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Reinventing Student Teaching

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Innovative student teaching programs have proliferated during the last decade. The author distinguishes among reinvented student teaching programs by examining their underlying assumptions about knowledge, power, and language in teaching and the various ways these are played out in school-university relationships and explores three contrasting school-university relationships—consonance, critical dissonance, and collaborative resonance—identifying the underlying assumptions of each and examining how problems are defined, goals established, and social and organizational structures for student teaching created. It is argued that collaborative resonance has unique potential to provide students with rich opportunities to learn to teach. This argument is illustrated with a description of the structures and effects of one innovative program, Project START, based on resonance and designed to foster intellectual growth and commitment to reform in both students and cooperating teachers.

Although preservice students and experienced teachers regard student teaching as the most valuable aspect of preservice preparation (Evertson, 1990), it is also widely regarded as a problem, an on-the-job experience that promotes isolation, practical expediency, and dependence on conventional wisdom (Goodlad, 1990). As part of larger efforts to reform preservice education, institutions across the country are in the process of reinventing student teaching by altering its duration, timing, requirements, connection to university courses and seminars, and the type and intensity of supervision.

The purpose of this article is to make distinctions among the innovative student teaching programs that have proliferated in the last decade on the basis of their underlying assumptions about power, knowledge, and the language of teaching, and the ways these are instantiated in university-school relationships. I argue that three contrasting relationships—consonance, critical dissonance, and collaborative resonance—characterize many reinvented programs and lead to different opportunities for students to learn to teach. A second purpose of the article is to

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argue that programs based on the collaborative resonance of university and school have the potential to provide unique opportunities for students to learn and continue learning about teaching and schooling. Drawing on data and program literature collected over 3 years, I elaborate on this argument by describing the structures and effects of one innovative program.

Consonance, Critical Dissonance, and Collaborative Resonance

The innovative student teaching programs of the last decade differ considerably in their conceptual underpinnings and structural arrangements. A number of frameworks might be used to distinguish and critique aspects of programs, including Tom's (1985) three dimensions of inquiry-oriented teacher education programs, Grimmer's (1988) categorization of the contents and purposes of reflection, and Cochran-Smith's (1989) notion of the theories of practice that underlie student teaching arrangements. Each of these offers a useful perspective, but none directly examines relations between the university and the school or exposes the structure of power that is implicit in the ways teacher educators regard and work with teachers when they arrange for school observations, organize field placements, appoint adjunct and regular staff, and supervise student teachers. My argument here is that every reinvented program is the product of a set of assumptions about the knowledge, language, and expertise of school-based teach-

ers relative to the knowledge, language, and expertise of university-based teacher educators and researchers. These assumptions and the ways they are played out in programs convey potent messages about the work lives of teachers and the parts they can expect to play in establishing and altering the social worlds of school. The school-university relationships of consonance, critical dissonance, and collaborative resonance are summarized in Table 1 and discussed in some detail in the sections that follow.

Consonance

One approach to reinventing student teaching is to insure that the university-based and school-based portions of preservice preparation are consistent with, and affirming of, one another. Borrowing a term used in music to describe the agreement or unison of sounds, I refer to this kind of school-university relationship as consonance or accord based on common application of effective teaching research. Although school-university relationships can be consonant in a variety of other ways, those based on the premises of teacher effectiveness research represent the major group in this category, and, as I point out below, are dominant in large-scale statewide university-school partnerships.

In programs designed to foster consonance, teacher education is generally faulted for not preparing prospective teachers to make sound professional decisions using the language and concepts of research on effective teaching (Anderson & Enz, 1989; McNergney, Lloyd, Mintz, & Moore, 1988). In this conception, the goal of teacher educators is to prepare students who are skilled situational decision makers (McNergney et al., 1988) and reflective classroom practitioners (Arends, 1988) who make what other professionals would recognize as justifiable educational judgments. In many programs, these goals are achieved by creating a high degree of consonance between theory and practice and by providing coordination between the language and messages conveyed by the university and the school (Berg, Murphy, Nagel, & Malian, 1989). Typically, this means that student teachers are trained in research-based teaching competencies, and their school-based and university-based mentors are trained to provide systematic feedback and instruction in those same competencies.

