enacted.	... that demonstrate a partial enactment of the standard.	... that demonstrate a complete enactment of the standard.	The teacher designs, enacts, and collaborates in activities that demonstrate skillful integration of multiple standards simultaneously.
Standard I. Joint Productive Activity Teacher and Students Producing	Joint Productive Activity is not observed.	Students are seated with a partner or group, and (a) collaborate* and assist one another; or (b) are instructed in how to work in groups, or (c) contribute individual work, not requiring collaboration, to a joint product.*	Students collaborate on a joint product.	Students work in small group or fully inclusive whole-class activities in which teacher and students collaborate on a joint product.	The teacher designs, enacts, and collaborates in joint productive activities that demonstrate skillful integration* of multiple standards simultaneously.
Standard IV. Challenging Activities	Challenging Activity is not observed.	The teacher (a) sets and presents standards for student performance, (b) accommodates students of varied ability levels, (c) connects instructional elements to academic concepts, or (d) provides students with feedback on their performance.	The teacher designs and enacts activities that advance student understanding to more complex levels,* or connects instructional elements to academic concepts.	The teacher presses, assists, and uses challenging standards to advance student understanding to more complex levels; connects instructional elements to academic concepts; and provides students with feedback on their performance.	The teacher designs, enacts, and collaborates in challenging activities that demonstrate skillful integration of multiple standards simultaneously.
Teaching Complex Thinking					

Notes. Standards Performance Assessment Continuum (SPAC), Manual for Classroom Observation. Based on research funded by the OERI, NIER, and USDOE funded research. Available online at: <http://www.crede.ucsc.edu/> ; *See Appendix.

to how forms of assistance for student teachers can support more challenging curricular and pedagogical experiences for students in urban settings. Thus, in promoting mentoring, a form of assistance, teacher educators must attend to the quality of the mentoring in terms of its capacity to enhance equity. Furthermore, when assisting performance is taken seriously, assessment must support learning. Consequently, formative assessment ought to play a major role in a sociocultural-based teacher assessment system. The acknowledgment by school- and university-based teacher educators that what happens *between* people can either support or inhibit learning is a prerequisite if assisted performance is to be taken seriously in teacher education. However, we want to spell out in more detail what the actual assessment might look like, noting the implied tension between solo and assisted performance by addressing the implications of our views of learning and teaching.

Learning. We must document both the precursors of individual performance during guided participation and the actual performance in subsequent activities. But the emphasis on the social origin of learning does not mean learning should not be assessed on an individual plane; we argue a cognitive perspective can be used to gauge the individual dimension of learning—that is, knowledge, beliefs. This means that sociocultural assessment models should document the tension that exists between the individual and social dimensions of learning, while accounting for the institutional dimension. In this vein, assessment must document how the institutional dimension mediates teacher performance. Thus, we must document how institutionally sanctioned rules, community expectations and goals, and the prescribed division of labor (i.e., roles) mediate teacher performance—attention to power issues within the division of labor is crucial (Artiles et al., 2000).

These ideas may translate in assessment activities that include: (a) continuous documentation of knowledge and beliefs, inasmuch as cultural models/schemas mediate performance (e.g., via concept maps and/or interviews; Trent & Artiles, 1998); (b) observation of teacher performance during guided participation in natural (e.g., team or collaborative teaching arrangements) and structured (e.g., demonstration lessons or analysis of videotaped teaching performance) contexts—this includes specification of the nature of guidance offered. For instance, assessment models could include sets of standardized tasks and assistance strategies (for examples of standardized tasks and strategies to “diagnose ZPDs,” see Brown & Ferrara, 1985), and (c) documentation of solo performance in natural and structured contexts. Such observations provide access to the ZPD. Observations in “natural and structured contexts” can be conducted in the activity systems of planning, teaching, and postteaching reflection.

