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AN ASSESSMENT FRAMEWORK FOR PROFESSIONAL DEVELOPMENT SCHOOLS

GOING BEYOND THE LEAP OF FAITH

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After reviewing the challenges of careful documentation of professional development school (PDS) impacts, the author proposes an integrated conceptual map that uses multiple measures and sources of data on PDS impacts. The author argues that each of the several impacts expected in a PDS (increased learning for students, preservice educators, and experienced educators) should be documented using a backward mapping process to reflect changes in the learning experience for each of these target groups (e.g., changes in classroom and field placement experiences for student teachers), as well as organizational and cultural changes (different beliefs about teaching and learning, models, etc.) that are taking place to support them. The article goes on to describe how this approach is currently being used to assess impacts in a PDS partnership in Massachusetts.

The current enthusiasm with which schools and teacher preparation institutions are embracing professional development school (PDS) partnerships is more a leap of faith than an educational reform based on solid and systematic evidence that PDSs produce better outcomes. Although many of those involved in PDSs feel strongly that their partnerships are improving the learning of prospective and experienced teachers at the K-12 level, teacher educators, and K-12 students, there is rarely any credible evidence to document those impacts. As the movement grows and receives increasing national recognition as a key to the future of teacher preparation and school improvement (National Commission on Teaching and America's Future, 1996) and as the costs of PDSs become better understood (Clark, 1997), more stakeholders become involved, and the need for documentation of impacts becomes more urgent. Those inside of PDSs also need data on the impacts of this educational reform to understand better what PDSs do and to justify sustaining their own high levels of personal effort.

In the first and second sections of this article, I look at the challenges inherent in thinking about assessing PDS impacts and provide a brief overview of the examples of assessments that currently exist in the literature. Next, I outline a conceptual framework for assessing the impacts of PDSs and explain how it may help organize more systematic thinking about PDS evaluation. The fourth and final section moves from theory to practice, drawing on an example from a multisite case study to demonstrate how a consortium of PDS partnerships in Massachusetts is using the conceptual framework and impact evaluation process I propose here.

DIFFICULTIES IN DOCUMENTATION OF PDS IMPACTS

Producing careful documentation and assessment of the impacts of PDS partnerships is challenging for several reasons: The definition of PDSs is not universally agreed on, so any evaluation of a particular PDS might occur in a setting that others would not consider a PDS.

Although current efforts to establish minimum threshold standards for PDSs by the PDS Standards Project of the National Council for Accreditation of Teacher Education (Levine, 1997) may alleviate this problem in the long run, none of these standards has yet been applied to existing evaluation studies. Furthermore, PDSs are moving targets. That is, they are often changing and evolving so fast that no evaluation could capture what they are doing.

Another challenge of documenting the impact of PDSs concerns timing. It may be too soon to measure the impacts of PDS partnerships, which represent long-term systemic changes that should not be measured until all changes are in place and until these changes have had an adequate chance to make a difference. Furthermore, PDS relationships are fragile and may easily be damaged by a premature evaluation or one that is not sensitive to the need to nurture the relationship. It is difficult to establish comparison or control groups in PDS evaluations because those who participate are self-selected. Because of the self-selection of individuals and programs or other confounding factors, students in PDS programs may be different from those in more traditional, campus-based programs. Sirotnik (1988) makes a cogent case for the difficulties of applying social science comparative methodologies to PDSs.

In addition, there are different perceptions of what outcomes matter in teaching, teacher education, and student learning, as well as how to measure those outcomes, especially among the different stakeholders involved in the educational process. Clark (1995) notes the challenges facing PDSs that have to be accountable to a variety of stakeholders, each with very different notions of what matters and how it should be measured. Furthermore, it is particularly difficult to measure certain outcomes—for instance, to get consensus on how to measure good teaching as an outcome for preservice teachers or increased student learning without relying solely on standardized test scores.

Finally, participants in PDSs are often too busy making the partnership happen to document their work; yet, reliance on outside evaluators, who are often brought in significantly

after the start-up of the PDS, may lead to a mismatch between the goals of the program and the direction of the evaluation. Furthermore, the use of external evaluators and the lack of clear terminology and scope defining the evaluation often render external evaluations less useful than they might be. If there are minimal or non-existent feedback loops from the evaluation back to the participants in the PDS, there is little opportunity to have PDS participants either inform the evaluation study or learn much from it (Hinkle, 1997).