Many of the large-scale teacher training partnerships of universities, state departments of education, and school districts aim for consonance between the university and the school. Examples include the Arizona State University/Maricopa County "Teacher Residency Training and Research Project" (Anderson & Enz, 1989), the University of Maryland's "Clinical Classroom Program" (Arends, 1988), the California State University system's "Clinical Supervision Initiative" (Berg et al., 1989), and the University of Virginia's preservice curriculum (McNergney et al., 1988). The University of Virginia's preservice program, for example, dovetails with statewide efforts to build a common curriculum for all teachers. The university's program is closely articulated with Virginia's Beginning Teacher Assistance Program, designed to assess first-year teachers' mastery of 14 teaching competencies identified on the basis of process-product classroom research. The university's program encourages preservice and inservice teachers to "speak the same language, that is, to draw on the results of research on effective teaching and to concentrate on common problems they can be expected to face in their classrooms" (McNergney et al., 1988, p. 37). Student teachers are trained to observe and make decisions about how to apply professional knowledge correctly and consistently through both computer teaching simulations and classroom observations. Cooperating teachers, called clinical instructors, also receive instruction in classroom observation and in strategies for evaluating student teachers, using the language and concepts of effective teaching.

Like the program at the University of Virginia, most student teaching innovations that aim for consonance between university and school seek to improve the status of teaching as a profession and to make student teaching more systematic and rigorous by the application of research-based knowledge on effective teaching. Few educators would disagree that the professionalization of teaching is an essential aspect of educational reform and one that prospective teachers ought to know about and support early in their careers. Although this is a worthy goal, programs that aim for school-university consonance are based on problematic notions about the power and knowledge of schools and universities. Although

Table 1
Reinventing Student Teaching: Three School-University Relationships

	CONSONANCE	CRITICAL DISSONANCE	COLLABORATIVE RESONANCE
	(accord based on common application of effective-teaching research)	(incongruity based on a radical critique of teaching and schooling)	(intensification based on the co-labor of learning communities)
CONCEPTION OF THE PROBLEM OF STUDENT TEACHING	Failure to prepare student teachers to make sound educational decisions via the language and strategies of process-product research on effective teaching	Failure to provide students with the skills to construct a radical critique of schooling and to work against perpetuation of existing school policies and practices	Failure to provide students with critical/analytical skills and resources to continue learning and working for reform across school sites and over time
GOAL OF STUDENT TEACHING	Prepare student teachers who are well-versed in the professional knowledge base and who are trained to be decision makers, systematic observers, and solvers of common classroom situations and problems	Prepare student teachers who have strong critical perspectives based on examination of issues of race, class, power, labor, and gender and who are prepared to call into question school policies and their implications	Prepare student teachers who know how to learn from teaching by inquiring collaboratively into their own practices and who help build cultures of teaching that support ongoing professional growth and reform
PROGRAM STRATEGIES AND STRUCTURAL ARRANGEMENTS	Placement of student teachers with school-based mentors trained in effective teaching competencies and language	Placement of students in area schools	Placement of students in sites for school-wide reform and restructuring or with small groups engaged in reform efforts
	University-based training and reinforcement of student teachers' managing/teaching competencies derived from process-product research	Critical theory-based curriculum study, foundations courses, and alternative methods courses	Theory and research-based curriculum, foundations, and methods courses with assignments critiqued in school and university settings
	Training of fieldwork supervisors and cooperating teachers in systematic observation and feedback via strategies and language of effective teaching	Student teachers work with university supervisors who help them view their school experiences from a critical perspective and see alternatives to common practice and policy	Collaborative inquiry in school-site meetings and university-site seminars; joint program planning/assessment by supervisors, teacher educators, and cooperating teachers
	Competency-based evaluation of student teachers' lessons, planning, and performance in methods courses and student teaching classrooms consistent with the training as above	Action research projects, ethnographic studies of schooling, university-led seminars, and student teaching journals to encourage individual growth and critical reflection on school experiences	Teacher research, action research, dialogue journals, and seminars conducted collaboratively or cooperatively by student and experienced teachers, supervisors, and teacher educators

these programs supposedly combine “knowledge-based empirical research” with “knowledge that comes from practical experience” (McNergney et al., 1988, p. 42), in reality teacher educators in these programs train experienced teachers by constructing for them both their knowledge (that is, what they ought to see when they look at and think about the classroom) and the language used to describe it (that is, the words and conceptual categories they ought to use to talk about teaching). There is little indication in program descriptions that either experienced teachers or student teachers are encouraged to examine their knowledge and language from multiple perspectives, draw upon their own resources to pose problems and generate theories, question the curriculum and its underlying assumptions, and challenge either the construction of a generic knowledge base for teaching or the institutional arrangements and consequences of schooling.

