TEACHERS' APPRAISALS OF TALENT DEVELOPMENT MIDDLE SCHOOL TRAINING, MATERIALS, AND STUDENT PROGRESS

Results from Focus Groups

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The Center

Every child has the capacity to succeed in school and in life. Yet far too many children, especially those from poor and minority families, are placed at risk by school practices that are based on a sorting paradigm in which some students receive high-expectations instruction while the rest are relegated to lower quality education and lower quality futures. The sorting perspective must be replaced by a "talent development" model that asserts that all children are capable of succeeding in a rich and demanding curriculum with appropriate assistance and support.

The mission of the Center for Research on the Education of Students Placed At Risk (CRESPAR) is to conduct the research, development, evaluation, and dissemination needed to transform schooling for students placed at risk. The work of the Center is guided by three central themes — ensuring the success of all students at key development points, building on students' personal and cultural assets, and scaling up effective programs — and conducted through seven research and development programs and a program of institutional activities.

CRESPAR is organized as a partnership of Johns Hopkins University and Howard University, in collaboration with researchers at the University of California at Santa Barbara, University of California at Los Angeles, University of Chicago, Manpower Demonstration Research Corporation, University of Memphis, Haskell Indian Nations University, and University of Houston-Clear Lake.

CRESPAR is supported by the National Institute on the Education of At-Risk Students (At-Risk Institute), one of five institutes created by the Educational Research, Development, Dissemination and Improvement Act of 1994 and located within the Office of Educational Research and Improvement (OERI) at the U.S. Department of Education. The At-Risk Institute supports a range of research and development activities designed to improve the education of students at risk of educational failure because of limited English proficiency, poverty, race, geographic location, or economic disadvantage.

Abstract

The Talent Development Middle School model is a comprehensive school-change design aimed at raising the academic proficiency of all children in schools where large proportions of children are at risk of failure. Thirty-one teachers in two Philadelphia public middle schools where the model has been piloted evaluated the implementation of training and curricular components of the model in six focus groups covering major subject areas (math, science, and Reading and English Language Arts [RELA]). Respondents were asked to appraise the helpfulness of the professional development training and materials in supporting their own teaching proficiency and the achievement level of their students, as well as obstacles they faced, their prediction of future use in the school, their evaluation of their students' capacity to meet the standards of the curriculum, and their sense of whether they made a difference. This report summarizes the findings by these topic areas, broken down by subject area and school. Teachers' responses were generally favorable. They seemed willing to forge ahead, believing that a continuous school-wide approach will produce better student achievement.

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Introduction

The Talent Development Middle School model is a comprehensive school-change design aimed at raising the academic proficiency of all children in 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 added in 1998-99. This approach also requires that staff be organized into interdisciplinary teacher teams instructing heterogeneously grouped students in a core standards-based curriculum.

Teachers in the two Philadelphia public middle schools where the program has been piloted, Central East and Cooke Middle Schools, evaluated the implementation of training and curricular components of the Talent Development Middle School model in six focus groups during December 1997. The information from the groups provided feedback to the researchers and trainers at the Center for Research on the Education of Students Placed At Risk (CRESPAR) at Johns Hopkins University, the organization responsible for developing and executing this comprehensive school improvement initiative. The groups were selected and run by Elizabeth Useem, Director of Research and Evaluation at the Philadelphia Education Fund, a nonprofit school reform organization.

In each school, one focus group was convened for each major subject area — mathematics, science, and Reading and English Language Arts (RELA). All teachers in each of those subject areas were invited to participate in at least one of the 90-minute focus groups. Thirty-one teachers participated in all, with six of those participating in more than one group. The size of the groups ranged from five to eight participants.

Implementation of the Talent Development model began at Central East during the 1995-96 school year with the introduction of the RELA curriculum. Instruction focused on the teaching of novels through activities and methods suggested in CRESPAR's instructional guides, *Treasure Hunts*, along with cooperative learning methods, notably Student Team Literature[1] and Student Team Writing.

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[1] Student Team Literature is an adaptation and elaboration of the Student Team Reading approach developed by Robert Stevens. See Leslie Jones & Alta Shaw, *Student Team Literature*, Talent Development Program, Johns Hopkins University, 1998; and Robert Stevens and Scott Durkin, *Using Student Team Reading and Student Team Writing in Middle Schools*, Center for Research on Effective Schooling for Disadvantaged Students, Johns Hopkins University, 1992.

The CATAMA[2] computer lab (an extra-period cooperative learning center) began full operation during that school year as well. Professional development in mathematics started up during the 1996-97 school year but use of the University of Chicago mathematics texts and curriculum materials (UCSMP) did not fully begin until the fall of 1997.[3] The science component was introduced midyear during that same academic year. Cooke Middle School voted to join the effort in the spring of 1997 and began formal training in all the above components over the summer of 1997.

Respondents were asked to appraise the helpfulness of the professional development training and materials provided by CRESPAR staff in supporting their own teaching proficiency and the achievement levels of their students. They were also queried on the obstacles they had faced in implementation of the curriculum, their prediction of its future use in the school, their evaluation of their students' capacity to meet the standards of the curriculum, and their sense of whether they were able to make a difference in the academic lives of their students. This report summarizes the findings by these topic areas, broken down according to subject area and school.

Training

The Training Model

The Talent Development approach calls for major changes in school organization, notably the assignment of students into heterogeneous interdisciplinary teams during the double period of RELA. These organizational changes, however, merely set the stage for changes in instruction that constitute the heart of the reform — implementation of a standards-based core curriculum fortified by professional development opportunities for teachers in the core subjects. Training opportunities take many forms — summer institutes, school-year sessions after school and on Saturdays, demonstration lessons in teachers' classrooms, in-class feedback sessions where teachers practice new material and methods, and classroom inter-visitations. This professional development program, organized by CRESPAR, lasts for up to five years. 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.

