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Appropriating Tools for Teaching English: A Theoretical Framework for Research on Learning to Teach

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In this article, we propose that activity theory provides a useful framework for studying teachers' professional development. Activity theory emphasizes the importance of settings in learning to teach, focusing on the social and cultural factors that mediate development in particular contexts. We outline the central tenets of activity theory, illustrating key concepts with examples from a longitudinal study of beginning teachers. We conclude by exploring the potential of this theoretical framework to illuminate the process of learning to teach.

We begin this article with a dilemma. Dorothy, an elementary school teacher, and Frank, a middle school teacher, both encountered the practice of writing workshop in their teacher preparation programs. This approach allows students to choose the topic and form of their writing, produce multiple drafts of their papers, and write for audiences of their own choice (see, e.g., Atwell 1998). Teachers serve as both facilitators and instructors, targeting their instruction to the particular needs of the students. Excited by the potential of this approach, Dorothy was eager to try out writing workshop during her student teaching in an elementary school classroom. Her cooperating teacher, however, did not share her enthusiasm, and Dorothy soon discovered that trying to implement a writing workshop approach in an unsupportive environment was not

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possible for her. Despite this experience, in her first year of teaching, Dorothy launched enthusiastically into a writing workshop with her first graders. By the middle of the year, Dorothy was implementing a full range of activities associated with this approach.

Frank, too, was inspired by the writing workshop approach he learned about in his methods course. In contrast with Dorothy, Frank had a mentor teacher who supported his use of a workshop approach during student teaching. He found, however, that his students resisted coming up with their own topics and found it difficult to stay on task given the open-ended parameters of the approach. His dismay at the resulting chaos led him to reject the approach altogether. In his first year of teaching, Frank did not use a workshop approach, and he struggled with ways to teach writing.

How do we understand the differences between Dorothy's and Frank's experiences? How did the ways in which they initially encountered the concept of writing workshop shape their later experiences? How did the particular settings in which they first experimented with the approach affect their subsequent decisions? Perhaps most important, what do we learn from their stories about the influence of teacher education programs on teachers' conceptions of teaching? Frank's experience conforms to both conventional wisdom and some research arguing for the weak influence of teacher education. Dorothy's experience, however, provides a compelling counterexample and suggests the possibility that the effects of teacher education programs can only be viewed in conjunction with a variety of variables having to do with the settings in which teachers learn and practice their work.

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The Problem: Disjunctures between Settings

Research on learning to teach has consistently revealed a disjuncture between the values and practices in the different settings that comprise teacher education. These settings include university courses and experiences in schools, including sites for field observations, student teaching, and initial job placement. Studies of teacher education programs (e.g., Borko and Eisenhart 1992; Kennedy 1998; Smagorinsky and Whiting 1995) have found that preservice teachers are, in many programs, exposed to textbooks and methods that follow a reform agenda that includes instruction that is experiential, learner-centered, activity-oriented, interconnected, and constructivist. Writing workshops, which shift classroom authority from teachers to students, exemplify the kinds of approaches frequently endorsed by university faculty. However, observational studies of schools show that the practice of teaching in most schools remains much as it has always been: content-oriented, teacher-centered, authoritarian, mimetic, and recitative (Applebee 1981, 1993; Cuban 1993; Goodlad 1984; Nystrand 1997; Sizer 1984). This incongruity between the teaching approaches advocated by university education faculty and those typically practiced in schools—even by their own program graduates—has been the source of much concern and vexation for those whose livelihood centers on the preparation of teachers (Grossman et al. 1997; Wideen et al. 1998).

Researchers have offered a variety of reasons for this disjuncture. Some studies suggest that teachers feel that their education course work is too theoretical and that their student teaching provides them with their greatest learning (e.g., Fagan and Laine 1980). Some researchers (Borko and Eisenhart 1992; Ritchie and Wilson 1993) have argued that students learn progressive pedagogies in their preservice programs but that the social environment of schools promotes an ethic more geared toward content coverage and control, thus overcoming the value placed on student-centered teaching methods learned in university programs. Others (e.g., Zeichner and Tabachnik 1981) argue that preservice teachers never adopt the values and practices promoted in universities to begin with, thus questioning the assumption that preservice teachers accept the values of teacher education programs only to abandon them in the school culture.

The finding that teachers tend to gravitate to the values of the institutions in which they are employed, while consistent across studies, is thus explained quite differently by different investigators. The reasons behind these differing accounts could easily have conventional explanations: different samples yield different results, researchers' predispositions may

influence data collection and analysis and thus interpretation, and multiple causes may be responsible for the same effect. These conventional explanations still leave the field without a unified way of viewing this persistent disjuncture. In this article, we propose that, by using a different theoretical framework for studying teachers' early career development than has been used thus far—one generally known as activity theory—we can view these findings as less contradictory and more as pieces to a larger puzzle. While we illustrate activity theory with examples from our current research, our primary purpose in this article is to (1) articulate the tenets of activity theory, (2) discuss its potential for understanding the process of learning to teach, and (3) discuss its usefulness in creating dynamic settings to foster early career teacher development.

Activity theory is capable of unifying diverse research findings because of its emphasis on the settings in which conceptions of teaching develop. Because it emphasizes the social settings in which concept development occurs, activity theory has the potential to illuminate how teachers' progression through a series of contexts can mediate their beliefs about teaching and learning and, consequently, their classroom practices. Activity theory can, therefore, help account for changes in teachers' thinking and practice, even when those changes differ from case to case. Rather than seeking a uniform explanation for the reasons behind teachers' gravitation to institutional values, an approach grounded in activity theory is more concerned with issues of enculturation and their myriad causes and effects. From this theoretical perspective, then, the question is not to discover a single cause that accounts for all change, but rather to ask, Under what circumstances do particular kinds of changes take place? What led Dorothy to hold on to her commitment to a writing workshop approach while Frank quickly abandoned it?

