

**Teachers' Appraisals of the Talent Development
Middle School Training Model**

Elizabeth Useem

Philadelphia Education Fund

Paper Presented at the Annual Meeting of the
American Educational Research Association

Montreal
April, 1999

Funding for this research came from The Pew Charitable Trusts through a grant to the Philadelphia Education Fund.

For additional copies of this paper, email the author at <buseem@philaedfund.org> or write to Philadelphia Education Fund, 7 Benjamin Franklin Parkway, Philadelphia, PA 19103.

Introduction

The Talent Development Middle School model, developed by the Center for Research on the Education of Students Placed at Risk (CRESPAR) at Johns Hopkins University, is a comprehensive school-change design aimed at raising the academic proficiency of all children in high poverty schools where large proportions of children are at risk of failure. The initiative combines teacher professional development and provision of materials in the fields of Reading/English Language Arts, mathematics, and science, along with extra-help academic programs, an educational planning and career exploration curriculum, and outreach to parents. A social studies component is being piloted in two schools during 1998-99. The Talent Development approach also requires that staff be organized into interdisciplinary teacher teams instructing heterogeneously grouped students in a core standards-based curriculum.

Five middle schools in the School District of Philadelphia are currently implementing the model although there is some variation in their speed of putting components of the initiative into place. Central East Middle School, the prototype of the model, is now in its fourth year of implementation; Cooke Middle School is completing its second full year in the program. Three more schools--Beeber, Shoemaker, and Clemente Middle Schools--began participating in the initiative this year. CRESPAR researchers are evaluating student outcomes by looking at attitudinal survey data and standardized test scores. This paper assesses another dimension of the Talent Development effort--teachers' reactions to the professional development provided by Hopkins staff and by a "teacher on special assignment" in mathematics assigned to the Talent Development initiative by the School District.

Teachers' assessment of the sufficiency and quality of the training they have received through Talent Development is a vital piece of information in any examination of the efficacy of the model. The effort's success depends on teachers' voluntary participation in sustained and intensive professional development in academic content areas, their willingness to accept coaching in their classes, and their skill and enthusiasm in changing aspects of their classroom instruction. If the model is to become institutionalized, they need to see it not as a passing fad but as a common sense design that has a fair chance of raising academic achievement for large proportions of children in their schools. Since this model has been developed by an external partner--Johns Hopkins University--the possibility that teachers might view it as a prescriptive design imposed by "outsiders" is also an ever-present threat that can undermine successful implementation. Outsiders also draw teachers' ire because they have a reputation for disregarding previous reform efforts in a school and failing to respect and draw on the talents of teacher leaders present in the building.

Data and Methods

I conducted focus groups and interviews with teachers at three of the schools over a two-year period in order to get feedback from them about the helpfulness of the professional development training and materials provided by CRESPAR staff and their general receptivity to the model. They were also queried on the obstacles they faced in implementation of the curriculum and pedagogical approaches promoted by the initiative, and their sense of whether they and their colleagues were making progress putting a schoolwide curriculum in place that was resulting in improved student performance.

Six focus groups with a total of 31 teachers were held at Central East and Cooke Middle Schools in December, 1997. In December, 1998 I conducted two additional focus groups with nine teachers at Cooke Middle School. At both time points, all teachers were invited to participate in at least one

of the groups. Individual interviews with all ten teachers piloting the eighth grade American history curriculum were carried out in November, 1998 (Central East) and January, 1999 (Clemente). I was a participant observer in the three-day training session for the history teachers in August, 1998, and observed a feedback session in January, 1999 with the American history teachers from Central East and Clemente with the CRESPAR social studies curriculum writers. In addition, I interviewed the principals at all five of the Talent Development middle schools in November, 1998 in order to learn about the seriousness of their staffing problems and its impact on the initiative. Teacher turnover and reliance on substitutes to fill vacancies, chronic conditions in many of Philadelphia's middle schools, have been identified in earlier studies as contextual factors that seriously erode the institutionalization of reform.