Significant messages about power, knowledge, and learning to teach are implicit in research-based programs based on consonance: (a) Teaching should be guided by an empirically verified knowledge base (Although not within the scope of this article, see Ayers, 1988, for an interesting discussion of the problems involved in the construction of a formalized and universal knowledge base for teaching, especially his concern with conveying to student teachers that teaching is a mechanistic and predictable activity.); (b) the knowledge base is generated almost exclusively by university-based researchers and teacher educators; neither experienced teachers nor student teachers are regarded as potential contributors (Cochran-Smith & Lytle, 1990b); (c) the role of the university in preservice education is to train students to control teaching by accurately predicting which research-based knowledge applies to which classroom situations; (d) universities can train student teachers most effectively when the perspectives and language of their school-based mentors are the same as those of their university-based teachers and supervisors; (e) teacher educators, therefore, should train experienced teachers to reframe and rename the wisdom of their own experience according to the linguistic and conceptual categories constructed by the university.

In effect, then, many student teaching programs

may achieve consonance between university and school by ignoring or preempting teachers' knowledge and by limiting the realm of discussion and reflection on teaching to consideration of which university-certified strategies apply to which classroom problems. Implicit in both the stated rationales and the structural arrangements of programs based on consonance is the hegemony of university-based knowledge, expertise, and language. This sends a potent message to prospective school-based teachers that their own chances to be generators of knowledge, agents for change, and genuine decision makers are circumscribed by outside-of-school expertise on teaching and learning.

Critical Dissonance

A second approach to reinventing student teaching is to make the university-based portions of preservice preparation sufficiently incongruous with the school-based portions of preparation so as to interrupt the influence of the school and prompt challenges to that which is usually taken-for-granted. Borrowing a term used to describe discord or disagreement among sounds, I refer to this school-university relationship as critical dissonance or incongruity based on a radical critique of teaching and schooling.

In reforms based on critical dissonance, the problem with student teaching is generally identified as its tendency to bolster utilitarian and vocational perspectives on teaching and ultimately to reproduce existing practice. This conceptualization of the problem is based on several interrelated arguments: (a) The liberalizing effects that university experiences may have on student teachers are diluted by the conservative press of school life and by teachers and administrators who emphasize management and trial-and-error learning rather than inquiry or critical reflection (Goodman, 1986a; Richardson-Koehler, 1988); (b) student teachers have had a powerful socialization into teaching from their own 12 years of schooling before they even begin formal preparation (Lortie, 1975), and student teaching does little to alter their views (Feiman-Nemser, 1983); instead, it may bolster their ability to articulate the perspectives they already have and hence contribute to the perpetuation of conservative school practice

(Tabachnick & Zeichner, 1984; Zeichner, Tabachnick, & Densmore, 1987); (c) the "liberalizing" influence of the university is largely a myth. Rather than liberalizing, many aspects of university-based preparation are conservative influences that emphasize relevance over critique and encourage reflection on factual or technical rather than critical aspects of teaching (Goodman, 1986b; Tabachnick, Popkewitz, & Zeichner, 1979-80).

Each of these arguments suggests that the problem with student teaching, whether actively or by default, is its conservative effect and its tendency to perpetuate existing instructional and institutional arrangements. When the problem of student teaching is perceived in this way, the goal of teacher educators is to help student teachers develop stronger, more critical perspectives that confront issues of race, class, power, labor, and gender and call into question the social and political implications of standard policy and practice. What makes this possible is the high degree of dissonance that emerges between what student teachers typically observe and practice in traditional schools, on the one hand, and their developing critical perspectives about the social, political, historical, and economic issues of schooling and instruction, on the other.

Although there are far fewer programs based on critical dissonance than on consonance (Feiman-Nemser, 1990), several of the decade's innovations in preservice programs generally and student teaching specifically grow out of school-university relationships based on dissonance. Examples include Washburn University's block program of early field experiences (Goodman, 1988); Knox College's field program, which combines ethnographic study of schooling, critical theory curriculum study, alternative teaching strategies, and a 10-week student teaching seminar (Beyer, 1984); the University of Utah's middle school program, which begins with students doing ethnographies of schools (Gitlin & Teitelbaum, 1983) and features horizontal supervision, a strategy that fosters the individual student's growth (Gitlin, 1981); and the University of Wisconsin-Madison's elementary education program, which teaches students critical inquiry and reflection (Zeichner & Liston, 1987).

In the Wisconsin program, for example, the goal is

for students to become reflective teachers who question and assess the origins, purposes, and consequences of schooling and work for more democratic participation in the governance of educational institutions (Zeichner & Liston, 1987). In addition to their experiences observing across classrooms and attending seminars during the student teaching semester, students in the program keep critical journals, conduct projects based on the framework for action research developed by Kemmis and McTaggart (1982), and write ethnographies and curriculum analysis projects from a critical theory perspective. As the Wisconsin studies show, a difficulty of these programs is that critical perspectives learned at the university are not necessarily used to critique student teaching experiences, particularly in the interactions of students and their university supervisors (Zeichner & Liston, 1987; Zeichner, Liston, Mahlios, & Gomez, 1988).