THE LITERATURE ON PDS IMPACTS

Reviews of the literature on PDSs compiled during the last several years demonstrate that the problems associated with evaluating PDS partnerships have, in fact, limited the available knowledge base. For example, Book (1996) describes the paucity of high-quality evaluations of partnerships, explaining that many of the studies are limited by unclear descriptions of the methods and sometimes confounded by difficulties related to publishing what may be seen as judgmental articles or reports about ongoing processes and relationships. With most of the published studies of PDSs focusing on start-up stories, roles and relationship changes, and teacher attitudes, Book notes a need for research on the long-term impacts of PDS restructuring on student learning. Zeichner and Miller (1997) share a similar concern about the overall state of research on PDSs, concluding their review of changes in teacher education brought about by PDS partnerships by noting that

despite all the evidence available about more time spent in schools, more collaboration, greater access to university supervisors, and so on, there is very little information reported about how the quality of student teacher learning has been affected by the changes. (p. 27)

In my own review of the PDS literature (Teitel, 1998), I found that most of the early literature listed in ERIC as “PDS evaluations” comprises attitude surveys about expectations or satisfaction with the PDS, usually targeted at student teachers. For example, Kroll, Boyer, and Hauben (1997) used survey responses from stu-

dent teachers and experienced teachers to document the changes in the student teaching experience. Telese (1996) tracked changes in student teachers' philosophical attitudes toward teaching by comparing their responses on survey questions before and after their field experience. Cifuentes, Davis, and Clarke (1996) used a similar methodology to compare preservice teachers' views on how much to use lecture as part of teaching, before and after a course designed to have them consider other approaches.

Those studies that try to establish comparison groups generally do so for analysis of self-report survey data. For example, the AT&T Teachers for Tomorrow Program (*Growing Young Minds*, 1996) used as a comparison group non-Teachers for Tomorrow beginning teachers and had them complete the same new teacher questionnaire as Teachers for Tomorrow teachers to assess their preparedness. Along the same lines, to establish comparison groups, Long (1995) used "regular" students (non-PDS), as did Hecht, Bland, Schoon, & Boschert (1996), who used a 150-item survey as their key source of data. Yet, self-selection bias or other confounding variables like the comparison of those who complete yearlong internships in the PDS with those who have traditional (shorter) student teaching experiences may lead to differences in outcomes or self-assessments that make meaningful comparisons difficult. Often, these differences are glossed over or ignored.

Most of the impact documentation focuses on preservice teachers. The few reports of impacts on experienced teachers' learning and experiences (more often at the K-12 school level than at the college level) include Bullough, Kauchak, Crow, Hobbs, and Stokes (1997), who interviewed 49 teachers and principals from PDSs affiliated with the University of Utah to look at changes in their views of teaching practice and self-reflection. Based on some similar questions, Campbell, Strawderman, and Reavis (1996) combined a Likert-type survey methodology with follow-up interviews by outside evaluators to look at impacts on experienced teachers' views of self-efficacy and empowerment and perceptions of the PDS impacts on their schools and students.

There is still relatively little documentation of the impact of PDS partnerships on K-12 students and student learning. Abdal-Haqq (1997) notes in her careful review of PDS reports that information about impacts is usually buried amid other data. Judge, Carriedo, and Johnson (1995) report math scores gains in one urban elementary PDS in Michigan as well as increased persistence rates for ninth graders in another urban high school PDS. Wiseman and Cooner (1996) describe dramatic gains in writing scores on state achievement tests as a result of a "writing buddies" program in the PDS. Sorting out which and how many of these gains are attributable to students' attending a PDS is of course difficult, due to the lack of effective comparison groups. When Valli, Cooper, and Frankes (1997) searched the PDS literature recently for signs that PDSs were helping reduce inequities in society and schools, they looked for data on the achievement of students of color and children born in poverty. Their carefully documented literature review shows little evidence of PDS impacts on any kind of student achievement at all.