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[2] Computer and Team Assisted Mathematics Acceleration
[3] One eighth grade teacher had used the Algebra book the previous year.

During the 1997-1998 year, each teacher at Central East and Cooke middle schools was offered up to 38 hours of training opportunities in RELA, mathematics, and/or science. Virtually all of the teachers took advantage of many of these opportunities in the subject areas that they were responsible for teaching.

The training model blends "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: a teacher-on-special-assignment conducts aspects of the training sessions and takes the lead in in-class support; teacher leaders in the school conduct much of the training; teachers observe one another's classes and share strategies and materials both within and across the Talent Development schools; CRESPAR staff members adopt suggestions from the school staff and incorporate them into their materials and instruction, and CRESPAR curriculum writers compose materials in response to requests from teachers (e.g., students' partner discussion guides to accompany the novels that teachers have selected). CRESPAR program directors have tried to develop an interconnected set of occasions for teacher learning that would foster strong and trusting personal ties over a period of years between their trainers and school staff.

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.[4] 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

[4] 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.

in their content area.[5] While a critical core of teachers at the 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.

Science

When queried about the quality and sufficiency of the professional development in science, teachers at both Cooke and Central East described the training provided by CRESPAR staff as extremely helpful. Many of the teachers were frank about their lack of preparation to teach science and were grateful for this kind of support. The training received high marks for being clear, focused on curriculum modules teachers were going to implement, and delivered in an interesting, low key, and friendly manner. The trainer, Allen Ruby, was praised for taking the time to learn about the pre-existing expertise of the staff and following up on their suggestions for materials and teaching strategies. Teachers also talked about his skill at identifying their needs for materials, his availability to respond to their requests, and his demonstration of respect for them. A sampling of teachers' comments include:

> Without Allen Ruby, I would be nowhere.... He is a good teacher, he is thorough, and the supplies Hopkins has supplied to me have been invaluable.
>
> [He is] someone who is very excited about the work he is doing and willing to convey that excitement to those whom he was trying to help.... I think I had my materials [from him] like literally within a week to a week and a half. I mean it was phenomenal how fast I got the *Sunken Treasures.* All the stuff I have used, the students have reacted extremely well to them, especially the *Sunken Treasure* simulations.
>
> Not only does Allen 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.

[5] 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.

> Allen 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.
>
> If you have a problem and you'd like in-class support, I mean all you have to do is yell and Allen will come and help you with a lesson.

The science effort at Central East was boosted by the presence of teacher leaders who had been trained through the National Science Foundation (NSF)-funded Science Resource Leader program. These teachers had continued as school-based leaders as part of the District's NSF-funded Urban Systemic Initiative. A science team already existed at the school and students participated in a science fair each year. That same level of long-term focus and organization did not exist at Cooke.

Mathematics

According to CRESPAR staff, the mathematics curriculum component of the Talent Development model made the most demands on teachers in terms of mastering content knowledge and learning new teaching methods. This dimension of the program was expected to be especially difficult for teachers instructing students in pre-algebra and algebra in the seventh and eighth grades since these first cohorts of students had not yet had the UCSMP *Everyday Mathematics* curriculum in the fifth and sixth grades. Moreover, each of the middle schools had only one teacher certified at the secondary level (that included eighth grade) and several math teachers at Cooke were only provisionally certified in the field.

Despite these difficulties, mathematics teachers praised the quality of the Talent Development training in the Chicago mathematics curriculum they received from Bob Balfanz from CRESPAR, from Debbie Ryan, the district's teacher on special assignment to the Talent Development schools in mathematics, and from teacher leaders based in the schools. They responded positively to the workshops, particularly those where they worked on lessons and units of study they would be teaching, and appreciated the in-class support they had received from Debbie Ryan and their colleagues. Cooke teachers talked about the ideas and lessons that Central East teachers had shared with them. Teachers in the CATAMA

Lab[6] credited Douglas MacIver at CRESPAR for setting up the operation and effectively troubleshooting implementation on a weekly basis.

Teachers' comments illustrate their favorable ratings of the training:

> 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 teaching math. But the workshops have been very helpful.... I'm learning as well as the students.
>
> Well, the most helpful part about it is that teachers get to plan their own lessons. And that's the key. You want to get them to start thinking together about some of the things they need to discuss and how to introduce certain lessons.
>
> 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.
>
> The [Newport, Rhode Island] training is not only good for the content but it's also good because teachers [from all over the country] are sharing ideas in the training. And they can talk about what works for them and what isn't working.... They said how very overwhelming it was the first year. But every year after that it got easier and easier. And they love it now.
>
> 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 math program [in the past].... I mean we were all over the place. We knew what we were covering, but everybody had a different kind of approach and way of doing it. So we decided about a year and a half ago...we needed a grade five through eight approach. And, of course, Hopkins hired Bob who is part of the University of Chicago program. He won us over to working with that program.
>
> [The support from Debbie Ryan] is wonderful.... Last week Debbie came to see me and I had a problem with some of the children who still did not know

[6] The CATAMA Lab was used by more than 300 students per year in each school. They were released from their Expressive Arts course daily for 12 consecutive weeks to go to the Lab.

> 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.
>
> [Debbie] is accessible. She has a mailbox. Just leave her a note and she responds.

Reading and English Language Arts (RELA)

Teachers' responses to questions about training in RELA varied a bit from those in math and science because the RELA teachers at Central East had been involved in the program for nearly three years and had seen it evolve over that time. The Cooke teachers, by contrast, were in the early stages of implementing the RELA program. The Central East teachers noted that the training and materials had improved over the three years:

> The training, I think, really has gotten better.... I think that I have come away each time with a better understanding.
>
> It's been much clearer to me than it was in the beginning. I think the program has grown and I think...that they do listen to what it is that we have to say, and we do see changes being made based on it.
>
> The quality of those *Treasure Hunts* that we received the first year or two were really very poor, but we kicked up a storm.... They have improved....
>
> I think if people think back...there were a lot of people who really didn't know how to approach a book, and there were a lot of things going on in classes that really didn't support the philosophy of the school. It really was not good instruction. This certainly facilitates good instruction.