Programs that aim to create critical dissonance are intended to be transformative, to overcome what Katz (1974) has called the "excessive realism" of student teachers by enabling them to develop the analytical skills to critique and reinvent their own perspectives (p. 59). These are essential goals, particularly in light of demands for teachers who think critically and help students think critically as well. However, a number of implicit messages in these programs, about the power and knowledge of school-based teachers relative to those of university-based teacher educators and researchers, when taken together, are problematic in some ways: (a) The way to link theory and practice is to bring a critical perspective to bear upon the institutional and instructional arrangements of schooling; (b) those outside of the institutions of schooling are the agents who have developed these perspectives and thus can liberalize and reform those inside; (c) the wisdom of practice associated with many teachers' views of teaching and curriculum is conservative with respect to issues of class, race, and gender and needs to be gotten around, exposed, or changed; (d) the language and conceptual frameworks useful for describing and critiquing teachers' work and work lives need not be familiar to teachers or articulated in their own voices.

Together, these messages suggest that the radical

critique prompted by dissonance, which argues abstractly in favor of the knowledge, voices, and power of teachers, may in reality set up many cooperating teachers to be exposed in university courses and may convey the message that many teachers' lived experiences are unenlightened and even unimportant. Efforts to connect theory and practice through critical dissonance may thus contribute to the irreconcilability of the two, to what Feiman-Nemser and Buchmann (1985) call the "two worlds pitfall" of separation of the worlds of practice/school and theory/university.

The assumptions underlying programs based on critical dissonance differ from those in programs based on consonance in many fundamental respects. Like programs based on consonance, however, those based on dissonance also reflect the hegemony of university-based knowledge, expertise, and language for teaching. Although their proponents argue for the construction of an informed "counter-hegemony" within a "language of possibility" (Giroux & MacLaren, 1987, p. 272), programs based on dissonance may convey intimidatingly mixed messages about the potential of most teachers to develop their own school-based critiques of the knowledge base for teaching and to function as active agents in transforming the educational system.

Collaborative Resonance

A third approach to reinventing student teaching is to link what students learn about teaching from their field-based school experiences with what they learn from their university experiences through mutually-constructed learning communities. Appropriating a term used to describe the increase of intensity among echoing sounds, I refer to this school-university relationship as collaborative resonance or intensification based on the co-labor of learning communities.

Underlying innovative programs based on collaborative resonance is the assumption that conjoined efforts to prepare new teachers create learning opportunities that are both different from and richer than the opportunities either the school or the university can provide alone. In these programs, the problem with student teaching is addressed in terms of its failure to provide student teachers with the skills needed to critique standard procedures and to

link theory with practice as well as the resources needed to learn from and reform teaching throughout their careers. In this conception, the goal of teacher educators is more than teaching students how to teach. It is teaching them how to continue learning in diverse school contexts by prolonging and intensifying the influences of university and school experiences, both of which are viewed as potentially liberalizing.

Programs based on collaborative resonance and critical dissonance share the view that the formal aspects of preservice preparation are largely impotent to alter students' perspectives (Zeichner et al., 1987), whereas the less formal, experiential aspects of student teaching are potentially more powerful (Feiman Nemser, 1983). Both recognize that an important part of what happens during student teaching is occupational socialization (Corbett, 1980) or learning the culture of the profession (Evertson, 1990; Little, 1987), including how to behave, talk, and think like experienced members. Both recognize the difficulty of field experiences where the culture does not support ongoing learning and mentor teachers are not actively involved in professional growth and school reform (Clift, Veal, Johnson, & Holland, 1990; Evertson, 1990). Consequently, both aim to interrupt the traditional pattern of socialization; but unlike programs designed to provoke critical dissonance, programs based on collaborative resonance simultaneously aim to capitalize on the potency of teaching culture to alter students' perspectives by creating or tapping into contexts that support student teachers' ongoing learning in the company of experienced teachers who are actively engaged in efforts to reform, research, or transform teaching (Evertson, 1990; Richardson-Koehler, 1988).

Although there are powerful norms in most schools against collegiality (Little, 1987; Pellegrin, 1976) and in favor of the notion that one learns to teach through trial-and-error experience rather than observation and analysis (Richardson-Koehler, 1988), programs based on resonance seek to develop felicitous contexts for students within a broader professional culture that supports teachers' learning. What makes this possible is the co-labor of school-based teachers, university-based educators, and student teachers.