Overview

An Activity Theory Framework for Studying Teacher Education

Activity theory (Cole 1996; Leont'ev 1981; Tulviste 1991; Wertsch 1981) is predicated on the assumption that a person's frameworks for thinking are developed through problem-solving action carried out in specific settings whose social structures have been developed through historical, culturally grounded actions. Activity theory is useful for understanding the process of learning to teach, particularly in illuminating how teachers choose pedagogical tools to inform and conduct their teaching. This framework focuses attention on the predominant value systems and so-

cial practices that characterize the settings in which learning to teach occurs.

Activity theory also calls attention to the cultural goals of development (*telos*) and the ways in which environments are structured to promote development toward these goals (*prolepsis*) (see Cole 1996; Wertsch 2000). Cultures are infused with notions of ideal personal and societal futures that are promoted through the ways in which cultural activity is structured. A central concern of activity theory is to understand the kinds of culturally defined futures that motivate people's activity and the sorts of tools they develop in order to help mediate one another's progress toward those futures.

Within the context of teacher education, the ultimate goal for preservice teachers is to assume the professional responsibilities of a teacher and to teach competently. However, the specific images of what professional responsibilities entail or what it means to be a competent teacher may differ dramatically in different settings. Similarly, all participants in teacher education, including school-based faculty and administrators and university-based faculty and supervisors, hold beliefs about how someone learns to teach. These beliefs help shape how they interact with and support beginning teachers. These varying and often conflicting belief systems and their relative authority and influence over preservice teachers often result in both multiple conceptions of the ideal teacher and multiple environmental structures to guide career development toward those ideals. In short, student teachers often find themselves tugged in different directions, with university faculty, supervisors, mentor teachers, and school systems encouraging different approaches to teaching.

Illustrative Data

In this article, we will illustrate the potential of using an activity theory framework for studying how the cultural settings of preservice and inservice environments mediate the process of learning to teach. As part of their development, teachers develop both concepts and practices related to teaching. The research we are conducting through an activity theory framework focuses on how elementary school and secondary school preservice teachers develop both conceptual understandings and specific practices for teaching English/language arts across the disparate settings that make up teacher education and initial job placements.

Our sample includes graduates of three large state university programs in the U.S. Northwest, Southwest, and Southeast. The schools in which these individuals have taught, during both preservice years and

first jobs, have varied in size, structure, grade level, demographics, and pedagogical emphasis. This variety provides us with diverse settings in which to study how concept development is mediated by involvement in activity settings. At this point, we have followed 21 teachers from their last year of teacher education into their first year of full-time teaching. Ten of these teachers are participating in a longer-term study in which they will be followed through their third year of teaching. We next discuss key concepts from activity theory that frame our understanding of the transition made by teachers from preservice programs into their first jobs.

Key Concepts within an Activity Theory Framework

Using an activity theory framework requires the elaboration of the key concepts of activity settings, tools, and appropriation. Wertsch (1985) identifies three themes as central in Vygotsky's theoretical framework: a reliance on a genetic (developmental) method, an assumption of the social origins of consciousness, and a claim that mental processes are mediated by tools and signs. All three of these themes are implicated in the sections that follow.

Activity Settings

Activity theory is fundamentally concerned with the contexts for human development. Borrowing terms from Sarason (1972), Wertsch (1985), and others, we refer to the contexts that mediate the development of consciousness as activity settings. The need to identify these mediating contexts is implied by the Vygotskian tenet that the origins of consciousness are necessarily social (Cole 1996; Tulviste 1991; Wertsch 1991). In the research that we use here for illustrative purposes, we examine the relationships within and across the specific activity settings in which prospective teachers learn to teach. Bakhtin's (1981, 1984) constructs of *dialogism, hetoroglossia,* and *multivoicedness*—frequently used by activity theorists (e.g., Wertsch 1991) to account for the internalization of ways of thinking—are also relevant to our efforts to understand how prospective teachers draw on and use the languages of their professors, cooperating teachers, supervisors, and peers to inform their approach to teaching English/language arts. In the sections that follow, we detail the aspects of activity settings that are relevant to our study of learning to teach.

Motive.—Activity settings encourage particular social practices that presumably participants will come to see as worthwhile means to a better future. Activity settings provide constraints and affordances that channel,

limit, and support learners' efforts to adopt the prevailing social practices. In this sense, a constraint is a positive set of limitations that provides the structure for productive activity (Valsiner 1998). Central to an activity setting is the *motive* or outcome implicit in the setting. Wertsch (1985) maintains that "the motive that is involved in a particular activity setting specifies what is to be maximized in that setting. By maximizing one goal, one set of behaviors, and the like over others, the motive also determines what will be given up if need be in order to accomplish something else" (p. 212). This motive provides a setting with a sense of purpose that implies a code of suitable conduct.

An activity setting has a cultural history through which community members have established specific outcomes that guide action within the setting. The condition of having a cultural history requires that a setting involve, in the words of Sarason (1972), "two or more people com[ing] together in new relationships over a sustained period of time in order to achieve certain goals" (p. 1). Sarason, who is interested in the creation of new settings, foregrounds the ways in which people conceive practices and artifacts designed to sustain their relationships. Wertsch (1985), in contrast, focuses more on how existing practices and artifacts constrain and afford new action, saying that "an activity setting guides the selection of actions and the operational composition of actions, and it determines the functional significance of these actions" (p. 212). Their different focuses aside, both researchers regard the condition of sustained relationships as central to an activity setting. These relationships are mediated by tools and artifacts for which participants develop over time a general agreement over purposes and meaning. Without widespread agreement on the motive and mediational means, a setting could not exist. Central, then, to the existence of an activity setting is the condition that action within settings is goal oriented and that a set of practices and artifacts exists to mediate development toward those goals.

Consensus on an overriding motive, however, is problematic. Multiple and competing desired outcomes often coexist within an activity setting, though typically some predominate. The overriding motive for a setting, then, while not specifying the actions that take place, provides channels that encourage and discourage particular ways of thinking and acting. For example, student teaching, as an activity setting, has diverse and sometimes rival goals. From one perspective, student teaching is an opportunity to experiment, to try out practices in a supportive environment (e.g., Dewey [1904] 1965). On the other hand, student teaching is also a high-stakes demonstration of one's competence as a teacher, successful completion of which is prerequisite to graduation or certification. The first purpose, experimentation and learning, might have encouraged Frank to try out the writing workshop approach he had learned

in his methods class. However, the classroom management problems he quickly encountered detracted from the second goal: that of demonstrating his competence.