Teachers from both schools praised the skills and responsiveness of trainers Leslie Jones and Alta Shaw ("excellent," "patient," "available") including their willingness to listen and provide feedback swiftly. They liked the in-class support provided by the trainers and wished for more extensive help of this kind. Teachers who had joined the Central East staff after the initiative began talked about the trainers' special efforts to familiarize them with the program's approach and methods. Comments along these lines included:

> 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 Leslie'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.

[Leslie] 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.

Johns Hopkins is there for you and it's clear as a bell and you know, I have never had any complaints about it.... I enjoy the program, I like the program, I want the program, I need the program. I just revise it for my needs and the children's needs.

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.

If I asked for help from Alta or from anybody, they would be there. They are really ready to make this program work, and they are helpful in any way that they can.... Like I've asked for things and although the program is not designed for special education, they've gotten them for me.

Curriculum Materials and Instructional Approaches

Science

Teachers at both schools said that the curricular and teaching materials given to them by CRESPAR staff enabled them to teach in ways that engaged their students and contributed to their understanding of science concepts under study. They also claimed to have benefited from the instruction Allen Ruby provided on materials and equipment (e.g., microscopes, science kits) they had received from other sources. Teachers were especially appreciative of the copying of materials done by CRESPAR/Hopkins staff — especially at Central East where teachers operated without science texts — and the prompt delivery of materials to them. They saw the CRESPAR/Hopkins effort as support for what they were doing, not an external approach imposed on them.

> I think the materials really have done a lot, helped the students achieve.... Students don't have a problem understanding things that come from them, I have found. Everything is very clear. It is written at their level.
>
> Allen was at the meeting that we had when we decided what units we were going to cover, and he is the one that came up with 'Well, how about if I whip something up on the scientific method?' The next meeting he came with a stack of great stuff that my kids loved doing. It was a little messy...a little ketchupy.... But the kids learned and it was fun, and there were some really great experiments that I never would have thought of doing, and I don't know if I would have ever found them in the book. So he definitely supported the curriculum that we wrote.

Overall, teachers were interested in having even more equipment and materials provided for hands-on instruction, and a special education teacher pleaded for more curricular adaptations and materials for her students. Some teachers suggested *Treasure Hunts* be developed for specific curriculum modules, including one on doing a science research paper. Seventh and eighth grade teachers at Cooke were vocal about the lack of science kits and general dearth of supplies.

The science program appeared to be in different stages of development at the two schools. At Central East, science teachers had been meeting regularly under the direction of teacher leaders and had mapped out a sequenced curriculum. The CRESPAR/Hopkins support dovetailed with and boosted their own efforts. The Cooke teachers, on the other hand, were not clear on the scope and sequence of their curriculum and did not have the same level of schoolwide curricular planning and organization in their discipline as their colleagues at Central East. The topics in their fifth and sixth grade textbooks did not necessarily match their perception of the district's science curriculum and standards, and they were uncertain about the ways in which the Hopkins topics and materials aligned with the texts and district standards. As one teacher put it:

> We need more in getting together and taking our science book. Alan needs to be able to sit there with us and say, 'Now when you are working on this chapter, these things can be thrown in here, and when you get to this chapter, throw in this'.... Because it is a book no one is familiar with.

Student reading levels surfaced as a serious concern among the teachers in the two science focus groups. Fifth and sixth grade teachers at Cooke noted that students' reading levels fell below the standard of their new texts, greatly interfering with students' broad understanding of the material. Teachers commented that students thrived on the hands-on lessons, but were often unable to apply this learning and take it to another level.

> They're fun experiments. But there is no background, like the kids just think it's fun. If you ask them what did they learn, [they say] 'I don't know, I learned how to use a microscope.' It doesn't tell you anything.
>
> The students don't make the connection. There is no application.... They love doing the hands-on because there is something exciting going on, but then afterwards it is like they didn't do it. I have to tell my kids over and over again, because they don't want to write anything. They just want to do the experiment. I can tell them over and over again, 'If you don't write it down, you can't get a grade for it.'
>
> They don't pause for a comma, and they look at you like, 'What do you mean pause?' 'What do you mean stop?' And they won't even try to sound out a word. They have no word attack skills whatsoever.
>
> [If they are reading silently]...things that should be funny, they never laugh.... I had them do peer reading for a chapter in class today that I thought was a very funny chapter. While they were reading, I heard a couple of chuckles. Then when they were done, I read the chapter with the proper intonation and pauses. They were rolling on the ground. So they were not reading properly.

Central East teachers, who as a group had not adopted texts in science, worried about the need for readable science materials that would supplement experiments and provide background information and content needed to tie together the hands-on work. They also talked about students' low reading levels hampering their test performance and their comprehension of a wide range of reading materials. They agreed that the library and the librarian at Central East, which had the potential to assist students in doing science research papers, were underutilized resources.

Implementation of the science curriculum has been hampered by the general inadequacy of instructional facilities and equipment available to science teachers in Philadelphia. At Cooke, for example, some of the science teachers taught in rooms without running water and lab tables. The nearest sources of water, bathrooms, were sometimes locked. Central East teachers complained about the difficulty of conducting experiments on unstable student desks and of using microscopes when they lacked lab tables with electrical outlets and extension cords to run to wall outlets. Even when extension cords were available, teachers claimed that their use was extremely awkward. ("I was falling, kids were falling, microscopes were falling.")

Teachers also talked about the need for qualified adult assistants to help them during labs, particularly since they had to contend with classes as large as 33 students. Schools' lack of capacity to duplicate copies for lessons and labs was also seen as a long-term

problem. Central East faculty worried that the initiative would have difficulty being sustained over the long haul if funding and staff from CRESPAR/Hopkins for copying of materials came to an end ("The program will only be as good as the materials.").