Teaching. The image of the teacher as leading learner in a knowledge-building community of learners is a starting point for the sociocultural assessment of teaching. From this perspective, we focus on the “social organization of learning” instead of “teaching” to stress the social and cultural roots of learning, and to shift the unit of analysis from the teacher to the group. Concrete examples of how to assess the social organization of learning is found in Englert, Tarrant, and Mariage’s (1992) work. We think that a socioculturally-based teacher performance assessment system might utilize an assessment scale such as Englert et al.’s, as well as using more open ended and descriptive accounts of teaching performance (see also CREDE’s web site for an alternative model <http://www.crede.ucsc.edu>).

Evaluating Changes in Participation of Teacher Candidates

From a sociocultural perspective, learning is viewed as change in participation, and as such, the variety of ways in which teacher candidates become involved in various professional relationships takes on central importance. Therefore, our focus turns to assessment over time, assessment based on an ideal view of professional practice, and changes in teachers’ roles and professional identity. Thus, a sociocultural model attends to student teachers interactions, collaborative problem-solving skills, the development of teacher identity, and the structure, assets, and limitations of the cultural context of the school and community:

Sociocultural theorists do not merely believe that culture influences learning, rather they believe that “learning and mental activities are cultural ... People cannot separate *how* thinking takes place from *what* knowledge is available in the place *where* learning happens. (Oakes & Lipton, 1999, p. 20, emphasis in original text)

As a complex and culturally embedded human activity, the assessment of learning to teach is not amenable to cursory engagement. Rather, a sociocultural approach highlights the importance of and impediments to paying attention to change and growth of teachers over time.

Meaning Making Central to Teacher Assessment

Drawing on both the centrality of semiotics in sociocultural theory and Moss’ (1998) use of Gadamer’s (1987) hermeneutic method, we think that meaning making ought to be a central feature in a teacher assessment system. Brown, Ash, Rutherford, Nakagawa, Gordon, and Campione (1993) discuss the notion of “mutual appropriation” and “negotiation” in the contexts of ZPDs. These notions highlight two aspects of assessment. First, we need to think about the process of assessment as a bidirectional process in

which the teacher educator also learns (i.e., he or she sees himself or herself as a learner) during the assessment process not only about the novice teacher but also about himself or herself. This is indeed a neglected aspect in teacher assessment scholarship and in the entire teacher education literature. Second, the assessment process must be regarded as an eminently social and cultural process in which negotiation of meaning is paramount. If we accept meaning making as a central tenet of an assessment system, then teacher candidates and teacher educators are drawn into a hermeneutic circle. From this position, Moss' (1998) dual dialectic becomes a central feature of an assessment system. For instance, the issue of classroom management is often a central concern for novice teachers at both the preservice and early career stages (Veenman, 1984) and a particular concern for many teaching in urban settings. From the perspective of the dual dialectic, those assessing teachers must assess specific aspects of a teacher's actions in light of the teacher's overall actions in a given urban teaching context. For example, some novice teachers, in an effort to empathize with the often difficult life circumstances of their students, may set low expectations for students, which may contribute to poor academic engagement and class management problems. From an assessor's point of view, teacher candidates' understanding and urban students' life circumstances must be evaluated in terms of whether they do or do not set high academic expectations for students. This, then, is an example of how the part-whole dimension of teaching is important in performance assessment. In addition, those assessing teachers must pay attention to their own preconceptions about teacher expectations for urban students and how these ought to be enacted. The second part of Gadamer's (1987) dialectic puts an emphasis on the tension between their own frames and preconceptions as assessors and possible alternative frames. In terms of practice, teacher educators are challenged to continually press for new and alternative understandings of classroom management and teacher expectations in urban settings. We think that this fact can bring an important and generally neglected aspect of teacher assessment in urban settings to the fore, namely, teacher educators' own biases and cultural preconceptions.

