RMLE Online
Research in Middle Level Education

David Hough, Ph.D., Editor
Missouri State University
Springfield, MO

2002 • Volume 25 • Number 2 ISSN 1084-8959

Instructional Innovation in Summer School: Outcomes for Urban Students

Mary Schearer
Classroom, Inc.
New York, NY

Jane Canner
Classroom, Inc.
New York, NY

Citation: Schearer, M., & Canner, J. (2002). Instructional innovation in summer school: Outcomes for urban students. *Research in Middle Level Education Online, 25*(2). Retrieved [date], from http://www.nmsa.org/Publications/RMLEOnline/tabid/101/Default.aspx

Abstract

In this paper, we present evaluation findings from a high stakes summer school program intended to help students failing Grade 8 in June 2000 meet promotion requirements by mid-August. Program components included: teacher professional development, an interdisciplinary curriculum, a Classroom, Inc. computer simulation and a related student workbook, and weekly on-site support visits. Over 300 students and 27 teachers in an urban district's nine middle schools participated in the program. The district and a not-for-profit organization (Classroom, Inc.) collaborated to offer the program. We used a pre-/post- design with traditional and non-traditional measures to examine student outcomes. The program fostered positive outcomes, including improvements in attendance, disciplinary referrals, and academic engagement. Performance in four core subjects—mathematics, reading, science, and social studies—was enhanced. District students made a greater than average improvement in standardized mathematics test scores, and reading gains comparable to the citywide Grade 8 results. Overall, scores on problem-solving performance assessments improved modestly between the pre- and post-testing; the scores of the lower two-thirds of the sample improved significantly. Students and educators deemed the program valuable; they would recommend it to others. Educators would use the program again—for Grade 8 and other levels. Implications for a larger scale implementation are discussed. The program was scaled up tenfold in 2001.

Introduction

With each year, school districts expand their summer programs (Alexander, Entwisle, & Olson, 2000; Chester, 2000; Cooper, 2000; Cooper, Charlton, Valentine, & Muhlenbruck, 1999; Nowakowski, 2000; Roderick & Jacob, 2000). In many cases, these are designed to help students meet increasingly rigorous graduation and promotion standards (Chester, 2000; Cooper, et al., 1999; Roderick & Jacob, 2000). In this paper, we present program evaluation findings related to a summer school application of Classroom, Inc.'s (CRI's) technology-enriched interdisciplinary curriculum. This was the pilot offering of CRI's program in a large-scale summer ses-

sion and represented an abbreviated, high-stakes exposure to the CRI program. The curriculum was the core of the Grade 8 remedial summer session operated by Community School District 20 in Brooklyn, New York.

New York's elevated graduation and promotion requirements for Grade 8 students went into effect in 1999-2000 (New York City Board of Education, 2000b, 1999). The Chancellor's Promotion Standards Regulation directed that

> promotion will be based on the integrated use of multiple criteria: achievement of designated performance standards as evidenced by student work, teacher observation, and assessment/grades; achievement of proficiency levels designated herein on Citywide and State assessments; attaining 90% attendance; and in Grade 8, attaining passing grades in academic subject areas designated herein.
>
> Decisions regarding promotion will consider all the stated criteria for each grade. The decision to promote or retain may not be based on consideration of a sole criterion. (New York City Board of Education, 1999, p. 9)

The criteria for participation in a district-provided remedial summer program included scoring far below proficiency on Spring 2000 standardized achievement tests in mathematics or reading, and/or failing one or more of four core subjects (language arts, mathematics, science, or social studies).

The Board of Education charged community school districts across the city with developing and staffing a six-week Grade 8 summer session that would prepare students who had failed and/or were at-risk of future failure in any of the four core subjects to meet the promotion standards.

The promotion decisions made at the end of the summer program were to be based on multiple criteria: work completed in summer school, an exit project(s) in the subject(s) they failed during 1999-2000, and in some cases, standardized test scores. Students who fell far below proficiency on spring 2000 New York state standardized tests in English language arts or mathematics were also required to take another standardized English language arts and/or mathematics test.