Stallings (1991) is one of the few researchers to use multiple measures across an array of impacts to assess the effectiveness of a PDS. Her study of the Learning to Teach Diverse Populations PDS project in Houston, Texas, focused primarily on the changes in classroom behaviors of student teachers and cooperating teachers, as measured by trained raters on a previously validated classroom observation instrument. For comparison purposes, Stallings used a control group made up of comparable student teachers in traditional practicum placements; both groups had observations made at the beginning and end of the semester. In addition, follow-up interviews were done with student teachers. Data were compared for student achievement. Job placement data were augmented by rankings by principals of how graduates were doing as 1st-year teachers. Not only did the data confirm significant improvements in actual classroom teaching (by student teachers and by their cooperating teachers at PDSs), but they also highlighted increased interest in (and follow-up placement in) urban school set-

tings for those student teachers who had worked in PDS partnerships. This was one of the goals of the program. The study also reported high rankings by principals, strong professional growth reported by the cooperating teachers, and gains in student achievement on standardized test scores.

One of the most comprehensive and convincing large-scale studies of the impact of PDSs augments a similar observational method with other test score data in a quasi-experimental model (Houston et al., 1999). Drawing on data from an urban consortium of four universities and three school districts, the study contrasted, on several measures, student teachers from PDSs with those from more traditional preparation programs. It compared test scores of PDS and non-PDS students on the Texas test for new teachers as well as classroom observations, looking at amounts of instructional time on task and a variety of other indicators associated with effective teaching. In addition to higher test scores, researchers found that consortium teachers spent significantly more time responding to student signals, checking student work, encouraging self-management, praising student behavior and performance, and correcting student performance. Houston and his colleagues also made a critical link rarely found in PDS research. Documenting their findings with classroom observations of time on task and with student gains on standardized test scores, they were able to connect these PDS-inspired changes in teacher preparation to improvements in student learning.

Another comprehensive study using multiple measures is currently going on at the Benedum Collaborative, involving the University of West Virginia and schools in four counties. Saab, Steel, and Shive (1997) focus on classroom impacts in the Benedum Collaborative, describing a multipronged approach to data collection, including a teacher survey, teacher interviews, focus group interviews with students, and phone calls with a random sampling of parents. They include samples of student work and parent responses, and they describe how the data are being used to fine-tune the restructuring experience. Webb-Dempsey

(1997) describes, in thoughtful detail, the collaborative process Benedum uses to gather and analyze data in a way that respects the needs and concerns of the participants while retaining a strong focus on getting credible data about impacts on experienced teachers, student teachers and students, and the schools themselves. Benedum draws on interviews with 400 students, surveys of 3,000 students, evaluation data collected by the State Department of Education, and standardized tests. A group of school and college faculty, working together as the Teacher Education Research Group, compared the 21 PDSs with state and county averages for trend-line analysis of attendance, graduation rate (for high schools), and achievement tests. The researchers report no significant differences on the achievement data and slightly more positive attendance and graduation rates (Teacher Education Research Group, 1999).

Two other multisite documentation efforts show promising efforts at well-designed impact assessments. The Colorado Partnership for Educational Renewal is engaged in a complex assessment project involving six universities and 12 school districts. The "empowerment evaluation" approach they are using is consciously designed to assess which impacts are taking place at the local partnership level, as well as at the statewide Colorado Partnership level (Kozleski et al., 1997). With significant financial support from the National Education Association, the Teacher Education Initiative (TEI) has developed a common questionnaire applied across 17 sites. It focuses on how well participants think the nine TEI principles are being implemented and also examines perspectives from preservice teachers, university supervisors, mentor teachers, and administrators on how well the partnership is going and what changes the partnership has brought about in the preparation of future teachers. This study uses a combination of narrative responses from the participating sites, interviews, and survey data (Loving, Wiseman, Cooner, Sterbin, & Seidel, 1997). Now moving into its 5th year, the group is shifting from looking at "data reflecting implementation of the principles" to "creat-

ing and testing multiple data sources for measuring initial impact data" (TEI, 2000).

Even though the studies mentioned above are being thoughtfully and carefully conducted, they could be enhanced by a clearer conceptual framework to help overcome the documentation challenges inherent in PDS impact assessment. As one participant at a recent American Educational Research Association (AERA) discussion of the Colorado initiative (Kozleski et al., 1997) put it, "We basically don't know how changes in the structure [i.e., setting up the PDS] are going to lead to changes in student outcomes." In the pages that follow, I offer a conceptual framework for assessing PDS impacts that may be helpful to researchers and practitioners who are involved in PDSs. The framework is intended to help link inputs and outcomes in a helpful and conceptually logical way.