Furthermore, self-assessment by teacher candidates becomes crucial as a stepping-stone toward holistic assessment. As such, paying attention to prospective teachers' prior knowledge and biography as learners is significant for teacher educators, evaluators, and those teachers being evaluated (Artiles, Gutierrez, & Rueda, 2002).

An Example: CREDE's "Five Standards of Effective Pedagogy"

The Center for Research on Education, Diversity, and Excellence (CREDE) at the University of California, Santa Cruz has developed a

teaching assessment model based on sociocultural theories of learning (CREDE, 2002; Dalton, 1998; Doherty, Hilberg, Epaloose, & Tharp, 2002; Tharp, Estrada, Dalton, & Yamauchi, 2000). Based on CREDE's teacher assessment framework, schools serving diverse student populations are developing teacher performance assessment models based on these five standards. Such performance assessment models often rely on professional portfolios for teachers that are aligned with school and district requirements. CREDE's five standards for the assessment of effective pedagogy (see Dalton, 1998, pp. 43–47) are:

- Standard I: Joint productive activity (JPA)
- Standard II: Language and literacy development (LLD)
- Standard III: Meaning Making (MM)
- Standard IV: Complex Thinking (CT)
- Standard V: Instructional conversations (IC)

These five “Standards for Effective Pedagogy and Learning” were established through CREDE research, rooted in sociocultural theories of learning, and based on an extensive analysis of the research and development literature in education and diversity (Dalton, 1998). In the case of “joint productive activity” and other core constructs in the assessment system, CREDE (2002) acknowledges the sociocultural origins of these constructs (see Tharp & Gallimore, 1988):

Learning occurs most effectively when experts and novices work together for a common product or goal, and are therefore motivated to assist one another. “Providing assistance” is the general definition of teaching; thus, joint productive activity (JPA) maximizes teaching and learning. Working together allows conversation, which teaches language, meaning, and values in the context of immediate issues. Teaching and learning through “joint productive activity” is cross-cultural, typically human, and probably “hard-wired.”

The widespread appeal and emerging validity of the CREDE teacher assessment model in diverse urban and multiethnic contexts is evidenced in the proposed adoption of the CREDE standards by the International Reading Association (see www.reading.org/advocacy/standards/standards_instructions.html). As Dalton (1998) notes:

The five pedagogy standards are joint productive activity (JPA), language and literacy development (LLD), meaning making (MM), complex thinking (CT), and instructional conversation (IC). These standards emerge from principles of practice that have proven successful with majority and minority at-risk students in a variety of teaching and learning settings

over several decades. Indicators are introduced for each standard, revealing action components of the standards and their functions in teaching and learning. (p. 4)

The proposal to adopt the CREDE “Standards of Effective Teaching and Learning” acknowledges their status as “basic general educational principles” (<http://www.reading.org/pdf/1046.pdf>, p. 3). Table 2.3 provides an example of Standards I and IV of CREDE’s teacher assessment rubric.

Consistent with a sociocultural assumption about the potential learning dividend resulting from shared and collaborative undertaking of goals, Standard I, for example, focuses on the degree and nature of joint productive activity (JPA). As we noted at the outset of this chapter, a consistent feature of urban students’ classroom experiences is the absence of both sufficiently challenging and supportive learning opportunities (Means, Chelemer, & Knapp, 1991). Consequently, Standard IV emphasizes the degree of challenge and nature of support provided by teachers in fostering complex thinking (CT).

CREDE has developed performance indicators in relation to the five standards. For example, in relation to Standard I, the indicators of joint productive activity are evidence that the teacher: (a) designs instructional activities requiring student collaboration to accomplish a joint product; (b) matches the demands of the joint productive activity to the time available for accomplishing them; (c) arranges classroom seating to accommodate students’ individual and group needs to communicate and work jointly; (d) participates with students in joint productive activity; (e) organizes students in a variety of groupings, such as by friendship, mixed academic ability, language, project, or interests, to promote interaction; (f) plans with students how to work in groups and move from one activity to another, such as from large group introduction to small group activity, for clean-up, dismissal, and the like; (g) manages student and teacher access to materials and technology to facilitate joint productive activity; and (h) monitors and supports student collaboration in positive ways. In summary, CREDE’s framework for teacher performance provides an empirically developed rubric (Doherty et al., 2002; Padron & Waxman, 1999) involving performance indicators across five standards rooted in sociocultural principles of learning.