The Training Model

While the Talent Development approach calls for school organizational changes such as de-tracking, teaming, and double periods of language arts, the heart of the reform is the implementation of a standards-based core curriculum fortified by professional development opportunities for teachers in the core subjects. The curricula used in the Talent Development model include *Student Team Literature* in the area of Reading English Language Arts (RELA), an approach combining cooperative learning in reading and writing exercises and the reading of award-winning novels; the University of Chicago School Mathematics Project (UCSMP) curricula, *Everyday Mathematics* in the fifth and sixth grades, *Transition Mathematics* in the sixth grade, and *UCSMP Algebra* in the eighth grade; and a science approach that includes curriculum modules, hands-on kits, and adaptations of the existing science curriculum to meet local and national standards. The social studies program in American History for the seventh and eighth grades is currently under development; the eighth grade curriculum that begins with the Civil War is being piloted during 1998-99. The program provides a wealth of materials and guides for teachers, including the text series by Joy Hakim, *A History of Us*. The instructional guidance provided in each of these curriculum areas stresses student teamwork and an array of pedagogical practices that encourage active learning.

When a school adopts the Talent Development approach, professional development for teachers in the content areas begins immediately. Teachers' introduction to and debate about the model's components and philosophy takes place prior to their voting to accept the program in their schools. A vote for the Talent Development model is a vote to de-track, to team, to provide double dose instruction in RELA, and to allow for extra-help opportunities for students within the school day. The initiative does not build in schoolwide retreats and meetings to re-vision school organization, curriculum, and other aspects of school improvement planning after the initiative has been voted in. Instead, the project launches directly into reshaping curriculum and instruction in classrooms. Professional development support is provided in four different formats:

1. Thirty to 40 hours annually (or even up to 50 hours in the case of mathematics) of training is offered in a content area over a minimum of two years. Three hours of graduate course credit are available from St. Joseph's University for those who participate fully in the training. The sessions are run by subject-area experts from CRESPAR, teachers on special assignment to Talent Development from the School District (also referred to as curriculum coaches), or lead teachers from the school. They take place over the summer (2-3 days) and during monthly sessions after school and on Saturdays during the school year. These meetings focus on the curriculum the teachers will actually be teaching rather than on generic pedagogical skills or more generalized content knowledge. This means that teachers preview and practice the lessons and experiments themselves so that they will develop deep familiarity with the curriculum prior to teaching it in class. Participation is

voluntary and varies by school, by subject area, and by year.

2. In-class follow-up support to teachers is available on a weekly basis from curriculum coaches who are either teachers on special assignment (one in mathematics, one in RELA thus far) from the District who are released full time to do this work, instructional facilitators from CRESPAR, or lead teachers in the school. This assistance includes organizing and delivering instructional materials, demonstrating lessons or giving feedback and tips to teachers on their instruction, and resolving logistical and other problems that interfere with instruction.
3. Special training times are set up to familiarize new teachers with the Talent Development instructional approaches and to provide make-up sessions for teachers unable to attend earlier meetings. The inclusion of new teachers, who often arrive just at or after the opening of school in the fall, is an important component of the professional development offerings. CRESPAR staff are considering developing a new course-long training module for beginning teachers that includes attention to both classroom management and instruction.

only 21% of Philly teachers sat > 4 hours annually

→ This approach to training draws on the emerging consensus among researchers that professional development for teachers will boost student achievement only if teachers engage in long-term in-depth learning opportunities that address the content and pedagogy relevant to the curriculum taught in their classes.¹ Despite all the writing about the futility of attendance at scattered workshops or in courses unrelated to the curriculum, short-term instruction on numerous discrete topics prevails. In Pennsylvania, for example, only 11 percent of the teaching force participates in nine or more hours of training in their subject-matter area in a given year, and 76 percent have no contact with such learning opportunities in their content area.² While a critical core of teachers at the first two Talent Development Middle Schools had engaged in intensive and sustained professional development through teacher networks such as the Philadelphia Writing Project or multi-year initiatives in mathematics and science supported by the National Science Foundation, the majority of the teachers had not participated in training of that sort.

most in instructional practices

Overall, CRESPAR staff have tried to fashion professional development opportunities that blend "top-down" and "bottom-up" approaches to teacher learning. The "top-down" component comes in the form of direct training by CRESPAR subject-area experts in the content and pedagogy of the discipline, specification of curriculum topics and materials (e.g. University of Chicago School Mathematics Program), and explicit guidance in instructional techniques designed to engage students (e.g cooperative learning). The participatory "bottom-up" quality takes several forms: the key role played by curriculum coaches from the School District and other school-based teachers; incorporation of teachers' suggestions and well-honed strategies into the curriculum materials and training sessions; and creation of materials and professional development sessions in response to requests from teachers. Overall, CRESPAR program directors have tried to develop an

¹ Recent papers and reports prepared for the National Commission on Teaching and America's Future based at Teachers College, Columbia University buttress findings and arguments put forth over the last two decades: See Deborah Loewenberg Ball & David K. Cohen, *Developing Practice, Developing Practitioners: Toward a Practice-Based Theory of Professional Education*, 1995; Linda Darling-Hammond, *What Matters Most: Investing in Quality Teaching*, 1997; Richard F. Elmore & Deanna Burney, *Investing in Teacher Learning: Staff Development and Instructional Improvement in Community School District #2, New York City.*, 1997. See also David K. Cohen and Heather C. Hill, "State Policy and Classroom Performance: Mathematics Reform in California," *CPRE Policy Briefs*, Consortium on Policy Research in Education, University of Pennsylvania, 1998.