Mathematics

Teachers' comments at both Central East and Cooke were based on just three months' experience with the curriculum. Instructional materials in math consisted of the UCSMP texts, workbooks (called journals) with consumable worksheets for the fifth and sixth graders, transparencies for some lessons, slate boards, and assistance with copying materials. Teachers were enthusiastic about the transparencies and some noted how much their students liked to work on the chalk or slate boards. One teacher complained that the slate board did not erase well.

Responses to the textbooks were mixed. Individual teachers praised aspects of the texts such as the stimulating problem-solving approach, the reinforcement of topics, the connections made between math and other subjects, the math games, and the group work.

> I have to brag that the other day we were doing the slate board, and I gave them the mystery puzzles like 'I am a square number, double it.' And then for homework and during class they worked in teams and made up their own. And it was wonderful to have a kid come up in front of the class and say, 'I am a square root, double me, subtract five.' And the kids were scuttling to try to figure out what the mystery number was. I like the fact they used the slate.... And they work with each other.... They are enjoying it so much more [this year].
>
> [My students] were doing problem solving kinds of problems, and I said to myself, 'If this continues, that means by the time they get to me in seventh grade, I won't have to break my neck when I say 'What strategy should we use to solve this problem?' Because most of the time the seventh graders come in and if I give a problem like the one with the clothing — how many different combinations can we make from this set of clothing? — what strategy or which idea do you think we should come up with? And you would think kids may say 'make a list' or 'make a tree diagram' or something. But most times they look like 'What is she talking about?' They don't say 'make a chart.'
>
> I'm excited about the program [in the CATAMA Lab].... I do reinforce what the teachers are teaching in fifth grade.... I can see where these kids are learning things that the seventh and eighth grade students were just getting

> exposed to. And they're grasping it — exponents, arrays. [They are] working with math in real life situations. I think that over a five-year period, we're going to see results. It's going to be a struggle but I love it. I think it's great.

Seventh grade teachers using the UCSMP Transition Math text and the one eighth grade teacher in the focus group using the algebra text (along with another who had used an earlier version of the book on her own with no support the previous year) talked about the problems they were encountering in using those books. A frequent complaint was the amount and difficulty level of the reading required, given that so many of the students were reading below grade level ("A lot of them are very, very poor readers.") They described how they would read the text passages with the students or explain it to them before they read it. Teachers' comments on the fifth to sixth grade texts and materials were more positive.

Some teachers found the pacing schedule, conceptual levels, and homework assignments too difficult for the students who entered the grade with major gaps in their math proficiency:

> I'm saying the reading has got to be there and the prior knowledge has got to be there as far as the seventh grade *Transition Math* [is concerned] or you are in serious trouble.
>
> But I find that in some areas, students who are not proficient in math, even if they're partly proficient or proficient in reading, are still having a hard time getting all those concepts. And I know the warm ups, you're supposed to just kind of sail through them and go. But if I have a seventh grader who can't do his nine times tables, I can't just ignore it and go on. So I have a problem with how that book presents itself to non-proficient math students.

They often adapted the materials and instruction to compensate for their students' gaps in math preparation:

> I think for the sixth grade curriculum, the first unit was on data and so there was a level playing field.... It felt like it was well received and fun. The second unit is now on fractions, decimals, percent, and we are struggling. What I have done with Cheryl's (another teacher) and Debbie Ryan's and Bob's help is go back to the fifth grade curriculum. I taught them the fifth grade curriculum for two weeks and now I'm teaching the sixth grade curriculum. So in some ways, you are backing up, so I'm not on schedule.
>
> I also found that I had to add another component...and that was the process of note taking.... Needing them to take notes over either a little mini-lecture or an overhead little lecture before you begin has sort of saved me. Then I'm able to go on.

Some teachers referred to the problem of the inadequacy of the time allotted for teaching mathematics (a 47 minute daily period), time that was further reduced by day-to-day classroom management problems. The need to serve increased numbers of students over longer time periods in the CATAMA Lab was also mentioned. The fact that two math teachers at Central East were out (accident and illness) for weeks or months and were replaced by ill-qualified substitutes was noted. ("I fear for these kids because these are seventh graders that are losing a teacher, and they're taking the SAT 9 which is their most crucial year for getting into a high school.") One focus group participant talked about the need for the Talent Development program to develop assessments that matched the text materials.

The undertone of teachers' remarks about the texts was a kind of "wait and see" attitude. They felt it was too early to tell whether the program could continue on its own once funding ended. Some talked about how it would become easier as they familiarized themselves with the materials and as students' preparation in earlier grades was strengthened. It was clear from the teachers' observations that the transition to a standards-driven curriculum was not a smooth process even with the best of training. As one Central East teacher put it:

> We're going somewhere but we've never been there. That's the problem. None of us know what the end is going to be like. I do feel the more we work with this program, even with the kids, they're getting more adjusted to it so it is becoming a bit easier.

Reading and English Language Arts (RELA)

Teachers at Central East were in their third year of using the Talent Development RELA materials and approaches — the novels and associated guides and Student Team Literature and Student Team Writing. While they had suggestions for how to improve the curriculum and recommended instructional methods, they were moderately positive about their experience with the Talent Development model in this area. Cooke teachers had been using these methods for just a few months and had many more reservations and questions. Due to their recent entry to the program, the teachers had had somewhat less control over the choice of novels compared to their colleagues at Central East.