CONCLUSION

In this chapter, we outlined the foundations of a sociocultural perspective on teacher assessment. We hope the broad principles sketched in this chapter will motivate teacher educators to develop context-specific adaptations to serve their unique needs. A number of issues arise out of our proposal for

a sociocultural perspective on teacher performance assessment. We comment briefly on three challenges: (a) cost–benefit, (b) complexity of collaborative approaches to assessment, and (c) the educational change agenda inherent in a sociocultural perspective on teacher performance assessment.

First, the proposal for reframing the assessment of teachers from a sociocultural perspective poses many challenges, not least being the cost. Any effort to engage in systematic performance assessments is expensive. Furthermore, without sufficient professional development and induction for those involved, these efforts are likely to fail. As Mehrens (1992) noted:

Because resources are always limited, the costs of performance assessments must be of great concern ... this is not to suggest that we should not do performance assessments, but cost–benefit ratios must be considered. (p. 9)

Second, the inbuilt collaborative nature of a sociocultural perspective on assessment presents challenges not alone at a procedural level but also at the level of deeply held beliefs about teaching, learning, and assessment. In particular, Western notions of learning and assessment are deeply rooted in an individualist conception of the learner. Although a sociocultural perspective does not ignore the importance of solo performance as a valid and worthwhile target of assessment, it puts a particular emphasis on assessment in settings where assisted performance can be assessed with the dual purpose of both assessing and supporting learning.

Finally, the shift in perspective we advocate in this chapter implies significant educational change in terms of beliefs, methods, and resources. In underresourced urban settings, the challenge of accomplishing real change is particularly difficult and demands both resilience and creativity (Peterman, chap. 3, this volume). Nevertheless, we think the framing of teacher performance assessment within a sociocultural perspective will provide useful planning, implementation, and reflective tools for all those involved in teacher performance assessment in urban settings.

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APPENDIX: GLOSSARY OF TERMS FOR TABLE 2.3

Collaboration: joint activity that results in shared ownership, authorship, use, or responsibility for a product. It can also include division of labor for coordinated subsections.

Assistance: a two-part process in which the teacher first monitors current student performance capacity, and then provides tailored assistance that advances performance ability. Types of assistance may include: (a) modeling—providing a demonstration; (b) feeding back—providing information about student performance as compared with a standard; (c) contingency management—providing rewards or punishments contingent on student performance; (d) questioning—providing questions that guide the students to advance their understanding; (e) instructions—providing clear verbal directions for performance; (f) cognitive structuring—providing explanations or rules for proceeding; or (g) task structuring—providing assistance by segmenting or sequencing portions of the task.

Product: may be tangible or intangible. Examples of tangible products are: worksheet, essay, report, pottery, word-web, a math problem solved on the blackboard, play, skit, game, and debate. Intangible products include “story time,” introductory lectures (the product is an accurate or elaborated understanding of a concept, procedure, idea), some instructional conversations, or some physical education activities (increased physical fitness is the product). The intangible products are an achieved physical, psychological, or social state that integrates a series of actions.

Complex thinking: activities that advance student understanding: (a) the “why” is addressed, not merely the “what” or the “how to”; (b) the activity requires that students generate knowledge or information, or use or elaborate on information provided (apply, interpret, categorize, order, evaluate, summarize, synthesize, analyze, explore, experiment, determine cause and effect, formulate and solve problems, explore patterns, make conjectures, generalize, justify, make judgments, interpret); (c) the

teacher connects the specific content or activity to a broader concept or abstract idea to advance student understanding; or (d) the teacher provides instruction in critical thinking, or problem solving or metacognitive strategies.