² Data are from the 1993-94 school year. See Linda Darling Hammond, *Doing What Matters Most: Investing in Quality Teaching. Ibid.*, Appendix A, Table 5.

interconnected set of occasions for teacher learning that would foster strong and trusting personal ties over a period of years among trainers from CRESPAR, teacher leaders and school staff.

It is important to note that the training model itself continues to evolve as the model is deepened and scaled up. The needs of new teachers, particularly in the area of classroom management, are getting more attention. Specific professional development support for special education teachers and English as a Second Language/bilingual teachers is being developed. CRESPAR curriculum developers are planning to work with teams of teachers from District to develop supporting curricular guides and materials for teachers in schools that are using standards-based math text series other than the UCSMP books.

Teachers' Assessments of the Training

In focus groups and interviews, teachers uniformly gave high marks to the professional development provided by the instructional facilitators from CRESPAR and from the District's teacher on special assignment for Talent Development in mathematics. (The RELA coach from the District had not yet been hired at the time of the focus groups.) The training was praised for being clear and delivered in an interesting, low key, and respectful manner. Teachers liked the fact that the training was focused on curriculum units they were actually going to be using in their classes. They expressed appreciation for the timely way in which the trainers responded to their requests for help and the speed with which needed materials were delivered. In the areas of mathematics and science, where teachers' content knowledge was often thin, the training enabled the teachers to learn the content, sometimes for the first time. The following comments provide a sampling of their appraisals by subject area:

Reading and English Language Arts (RELA)

So many other programs I have been involved in have basically been dictated but [the instructional facilitators] have been very open. I mean they said they wanted suggestions, and they meant it when we gave them suggestions. They changed things that went along with what we were saying, and I think that's great because we are the ones who are using the program in the classroom.

If I didn't have the RELA curriculum, I'd be completely and utterly lost in RELA. It is good for Hopkins to do this for us. I'd be way worse without it. (new teacher)

I know that a few weeks ago people had been saying to me that they feel that Johns Hopkins needs to address the issue of the wide range of levels that we have in each class and how can we address that using our program. I immediately brought this to [the instructional facilitator's] attention. As soon as I asked her to do a workshop for us in that area, she immediately responded ... and they did, last week ... They're very very accommodating. Whenever there is an issue that I raise or question that I have, there is always somebody there who will answer it and who will address it.

[The instructional facilitator] gave me some one-on-one instructional guidance and came into the classroom and observed, pointed out some deficiencies that I might have had and [made] some suggestions. I implemented them and I am thrilled with the whole program.

I really think that this has done [a great deal] for teachers who may not have been really comfortable in teaching reading and teaching novels. This has given us a

structure for teaching that perhaps we did not have before ... [Those who are] new to teaching reading really rely on this very strongly and are very grateful for having this kind of structure. I mean, I have never seen in all of the years that I've been teaching this kind of support for any one book.

Mathematics

We did the lessons as if we were students. And then we had time to prepare our own lessons which helped us because most of us weren't doing that in the summer to begin with.

I was very apprehensive about math all my life ... Right now I can say that I teach math better than I teach any other subject.

I guess I found the training really helpful for me. The first training we had I think was before school started, where we were introduced to the teachers' manual. We actually tabbed the teachers' manual so we knew how to turn to sections and how to use the math games and the reference areas. I don't think I could have taught without knowing that first. And then every three weeks or so, we have Saturday morning sessions which I just get to the point where I don't know what I'm doing, and then we have that session and that sort of pushes me forward. So I'm pretty happy with that.

[The support from the teacher on special assignment] is wonderful ... Last week she came to see me and I had a problem with some of the children who still did not know the times tables. I was frustrated. I didn't know what else I can do. She came up with several wonderful ideas that I can use to help reinforce the times tables. These support people have so many different strategies that I can use with the kids and it's invaluable.

Science

Without [the instructional facilitator], I would be nowhere ... He is a good teacher, he is thorough, and the supplies Hopkins has supplied to me have been invaluable.