A CONCEPTUAL FRAMEWORK FOR ASSESSING PDS IMPACTS

The biggest and ultimately the most important questions asked in any kind of research on PDSs has to do with impacts—impacts on student learning; impacts on the preparation of preservice teachers, administrators, and other educators; and impacts on the continuing professional development and learning of all the adults who work in the schools and universities. The AERA participant cited above is basically on target here. As his comment suggests, we generally do not know what connections (if any) exist between the structural change of a PDS and the desired outcomes for student and teacher learning. Writing about the National Network for Educational Renewal partner schools, Kimball, Swap, LaRosa, and Howick (1995) warn,

The means to effective partnership can easily become ends in themselves. For example, the energy for change in schools may become focused only on improving working conditions for teachers, establishing more collaborative decision making structures, or creating more flexible schedules, all of which can be means to the end of the learning but should not be ends in themselves. Administrative practice can change without passing the advantage to the classroom. (p. 24)

Commenting on the impact of other forms of restructuring, Newmann and Wehlage (1995) conceptualize a series of concentric circles with student learning as the target in the center, and they note that student learning is affected only where there are changes in the circles around it, which they label "authentic pedagogy," which is in turn supported by improvements in the school's organizational capacity and its external supports. They note that school restructuring without impacts on pedagogy will not change student learning. Reviewing a range of popular reform/restructuring efforts, Slavin (1996) notes, "These reform proposals ignore a basic truth. Student achievement cannot change unless America's teachers use markedly more effective instruction methods" (p. 4).

My argument here is that PDSs need to be able to show how they create contexts for structural, organizational, and cultural changes that support improved approaches to teaching, learning, and leadership in schools. Furthermore, PDSs need to show that these approaches lead to better outcomes for all three groups involved in PDSs: students, preservice teachers, and experienced educators. A conceptual model that incorporates these outcomes and the changes that support them is presented in Figure 1.

Each column of Figure 1 is explained briefly below, along with suggested sources for the collection of data. In the next section, the categories are explained more fully, using examples from a study currently using this framework to assess impacts of a consortium of partnerships in Massachusetts.

Organizational Innovation: Partnership Development

The organizational changes listed under this heading can be thought of quite broadly. For example, each of the structural entities, school and university, is surrounded by a larger community with its own (sometimes overlapping) set of stakeholders and participants. Also, there are a number of subsections within each organization—such as arts and sciences faculties as

FIGURE 1: Conceptual Framework for Assessment of Professional Development School Impacts

Column			
1	2	3	4
Organizational innovation: partnership development	Adaptations in roles, structure, and culture	Best practice in teaching, learning, and leadership	Desired outcomes: improved learning for:
New relationships involving teacher education programs, schools and school districts, arts and sciences faculties, unions, parents, and communities	Changes in governance, decision making, leadership	Classroom approaches: teaching for understanding, e.g., constructivism	All students
	New uses of time, roles, and rewards; development	Different expectations for teacher professionals	Experienced teachers and other education personnel
	New views of collaborative relationships, expectations	Different approaches to preservice teaching, field work	Preservice teachers and other education personnel

NOTE: The conceptual map is drawn in a linear fashion, with changes brought about by setting up professional development schools on the extreme left, leading to the desired outcomes on the extreme right. In real life, of course, the process is much more recursive. The changes in Column 3 and the changes in Column 2 often go back to having influence on Column 1, and so forth. Impact research cuts across the columns and should inform and connect the different pieces in ways that are useful for both internal and external uses of the findings.

well as teacher education programs in a university or the parents, school board, and district office for a school. PDSs often prompt new relationships to form between these different entities, involving other community groups, agencies, unions, and so forth. Examples of data that could be collected to document organizational changes include minutes of meetings, collaborative agreements, histories, calendars of partnership events, surveys of stakeholders, press clippings, copies of newsletters, and yearly progress reports (Sirotnik, 1988).