Individual constructions of the activity settings.—A school has properties that are indisputable (e.g., classroom walls physically exist; some classrooms have access to computers while others do not). In addition, individuals construe the school in particular ways through their internal representations of the situation. Lave (1988) makes a distinction between an *arena,* which has visible structural features, and a *setting,* which represents the individual' s construal of that arena. Thus, while two teachers may work at the same arena (e.g., a school), they may have distinctly different understandings of the school setting based on their own goals, histories, and activities within the school arena.

The experiences of one university supervisor with a group of elementary school student teachers illustrates well how one activity setting is open to multiple construals. The university supervisor, Imelda, was a native of the Philippines and was working toward a Ph.D. in mathematics education. Her style of supervision was to observe a class (preferably a math lesson, although for our study she agreed to observe some language arts lessons) and then, rather than providing an assessment of the lesson, to ask the student teacher how the lesson had gone. The sessions were designed, she said, to get the student teachers to reflect on the lesson and think about how it had worked. Student teachers consistently said that they would have preferred a direct critical evaluation of the lesson that pointed out their mistakes and suggested methods for improvement. When asked for the rationale behind her method of response, however, Imelda said that American students do not like direct feedback and prefer a less critical approach; she noted that if she were in her native country, she would respond with a critical appraisal. If the relationship between university supervisor and student teacher is viewed as an activity setting, then the setting was constructed and interpreted quite differently by each participant. The cases in our research yielded a number of instances in which activity settings were construed differently by different participants.

Resistance can also take place within settings that have officially established goals. The two faculty in one program we studied, for instance, team taught a block of preservice courses in planning, inquiry, and young adult literature. They were unified in their advocacy of a process-oriented pedagogy that involved students in extensive reflective writing. The mediating practices and artifacts of their program—including the grades assigned to their work—channeled students toward adopting and implementing such a pedagogy. One African-American participant in the study, however, was highly resistant to this pedagogy, frequently con-

testing the professors by citing Delpit's (1995) advocacy of explicit teaching for minority students who are not fluent in the codes that are required for school success. His refusal to adopt their reflective pedagogy was a consistent theme of interview data provided by him and his professors. This example illustrates how the existence of a formal motive, while suggesting to participants an ideal conceptual outcome, does not guarantee that it will be realized by all, even with the prospect of the professors' formal evaluation being potentially coercive. To understand this situation in terms of activity theory, it is necessary to take into account the history that each participant brings to the setting (Smagorinsky and O'Donnell-Allen 1998*a*). Focusing solely on the setting would overlook the ways in which it is constructed by each person within it, making discrepant cases difficult to explain because they defy the motive of the setting. The question of individual history and identity within settings, then, becomes part of the consideration of their dynamic and evolving nature.

Sociocultural history of activity settings.—One of the contributions of sociocultural theory is its emphasis on the ways in which human activity is embedded within a sociohistorical context. The very existence of structures such as student teaching or university course work in pedagogy is rooted in history. Similarly, many prospective teachers enter teacher education imbued with cultural beliefs about the dubious worth of their formal preparation for teaching. As one of our participants commented, she had heard from a friend that teacher education was redundant, so "that's what I was expecting, a lot of redundant information."

In trying to understand the ready dismissal of the formal study of pedagogy in learning to teach, one must look not only to the ultimate goal of teacher development but to the past. The tools of teacher education that most take for granted (e.g., lesson and unit plans, courses on educational psychology and foundations, and supervision) all have histories that are linked to their current forms and utility. We have found that in our interviews with mentor teachers and other school-based supervisors, teacher education programs in general are not highly regarded, a view routinely expressed in recurrent condemnations of university education programs (e.g., Conant 1963; Kramer 1991). One assistant principal from our sample, for instance, was a former English teacher who presided over an innovative series of professional development opportunities in her school, which included literature book clubs for faculty and workshops on student-centered teaching methods. She commented, "I had great English/language arts teachers in college, but I have no pleasant memories of my undergraduate college education experience. . . . You know I still remember sitting in those [education] classes and I don't think it was the education I got there as much as it was my own excitement at what I was about to do as to what made me the teacher I was." Her com-

ments echo the cultural emphasis on the dismissal of professional education as a factor in learning to teach. Sociocultural theory helps focus attention on the culture existing within schools that often disregards the importance of university preparation for teaching, a culture that strengthens the authority of the school as the venue for learning to teach.

We should note that the emphasis on cultural history presents a conundrum for activity theorists because, while considered essential, it is often difficult to document clearly. Although some efforts have been made to study classrooms over time in order to understand the development of the prevailing practices, routines, and values (e.g., Gutierrez and Stone 2000; Smagorinsky and O'Donnell-Allen 1998*a*, 1998*b*, 2000), a deeper sense of individual or institutional history is available primarily through interviews and suggestive artifacts rather than through direct, empirical study.

Boundaries.—Activity settings typically overlap. That is, they do not exist as insular social contexts but rather as sets of relationships that coexist with others. Some exist side by side, while others are subsumed within larger settings. Each classroom participant, for instance, acts within an activity setting bounded by the classroom, which is a subset of different, coexisting settings: the classroom is part of a school, which is part of a district, which exists within a statewide system. At the same time, an English class is situated within a set of departmentally governed English classes that are typically responsive to local and state English/language arts frameworks (Grossman and Stodolsky 1994).