Not only does [the instructional facilitator] do the basic components of our program, he also goes above and beyond what we are asking for ... I mean he just makes the extra effort. If you ask him questions, he always follows up with the answer and more. He just goes above and beyond, puts himself out. He doesn't make us feel stupid in any way ... He is just very patient with his instruction. He has just been one in a million.

[The instructional facilitator] trained us, the fifth grade teachers, on the sinking and floating unit. He went through every experiment with us. We did everything. I have a thorough understanding now on how to teach sink and float. If I hadn't stayed that night [for training], I would just be blank.

He also instills confidence when we say we can't ... He'll show us how we can. So, especially teaching a couple of physics concepts, he just kept presenting the

material in different ways until we were able to understand it ... If you don't have a physics background for some of these things, they're difficult concepts to teach to the kids.

Teachers' Recommendations and Unmet Needs

While teachers praised the training, they noted that some instructional areas were under served in the program. In the 1997 focus groups, special education was singled out as an area where professional development and materials were needed. As a result of this feedback, CRESPAR staff made an effort to address that need. The 1998 focus group participants at Cooke Middle School stressed the importance of locating and/or developing good materials for students whose first language was not English along with professional development for those materials. The need to complete the development of a science curriculum was also expressed.

All of the social studies teachers participating in piloting the eighth grade American history curriculum were effusive in praising the summer training and materials provided by CRESPAR and looked forward to more summer training, but it was clear they needed the close classroom support provided in the other subject areas that was not yet available in history. Their pacing of lessons and units varied radically from classroom to classroom, and they used different approaches to "backfilling" students' knowledge about the period before the Civil War. Seventh grade teachers appeared to have taught varying social studies curricula even within the same school building so the eighth grade teachers had to improvise to build students' background understanding. As a schoolwide core curriculum takes hold in RELA, math, and science, the lack of a common multi-year curriculum in social studies becomes a more glaring deficiency. CRESPAR curriculum developers plan to complete the seventh grade American history curriculum in time for the 2000-2001 school year.

Teachers in all subjects worried that their students' low reading levels and lack of adequate prior preparation made it difficult to master the novels and mathematics curriculum and some of the science texts. In a certain sense, this feedback was a kind of implementation check of the initiative in that it provided evidence that students were being challenged and stretched by the new curriculum. At Central East Middle School, where the initiative is now in its fourth year, the eighth grade teachers, who were in a position to see the effects of long-term growth, were more aware of and optimistic about the program's impact than the fifth grade teachers.

In each subject area, teachers expressed reservations about the instructional approach of the model and made recommendations for revisions or extensions of it. In Reading and English Language Arts, individual teachers recommended more attention in the curriculum to writing mechanics and grammar, alignment with the District's standardized test (the Stanford 9), deeper literary analysis, and more silent reading (as opposed to reading out loud to a partner). Teachers at Cooke Middle School wanted the chance to select a different set of novels since theirs had been ordered in haste by the school the first year without sufficient input from teachers.

Mathematics teachers wanted more attention during the school day from the curriculum coach (the teacher on special assignment) whose time was increasingly being taken up by the new schools added to the initiative. They noted that her assistance was needed both for instructional support but also to coordinate professional development sessions and to oversee the delivery of curriculum materials to the classroom. Teachers complained about the shortness of the time allotted for mathematics (a 47 minute daily period). Some felt that the math texts had pacing schedules, conceptual levels, and homework assignments that were too hard for students who were below grade level.

In science, teachers spoke about the need for more equipment and materials for hands-on instruction. Implementation of science in the Philadelphia public schools is seriously hampered by the inadequacy of instructional facilities and equipment. At Cooke, for example, some of the science teachers taught in rooms without running water or lab tables. The Central East staff worried that the initiative would have difficulty being sustained over the long haul if funding and staff from CRESPAR for copying and materials came to an end. The implementation of the science program varied between the two schools because their science efforts were at different stages of development. At Central East, science teachers had been meeting regularly under the direction of teacher leaders prior to the arrival of CRESPAR and had mapped out a sequenced curriculum. The Talent Development effort dovetailed with, learned from, and boosted their efforts, and they felt more confident that they were seeing results in their students' work. The Cooke teachers, on the other hand, were not clear on the scope and sequence of their curriculum when the initiative began. As a result of the professional development course offered on-site in science at Cooke during 1998-99, all 18 science teachers have been meeting monthly and have been moving toward a more consistent curriculum.