Several of the Central East teachers talked enthusiastically about the program and their students' familiarity with its instructional routines:

> The material is great. I want to emphasize that. I love the *Treasure Hunts*. I love the novels. I don't know where I would be without them. It is a tool to use — how you use it is a different story.
>
> I like the *Treasure Hunts*.... I would be lost without them.
>
> Well, we just finished *Maniac Magee* and we had a show of hands of who liked the novel, and who would like to read another one of this author's novels. Everyone was unanimous.
>
> I love the other activities, so much. I do a lot of writing, my kids do a lot, and so many of the things I give for homework for writing, it's right there for you.
>
> And what's so nice about it with the *Treasure Hunts*, I mean no matter what the individual teacher does with that *Treasure Hunt*, the children are familiar with it. Fifth grade, sixth grade, seventh grade.
>
> The Student Team Reading and Writing. They're used to that routine, they just fall into it.
>
> Right, or having another child check their work.
>
> I think what we're going to find is that the fifth graders are going to come in with the same kind of background you are getting with the sixth graders [and up]...now that Barton, one of our feeder schools, is now part of the program.

At Cooke, teachers spoke positively about the partner reading aspect of the program:

> In special education, those kids who can't read that well...wouldn't get it at all if they weren't with partner reading or shared reading.
>
> I think the partner reading is really, really beneficial.
>
> This curriculum allows it to be much easier to do partner reading.

At the same time, individual focus group participants from Central East along with their colleagues at Cooke suggested changes to strengthen the curriculum although there was no strong consensus among them. Their recommendations included:

> ...more explicit attention to grammar and writing skills;
>
> ...different choices of vocabulary words and possible omission of starred words (since students tend to learn only the starred words and ignore others);
>
> ...rubrics for grading tests;
>
> ...reduction of the number of *Treasure Hunts* developed for each novel;
>
> ...more materials for high achievers;

...more materials for special education students;

...connections to social studies.

Some of the teachers at Cooke claimed to have difficulty with the pacing schedule of the curriculum and level of difficulty of the novels, arguing that their students' low reading levels and lack of background knowledge made it difficult if not impossible to do the four or five novels planned for the year.

> The kids really do not have a lot of background knowledge about most of these things so you really...you have to build up so much for them.
>
> That [novel] uses metaphor after metaphor and these kids are like 'What does that mean?' So I had to spend days teaching metaphors....
>
> ... I have a difficult time because the students are always coming up to me because they can't figure out a word.... In a sentence that is maybe 15 words long, they might not know four or five of those words. They can't get through that sentence unless there is some kind of intervention for them. Therefore, I don't get the kind of work that I get out of them when they have material that's more suited to them. So I like the concept of Johns Hopkins, but I find that when [the reading] is so far above their level, you're not going to see what they really want you to see. [teacher of an "at risk" class]

In contrast, some of the Central East teachers felt that the novels were too easy for the assigned grade level, and believed that the school's RELA Committee that chose the novels needed to re-evaluate their appropriateness for a given grade. A teacher from Central East who had transferred to Cooke commented that the novels selected at Central East were easier for students than those chosen at Cooke.

Teachers at Cooke thought that "round robin" or turn-taking reading in large groups was discouraged in the program and by the principal. They argued, however, that the children who were poor readers liked to read in turns out loud and tended to learn the material better than they did through silent reading on their own.

> I find that the silent reading part doesn't work that well because I have a lot of kids that will read two pages and then they drift off and are not reading anymore. The partner reading works and the round robin reading works.
>
> Silent reading for special education kids is no reading.
>
> I modify the silent reading [for a special "at risk" class]. I'll let them read two pages silently and then we'll do a whole class choral reading.... We'll do a reading of a paragraph or two then we stop. And then I'll read and they follow

along. I have kids that are on a primer level — third grade is their highest level and this is a fifth grade book.

I think there needs to be some modification in the silent reading process that will address the issues of the kids' comprehension.

If I don't hear the errors the child is making, how do I correct them? To give you an example, the word 'philosophy' came up somewhere ... and the kids stumbled over the word. And I said 'okay, let's stop for a minute'...and we broke it down phonetically.... Well, when they got to the end of that word, they were all shouting 'philosophy' and almost jumping up in their seat. So the next time it came up in that sentence and that kid is reading it, everybody is waiting. 'He's not going to get it right.' 'We want to say it.' And it's a beautiful thing.... They want to read out loud. So why can't I give them that?

One teacher noted the importance of training the teachers to extend the vocabulary work to include a fuller understanding of the parts of speech so that students could use words in many different ways.

So if you're dealing with the word 'concession,' maybe they could get into the verb part.... It's like they get the word 'concession' and that's the only word, and they want to say 'I concession my mothers.' But if you tell them there's a verb to go with it, 'concede,' now they've got choices. And the same thing with 'malign' and 'malicious'.... They really need to see it in different contexts.

A few of the Cooke teachers felt that the activities associated with reading the novels were not engaging the students:

And these *Treasure Hunts*, it's just so much writing that the kids are really getting annoyed by it. I am starting to get real sloppy answers. They just want to finish.

You get two pages, you answer five questions. They read another 15 pages, they answer five questions. Then there is story re-tell. Then there is a test. Then they go to the next part of the book and it is the same thing. It is repeated over and over again.

In some instances, individual teachers at the two schools expressed more fundamental criticisms of the Talent Development approach, questioning the emphasis on cooperative learning or detracking.

I really am having trouble with their philosophy. I would like to see some homogeneous grouping.... There is such a wide range of reading levels among the children from non-readers to maybe seventh or eighth grade readers in the

fifth grade. So, the cooperative learning works in some aspects but I don't have enough strength really to pull the group through, and I would like to do some core homogeneous grouping at least at the lower levels. The student team writing works a little bit better as far as peer editing and revising...that seems to work pretty well.

I have to be honest with you. I don't like it [group work]. It's nice to help somebody and I use that. If somebody is done, they come over and help somebody else. But sitting next to somebody day in and day out.... I still don't like that idea. I like to separate. There's just too much playing going on underneath those tables. Kicking feet and trash on the floor.... I believe I walk into everybody else's class and I see it. A lot of kids are focused, but as soon as they have an opportunity, they get acquainted real fast.

I don't know that we have much to offer the high achievers.... I am so enmeshed with the low kids that I really don't have much to give to the others.