The question of a cultural history and its enduring relationships and practices needs some modification when considering the time-limited boundaries of some settings. For instance, during student teaching, two participants from one university program carpooled with a third student teacher to and from the school, a trip of over 30 minutes each way. This carpool had a well-defined duration and served a significant purpose within their teaching lives, but it had no life beyond the last day of school. We consider the carpool to be a key setting for these three women, who used the drive as a way to discuss many different aspects of their student teaching experience. In Sarason's (1972) terms, the carpool would serve as a created setting in which the participants needed to develop their own practices and artifacts to develop and sustain their relationships. The setting was not entirely discrete, however, in that it evolved out of their prior experiences in the university program and, thus, inherited the conceptual vocabulary they had learned for teaching as a way to mediate their discussions about their student teaching. They also generated new goals and mediational means to achieve them, some related to their personal lives outside teaching (e.g., two of the three

women were getting married in the summer following student teaching). The setting was dissolved, however, when it no longer served its purpose and the three women dispersed for the summer.

Settings can, then, have temporal, conceptual, and physical boundaries. They are rarely discrete, however, typically overlapping in some way with other settings in dynamic ways.

Activity settings of preservice teaching.—Teacher education is composed of a number of distinct activity settings, including university course work and the specific classes that make up the program curriculum; field experiences, including initial observations as well as full-time student teaching; supervision; and the overall program, including the ways in which students are admitted and organized and the ways in which all participants relate to one another. Each of these activity settings has its own specific motive, structural features, sets of relationships, and resources for learning to teach. These examples are illustrative rather than comprehensive. The likelihood is that the more activity settings that are available, the greater the prospects are for incompatible goals to coexist, each competing for primacy. With each participant involved in overlapping activity settings, the likelihood that all will wholeheartedly pursue the same goals is diminished. In cases where there is consistency of purpose across activity settings, the overall congruence is likely to be much stronger.

Activity theory can help illustrate the *two-worlds* pitfall (Feiman-Nemser and Buchmann 1985) because it draws attention to the ways in which individuals develop goals within settings that themselves suggest particular goals and activities. In the setting of the university, preservice teachers are exposed to one set of conceptions and practices related to the teaching of English. These conceptions may or may not be consistent with their prior experiences and beliefs (Agee 1998). In addition, the university setting reinforces a student role for preservice teachers; both professors' and preservice teachers' goals in the university involve success in this *student* role.

Simultaneously, preservice teachers are being exposed to conceptions and practices for teaching English when they enter schools for field experiences and student teaching. Again, these conceptions may or may not conform to their prior beliefs or experiences or to the university's conceptions. In contrast to the university, the school setting reinforces the *teacher* role of the preservice teacher, albeit as an apprentice and mentee. Since the ultimate goal of the preservice teacher's development is to assume the role of teacher, the teaching role impressed by schools is likely to supersede the values and practices that are stressed in the university. Preservice teachers' goals in the school setting have little to do with success in course work and much to do with establishing oneself

as a teacher, winning the respect of the cooperating teacher, developing relationships with students, and being deemed competent within the value system that governs the school. While the student role is still in effect during visits from university supervisors, these occasions are relatively infrequent compared to those involving the influence and guidance of the cooperating teacher and school institution.

Identity

Activity theory also focuses on the ways in which individuals begin to adopt particular practices and ways of thinking to solve specific problems or challenges within a setting. Learning to teach poses a number of challenges for novices, many of which have been amply described in the literature. These problems, or concerns as they are sometimes labeled, include but are not limited to developing a conception of the subject matter and how to teach it (e.g., Grossman and Stodolsky 1994), developing a conception of teaching and learning and their role as a teacher (e.g., Grossman 1990), learning to manage student behavior (e.g., Bullough 1989), and learning to work with colleagues (e.g., Smylie 1994). These problems all contribute to the development of an identity as a teacher (e.g., Britzman 1991). Lave and Wenger (1991) emphasize the way in which an identity both results from and contributes to a set of broader relationships, such as those we have reviewed above: "Activities, tasks, functions, and understandings do not exist in isolation; they are part of broader systems of relations in which they have meaning. These systems of relations arise out of and are reproduced and developed within social communities, which are in part systems of relations among persons. The person is defined by as well as defines these relations. Learning, thus, implies becoming a different person with respect to the possibilities enabled by these systems of relations. To ignore this aspect of learning is to overlook the fact that learning involves the construction of identities" (p. 53).

While there is a general set of problems involved in learning to teach, individuals will encounter specific variations of these problems in their own practice. Part of our effort is to understand how prospective teachers and those around them define the problems they face and how they engage in solving these problems, using the resources around them. This process contributes to the identities that they develop as teachers. Because of the conflicts in motive that we have outlined (e.g., different roles expected in universities and schools, different conceptions of teaching favored in universities and schools), learning to teach can create confusion over which goals and mediating practices to follow. Stu-

dent teaching in particular provides one of the most difficult contexts in which to develop identity because the student teacher is evaluated by both school-based mentor teachers and university-based supervisors, who may have competing goals for the student teacher and different assumptions about how someone learns to teach. The situation may be even more complicated when, within either of these settings, there is further conflict over motive and its mediating practices.

For example, Donna, a secondary school English teacher from one of our research sites, struggled to define her own teaching style and vision of teaching as she moved between two cooperating teachers during student teaching. One of these cooperating teachers emphasized content coverage, particularly understanding the historical context of required literature; the other's primary goal was to incite the entire class to discuss and challenge the literature they read. Donna spent the year assuming one identity for the first three periods of the school day and another for the last three. Although both cooperating teachers thought that Donna was a very competent student teacher, Donna knew that neither teacher was who she wanted to be. What is more, she knew that she had to become each one to succeed in their classes. "I used to have to take the lunch hour to completely rethink my whole self so that I could then switch," she said.

While she worked hard to teach in ways that would please each cooperating teacher, Donna longed to try out ideas and methods of her own and to experiment with the kinds of pedagogical tools and small group activities she had experienced in her teacher education program but that were difficult to implement in either student teaching classroom. After her first year of full-time teaching, Donna asserted that student teaching was much more difficult than her first year. Although she readily acknowledged that she learned from her cooperating teachers, she felt that she had not truly developed her own identity and style until she was free from her cooperating teachers.