A growing number of preservice programs are designed to support the collaborative efforts of school and university in helping students learn from teaching. Examples include many of the professional development school initiatives, such as the Rochester City Schools/University of Rochester preservice project, where cooperating teachers participate in school-site planning teams, teacher institutes, and teacher research (Rochester City Schools/University of Rochester Ford Foundation Report 1988-89); the University of Pennsylvania's Network of New and Experienced Urban Teachers (Larkin, 1990; University of Pennsylvania Annual FIPSE Report, 1990), which places students with teachers who are participants in school-university partnerships; the University of Houston's RITE program, where student teachers are placed in school cultures that encourage professional learning and action research (Clift et al., 1990); the University of Arizona's Cooperating Teacher Project, in which mentors construct cases of practice to structure mentor-novice conversations about teaching (Carter, 1988); and the University of Pennsylvania's Project START, described in more detail below, where students and mentors meet regularly as teacher research teams (Cochran-Smith, 1989; in press).

Like student teaching innovations based on critical dissonance, student teaching based on collaborative resonance is intended to be transformative, to help participants develop new understandings of their work and of the possibilities of an educational system less restricted by conventional structures and assumptions. But unlike programs based on critical dissonance, in programs based on collaborative resonance, student teachers, cooperating teachers, and teacher educators alike are involved in efforts to learn from, interpret, and ultimately alter the day-to-day life of schools by critiquing the cultures of teaching and schooling, researching their own practices, articulating their own expertise, and calling into question the policies and language of schooling that are taken for granted.

Differing in important ways from those in programs based on either consonance or critical dissonance, the messages embedded in programs based on collaborative resonance include the following: (a) The way to link theory and practice is through a

process of self-critical and systematic inquiry about teaching, learning, and schooling (Cochran-Smith & Lytle, 1990); (b) inquiry of this kind occurs within a culture of collaboration wherein novices, veterans, and teacher educators alike are continually learning to teach and research their own teaching; (c) power is shared, and knowledge about teaching is fluid and socially constructed; (d) the wisdom, language, critiques, and theoretical frameworks of school-based teachers are as essential to a knowledge base for teaching as are those of university-based teacher educators and researchers; (e) in the end, the power to reinvent teaching and schooling is located in neither the university nor the school, but in the collaborative work of the two.

Preservice programs based on collaborative resonance cannot provide solutions to all the problems of student teaching. It is difficult, for example, to design fieldwork experiences so there are adequate time and incentives for students, cooperating teachers, and teacher educators to work jointly to reflect critically on their work. Even when it is possible to provide supportive organizational structures, they alone do not guarantee critical reflection or the genuine co-labor of an inquiring community (Cochran-Smith & Lytle, in press-a; Whitford, Schlechty, & Shelor, 1987). Further, in every school-university partnership designed to nurture co-labor, there is a tension between the necessity for critique and the commitment to collaboration, a tension that can weaken the critical analyses participants are willing to share about both K-12 and higher educational systems.

Perhaps the greatest difficulty is recruiting experienced teachers who have had opportunities to use generative and collaborative strategies to construct and reconstruct their knowledge about teaching and to participate in thoughtful reading and inquiry about their work. It is well documented that the educational system has not generally supported intellectual opportunities for teachers (Goodlad, 1984; Lieberman & Miller, 1984), provided the social and organizational contexts within which these might occur (Cochran-Smith & Lytle, in press-a), or emphasized the role of teachers as agents for change in their schools (Goodlad, 1990). Nevertheless, the growing movement to professionalize teaching indicates that teachers are increasingly seeking opportunities for

intellectual growth and ongoing professional development and that teachers and administrators are designing innovative structures to support teachers' participation in decisions about curriculum, instruction, and assessment. An especially rich avenue is the participation of experienced teachers in programs that foster concurrent preservice and inservice teacher development (Holmes Group, 1990; Lanier, 1990). This may well mean that now is a particularly propitious moment to invite experienced teachers to participate more actively in the education of prospective teachers through collaborative inquiry.

Despite some difficulties, programs based on collaborative resonance have the potential to provide students with unique opportunities to learn from teaching and to become career-long learners and reformers. To illustrate, in the remainder of this article I describe the structures and effects of Project START, a program built on collaborative resonance and designed to foster students' and teachers' intellectual growth and commitment to reform.

Inviting Students into a Community of Learners

Project START (Student Teachers as Researching Teachers), a fifth-year preservice program in elementary education at the University of Pennsylvania, was conceived 4 years ago by Philadelphia-area teachers and teacher educators at the University of Pennsylvania to provide intensive, year-long student

teaching experiences and closer links between the university and schools. Project designers built on longstanding traditions of theory- and research-based methods and foundations courses and a "laboratory" view of the practical work in teacher education that emphasizes the intellectual strategies of teachers in contrast with an "apprenticeship" view that has the more immediate goal of training students to perform as efficient workers in the classroom (Dewey, 1904).