Integrating: a single activity with two or more standards present at the enacting level.

Conversation (converse): is inclusive of topics familiar and interesting to students, is responsive to student contributions to the conversation, and includes joint participation structures that are responsive to students' interaction preferences. Conversation also includes sustained dialogue on a single topic and the asking of open-ended questions. A precondition or precursor of conversation is discourse between teacher and student(s) that is extended to at least two speech turns each, with each turn consisting of more than just providing an answer or providing a fact (responses to convergent teacher questions).

REFERENCES

- Allal, L., & Pelgrimes Ducrey, G. (2000). Assessment of—or in—the zone of proximal development. *Learning & Instruction*, 10, 137–152.
- Ambach, G. (1996). Standards for teachers: Potential for improving practice. *Phi Delta Kappan*, 78(3), 207–10.
- Amrein, A. L., & Berliner, D. C. (2002, March 28). High-stakes testing, uncertainty, and student learning. *Educational Policy Analysis Archives*, 10(18). Retrieved July 3, 2003, from <http://epaa.asu.edu/epaa/v10n18/>
- Anon, J. (1980). Social class and the hidden curriculum. *Journal of Education*, 168, 61–80.
- Artiles, A. J. (1996). Teacher thinking in urban schools: Toward a contextualized research agenda. In F. Ríos (Ed.), *Teacher thinking in cultural contexts* (pp. 23–52, 355–363). New York: SUNY Press.
- Artiles, A. J., Gutierrez, K., & Rueda, R. (2002, April). *Teacher education in a culturally diverse inclusive era: Implications of a cultural historical vision for teacher learning research*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.
- Artiles, A. J., Trent, S. C., Hoffman-Kipp, P., & López-Torres, L. (2000). From individual acquisition to cultural–historical practices in multicultural teacher education. *Remedial and Special Education*, 21, 79–89.
- Berliner, D. C., & Biddle, B. J. (1996). *The manufactured crisis: Myths, fraud, and the attack on America's public schools*. New York: Perseus Press.
- Bernstein, B. (Ed.). (1971–1977). *Class, codes and control* (Vols. 1–3). London: Routledge & Kegan Paul.
- Bernstein, B. (1982). *Codes, modalities and the processes of cultural production: A model*. London: Routledge & Kegan Paul.
- Bernstein, B. (1996). *Pedagogy, symbolic control and identity*. London: Taylor & Francis.