Tools

An activity theory framework for studying teacher learning would need to be concerned with identifying the tools that teachers use to guide and implement their classroom practice. Psychological tools, like the more familiar tools of handiwork and construction, enable people to act on their environments. In our research, we are concerned with the tools through which teachers construct and carry out teaching practices. We distinguish pedagogical tools of two types, conceptual and practical, which we define next.

Conceptual Tools.—Conceptual tools are principles, frameworks, and ideas about teaching, learning, and English/language arts acquisition that teachers use as heuristics to guide decisions about teaching and learning. Conceptual tools can include broadly applicable theories, such as constructivism or reader-response theory, and theoretical principles and concepts, such as instructional scaffolding, that can serve as guidelines for instructional practice across the different strands of the curriculum. A good illustration of a conceptual tool comes from one of our research sites, a preservice program that stressed attention to assessment. One course in this program emphasized the need for the alignment of goals, curriculum, instruction, and assessment. Students gave evidence of internalizing this framework for alignment. One secondary school preservice teacher, for instance, described the broad applicability of this assessment framework for developing goal-oriented instruction in a variety of areas: "[The assessment class] really made me realize that every single thing I do, every little activity that I do should have a purpose, and it should be working [toward] some kind of an educational goal. I think knowing that I had to always focus on what I wanted them to get out of the lesson before teaching it. Like don't think afterwards, well what did they learn, but think ahead of time, what are they going to learn from this?"

A second preservice teacher from this program also articulated the need for assessment to be aligned with instructional goals and practices: "[The instructor says] you're going to stand up in front of people and teach. What are you teaching them? Why is it important? How is it important? . . . Are you assessing your students on the thing that you say you're teaching them, or are you assessing them on some other thing? Have you taught them the thing you're about to test them on? And if you are, well, why is it important, and if you're not, well why are you going to do it anyway?"

Both of these statements illustrate how these preservice teachers used the alignment framework as a conceptual tool for thinking about planning, instruction, and assessment. For many of the students in this program, this framework became an implicit part of how they thought about and critiqued their own teaching.

Practical Tools.—Practical tools are classroom practices, strategies, and resources that do not serve as broad conceptions to guide an array of decisions but, instead, have more local and immediate utility. These include instructional practices, such as journal writing and daily oral language exercises, and resources, such as textbooks or curriculum materials that provide such instructional practices. One example of a practical tool used by participants in our study was a unit plan for the teaching of

writing that came complete with peer feedback sheets and other ready-made resources. One of the teachers used this unit plan several times for quite different writing assignments, never adapting the peer feedback sheet for the different genres or purposes for writing. While she eagerly used the practical tool of this unit plan, she did not necessarily have a conceptual understanding that guided her use of it.

In activity theory parlance, this process of adoption carries the name of *appropriation* (Newman et al. 1989; Wertsch 1991). We next elucidate what we mean when we refer to appropriation of pedagogical tools for teaching, again using our current research to illustrate how the concept of appropriation helps illuminate teacher learning.

Appropriation

One of the central concepts of activity theory is that of *appropriation* (Leont'ev 1981; Newman et al. 1989; Wertsch 1991). Appropriation refers to the process through which a person adopts the pedagogical tools available for use in particular social environments (e.g., schools, preservice programs) and through this process internalizes ways of thinking endemic to specific cultural practices (e.g., using phonics to teach reading). Wertsch stresses the ways in which appropriation is a developmental process that comes about through socially formulated, goal-directed, and tool-mediated actions.

The extent of appropriation depends on the congruence of a learner's values, prior experiences, and goals with those of more experienced or powerful members of a culture, such as school-based teachers or university faculty (see Cole 1996; Newman et al. 1989; Smagorinsky 1995; Wertsch 1991). Fundamental to appropriation is the learner's active role in these practices. Through the process of appropriation, learners reconstruct the knowledge they are internalizing, thus transforming both their conception of the knowledge and, in turn, that knowledge as it is construed and used by others. Cazden's (1988) idea of *performance before competence* is useful to our understanding of the concept of appropriation because it emphasizes the role of active participation as a means of becoming competent in social practices.

From an activity theory perspective, then, the central questions about learning to teach include these: How do activity settings mediate teachers' thinking? What kinds of social structures are prevalent in different settings, and in what manner do they mediate the appropriation of particular pedagogical tools for teaching? To what extent are different tools for teaching appropriated for use in different settings? To answer

these questions, we first differentiate among five degrees of appropriation, each representing a depth of understanding of a particular tool's functions.[1]

Five Degrees of Appropriation

Appropriation can take place in varying degrees, including a lack of appropriation. We next define different levels of appropriation, beginning with a discussion of why a person might not appropriate a particular tool at all.

Lack of appropriation.—Learners might not appropriate a pedagogical tool for several reasons. A concept may be too difficult to comprehend at the point in someone's development that it is initially encountered. Alternatively, the concept may be too foreign to the learners' prior frameworks at that point in their development. Learners might also understand the concepts as intended but reject them for a variety of reasons. For instance, there was a cultural mismatch between Penny, a student teacher, and her cooperating teacher (see Smagorinsky, 1999). The cooperating teacher was a highly efficient, well-organized, nine-year veteran who encouraged Penny to teach within the confines of the overall school schedule and within the boundaries of time scheduled for each lesson. Penny resisted her mentor's efforts to become more efficient, however, because she preferred to explore each lesson in depth, even if that meant running over the scheduled time and infringing on the next lesson's allotment.

In interviews, she located her conception of time in both her university's constructivist philosophy, which viewed knowledge as constructed over time rather than readily transmitted, and in her Native American upbringing, where precise adherence to scheduled time had not been emphasized. She understood the conception that her cooperating teacher was urging her to appropriate but rejected it as an alien way to regard time and as an impediment to implementing process-oriented instruction. She was, therefore, at odds with her cooperating teacher's daily planning, which moved crisply from lesson to lesson. She was much more likely to allow a lesson or discussion to extend well beyond its scheduled limits, and thus, in the cooperating teacher's eyes, compromise the overall coverage goals of the curriculum. In this example, the concept of efficient instruction was resisted and not appropriated because of Penny's different framework for viewing time and curricular goals.