Last year I put all my top students together. There were the students who were going to Central High School.... I thought it was unfair to penalize them because you want to put them in these mixed groups, but they have to put up with so much nonsense in those groups that you hold them back...they're bored to death. I mean, they've got to put up with kids that are not on task.

Now I've made an adjustment. If they do silent reading, I don't let them discuss the questions that they have to answer with anybody. They have to answer them completely on their own. That's the only way I can tell whether they actually get the silent reading or not. If they work with somebody, that other person can be giving them answers.

Two kids [in partner reading] who cannot read these words can't help each other.... It's like the blind leading the blind.... You run out of [upper level] kids [to pair them with].

Overall, implementation of the Reading and English Language Arts component of the Talent Development model is very much "a work in progress," particularly at Cooke Middle School. Teachers are refining and adapting the curriculum, looking for more support and ideas for teaching in heterogeneous groups, and seeking extensions of the methods and materials.

Forecasting the Future of the Program

At Central East, where the RELA program has had three years to mature, teachers were asked whether they thought the initiative would continue over the long run beyond the end of the formal Talent Development funding. They were unanimous in saying that the

approach would most likely be strengthened over the next few years and would be sustained beyond that, albeit in somewhat reduced form if money for novels and guides were cut back or eliminated. The school's strong collegial professional culture and internal teacher leadership were cited as factors in the probability of sustaining change. Their comments indicate their support for the program:

> I think it [the RELA approach] will [continue] because I think as we continue to give input, it will only get better.
>
> Yes, I think there are certain things that we would like to change but they (Hopkins) do respond to those things.
>
> We have the opportunity to express ourselves.
>
> I think [it will be continued] because it will be programmed into us.
>
> I think so long as we have copies of the materials...and I would use what's available. Definitely.
>
> I think I am capable of writing a *Treasure Hunt* if given time.
>
> Yes, because we're almost like she said, we're programmed. We're more comfortable now putting together assessments and lessons and questions....
>
> If Johns Hopkins were not going to come here after today, we would still be sharing, we would still be helping each other, and we would have the groundwork from Johns Hopkins. Because right now, we modify what we want...but the groundwork is there.
>
> I have a feeling that teachers, I think would probably vote to continue with the program at the start to pay for this. Maybe not to the same extent that we are doing now, maybe we would not order a set of *Treasure Hunts* for each teacher for each novel, maybe we would share somehow.... I think many of them would probably want to continue the association with Hopkins even if it meant we had to start to pay for it.

Estimates of Students' Progress in Meeting Standards

Focus group participants were asked how well they thought students were able to meet the standards set by the Talent Development curriculum, including their estimate of the proportion of their students who were unable to handle the material. Estimates of student proficiency ranged widely, in part because teachers defined proficiency differently. Responses are presented here by subject area and school.

Science

At Central East, one teacher argued that the students could handle the reading material used because it was "watered down." Two others estimated that 30 percent of the students were working below grade level while another estimated it to be 60 percent. Another felt that almost none of her students were operating at a level of proficiency. Teachers singled out student weakness in reading as the single most important impediment to their working at grade level in science.

At Cooke, where teachers used textbooks in science in addition to the Talent Development hands-on modules, teachers did not (and were not pressed by the moderator) to estimate the proportion of students unable to meet the level of the curriculum. There was general agreement among them, however, that students in the fifth and sixth grades could not handle the reading level of their grade-level textbooks while the upper grades' students worked better with the easier texts used in those classes. At both schools, teachers thought the children responded well to the activities developed by the Talent Development staff.

Mathematics

Mathematics teachers also gave divergent estimates of students' proficiency levels. At Central East, two teachers thought that the majority of their students could handle the material, approximating that 20 percent or 40 percent were unable to do so. Another guessed that half of her students in two classes could meet the standards set by the curriculum but conceded that in a third class up to 80 percent of the students worked below that level. Two other colleagues concurred that they also had classes where approximately 80-85 percent experienced difficulty, pointing to gaps in students' preparation and low reading levels. They used terms like "partially proficient," however, to explain that high proportions of students could follow and learn from portions of the curriculum.

At Cooke, all but one teacher estimated that 30 to 40 percent of their students were not yet able to meet the standards set by the curriculum but that the majority of their students were able to do so. The teacher of the "at-risk" class said that two-thirds of her students struggled with the material.

Reading and English Language Arts

Estimates by Central East teachers of students' non-proficiency in reading and analyzing the novels ranged from a low of 10 percent non-proficient to a high of 50 percent non-proficient, with others reckoning the figure to be about 25 percent. The teacher who said that half of his students were having difficulty pointed out that the students had had a long-term substitute teacher the year before who did not follow the Talent Development approach "so my kids really don't know what to do with the *Treasure Hunts.* They did everything on their own. They didn't work in groups." This same teacher, who had previously been able to stay with a cohort of children over three years, had seen a change for the better over that time in their ability to master the novels.

Teachers at Cooke noted that since most of the children were reading below grade level, they could not easily comprehend the novels on their own, but with the help of the teacher most of them "are doing okay with the book." Estimates of real difficulty among students ranged from 10 percent to 15 percent to 30 percent to 50 percent. The teacher of the "at-risk" class thought that only 20 percent of her students could read the book and understand it without significant help.

Making a Difference with Students

Focus group participants were asked whether they thought they were able to make a significant difference in the academic lives of their students. Given the somber appraisals teachers had just given about their students' reading levels and prior learning, they were remarkably upbeat about their ability to help students. Their comments were free of cynicism and despair, and they projected a sense of hope that things would get better in their schools if they stayed the present course.

Science/Central East

Central East science teachers reflected on their long-term work in science, its impact on students over time, and the contribution of CRESPAR assistance.

> Definitely [I am making a difference].... It seems like the kids we are getting... are so deprived.... I think whatever we can do can be a plus. With the addition of more, better learning for us, resources and supplies, we are doing a better job, but I think no matter what we do, it is an improvement.