Teachers' Sense of Progress

The belief that children in high-poverty schools can learn at high levels if they are engaged in a challenging common curriculum is central to the Talent Development philosophy and to that of the District's *Children Achieving* reform program. Focus group participants were asked whether they thought they were able to make a significant difference in the academic lives of their students and whether they saw progress in the school's use of a consistent core curriculum across classrooms. Despite their concern about students' reading levels and learning gaps, the teachers in groups from both years were remarkably positive about the school's movement toward a standards-based curriculum and its impact on students. Their comments were free of cynicism and despair, and they expressed a sense of cautious optimism that things would get better in their schools if they stayed the present course:

Last year I kept asking the principal, 'I want to see those test results' because I feel that my kids really made progress, but I know that the measure is how they do on the standardized tests. Well, when we saw it [the test scores], we were thrilled.

I was very surprised. My feeling initially in the program was 'How are these kids going to learn all these big words?' And I was very surprised because of the way it is taught that the students not only learn the big words, but they learn how to use them and they remembered them.

And you [the fifth grade teachers] do a good job. I do see excellent results but it takes until they reach the eighth grade, so I think we have a good thing going because even though you don't see the results early, the more they practice, the better they get at it. Now my kids in the eighth grade are really doing all the right things, turning in the right papers and it's because they have done it and a lot of them will say, 'I've done this since the fifth grade.'

[The sixth grade teachers] put an announcement in the *Dailygram* that said, 'Thank you fifth grade teachers, your students are very well prepared.' You know, the students can get right into the program this year because they were used to the procedures, they were used to writing meaningful sentences, they were used to *Treasure Hunts* [partner reading guides] ... And this was not just my partner and

me, it was all the sixth grade teachers saying this about all the fifth grade teachers ... When I saw this announcement, I thought 'How wonderful that we are being told [that]' because you so rarely hear about it, and it really made me feel like well, we did something right.

[The principal] really expressed that she wanted us to try the program--all teachers--and the teachers are observed based on the program. So you will see the same type of vocabulary list and meaningful sentences from one classroom to the next. ... We know what is expected of us. I mean, it's made very clear. There is no question. We are using the Johns Hopkins program. Everyone is to be using it and that's good.

It is important to note that teachers' sense of efficacy and participation in a schoolwide collegial professional community in both of these schools was partially a result of the fact that their principals were effective leaders who were committed to the effort. (Even though there have been three principals at Central East over a four-year period, all three have been strong instructional leaders.) As is the case in many of Philadelphia's schools, a critical core of teacher leaders were present as well, some of whom had had years of involvement in teacher and school improvement networks of various kinds (e.g. the Philadelphia Writing Project, the work of the Coalition of Essential Schools, various NSF-funded projects). Administrators and teachers of this caliber, who are obviously key to the success of a comprehensive school design initiative such as Talent Development, could easily have turned away from the Talent Development program had it come in as a rigid and prescriptive effort that ignored their talents and the strengths of other initiatives already in place at the school.

Staffing Issues and the Threat to Sustainability

The impact of even the most effective forms of professional development can be blunted when teachers who have undergone the training and are strong implementers of an initiative leave the school. Philadelphia's middle schools experience high turnover each year. Further, new teachers tend not to want to be placed in those schools since they have either elementary or high school certifications and little training in the education of young adolescents.³ Pennsylvania does not require or even offer a middle school certificate, and higher education institutions are only now gearing up to offer specialized middle grades education programs. During 1997-98, for example, Temple University, the largest supplier of new teachers to the School District of Philadelphia, did not have any student teachers in the District's middle schools.

The fact that so many middle grades teachers lack formal preparation in core subject areas makes the professional development opportunities available through programs such as Talent Development all the more important. The departure of such teachers (often for higher paying suburban jobs) after the initiative has invested so heavily in their training is a major frustration for school leaders and CRESPAR staff. The District's centralized hiring and assignment of teachers to schools makes it difficult for principals to attract staff whose skills and philosophy might be compatible with those stressed by the school.

The five schools now in various stages of implementing the Talent Development model vary considerably in the seriousness of the turnover problem and the difficulty of finding new recruits. (As of this writing, the District still has approximately 125 teaching positions unfilled and expects to lose about 10 percent of its teaching staff this year.) The success of the model will depend in part on the ability of the schools to retain their faculty, particularly new recruits, and to attract

³ Elizabeth Useem, "New Teachers' Assessments of the Hiring Process in the School District of Philadelphia: Results from Two Surveys," February, 1999, Philadelphia Education Fund.

talented teachers. The status of the five schools in this regard is detailed below.