Appropriating a label.—The most superficial type of appropriation comes when a person learns the name of a tool but knows none of its

features. For instance, one cooperating teacher in our sample was familiar with the term *whole language* and knew vaguely that it involved noisy classrooms but was not aware of any specific whole language practices or their conceptual underpinnings.

Appropriating surface features.—The next level of appropriation comes when a person learns some or most of the features of a tool, yet does not understand how those features contribute to the conceptual whole. Here, we assume that the authoritative version of the concept has a particular, officially articulated meaning and that this meaning has been offered as a conceptual tool by a teacher of some kind. As we describe this level of appropriation, then, we are assuming that the learner is making some effort to grasp the official conception, yet is succeeding in doing so only at the surface level.

As an example, we offer a case from a prior study (Smagorinsky 1996) in which a student teacher claimed to be engaging her students in cooperative learning, a pedagogical tool she had been exposed to in her preservice course work. Her implementation of cooperative learning involved having the students work in groups and share their work. The assignment, however, consisted of a three-page summary of a story with blanks provided for students to fill in missing information. Students were placed in groups of three and told that each student should do one page independently and, when finished, the group should read the three pages consecutively for a whole understanding of the story. The teacher, thus, grasped some features of the tool of cooperative learning, at least as articulated in professional literature, yet did not understand or promote the overall concept of cooperative learning's emphasis on interdependence.

Another example of surface understanding appeared in our current research during one beginning teacher's use of the practice of peer response groups. She used the term to describe breaking students up into groups to read each other's papers. She also used a guidesheet borrowed from a prepackaged unit to focus students' responses. However, she seemed less clear about what students could gain from the experience or how to structure the response groups to fit the genre of writing in which students were engaged.

Appropriating conceptual underpinnings.—At the conceptual level, one grasps the theoretical basis that informs and motivates the use of a tool. Teachers who grasp the conceptual underpinnings of a tool are likely able to make use of it in new contexts and for solving new problems. A person could conceivably understand and use the conceptual underpinnings of a tool but not know its label; a teacher could also conceivably understand the conceptual underpinnings without knowing its pedagogical applications. For instance, in one elementary school preservice

program we studied, the university faculty emphasized constructivism as its umbrella concept, reinforcing it across a block of five teaching methods classes. Preservice teachers whom we interviewed were able to provide textbook definitions of constructivism, contrast different professors' versions of it, critique professors who espoused constructivism but did not practice it, critique cooperating teachers for teaching in traditional rather than constructivist ways, and plan and carry out lessons and units that were faithful to their definitions of constructivism. They, therefore, demonstrated an ability to apply the concept to a variety of new situations and to classify various teaching practices as constructivist or not.

Another example of conceptual understanding involved Dorothy's use of writing workshop. Although she had been introduced to the concept in her teacher education class, she had not had the opportunity to try out the ideas in her student teaching. Her frustration with her cooperating teacher provided an opportunity to explore more deeply aspects of a classroom that facilitated writing workshop and those that got in the way. By her first year of teaching, she was able to create an environment that supported her writing workshop and to discuss how the various features of her approach supported her first graders' writing.

Achieving mastery.—Preservice teachers in our study also gave evidence that they had appropriated the conceptual underpinnings of a pedagogical practice but were not yet able to implement such assessments in their own classrooms. Several of the preservice teachers in our study were able to use their conceptual understanding of performance assessment, for example, to critique their current practices, but found themselves unable to actually develop and use performance assessments in their classes. This example raises the distinction between *appropriation* and *mastery* (Herrenkohl and Wertsch 1999). If mastery means the skill to use a tool effectively, then this more fully realized grasp of a concept most likely would take years of practice to achieve. This distinction argues for a longitudinal look at teachers' development, since they may only be able to master some of the pedagogical tools after several years of classroom practice.

Summary.—Appropriation can occur at different levels for pedagogical tools. A conceptual tool such as constructivism may be appropriated as a label only or can be grasped in terms of conceptual underpinnings. A tool such as writing workshop can also be understood at each level. We should stress that a lack of appropriation does not necessarily involve a lack of understanding; one might understand the conceptual underpinnings of writing workshop but reject the premises that support it. One might also understand a tool but find that the environment makes it difficult to use effectively, such as when Dorothy embraced writing workshop values yet was discouraged from using them during her student

teaching. Grasping and appropriating a tool and using it, then, do not necessarily co-occur for a variety of reasons.

Factors Affecting Appropriation

Through the process of appropriation, learners may alter the surface features or conceptual underpinnings of the tool and perhaps relabel its features to account for changes in the way in which they use it. Whether the reconstruction is consistent or inconsistent with the authoritative or official conception depends on the social context of learning and the individual characteristics of the learner.

Social context of learning.—The social context of learning provides the environment in which one learns how to use tools. The notion of context is often associated with a physical structure (e.g., an arena such as a school, a university, a university department) that embodies a set of human values (Chin 1994). The sense of context that we are concerned with here primarily refers to the related set of social practices in and through which learning takes place among people whose lives intersect in a particular activity (in this case, learning to teach)—what we previously referred to as a setting. Drawing on activity theory, we view social contexts as structures that are products of cultural history in which individual histories converge. Social contexts are thus inherently relational and value-laden. The social contexts of learning to teach include the imagined outcomes, relationships among participants, underlying philosophies of a program, and kinds of activities that engage the different participants.

The social context of a setting also includes how, and by whom, tools are introduced and used. A tool may be presented through a text, instructor, school-based teacher, or classmates in varying degrees of faith to its authoritative conception and in varying degrees of complexity corresponding to the levels of appropriation we have outlined. If a tool is presented without its conceptual underpinnings, students may appropriate only what is available, that is, the label and surface features. Some textbooks are written with the intention of providing an overview of teaching ideas without their conceptual underpinnings, and, thus, they create situations in which teachers' initial learning of tools is potentially limited to labels and surface features (Smagorinsky and Whiting 1995). We hypothesize that such approaches limit teachers' likelihood of understanding the conceptual underpinnings of the tool and their chances of applying it to handle new situations or to solve new problems.