Adaptations in Roles, Structure, and Culture

For PDS partnerships to have an impact beyond mere structural rearrangements, there needs to be evidence of other kinds of changes in the culture, the governance structure, the rewards system, the use of time, the human resource policies, and so forth—at both K-12 schools and colleges/universities. This often includes development of new kinds of roles that cross over institutional boundaries, blurring the distinctions between school faculty and college faculty and changing the nature of leadership and decision making in both organizations and cultures. These contribute to the development

of new relationships and constituencies within the broader community as part of this process. Changes like these are necessary but are not sufficient to produce an impact on ultimate learning outcomes. That is, they provide the needed supports for changes in approaches to teaching and learning but do not in and of themselves produce improved student learning. Types of data that would document these changes include job descriptions and evidence of jointly conducted searches for personnel in new or modified jobs at the intersection of the institutions, evidence of boundary-crossing capacities, changes in reward structure (e.g., promotion and tenure language) at both institutions, operating budget, schedules that show how time is used both at the school and at the college, and journal entries or reflections of participants.

Best Practice in Teaching, Learning, and Leadership

Column 3 of Figure 1 represents the next critical link in assessing impacts on preservice teachers, experienced educators, or K-12 students. Any impacts on students, for instance, make sense only if the students are experiencing better teaching and learning experiences in the PDS. Column 3 suggests ways to document the

development of best practice models of teaching and learning and leadership—for children as well as for the initial and continuing professional development of adults. Changes in the belief structure—the philosophy that underlies the teaching, learning, and leadership practices—are as important as the actual changes themselves. These changes could have implications for school organization, for instance, tracking versus detracking policies, as well as for numerous other innovations that may coincide with development of these partnerships, for example, teaching for understanding or use of constructivist approaches. The changes could lead to different roles and relationships for experienced educators (including administrators) at schools and colleges/universities. Leadership roles might be different, with coteaching and research roles being developed in a more collaborative way. In preservice programs, both the field and classroom experiences of preservice teachers might be changing to adopt and model best practice approaches to instruction. Data to be collected include syllabi and course sequencing (for K-12 students as well as preservice teachers), evidence of effective strategies for working with diverse students, professional development opportunities and plans for experienced educators, evidence of the beliefs underlying the practices, and documentation of what experienced teachers do with out-of-classroom time provided by interns.

Desired Learning Outcomes

Findings related to desired learning outcomes are ultimately the most important but make more sense when tied to concerns represented in the first three columns. Data to demonstrate learning outcomes would be most useful if collected in ways that work for the various stakeholders and that are credible for both formative and summative decisions. Data could be collected on all three outcomes (impacts on K-12 students, preservice teachers, and in-service educators). Data ideally would incorporate multiple measures—for example, for one outcome, improved learning for preservice teach-

ers, data might include perspectives of hiring principals, classroom observations of graduating teachers, and student test scores (Stallings, 1991); questionnaires on preservice teacher preparedness drawing on views of preservice teachers, school-based mentors, and college faculty (Loving et al., 1997); and archival data on graduates—where they applied to work, where they were hired, and what follow-up assessments of their preparedness and teaching skill over time show.

USE OF THE CONCEPTUAL FRAMEWORK

The framework I have proposed can help organize and conceptualize a broad range of impact documentation studies. It can also be used to identify potential gaps within a large study of PDSs and their impacts or can help put smaller studies in context. As a discussant at a recent AERA session, I used an earlier version of this model to analyze the results of the large multisite study of the National Educational Association's TEI. Among the dozen or so findings reported by Loving et al. (1997), I identified 10 structural/organizational/cultural changes (Column 2); 5 findings that reported changes in approaches to teaching, learning, and leadership (Column 3); and only 1 that addressed impacts on learning (Column 4). The use of the model highlighted the stage of the research and suggested to the researchers where else they might look for data. The conceptual framework also provides a preponderance of evidence approach in which the range of evidence displayed suggests a plausible logical connection between process and product. Put another way, the changes being instituted by the PDS are impacting teaching and learning processes in ways that are consistent with research on best practice and show the potential for improved results for students over the long term.¹

Furthermore, the conceptual model provides a common framework to link smaller studies—which might be done at individual partnership sites—to one another. My colleagues in Massachusetts and I are using this model, for instance, to promote cross-site linkages and integration

in developing the big picture of the impacts that several PDSs may be having at the local level. This effort is described in the next section.