In the spring of 2000, CRI approached a district with which it had worked for several years about the possibility of jointly developing a summer school program with its computer simulations as a focus. Because of CRI's history with this district, both partners saw this as an opportunity to pilot CRI's technology-enriched interdisciplinary program in a short-term, high stakes application—summer school. CRI entered into a partnership with the district to develop a program for the district's eighth-grade teachers and students. The summer program used one of CRI's workplace simulations, *The Green Mountain Paper Company* (GMPC), as a centerpiece.

The district serves over 27,000 students, nearly 3,000 in Grade 8—from several urban neighborhoods. The students throughout the district—and those who participated in the summer program—represent substantial socioeconomic, ethnic, and racial diversity, and include large numbers of students whose families are recent immigrants to the U.S.

This summer program was developed and offered jointly by the district and CRI. Together CRI and the district conceptualized the program, the curriculum, the materials, and the training and support that would be required. CRI developed that portion of the program and materials that were most specifically related to the simulation (e.g., a student workbook) and the district developed the more general but related curriculum guide for specific subject areas. CRI edited and produced the overall package for teachers. CRI and district staff provided the initial two-day training for teachers at a school within the district, provided the materials for teachers, and subsequently provided weekly on-site support and a mid-program assessment workshop. CRI developed the evaluation design and materials, and with the district's assistance, distributed and collected evaluation materials. Both partners planned and conducted an end-of-program student exhibit at one of the schools. CRI evaluated the program and reported its findings.

Program Description

The summer program included professional development for teachers (i.e., an introductory two-day workshop and a mid-program afternoon assessment workshop), a six-week interdisciplinary curriculum, the GMPC simulation, a student workbook to accompany the simulation, weekly on-site support visits to teachers, and an evaluation.

The "standard" CRI program uses workplace-based computer simulations and related extension activities intended to enhance student engagement and learning. The cornerstones of the CRI approach are collaborative learning, interdisciplinary instruction, the integration of technology into the curriculum, and the development of students' problem-solving and decision-making skills.

The summer session curriculum was interdisciplinary, but focused on a major subject area each week. Following three days of introductory and assessment activities, the four full weeks of the program emphasized language arts, science, social studies, and mathematics, and were followed by a week of culminating and assessment activities. The Teacher's Handbook developed for the course articulated the interdisciplinary curriculum—this was presented with a week-by-week focus on one of four core content areas—addressing middle school standards. The Handbook also specified a culminating (or exit) project for each week intended to pull together students' work in the subject area for the week, and to provide an opportunity for students to demonstrate their command of a particular subject area. The culminating interdisciplinary projects included creating a community newspaper, a plan for an environmentally sound city, an exhibit highlighting significant events of a late 20th century decade, and a design for a room. On Wednesday of each week, students worked collaboratively to complete an episode of GMPC. They used the preparation, on-computer, and post-simulation activities in their workbooks on Wednesdays.

The professional development provided to teachers included initial training in using the technology, implementing the overall themes and activities of the curriculum, and assessing student work. Weekly support visits by district and CRI program administrators were used for troubleshooting, monitoring implementation, technology support, and collecting evaluation data. A mid-program workshop was designed to strengthen teachers' abilities to assess student progress (in preparation for making end-of-program promotion decisions).

Scope of the Program

The district's nine middle schools participated in the pilot program, engaging 27 teachers and over 300 students in the Grade 8 summer session. Class size was limited to 15 students per class. All classrooms were equipped with four computers provided over the last three years through a school system initiative to dramatically increase technology access. This access and small class size allowed students to do the computer work related to this program in their regular classroom—rather than moving to a computer lab for some instruction. Students attended school from 8:30 a.m. through 12:30 p.m., five days per week between July 5th and August 10th. Students received 108 hours of instruction and assessment during the summer. Virtually all students attended the summer session at the schools they attended throughout the 1999-2000 year, but did not typically work with their 1999-2000-classroom teacher in the summer session.

Over two-thirds of the teachers had no prior exposure to the CRI program. Teacher preparation for the program included ten hours of formal teacher training, supplemented by weekly on-site support.

Historically, CRI has recognized the importance of systematically examining its work — to improve program quality. Building on this practice of ongoing program review, CRI included a formal evaluation in this pilot implementation. The study included multiple measures that gathered quantitative and qualitative data. There were formative and summative components of the overall evaluation.