The goal of START designers was to invent new social and organizational structures to offer students opportunities to learn to think like teachers and reformers in the company of experienced school-based and university-based professionals. Toward this end, cohorts of 25-30 students progress through the 12-month program together, participating in study groups, seminars, courses, teacher-researcher teams, and the larger Philadelphia/University of Pennsylvania community of teachers and teacher educators. Each student simultaneously completes course work and a year of student teaching with the same teacher (the first 5 months teaching 2 days per week and the next 3 months teaching 5 days per week). The major aim of the program is to invite student teachers into a community of school-based and university-based learners and, essentially, a way of life as teachers by emphasizing reform, research, and renewal. Figure 1 summarizes the major strategies and structural arrangements of the program.

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- 12-month, post-baccalaureate preservice program for liberal arts graduates
 - student cohort progresses through the program together
 - teacher/teacher educator cohort remains relatively stable over time
 - intensive course work (over three semesters):
alternative curriculum and methods; social, psychological, and pedagogical foundations
 - intensive fieldwork (over two semesters):
student teaching in the same class, Sept.-May; students begin on first teacher-day of school year
 - placements:
cooperating teachers selected for their involvement in reform efforts and their commitment to collaboration
subcohorts of student teachers placed with small groups of cooperating teachers at each school site
 - community of learners/teacher researchers:
common readings, collaborative journals, essays, studies, oral inquiries
publications/presentations of work, weekly school-site, teacher-researcher meetings monthly; university-site
teaching and learning seminars
 - redefinition of choices:
supervisors/director meet two times a month to research their practice
teachers/teacher educators meet three times a year to assess plan

Figure 1. Project START strategies and structural arrangements.

START researchers and participants are in the process of collecting and analyzing data to document the developmental course, kinds of learning, and eventual consequences of the curriculum through a 10-year, 2-part study. The first part is a case study of the progress of one cohort of student teachers through the preservice program and into the first year of teaching; it explores students' opportunities to learn to be teachers and reformers within the social and organizational contexts of the program. The second part is a longitudinal study that focuses on the intellectual lives and professional careers of a smaller group of the same student teachers by following them through the first 5-7 early career years of teaching, a period during which new teachers redefine their knowledge of teaching and make major career decisions (Murnane, 1987).

The discussion in the remainder of this article draws on program literature, preliminary analyses, and two completed examinations of case study data sets—transcriptions of group meeting conversations within and across school sites (Cochran-Smith, 1989, 1990, in press)—as well as a collection of essays, studies, and commentaries by teacher researchers analyzing their own learning experiences as student teachers, cooperating teachers, and supervisors in Project START (Barr, Colgan-Davis, & Larson, 1990; Brody et al., in press; Carter et al., 1989; Crouse, 1990; Gutkin, 1990; Miller, 1990; Ritchie, 1990).

Reform

In Project START, teachers are regarded as decision makers and collaborators who have a responsibility to take a stand as both educators and activists. This does not assume that teachers alone have the power or the responsibility to reform education by teaching better but rather assumes, as critical historians and educators have demonstrated, that teaching and even student teaching are fundamentally political activities in which every teacher plays a part by accepting or questioning the educational status quo (Ginsburg, 1988; Popkewitz, 1987; Willis, 1978). One aim of the program, then, is to help students learn to "teach against the grain" (Cochran-Smith, in press)—that is, to become effective teachers as well as reformers who call into question and

work to alter much of what is taken for granted in teaching and schooling.

Toward this end, subcohorts of three to four student teachers are placed with small groups of cooperating teachers at Philadelphia area elementary schools. Although the culture of teaching at some of the school sites is traditional and largely technical, most START cooperating teachers are members of cultures or subcultures in which teachers work as agents for change through their involvement in curricular redesign, teacher research and publication, progressive education societies, grass-roots parent-teacher community groups, teacher collaboratives, and other teaching and school reform efforts. In this sense, START's placement strategy is slightly different from current initiatives to place students in professional development schools where university-school efforts are underway to create cultures of professional learning and leadership (Lanier, 1990). Although both strategies acknowledge that students need to work in teaching cultures that support their ongoing learning, START accomplishes this by tapping into and then helping to build and sustain reform, collaboration, and self-critical inquiry that is largely teacher-initiated.