Pedagogy represents another layer of the social context of learning to teach. Students may have opportunities to understand conceptual

underpinnings of a tool, but the pedagogy of teacher education itself may run counter to the conception of teaching being espoused. A truism in teacher education and teacher development concerns the need for teachers to experience a pedagogical approach from the standpoint of a learner before they are able to implement this approach in their own classrooms (Duckworth 1987; Feiman-Nemser and Featherstone 1992; Schifter and Fosnot 1993). The opportunity to experience a pedagogical tool in the social setting of teacher education may also affect appropriation.

Once teachers join the work force, the school becomes the primary activity setting for developing conceptions of teaching and learning. Researchers have found that the culture of the school mediates teachers' thinking in powerful and lasting ways. We see the strong influence of the school culture throughout our data. One example illustrates well the power of the social context of schools. Sharon, a student teacher from a constructivist elementary school preservice program, was placed with Caroline, an extremely authoritarian mentoring teacher who also served as the school's head teacher. As head teacher, she was the school's de facto assistant principal, and in this role had great influence over the teaching approaches used throughout the school. Caroline's teaching was conducted almost exclusively through basal readers and their accompanying worksheets; she routinely eliminated any generative questions on the worksheets, requiring students only to do those problems that had definite answers.

Caroline's mentoring style was consistent with her teaching style. Her method was for Sharon to follow her lesson plans and imitate her teaching style as faithfully as possible. In Sharon's view, there was little opportunity for constructing a personal teaching style within Caroline's mimetic mentoring approach. She often expressed frustration at the lack of opportunity she had to teach according to the principles she had learned in her preservice program. During one interview, she said in frustration, "Sometimes I'm afraid I'm going over to her side." When asked to elaborate, she said that because she had been provided so little opportunity to practice the methods learned in her university program, she was afraid that she would lose that knowledge altogether.

Of particular concern to Sharon was the prospect of getting her first teaching job in a school with values similar to those of her student teaching site where the prevailing practices would pressure her to teach with basals, with an emphasis on classroom management and with a curriculum built around isolated literacy building blocks. Such an environment, she said, would likely lead to further erosion of the constructivist principles she had learned. Without an opportunity to engage in construc-

tivist practices, she might find herself using classroom practices that she had learned a conceptual basis for critiquing and avoiding.

The culture of the school, however, is not always in opposition to the culture of the university. Another preservice teacher, Allison, was placed with a cooperating teacher whose practices and beliefs closely mirrored the perspectives of the university course work. Seen from the context of this student teaching experience, the influence of the university paled in comparison, and Allison came to believe that she had learned virtually everything of importance during her student teaching, even when the university program had been her first point of contact with the ideas she attributed to the school site. It may be that the contrasts between the two cultures help students further articulate and define their own beliefs (Hollingsworth 1989). When a preservice teacher's prior beliefs, university course work, and student teaching experience are all in concert, the influence of the university may become invisible (Grossman and Richert 1988). We see here the importance of seeing the roles that preservice teachers are expected to assume in the contexts of university and school. Allison's attribution of knowledge about teaching to the school experience suggests that her role as teacher in that setting had powerful consequences for her locus of learning.

Individual characteristics of the learner.—Activity theory focuses primary attention on the cultural-historical setting in which the development of both individuals and their social groups takes place. Our discussion thus far has focused on the settings of development and how they mediate individuals' (e.g., preservice teachers) and social groups' (e.g., faculty, student, and cohorts) conceptions of teaching. We also see the need to attend to individual characteristics as factors that are implicated in the process of appropriation. Wertsch (1998) has argued that debates about human development typically cast the individual and society as antimonies in ways that caricature one position or the other; he argues instead for the need to view the individual as fundamental to the construction of social groups, rather than as a separate entity. Doing so requires that we take into account how individuals act within social frameworks. We next review important characteristics of individual teachers that, in conjunction with contextual mediators, affect the ways in which teachers develop conceptions of teaching.

1. Apprenticeship of observation. A teacher's apprenticeship of observation is the set of experiences accrued through years of being a student. Grossman (1991), Lortie (1975), and others have discussed the influence of the apprenticeship of observation on teachers' beliefs and classroom practices. Prospective teachers emerge from their own schooling with strong views about what it means to teach. These views will constrain

how prospective teachers are able to appropriate new ideas about teaching and learning.

For example, one preservice teacher in our sample, Dale, described his most influential teachers as being charismatic, and he believed that a teacher's personality was the dominant factor in his or her success. This belief overrode his methods course professor's emphasis on thematic units taught through scaffolded engagement in inductive activities. Dale's student teaching was highly problematic because he eschewed the need to plan thematic units involving scaffolded learning and instead relied on his witty personality to sway students to his way of thinking, as his own favorite charismatic teachers had done with him. Students, however, did not find him amusing, and his student teaching was troubled throughout by his failure either to captivate his students or to effectively plan instruction.

Dale's cooperating teacher was highly regarded for her constructivist approach (she was the reigning Teacher of the Year for a large school district and finalist for State Teacher of the Year honors), and she was in strong agreement with Dale's methods course professor's approach of teaching through thematic units of instruction. However, Dale's own positive experiences with charismatic teachers and his misplaced confidence in his own personal magnetism led him to underestimate the importance of preparation. Ultimately, his student teaching received low evaluations from both his cooperating teacher and his university supervisor. An apprenticeship of observation, then, can influence both the types of assumptions teachers have about the way schooling ought to occur and the success of those practices in particular institutional contexts.

2. Personal goals and expectations. Teachers teach for a variety of reasons. Many prospective teachers may focus primarily on the relationship between student and teacher and overlook the academic dimensions of the job. Conversely, others may see teaching as a way to continue their involvement with and love for the subject matter. Still others may be attracted to teaching as a means toward social justice. Whatever the specific goal or expectation that leads someone to teach, it is likely to mediate what prospective teachers expect to learn from their professional preparation.