What follows is an example of the conceptual model in use, as it has been guiding the impact documentation of a multiyear, multisite partnership model in Massachusetts. The Consortium for Initial Teacher Preparation Development uses federal (Eisenhower) monies and involves the Massachusetts State Department of Education, several statewide professional development organizations, and four school-college partnerships in an effort to develop and nurture innovative approaches to teacher education. The consortium has three goals: developing model teacher preparation programs, influencing state policy on teacher preparation based on the field-tested models (and aligning them with other reform initiatives), and supporting a network to improve teacher professional development. Three of the four school-college partnerships in the consortium have developed PDSs as their model teacher preparation programs, and a key element of the initiative has been documenting the schools' impacts as a way to think about influencing policy.

Impact data were collected at each site by a local partnership team of researchers. However, the studies were linked by the use of the common conceptual framework outlined above. This enabled cross-site discussion—even coding of each other's data—and overall significantly enriched the experience and the quality of data collected. Although data were collected at all the sites, only one partnership—the Clark-Worcester Partnership—is described in this article. The example is used to illustrate how the four-column conceptual model has been helpful in collecting and analyzing data. For details on the other three partnerships (between Lesley College and the Dever School in Boston, the University of Massachusetts-Amherst and two schools in Springfield, and Bridgewater State College and two districts), see Teitel (1997). The following section on the Clark-Worcester Public Schools Partnership is based on a case study by Tom Del Prete and Maureen Reddy (1999), edited and slightly augmented for this article.

ORGANIZATIONAL INNOVATION AND PARTNERSHIP DEVELOPMENT

To look at which partnership agreements led to the Clark-Worcester Public Schools Partnership PDSs, participants examined their histories and how they shaped the current partnerships, how their partnerships got started, and who, in both the school and college community, was involved. To answer these questions, participants drew on agreements, minutes of meetings, chronologies of events, and so on. At the Clark-Worcester Public Schools Partnership, considerable groundwork was laid through several years of Worcester Public School teachers' receiving fellowships to study at Clark and engage in professional development activities in their schools, particularly in the area of teacher research. All of the current PDSs have been affiliated with Clark through the Jacob Hiatt Center for Urban Education since 1990-1991. They were designated PDSs in 1994. The partnership attained a new level of collaboration when the doors of a small neighborhood PDS (Grades 7-12) opened for the first time in 1997. The University Park Campus School is a joint initiative of the school district and university and promises a tuition-free university education for all students who qualify. At least two of the schools benefited from grant programs organized through the Hiatt Center prior to becoming PDSs.

ADAPTATIONS IN ROLES, STRUCTURES, AND CULTURE

Involvement in partnerships has led to new attitudes, roles, and opportunities for teachers, administrators, and students, as well as structural and organizational changes. In Worcester, the PDS relationship exists with the blessing of the school superintendent and Clark University administrators. Each school has a full-time PDS coordinator (a teacher released from classroom teaching for a year) who has played a strong leadership role in developing and implementing the consortium and related initiatives. The Clark-Worcester PDS collaborative functions in

an atmosphere of reciprocity and mutual respect.

The partnership is integrated into the mainstream of both partnering institutions and represents a widespread systemic change with strong commitment of resources and support from both partners. The release from classroom teaching duties of the PDS coordinators is a powerful symbolic and practical support by district leadership of Worcester. At Clark, there is also a high level of commitment to the PDS, which fits in with the larger strategic vision of the college. Clark created the position of PDS coordinator as part of its effort to reshape teacher education. The program is supported with generous tuition waivers as well. University counterparts to the school-based PDS coordinators have been established as nontenured clinical faculty. The majority of faculty and administrative roles in the Hiatt Center and education department are defined in relation to the collaborative's work. The involvement of a range of faculty in the Ways of Knowing courses (courses designed to teach how thinkers and scholars understand their fields) and related curriculum teams have also been key in spreading the ideas generated in the PDS to arts and science faculty as well as teacher educators. These courses are cross-listed in education and one of the university's interdisciplinary liberal arts majors. One arts and sciences faculty member has a joint appointment in physics and education. In addition to teaching in a Ways of Knowing course, he has a cross-listed course in physics modeling investigative learning and knowledge construction, a model the university aims to replicate in other disciplines. Other arts and sciences faculty participate on curriculum study teams with education faculty members and K-12 teachers and co-instruct summer institutes for other teachers and master's students.

The partnership with Worcester Public Schools is imbedded in the teacher education program symbolically as well as practically: Clark's teacher education brochure describes the program as "a program in collaboration with the Worcester Public Schools," and the collaborative's logo (showing Clark and WPS) adorns all of its publications.