School A: This school currently has a stable teaching staff of 59 teachers with very little turnover. No beginning teachers were hired for this academic year. When new teachers join the faculty, they are given a day of release time to meet with the Talent Development trainers and are given special attention by the faculty in their Small Learning Communities (teams of teachers instructing a common group of children) which are well established at the school. Principals at the school have intervened in a variety of ways in the centralized hiring and transfer system to attract teachers they want to the school.

School B: The principal undertakes vigorous efforts in recruitment, retention, and induction supports for new teachers. The school, however, had the sixth highest number of new teacher hired for the fall of 1999 out of 42 middle schools in the District (8 new teachers out of a staff of 67). Two strong implementers of the Talent Development model took jobs in the suburbs for the 1998-99 school year.

School C: This bilingual middle school has one of the highest staff vacancy rates among the middle schools with 15 teaching vacancies out of its 92-member teaching staff this year. The school has great difficulty finding bilingual staff (a requirement of the District for this school). Three first year teachers left last year for jobs in the suburbs as a result of the District's requirement that teachers move into the city after their first year on the job. The principal, faced with enrollment that has grown to nearly 1600 students, aggressively recruits new teachers.

School D: A large number of new teachers joined the school in 1997-98 (14) but they will be eligible to transfer to other schools at the end of the current school year. Only one new teacher was appointed this year. The school's problem of holding onto its teachers (36 total) has been temporarily halted but the danger exists that the new teachers will leave, a group in which Talent Development has made a major training investment.

School E: Six new teachers joined the 65 member faculty this year. Although the school has historically been a choice teaching assignment, the problem of retaining teachers has increased, with several teachers leaving with almost no notice during the year or over the summer. Recruitment efforts and induction supports are not strong.

It is possible that these schools can emulate the relative success of School A in retaining faculty if there is strong principal leadership and a supportive school culture, particularly for new teachers. Many factors are at work, however, to cause teachers to leave a high-poverty middle school. Salary differentials with the suburbs have widened in recent years; the residency requirement drives away a certain proportion of teachers, particularly those with school-aged children; the probability of transferring to other schools and other grade levels within the District increases with seniority; and the state's early retirement offer currently in effect encourages veteran teachers to retire. Given these conditions, successful principals must become skilled at encouraging teachers to stay and at manipulating the District's hiring system to their own advantage.

The School District's Office of Human Resources is currently in the process of mounting an aggressive recruitment effort and streamlining hiring procedures, but a change in the residency requirement (controlled by the School Board) and the District's practice of assigning teachers centrally with no input from the school, a policy supported by the teachers union, are unlikely to change in the near future. Looming budget deficits make it unlikely that significant salary increases are in the offing.

Lessons Learned

Looking over the experience of four years of CRESPAR's involvement with the professional development of teachers in five of Philadelphia's middle schools, a few general points stand out. First, their experience confirms the findings of other researchers that teacher learning is effectively nourished when multi-layered opportunities embedded in the school and classroom are readily available and when the training is focused on the curriculum modules actually being taught. Second, the emphasis on training in the content and pedagogy of core subject areas, versus say convening school staffs to focus on issues such as school organization, climate, or decisionmaking, has turned out to be a more direct route to improving student achievement than if non-instructional issues had been the centerpiece of the reform. Third, the effort to make special arrangements to train new teachers informally regardless of the time of year they joined the school staff has been important in creating a schoolwide impact. Fourth, the explicit ways in which the District's teacher leaders have taken on important training roles has built the capacity of the District and schools to sustain the learning over the long haul. And finally, the willingness of the CRESPAR staff developers to respond flexibly and respectfully to teachers' suggestions and requests and to build on their prior work has been of critical importance in maintaining teachers' support for the model.

Significant implementation issues remain. Money must be found to hire additional teachers on special assignment when the model is adopted in eight schools for the 1999-2000 school year. As noted above, improvements in teacher retention are needed if the model is to have a chance of succeeding over a period of years in the most challenging schools. Principals too need to stick with the effort over time. The District's central office, which has encouraged schools to adopt comprehensive school reform models, needs to find ways to align its own personnel systems and structures to support rapid implementation of these models and to expedite decisions that have an impact on the resources available to schools. The Talent Development Middle School model has already demonstrated promising gains in student achievement and has forged strong connections with teachers but its ability to scale up and to be sustained in the city's schools will depend in part on the District's progress on human resource issues, bureaucratic responsiveness, and budgetary support.