Teachers in our sample described different goals for their teaching. One secondary school teacher, for instance, distinguished between her best and worst teachers as being "fun" and "boring"; her goal was to conduct classes that the students found fun so that they would enjoy school. An elementary school teacher, on the other hand, had entered teaching following careers in both the U.S. Marines and the local police force. Her decision to teach resulted from her observation as a police officer that most criminals she encountered were illiterate. Seeking to

intervene in a positive and constructive way early in children's lives, she decided to go into teaching as a way to provide students with tools for productive civic life and to make lives of crime less likely. These different sets of goals—one to make instruction fun, the other to provide productive tools for literacy—led to different degrees of value on pragmatic literacy skills and their role in the language arts curriculum.

3. Knowledge and beliefs about content. Another critical factor affecting the appropriation of conceptions and practices for teaching English/language arts concerns teachers' knowledge and beliefs about both the content and teaching of language arts. Conceptions of how to teach language arts invariably draw on knowledge of the specific content of the discipline (Ball and McDiarmid 1990; Cohen 1990; Grossman 1991; Shulman 1986). It would be difficult, for example, to appropriate the conceptual underpinnings of teaching a literature-based curriculum without having a conception of literature and literary understanding. Similarly, how one teaches writing depends heavily on one's prior understanding of the nature of writing processes and of how writers employ different strategies in their work. These assumptions then inform whether instruction should follow a workshop approach, rely on the imitation of model essays, or emphasize expressive or analytic stances, as well as affect other decisions about how to teach writing.

For example, Jesse, one of the elementary school teachers in our sample, was a strong and committed writer. Drawing on his own experience as a writer, he was able to successfully base his writing instruction on a writing workshop model, modifying the structure throughout the year to meet his young writers' changing needs. Jesse provided many opportunities for writing and frequently gave individual in-depth feedback to his students as well as minilessons based on his appraisal on their needs. His students rewarded his efforts by developing a love of writing so strong that they were observed spontaneously continuing their writing at lunch on more than one occasion. For Jesse, writing was the one subject where he felt he was "not following any curriculum. It's coming from me."

His teaching of reading, however, stood in stark contrast to his fluid and creative approach to his teaching of writing. He struggled to incorporate skill lessons for different levels of readers into his instruction. In the midpoint of his first year, he turned to a commercial skills program as a way to meet the needs of his students instead of assessing his students and teaching to their strengths and weaknesses, as he was able to do in writing. In addition, many of his reading activities were based on procedural concerns as opposed to instructional concerns (e.g., asking students to read aloud in literature circles so that the groups would stay on task). While Jesse's background in writing gave him a deep understand-

ing of desirable learning outcomes in writing, he lacked this same clarity in reading.

Potential Benefits of Using Activity Theory to Study Professional Development

Activity theory, like other perspectives evolving from the work of Vygotsky (1978, 1987), is fundamentally concerned with socially mediated human development (Wertsch 1985). Its developmental focus makes it a powerful framework for studying teachers' professional development, particularly in longitudinal studies that follow teachers as they progress through different social contexts. We see this perspective as particularly beneficial for illuminating a number of perplexities posed by research on teachers' professional development.

Activity theory highlights the importance of context in learning to teach. Just as research on teaching has begun to focus on context (McLaughlin and Talbert 1993), research on teacher education needs to take up the analytic challenge of portraying the features of settings that matter most in learning to teach. Much of the research in teacher education has been focused on the individual teacher (e.g., Bullough 1989) and has offered individualistic explanations for preservice teachers' success or failure in appropriating approaches to teaching. With this premise, the profession is offered little hope for change if changing teaching requires changing teachers one at a time. The prospect is daunting to say the least.

A focus on social contexts, however, shifts attention from the individual to the setting. Changing settings is much more possible than changing hosts of individuals. Studies that focus on the settings for professional development can reveal the kinds of social structures that promote the appropriation of pedagogical tools that, in turn, result in particular kinds of teaching. An activity theory perspective allows for an analysis of the consequences of different approaches to professional development, including university programs, district-wide inservice programs, voluntary participation in professional organizations, school-based activities, and other structures with particular goals and supportive practices. Identifying the consequences of different activity settings can help generate hypotheses about effective preservice and inservice settings.

A second advantage afforded by activity theory is that it provides a rich theoretical basis for the importance of field experiences. All too often, research on teacher education has polarized the university and school settings and bemoaned the university's lack of influence. From an activity theory perspective, however, the predominance of school values seems

eminently reasonable. The ultimate goal of the enterprise of teacher education involves identification with the role of teacher, not with the role of university student. Similarly, teachers cannot learn to teach without engaging in the activities of teaching. From this perspective, the design of field experiences is absolutely critical to the enterprise of learning to teach. At the same time, activity theory allows researchers to look at the ways in which teachers have appropriated pedagogical tools from their experiences in teacher education that frame how they construct their actions and beliefs once they are in the school setting.

To return to our opening example, understanding why Dorothy embraced the practice of writers workshop while Frank rejected it requires us to look at both the teachers' individual differences and the differences in their teacher education programs. Activity theory provides a framework for attending simultaneously to individuals and the settings in which they learn and develop. Ultimately, we hope the tools from activity theory not only can help us to understand better the process of learning to teach but also will help us, as teacher educators, to rethink our own practices and programs.

Notes

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1. As part of our discussion of appropriation, we should clarify our understanding of a concept. A concept is a social construction, not an autonomous ideal. Typically, a concept has some official, sanctioned, or authoritative meaning that within a community of thought is regarded as ideal. How one attributes meaning to this concept, however, might vary depending on the kinds of cultural schemata already in place for organizing ideas. In our discussion below, we will treat concepts as they exist within thought communities, that is, as having

authoritative or official definitions. We recognize that different thought communities have different conceptions associated with the same term; different conceptions of student-centered teaching, for instance, attribute varying degrees of authority to both students and teachers (see, e.g., the various interpretations described by Cuban [1993]). In our account of five degrees of appropriation, we are considering the appropriation of a tool as it is being conceived in the context of learning, typically as it is represented by university faculty, authoritative texts, or school-based mentors. In doing so, we recognize that these conceptions are social constructions rather than ideals.

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