- Brown, A. L., & Ferrara, R. A. (1985). Diagnosing zones of proximal development. In J. Wertsch (Ed.), *Culture, communication and cognition* (pp. 272–305). New York: Cambridge University Press.
- Brown, A. L., Ash, D., Rutherford, M., Nakagawa, K., Gordon, A., & Campione, J. C. (1993). Distributed expertise in the classroom. In G. Salomon (Ed.), *Distributed cognitions: Psychological and educational considerations* (pp. 188–228). Cambridge: Cambridge University Press.
- Bruner, J. (1986). *Actual minds, possible worlds*. Cambridge, MA: Harvard University Press.
- Bruno, J. E. (2002, July 26). The geographical distribution of teacher absenteeism in large urban school district settings: Implications for school reform efforts aimed at promoting equity and excellence in education. *Education Policy Analysis Archives*, 10(32). Retrieved July 3, 2003, from <http://epaa.asu.edu/epaa/v10n32/>
- Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models: Applications and data analysis methods*. Newbury Park, CA: Sage.
- Clark, C. M. (1995). *Thoughtful teaching*. New York: Teachers College Press.
- Clark, C. M., & Peterson, P. L. (1986). Teachers' thought processes. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 255–296). New York: Macmillan.
- Claxton, G., & Wells, G. (Eds.). (2002). *Learning for life in the 21st century: Sociocultural perspectives on the future of education*. Oxford: Blackwell.
- Cochran-Smith, M. (2001, April 2). Constructing outcomes in teacher education: Policy, practice and pitfalls. *Educational Policy Analysis Archives*, 9(11). Retrieved July 5, 2003 from <http://epaa.asu.edu/epaa/v9n11.html>
- Cole, M. (1996). *Cultural psychology: A once and future discipline*. Cambridge, MA: Harvard University Press.
- Cole, M., & Wertsch, J. V. (1996). Beyond the individual–social antimony in discussions of Piaget and Vygotsky. *Human Development*, 39(5), 250–256.
- Conway, P. F. (2002). Learning in communities of practice: Rethinking teaching and learning in disadvantaged contexts. *Irish Educational Studies*, 21(3), 61–92.
- Conway, P. F., & Clark, C. M. (2003). The journey inward and outward: A re-examination of Fuller's concerns-based model of teacher development. *Teaching and Teacher Education*, 19(5), 465–482.
- Conway, P. F., Goodell, J., & Carl, J. (2002). Educational reform in the United States: Politics, purposes, and processes. In R. Griffin (Ed.), *Education in transition: International perspectives on the politics and processes of change* (pp. 83–108). London: Symposium Books.
- CREDE. (2002, March). *Research evidence five standards for effective pedagogy and student outcomes*. (Technical Report No. G1). Center for Research on Education, Diversity & Excellence. http://www.crede.ucsc.edu/research/pdd/5stand_evidence.html
- Curry, S., & Cruz, J. (2000). Portfolio-based teacher assessment. *Thrust for Educational Leadership*, 29(3), 34–37.
- Dalton, S. S. (1998). *Pedagogy matters: Standards for effective teaching practice* (Research Rep. No. 4). Washington, DC & Santa Cruz, CA: Center for Research on Education, Diversity & Excellence. <http://www.crede.ucsc.edu/products/print/reports.html>
- Daniels, H. (2001). *Vygotsky and pedagogy*. London: Routledge/Falmer.