These changes in roles have been mirrored and supported by changes in governance. In Clark-Worcester, there is a steering committee that has been carefully assembled with high-level personnel including principals, people from the department, and people from the central office to make policy decisions. There is a second tier of people who are actually involved in much of the day-to-day work, including some of the decision making. This second tier comprises one or two of the college faculty and staff and the core of PDS coordinators who are on full-time classroom releases. In addition, each PDS has a committee composed of teachers, the principal, and university faculty—one of these teams meets regularly and frequently; the others meet less frequently or as needed. In practice, the site principal and the PDS coordinator are key figures in deciding on and shaping school-based activity. The full-time PDS coordinators in each school play strong roles as partners in developing and implementing the consortium and related initiatives and collaborative functions in an atmosphere of reciprocity and mutual respect.

The activities that have changed teacher education and professional development (described more fully in the next section under Best Practice in Teaching, Learning, and Leadership) have contributed to and been supported by a culture of inquiry and mutual exploration involving preservice, in-service, and college teachers. The rounds model, based on the medical practice of observing and conferencing with experienced practitioners in action, has dramatically opened up the practice of teaching to public discussion. Rounds provide novice and experienced teachers the chance to explain a planned lesson to the visiting group, have them observe the lesson, and then discuss it with them. In addition, in each subject area, groups of interns, experienced teachers, and college faculty from all levels meet to discuss aspects of subject area knowledge and ways to teach it in K-16. These Ways of Knowing seminars culminate in a summer institute for other Worcester teachers that is cotaught by college and school faculty. These initiatives, and others described below, have grown up in and reinforced a cul-

ture that is increasingly hospitable to joint inquiry, collaborations between college and school faculties, and making teaching public.

BEST PRACTICE IN TEACHING, LEARNING, AND LEADERSHIP

At the Clark–Worcester Public Schools Partnership, there are many changes in the field-based portions of preservice teacher education. As mentioned above, these include rounds during which preservice teachers (from initial and standard certification programs) get to visit a class in clusters with an experienced teacher and/or university faculty member and discuss, before and after, his or her particular lesson. The preservice teachers themselves learn to host rounds as part of the collaborative's effort to help them develop as reflective practitioners and supportive colleagues. The process includes questions that focus directly on the connections between the observed teaching and the learning of students. A teacher research assignment is also tied to student learning. A mentor program provides mentors for the standard certification interns; mentors themselves model and engage in professional development activities. Performance evaluation is tied to the principles of effective teaching and the state and district curriculum frameworks. Portfolios are used, including examples of lessons and student work, with PDS community members involved in performance-based assessment panels. On-site seminars are held for student teachers involving at different times teachers, principals, and other school-based personnel, as well as university faculty members.

The majority of required courses are now, in part or in whole, school based, with significantly increased use of real observation and involvement in the classrooms. Rounds are introduced in the school-based courses. At least one course involves different groups of children working with university students on tasks developed under the guidance of school and/or university faculty. Most of the courses involve school-based faculty working singly or as members of teams of university (liberal arts and ed-

ucation) and school instructor teams. School-based faculty members have substantial roles in shaping much of the education coursework for both the initial and standard levels of certification. Instructor teams, K-16 teams, and steering committees ensure this.

As mentioned above, the Ways of Knowing courses and the shared summer curriculum institutes have been powerful ways of involving arts and science faculty. Planned collaboratively with school and college people, they look together at the K-16+ spectrum, contemplating the whole span of learning in a discipline. Several liberal arts faculty members have indicated that they have rethought their practice as a result of participating on K-16 curriculum teams, which also plan summer institutes for university master's students and PDS teachers.

DESIRED OUTCOMES OF IMPROVED LEARNING

The study of PDS impacts reported here focuses on preservice teachers who are students in the year-long master's in urban education and teacher research program leading to standard certification in Massachusetts. This focus was chosen because of the nature of the federal grant, which called for new models of initial teacher preparation. Using the same conceptual framework, data could be collected on the other desired outcomes for PDSs: K-12 students or experienced teachers and other educational personnel.