Two interesting lessons about preparing teachers to be reformers have begun to emerge from preliminary analyses. First, analysis of 61 weekly school-site meetings at four different sites over a year revealed that student teachers who worked and talked with mentors involved in reform and research had unique opportunities to learn both how to learn from teaching and the ways of knowing and inquiring about teaching that are involved in reform (Cochran-Smith, 1990). Analytic induction (Erickson, 1986) and thematic analysis (Spradley, 1980) of more than 60 hours of conversations were used to explore the interrelationships of topic, intellectual work, and the culture of the school. Data demonstrated that large-scale school restructuring efforts were deeply entangled with the biographies of individual educators, the decisions they made and permitted others to make about the children in their classrooms, and the discussions that occurred (or failed to occur) at their schools. When students talked with experienced teachers at regular school-site meetings, they participated in the intellectual work of rethinking the lan-

guage of teaching, posing problems of practice, constructing and critiquing curriculum, and confronting the dilemmas of teaching and schooling embedded in the culture and the history of their individual schools (Cochran-Smith, 1990, in press).

An intriguing paradox about the process of learning to be both educator and activist is emerging from this early analysis: It is in the concreteness of work in particular classrooms and in the boundedness of discussions of highly specific instances of practice that student teachers have opportunities to confront the abstract and unbounded complexity of teaching. This may mean that the only way for beginners to learn to be both teachers and reformers is to work over time in the company of experienced teachers who are committed to collaboration and reform in their own classrooms, schools, and communities.

Second, university supervisors and course instructors have for several years collected anecdotal evidence indicating that over time START student teachers think of themselves as researchers and agents for change in their schools. We are in the process of empirically exploring this impact of the program by analyzing interviews and essays collected during the preservice year and the first year of teaching for a cohort of 20 former students. We are seeking confirming and disconfirming evidence of former students' efforts, for example, to construct alternative curricula, initiate cross-curriculum projects, use alternative means of assessing children's learning, raise questions about and work to alter policies in their schools and school districts, document and write about their own work, participate in teacher collaboratives, and publish and present their work in local and larger forums. It is well known that these sorts of activities are not the general rule for student teachers or for recent graduates of student teaching programs. Students often leave student teaching with more conservative and custodial attitudes (Hoy & Rees, 1977) and less confidence in the general efficacy of teaching (Hoy & Woolfolk, 1990) than they had when they began. In addition, very few teacher education students (or teacher educators for that matter) talk about teachers as agents for change when they are questioned about the roles of teachers in schools (Goodlad, 1990).

Research

In addition to its emphasis on teacher as reformer, the START curriculum also promotes a view of teacher as researcher. Teacher research, a part of the growing teacher professionalization movement (Cazden, Diamondstone, & Naso, 1989; Goswami & Stillman, 1987), has been defined as "systematic intentional inquiry" through which teachers reflect on, ask questions about, and develop understanding of their work lives as teachers (Cochran-Smith & Lytle, 1990). Teacher research enfranchises teachers (and student teachers) as contributors to the knowledge about teaching and learning and emphasizes that classroom teachers not only apply other people's ideas by transforming knowledge into cases (Shulman, 1986) but also generate new understandings from their unique perspectives inside classrooms by transforming cases into knowledge (Cochran-Smith, 1989).

The START curriculum gives student teachers opportunities to engage in four kinds of teacher research—oral inquiry processes, essays, journals, and classroom studies (Lytle & Cochran-Smith, 1990)—through course assignments, school- and university-site activities, in-house and regional publications and professional forums, and the larger professional community. One of the key structures is the teacher-researcher team meeting, a school-site weekly discussion of each subcohort of student teachers, cooperating teachers, and university supervisor. In these meetings, which feature classroom and school inquiries on topics selected by the individual group, participants share observations, raise questions, and suggest different ways of looking at and thinking about the social life of classrooms. Inquiry strategies include critical discussion of common readings, sharing data in the forms of journal entries, children's work, anecdotal records, excerpts from essays, descriptive reviews of individual children (Carini, 1986), and cross-grade observations.

In a second study, 17 teacher-researcher meetings at one school site, ranging in length from 45 to 60 minutes over a year, were analyzed according to topics and modes of discourse as well as the organizational, systemic, and role structures that supported the discourse (Cochran-Smith, 1989). The analysis indicated that over time the weekly school-site meet-

ings fostered a supervisory discourse of “interpretive inquiry” or discussion that centered on understanding and articulating the daily work of teaching. Part of interpretive inquiry was “giving reason to cases,” a process of jointly constructing theoretical explanations for classroom phenomena during group conversation by building on one another’s questions, examples, and arguments. In school-site meetings, student teachers had the chance to be both observers and participants in this process. They had a window on the mind of experienced teachers who not only applied others’ theories but also generated complex problems and theoretical interpretations grounded in the particulars of classroom life. This discourse is different from the kind of discourse that typically occurs among student teachers and their school and university mentors. Even in preservice programs intended to encourage reflection and critical inquiry, for example, supervisory discourse tends to emphasize teaching methods as opposed to questions of substance (Zeichner & Liston, 1985), and the institutional arrangements of schooling and instructional content are usually taken for granted (Zeichner et al., 1988).