- Darling-Hammond, L. (1994). Who will speak for the children? How "Teach for America" hurts urban schools and students. *Phi Delta Kappan*, 76(1), 21–34.
- Darling-Hammond, L. (1997). *Doing what matters most: Investing in quality teaching*. (ERIC Document Reproduction Service No. ED415183: 75)
- Darling-Hammond, L., & Snyder, J. (2000). Authentic assessment of teaching in context. *Teaching and Teacher Education*, 16, 523–545.
- Delandshere, G., & Petrosky, A. (2004). Political rationales and ideological stances of the standards-based reform of teacher education in the U.S. *Teaching and Teacher Education*, 20(1), 1–15.
- Doherty, R. W., Hilberg, R. S., Epaloose, G., & Tharp, R. G. (2002). *Development and validation of the Standards Performance Continuum: A performance-based measure of the Standards for Effective Pedagogy*. Center for Research on Education, Diversity & Excellence. Manuscript submitted for publication.
- Engeström, Y. (1999). Activity theory and individual and social transformation. In Y. Engeström, R. Miettinen, & R.-L. Punamäki (Eds.), *Perspectives on activity theory* (pp. 19–38). New York: Cambridge University Press.
- Engeström, Y., Miettinen, R., & Punamäki, R.-L. (Eds.). (1999). *Perspectives on activity theory*. New York, NY: Cambridge University Press.
- Englert, C. S., Tarrant, K. L., & Mariage, T. V. (1992). Defining and redefining instructional practice in special education: Perspectives on good teaching. *Teacher Education and Special Education*, 15(2), 62–86.
- Feiman-Nemser, S., & Rosaen, C. (Eds.). (1997). *Guiding teacher learning: Insider studies of classroom work with prospective & practicing teachers*. (ERIC Document Reproduction Service No. ED408278: 113)
- Gadamer, H. G. (1987). The problem of historical consciousness. In P. Rabinow & W. M. Sullivan (Eds.), *Interpretive social science: A second look* (pp. 82–140). Berkeley, CA: University of California Press. (Original work published 1963)
- Gipps, C. V. (1999). Socio-cultural aspects of assessment. In A. Iran-Nejad & P. D. Pearson (Eds.), *Review of research in education* (pp. 335–392). Washington, DC: American Educational Research Association.
- Gipps, C. V. (2002). Sociocultural perspectives on assessment. In G. Wells & G. Claxton (Eds.), *Learning for life in the 21st century* (pp. 73–83). Oxford: Blackwell.
- Good, T. L., & Brophy, J. E. (1986). School effects. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 570–602). New York: Macmillan.
- Hoffman-Kipp, P., Artiles, A. J., & López-Torres, L. (in press). Beyond reflection: Teacher learning as praxis. *Theory into Practice*.
- Jackson, P. W. (1968). *Life in classrooms*. New York: Holt, Rinehart & Winston.
- Kozol, J. (1992). *Savage inequalities: Children in America's schools*. New York: HarperCollins.
- Krei, M. S. (1998). Intensifying the barriers: The problem of inequitable teacher allocation in low-income urban schools. *Urban Education*, 33(1), 71–94.
- Ladson-Billings, G. (1998). Teaching in dangerous times: Culturally relevant approaches to teacher assessment. *Journal of Negro Education*, 67(3), 255–67.
- Leont'ev, A. N. (1981). The problem of activity in psychology. In J. V. Wertsch (Ed.), *The concept of activity in Soviet psychology* (pp. 37–71). Armonk, NY: M. E. Sharpe.
- Linn, R. L. (2000). Assessments and accountability. *Educational Researcher*, 29(2), 4–16.

- Means, B., Chelemer, C., & Knapp, M. S. (Eds.). (1991). *Teaching advanced skills to at-risk students: Views from research and practice*. San Francisco: Jossey-Bass.
- Mehrens, W. A. (1992). Using performance assessment for accountability purposes. *Educational Measurement: Issues and Practice*, 11(1), 3–9, 20.
- Moll, L. (Ed.). (1990). *Vygotsky and education: Instructional implications and applications of socio-historical psychology*. New York: Cambridge University Press.
- Moss, P. A. (1998). Rethinking validity for the assessment of teaching. In N. Lyons (Ed.), *With portfolio in hand: Validating the new teacher professionalism* (pp. 202–219). New York: Teachers College Press.
- Nakkula, M. J., & Ravitch, S. M. (1998). *Matters of interpretation: Reciprocal transformation in therapeutic and developmental relationships with youth*. San Francisco: Jossey-Bass.
- Oakes, J. (1986). Tracking, inequality, and the rhetoric of school reform: Why schools don't change. *Journal of Education*, 168(1), 60–80.
- Oakes, J., & Lipton, M. (1999). *Teaching to change the world*. Boston: McGraw-Hill College.
- Padron, Y. N., & Waxman, H. C. (1999). Classroom observations of the five standards of effective teaching in urban classrooms with English language learners. *Teaching and Change*, 7(1), 79–100.
- Pecheone, R. L., & Stansbury, K. (1996). Connecting teacher assessment and school reform. *Elementary School Journal*, 97(2), 163–77.
- Porter, A. C., Youngs, P., & Odden, A. (2001). Advances in teacher assessments and their uses. In V. Richardson (Ed.), *Handbook of research on teaching* (4th ed., pp. 259–297). Washington, DC: American Educational Research Association.
- Raudenbush, S. W. (1988). Educational applications of hierarchical linear models: A review. *Journal of Educational Statistics*, 13(2), 85–116.
- Raudenbush, S. W. (1993). Hierarchical linear models and experimental design. In L. K. Edwards (Ed.), *Applied analysis of variance in behavioral science* (pp. 459–496). New York: Marcel Dekker.
- Rogoff, B. (1997). Evaluating development in the process of participation: Theory, methods, and practice build on each other. In E. Amsel & K. A. E. Renninger (Eds.), *Change and development: Issues of theory, application, and method* (pp. 265–285). Mahwah, NJ: Lawrence Erlbaum Associates.
- Shepard, L. (1991). Psychometrician's beliefs about teaching. *Educational Researcher*, 20(7), 2–16.
- Shepel, E. N. L. (1995). Teacher self-identification in culture from Vygotsky's developmental perspective. *Anthropology and Education Quarterly*, 26, 425–442.
- Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4–14.
- Shulman, L. S. (1987). Assessment for teaching: An initiative for the profession. *Phi Delta Kappan*, 69(1), 38–44.
- Shulman, L. S. (1988). A union of insufficiencies: Strategies for teacher assessment in a period of educational reform. *Educational Leadership*, 46(3), 36–41.
- Tharp, R. G. (1997). *From at-risk to excellence: Research, theory, and principles for practice*. Santa Cruz, CA: Center for Research on Education, Diversity, and Excellence.
- Tharp, R. G., Estrada, P., Dalton, S. S., & Yamauchi, L. (2000). *Teaching transformed: Achieving excellence, fairness, inclusion, and harmony*. Boulder, CO: Westview Press.