The Clark–Worcester Partnership, along with the other partnerships in the consortium, developed a set of common outcomes for preservice teachers—a set of criteria of what the improved preparation of teacher education candidates might look like. These included realistic but positive attitudes toward teaching in urban schools (and toward urban education in general) as well as high expectations of kids, an understanding of how kids learn best, and an understanding of the role of the teacher in accommodating diverse learners. A second set of outcomes pertained to the development of professional relationships, including supporting a collegial, learning culture; sharing practice

through peer observation, mentoring, and discussion of teaching; taking leadership roles (outside the classroom); understanding school culture; and being comfortable in the whole school setting. A third category was around enhanced teaching and learning practice, including subject matter expertise, understanding motivation of children, development of pedagogical concepts and constructs, and the repertoire of skills for classroom management—maintaining momentum that accommodates and responds to diverse learners. A fourth and final category was reflection and continuous professional development including becoming a reflective practitioner (individually and collaboratively), developing and exhibiting resilience (the ability to maintain convictions and focus in the face of adversity), the capacity to self-assess, and continued learning about teaching, subject, and motivation of diverse learners.

Along with the other partnerships, Clark-Worcester looked for a variety of data sources to help document the impacts its program was having along these criteria. These included interviews and focus groups held with graduates 1 and 2 years into teaching, reflective writings during the program, documentation of classroom teaching from rounds reports, performance assessments through portfolios, and observations and ratings by faculty and mentors during the program and by principals who had hired the graduates after the program.

Preliminary findings indicate that among those graduates who are teaching, most are described by their principals in terms suggesting competence or “way above average” performance as 1st-year teachers. The graduates themselves express clear goals and strategies in terms of supporting all students’ learning. One talks about “teaching the whole student,” another teaching “them how to think and meet new challenges . . . and get personal satisfaction from learning,” a third of “trying to get students excited about history, to become thinkers, researchers, learn analysis.” Perhaps the most prominent and distinguishing characteristic of these former students is their expressed and demonstrated commitment to continuous professional learning as a means to enhance their

capability to support student achievement. This commitment means a willingness to seek help when confronted with uncertainty as well as self-directed learning. There are several former students teaching in the collaborative who in their 1st and 2nd years have become extraordinarily active in many dimensions of professional development—conducting classroom-based research, taking additional courses, modeling rounds, participating in curriculum study groups and summer institutes, and supporting preservice teachers who are in school-based courses, student teaching, or the master’s program. All of those teaching outside the collaborative have become similarly involved. One talks about a Ph.D. in literature, another about a certificate of advanced study in education, a third about increasing “knowledge of teaching strategies and of subject area.” These involvements and clear professional goals suggest the strong impact of the program on the professional attitudes and habits of these beginning teachers. Overall, the program seems to support the development of the kind of committed, reflective, proactive, and multidimensional practitioner suggested by the consortium’s framework of hoped-for outcomes.

CONCLUSION

The documentation of processes and impacts of the Clark-Worcester Partnership specifically, and of the Massachusetts consortium in general, is offered as an example of how research on the impacts of PDS might be conceptualized. It is a report that is still in progress, with additional data collection and analyses underway. This case illustrates that understanding the impact of PDSs is more sophisticated than ascertaining whether a partnership calls itself a PDS and then reviewing student test score data.

The work of assessing the impact of PDSs is challenging. I hope the conceptual framework outlined here will be of help in organizing it. The credible, systematic documentation of PDS impacts is critical to the growth and sustenance of PDSs and the PDS movement. Without good documentation of impacts on preservice and experienced educators and on K-12 students,

PDSs will wither away. Good impact documentation needs to be carefully conceptualized and focused on products as well as processes. It needs to be well implemented and use a variety of credible outcome measures. High-quality impact documentation will allow insiders to improve what they are doing, even as it helps all stakeholders assess, well beyond a leap of faith, whether all the effort that goes into starting and sustaining a PDS is worth it.

NOTE

1. This point was made by Randy Flora, who coordinates partner school activities at Miami University (Ohio) and was a participant in the American Educational Research Association session. Flora expressed his concern about the usual simplistic demands for immediate change of student performance on proficiency/achievement tests as the sole criterion of value. He noted that reliance on one set of measures and insistence that change be immediately observable on those measures would exclude other evidence of student learning and would not recognize changes in environment, materials, teacher and other adult behavior, student health and safety, and so on that are often necessary conditions for change in educational results. Drawing on his recollection of legal terminology, Flora suggested the preponderance of evidence notion.

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