In cooperation and consultation with their cooperating teachers, START student teachers also conduct small-scale studies such as designing and teaching a literature unit to explore children’s comprehension of factual and fictional reading materials, comparing question and response patterns in basal reading and literature-based lessons, and constructing case studies of individual children using descriptive review (Carini, 1986) and biographic literacy (Taylor, 1990) categories. These studies invite students to engage simultaneously in both teaching and research on teaching. They offer students opportunities to construct curriculum, to plan and reflect on teaching strategies, and to raise questions, collect data, and analyze particular aspects of children’s learning and their own teaching (Carter et al., 1989; Crouse, 1990; Miller, 1990; Ritchie, 1990). With their mentors as partners, student teachers also write in double-entry dialogue journals, and all participants in START write essays, which give form and voice to their emerging theories of practice and provide opportunities to connect diverse classroom incidents (Brody et al., in press).

Renewal

Bolin (1987) argued that professional development is rightly regarded as an internal renewal process wherein teachers find ways to derive meaning and satisfaction from the work of teaching rather than an external training process wherein education experts find ways to improve or fix teachers. All START participants—student teachers, cooperating teachers, university supervisors, and course instructors—are invited to be part of the search for meaning and for the questions that matter in the intellectual lives of teachers. In Project START, this is a collaborative not a lonely search. START’s social and organizational contexts sustain and support renewal through participation in communities that accept the vulnerability of both beginners and veterans and regard each teacher’s questions as resources for the learning of other teachers (Barr et al., 1990; Cochran-Smith & Lytle, 1990b). Working with experienced teachers who inquire about their own work, call policies and procedures into question, and seek out ways to meet regularly with their colleagues provides student teachers with powerful role models for renewal.

One of the key structures that support renewal is the university-site monthly seminar wherein teacher-researcher teams from all school sites meet together to reflect, write, talk, and hear about the work of teaching. Drawing on a variety of structures for inquiry, members of the community consider teaching and learning from cross-grade, cross-school, and cross-school system perspectives. In addition, the project’s three publications—a newsletter three times a year, a collection of autobiographical essays by all members, and a booklet of writings on teaching and learning to teach—help members understand one another’s professional perspectives and work lives.

Analysis of the long-term consequences of START is in the early stages. Even at this point, however, there are indications that most graduates come to regard teaching as a process that requires renewal: They seek teaching positions where they will have colleagues and collaborators. They participate in regional and national communities of teacher researchers. They write about their work for themselves and for publication, and they join or form their own teacher groups (Brody et al., in press;

Gutkin, 1990; Turner et al., 1990). Given the widespread isolation of teachers and the culture of non-collegiality that begins during student teaching (Goodlad, 1990; Su, 1990), these seem to be promising signs.

Conclusion

Research during the last decade has demonstrated that the formal aspects of preservice preparation do little to alter students' outlooks and practices, whereas the less formal, experiential aspects of student teaching are potentially significant influences (Feiman-Nemser, 1983; Zeichner et al., 1987). The images of knowledge, power, and language in teaching that are implicit in the pedagogy of preservice programs may be among the most potent informal influences on prospective teachers. That is, the ways that teacher educators work with experienced teachers, the ways they regard or disregard teachers' knowledge and expertise, and the ways they respect or dismiss the depth and vigor of teachers' commitments send compelling, albeit not necessarily obvious, messages to their students about their own chances and challenges as teachers. Thus, embedded in preservice pedagogy itself—not simply what teacher educators say to their students about the kinds of teachers they should become, but what they show them about the power and knowledge of practicing teachers—is a powerful subtext about teaching and about the boundaries of teacher agency in schools and larger educational systems.

Reinvented student teaching programs that aim for collaborative resonance are founded on the recognition that many people have developed extensive knowledge and incisive critiques of teaching based on years of professional work inside schools. When it comes to educating prospective teachers and ultimately reforming the social life of classrooms, it is assumed that these emic perspectives are different from, but as important as, the etic knowledge and critiques developed by people who have devoted their professional lives to work about, but outside of, schools. Preservice programs based on resonance attempt to bring together people with emic and etic perspectives on teaching and schooling—not in order to homogenize ideas or create consensus in language and thought, but to intensify through co-labor the

opportunities student teachers have to learn to teach.

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