I feel like on a day to day basis we make a difference.... I wish I could do more, but I am one person, and they'll say on my tombstone, 'She tried.'

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 fifth grade.'

I think after six years, we are starting to see some of the things we have done, because we have done science fairs every year.... I think each year we get better at teaching it.... I see the difference with the kid I have had that has been here four years as opposed to a brand new child. Like a brand new eighth grader....they have no clue whatsoever.

When you look at other schools, I think we are making tremendous strides.

I think with science, with the things that we are doing with Johns Hopkins, we are bringing a lot. We have IBM involved in this school. We each attend various workshops, and I think each one of us brings something back from those workshops. So I think it's a combination of everything and having Johns Hopkins to support us and get materials for us, and just having a body that is willing to come into the room and help us out. I think all of that combination is making for the best.... It's not perfect, but I think we have a really good situation here.

Do I think I am making a difference personally? Yes I do. I have a lot of students that stay after school and go, 'Wow, that's really neat the way that happened.' They want me to show them how to do it again or they want to go over things with me. Compared to last year's students who bolted out of the room when the bell rang...my students now are more inquisitive.... So yes, I feel I am making a difference academically with them and Johns Hopkins is helping me be a better teacher, giving me the resources to be able to teach.

Science/Cooke

Cooke teachers had less time to respond to the question about their ability to make a significant difference in the academic lives of their students but their brief answers were generally positive:

Yes, I think by working hands-on constantly, they get used to it.

Yes, but not as much as I would like to.

Yes, I feel that I can. I do make a difference for *most* kids.

I say *some* [kids], I can make a difference. (2 teachers)

I would say, yes, *all*.

Mathematics/Central East

Math teachers at Central East noted slow but detectable progress with students.

I really am starting to see more success in the seventh graders.... I do see a few in the eighth grade that are getting it eventually.

I have fifth graders. I don't think anybody is making a significant difference on the fifth grade because I don't think school is real important [to them] right now.

In CATAMA, absolutely [I am making a difference]. We're not making a significant difference with 100 percent of the kids. But I think we are moving forward with the kids who are capable and willing.

I don't see a great big difference right now.... However, I feel more comfortable like if I'm moving on to another lesson and the kids can still tell me what the vocabulary was or what the concept was from the previous couple of lessons back. Or four or five lessons back, and they're still able to maintain that concept.... So that makes me feel a little better. It makes me feel like I've made a difference. Some of them. However, it's not all of them. But yet they try and that's what's important to me.

I'm seeing a slow turnaround with some of them.... I have no doubt that even if it's not with me, if it's with someone else, if they stick with the program for as long as ... from what I hear, the algebra program gets turned around somewhat, they're going to have a decent successful stance to go to high school with. I don't have too much doubt about that now. So I feel pretty good about what I'm doing.

Mathematics/Cooke

The same tone of cautious optimism characterized the responses of the Cooke math teachers:

I don't always feel I'm making a difference, but I think I am.

The high school [teachers] say they love me. Because they were complaining about the kids coming from middle school. The math teacher said 'I don't know who Ms. X is, but her kids all come over well prepared.' That's the only way you know whether your kids are doing well.

> Well, I teach fifth grade and they're young and we're doing a lot of basic work, but I expect that it will...if there's continuity throughout the year.... If the curriculum has continuity.
>
> I hope I'm making a difference. I can tell by who shows up for tutoring.... I've had some additions...voluntarily coming forward. And it's 8 o'clock in the morning. And it increases as the year goes on.
>
> Definitely, I am [making a difference]. Because I have had so many opportunities to get out of here and somebody ['the spirit in the sky'] wants me here. The students I had last year are definitely better this year...and I hope I had something to do with that.
>
> Well, I know that she (the previous speaker) is making a difference because I had her seventh grade kids for math last year.... But anyway, in CATAMA, I'm hoping that I am making a difference.

Reading and English Language Arts/Central East

Central East RELA teachers gave nuanced answers to the teacher efficacy query, reflecting on the positive impact of their work over the past three years with the Talent Development program and school improvement efforts. The first respondent talked about the favorable impact he had had on students with whom he had "looped" over a three-year period ("they need continuity") and how that contrasted with this year's eighth grade class whom he had "inherited" from a temporary seventh grade teacher who had not followed the program.

> Now, if you had spoken with me last year, I would have said yes [I have made a significant difference]. This year I would be telling you a lie.... Even my top kids, if you look at their report card grades, they got like C's and D's on them, got F's. But they got like 90's and 93's on the SAT 9 test. Because they are lazy...and they are so busy chasing the girls, the girls chasing the boys.... I have so many kids that are absent or late.... [Staying with the same kids for three years] worked. I see the difference.
>
> With the majority, not all of them, I do [make a difference]. You cannot just hand papers back with a D on it and not explain.... I just give them seat work and I do it [individual conferences] and it's working.... They love it, and they need it, and it is a better relationship between me and the children, and you are just constantly encouraging them.... It's working, we talk a lot and it's working for me. Not all of them, but like 70 percent of them
>
> . I guess I feel I make a difference for some.... I've been doing a lot this year, how to take tests and things like that...a lot of general stuff that I would have

expected them to have at ten years old. I have stopped making assumptions.... We talked yesterday at the science fair boards.... We see growth from the fifth to eighth grades.

Well my feeling is that I see things from a different perspective. That every one of the teachers who is sitting here, you know that when I have dealt with their kids, they have much more of an impact on the growth of these kids than they are aware of, and maybe they are just very hard on themselves.

I would say 'yes I do' [have an impact]. At least I try to. I feel like I do. If I felt like I didn't, I wouldn't be doing this. I'd go back to roofing or an electrician.... That's the only reward I get because it certainly isn't the money. You know what I mean, the only reward I get is sometimes I go home and I feel lousy, and then there are days that I go home and I go, 'yeah, I made a difference today. Today a light bulb went off, and it was because of what I said or what I did.'