- Tharp, R. G., & Gallimore, R. (1988). *Rousing minds to life: Teaching, learning, and schooling in social context*. New York, NY: Cambridge University Press.
- Tharp, R. G., & Gallimore, R. (1989). Rousing schools to life. *American Educator*, 13(2), 20–25, 46–52.
- Trent, S. C., & Artiles, A. J. (Eds.). (1998). Multicultural teacher education in special and bilingual education: Exploring multiple measurement strategies to assess teacher learning [Special issue]. *Remedial and Special Education*, 19, 2–58.
- Tudge, J. (1992). Vygotsky, the zone of proximal development, and peer collaboration: Implications for classroom practice. In L. C. Moll (Ed.), *Vygotsky and education: Instructional implications and applications of sociohistorical psychology* (155–172). New York, NY: Cambridge University Press.
- Tudge, J., Putnam, S., & Valsiner, J. (1996). Culture and cognition in developmental perspective. In R. B. Cairns, G. H. J. Elder, & E. J. Costello (Eds.), *Developmental science* (190–222). New York, NY: Cambridge University Press.
- Valencia, R. R. (1997). *The evolution of deficit thinking: educational thought and practice*. Washington, DC: Falmer Press.
- Veenman, S. (1984). Perceived problems of beginning teachers. *Review of Educational Research*, 54(2), 143–78.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wayne, A. J. (2002, June 13). Teacher inequality: New evidence on disparities in teachers' academic skills. *Education Policy Analysis Archives*, 10(30). Retrieved July 3, 2003 from <http://epaa.asu.edu/epaa/v10n30/>
- Wertsch, J. V. (1985a). *Vygotsky and the social formation of mind*. Cambridge, MA: Harvard University Press.
- Wertsch, J. V. (1985b). The semiotic mediation of mental life: L. S. Vygotsky & M. M. Bakhtin. In E. Mertz & R. J. Parmentier (Eds.), *Semiotic mediation: Sociocultural and psychological perspectives* (49–69). Orlando, FL: Academic Press.
- Wertsch, J. V. (1991). *Voices of the mind: A sociocultural approach to mediated action*. Cambridge, MA: Harvard University Press.
- Zvoch, K., & Stevens, J. J. (2003, July 8). A multi-level, longitudinal analysis of middle school math and language achievement. *Education Policy Analysis Archives*, 11(20). Retrieved July 9, 2003, from <http://epaa.asu.edu/epaa/v11n20/>