Oh, when they used those starred vocabulary words, I go crazy.

I think what really makes you feel good is when you have the eighth graders and they come back and they make comments about, 'Well, I'm so glad you taught me how to write and the writing process.'

We had some visitors today who had just come back from visiting several other schools.... I must tell you they were overwhelmed by what they saw in this school ... They were just, I mean just walking through and looking into the classrooms and seeing that the halls are empty because the kids are in the classrooms and every classroom there is something positive going on.... The [student] escorts were very, very impressive, and they were so positive about the school and the experience they've had here, and all of that is because of the difference that you guys make and I think that you need to be aware of that. You make a difference every day.

Reading and English Language Arts/Cooke

Although Cooke teachers had only recently adopted the Talent Development program, they too gave relatively positive assessments of their ability to make a difference in students' academic lives.

Yeah, I feel like because I am trying my hardest, and I'm going to adapt and adjust. So absolutely, I feel like I can make a difference.

I think their vocabulary has increased tremendously...and analyzing the book.

I can definitely make a difference. If I were to use the program in and of itself and that was it and not add things to it, then I would think a lot would be lost.

I definitely see my students' outward speech changing from the books we're reading. Like we had 'monotonous' today, and we talked abut the Latin word 'mono.' I'm like 'now you know Latin' and they were all excited. Then they said to me in eighth period, 'Can we stop? This is monotonous.'

From the CATARA [RELA extra help class] portion, I believe I am going to make a difference...that the basic skills that I'm offering the students now, and the small group is going to make a difference somewhere along the line. And I also believe that because they know it's serious. They walk in that classroom, they realize we're here because we want higher test scores and attitude changes. So we're making a difference. Yes.

Yes, absolutely, I think we're going to make a difference because it is a schoolwide focus. And I think that the teachers are really together in their commitment to make it work by whatever means possible. We are going to make it work. Nobody has given up and said 'I'm doing my own thing and forget this.' Everybody is really trying to adapt and make modifications, and we're sharing with each other. 'What are you doing about this and what are you doing about that?' So I think because of the commitment of the teachers, we're going to make it.

Conclusions and Implications

Teachers' responses to the Talent Development training, materials, and instructional approach are generally favorable, with some components coming in for more praise than others. At both schools and in all subject areas, the content-specific training and classroom support was commended by all focus group participants. They noted the initiative's openness to and encouragement of teachers' refinements, adaptations, and suggestions. The multiple levels of support — from CRESPAR/Hopkins trainers, teacher leaders in the schools, and a teacher-on-special assignment in math — appear to provide a highly effective package of professional development services. Teachers' assessments confirmed findings from the research community that teacher learning is effectively nourished when multi-layered opportunities embedded in the school and classroom are readily available. Teachers are often in contact with skilled trainers in a variety of professional development settings, but it is rare to have the trainers so closely connected to their actual work in classrooms.

With regard to curriculum materials, science teachers found the CRESPAR/Hopkins-provided lessons and activities very helpful. Central East teachers thought their three-year experience with the RELA program was leading to long-term student growth, while Cooke teachers were still grappling with its implementation during their first year. The math

teachers at both schools expressed cautious support for the UCSMP textbooks and instructional approaches although the teacher currently using the eighth grade algebra book noted some difficulties with it.

Teachers in all of the 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. Teachers were hopeful that similar reforms in the elementary feeder schools would better prepare the entering fifth graders. At Central East, eighth grade teachers were more aware of the program's impact than the fifth grade teachers because they thought they were seeing long-term growth, an important observation since achievement levels of eighth graders are typically more divergent and depressing than those of fifth graders. Overall, teachers gave widely varying estimates of the percentage of students meeting the standards of the new curriculum, perhaps because the focus group did not enable them to ground the discussion in an examination of classroom assignments, student work, and scoring guides.

Teachers' sense of efficacy with their students was relatively high at both schools. While unflinchingly honest about their students' shaky levels of performance, teachers seemed willing to forge ahead, believing that a continuous schoolwide approach would produce better student achievement. They appeared to respect and support one another and did not criticize their school's leadership, organization, or culture.

As expected, some criticism of cooperative learning and heterogeneous grouping emerged in the focus group responses. These aspects of the Talent Development model are the most controversial and most likely to meet resistance from teachers. The majority of focus group participants did not articulate such objections, and some noted that CRESPAR staff members were trying to provide additional training and materials in strategies for dealing with diverse learning levels in the classroom. While the teachers' objections serve as a critical reminder that the implementation of cooperative learning and de-tracking require extensive support and refinement, there was no evidence of widespread desire to jettison those underpinnings of the initiative.

As with all externally-funded initiatives, responses from participants indicated that long-term institutionalization of the initiative was a question. The teachers pointed to components of the Talent Development approach that support internal capacity building: the training and use of a teacher-on-special assignment from the District; the use of teacher

leaders in the school to conduct much of the training and to run the CATAMA and CATARA Lab; the schools' own commitment to de-tracking, interdisciplinary teaming, double dose support, and double periods in RELA; and the depth of the training over time for teachers. They noted factors that could undermine institutionalization, however, including turnover among teachers and administrators, lack of funds to continue purchasing consumable science materials and other curriculum materials (*Treasure Hunts*, teacher guides, overheads), and the absence of staff time to coordinate training and to take care of mundane tasks like photocopying.

A discordant note was sounded by teachers who noted the presence of substitutes in several classes and warned about the deleterious impact of long-term substitutes. Students who spend months or even a year with an unqualified temporary teacher who does not join in the initiative, they felt, would be seriously harmed by that experience.

This report is based on the self-reports of a self-selected sample and thus should be treated as only one piece of evidence about the impact of the Talent Development model. Teachers' perceptions, however, should be useful to those who are interested in further improving the initiative. Talent Development organizers should take heart that much of their work has been well received in the schools and that teachers are committed to moving forward with the effort.