Methods

The evaluation was intended primarily to assess change in students' performance related to their involvement in the six-week summer session. We used a pre-/post- design (i.e., before and after students worked with the simulation and related materials) that relied on traditional and non-traditional measures. In this paper, we present pre- and post-intervention data from over 200 students as well as teachers and administrators.

We examined student outcomes that included these traditional progress indicators: promotion/retention decisions, attendance, and standardized mathematics and reading test scores (test scores only for students required to attend the program because of poor performance on Spring 2000 standardized tests). We also examined less traditional indicators—problem-solving performance assessment data and student survey responses.

In addition to these measures used largely for program evaluation purposes, the curriculum provided opportunities to assess student progress. A performance assessment/exit project was built in as a culminating activity for each curriculum area. The assessment materials given to teachers included rubrics for evaluating student work on the exit projects. Other student work (e.g., class work, homework, completion of a student workbook) provided opportunities for assessment of student progress in all four subject areas. Teachers were advised to consider all of these examples of student work in making their promotion/retention decisions, in addition to any standardized test results.

We also sought evaluative information from teachers and administrators. Throughout the summer, we asked teachers to give us weekly written feedback on key areas of program implementation and to identify any areas in which they needed help. We surveyed teachers initially at the close of the two-day pre-program professional development sessions for their assessment of the initial training and their preparedness to offer the program to students. The end-of-program activities included surveys of teachers and administrators regarding program implementation and its perceived utility. In this paper, we focus on data related to students' outcomes.

Measures

In Table 1, we summarize the forms and sources of the data presented in this paper (see next page). In addition to reviewing data provided by the district, we gathered data from participants in all schools operating a summer session using surveys, an interview, performance assessments, and student data summaries.

Teachers administered both of the student measures—the pre- and post-program problem-solving performance assessment and the end-of-program Student Survey. Most also completed the Student Data Summaries describing student status and progress over the course of the summer.

Researchers at Indiana University's Center for Innovation in Assessment created, validated, and scored two forms of a performance assessment designed to accompany the GMPC simulation—"How Are We Doing? Completing a Performance Summary Report." Teachers administered Form A at the beginning of the summer session and Form B at the end. The measure assesses a student's ability to read, interpret, analyze, and evaluate information; recognize potential threats to and support for protecting the environment, making a profit, employee satisfaction, and community relations; and create a bar graph. The assessment developers at Indiana University described the assessment in this way:

> In the assessment, the student teams [assume] the role of Plant Manager at a paper company. The Plant Manager is asked to evaluate a paper company's performance for one week in each of four areas: environmental friendliness, profitability, employee satisfaction, and community relations. Each of four employees provides students with information about the events that occurred that week at the Paper Company. While reading what each of these employees has to say, students take notes on the sheet labeled, "Good and Bad Events of the Week." Based on the information gathered from each of the four employees, students create a bar graph indicating how well the company performed during that week in each of the four areas listed above. (B. G. Greene, personal communication, September 2000)

Indiana University researchers used two formulae (viz., Dale-Chall, Fry) to estimate the readability of both forms of the assessment (Dale & Chall, 1948; Fry, 1968, 1977). These were the estimates: Form A at 7.9 (Dale-Chall) and 7.0 (Fry) and Form B at 8.7 (Dale-Chall) and 8.0 (Fry).

TABLE 1. Data Sources and Measures Used

	Data Sources			
	District files	Administrators	Teachers	Students
Traditional measures				
• Summer program attendance	*		*	
• Pre-program test scores	*		*	
• Post-program test scores	*			
• Pre-program course grades			*	
• Post-program course grades			*	
• Post-program promotion decisions	*		*	
Non-traditional measures				
• Scores on pre-program problem-solving performance assessments				*
• Scores on post-program problem-solving performance assessments				*
Survey data				
• Feedback on initial training			*	
• Weekly feedback			*	
• End-of-program surveys		*	*	*
Interview data				
• Feedback on exit projects			*	

CRI also used an end-of-session evaluative survey to get students' feedback on their actual use of the simulation, the parts of the summer program that they enjoyed or did not and those they found helpful to their work in core subject areas. Along with the end-of-session survey of students, CRI distributed evaluative surveys to each teacher and principal.

Program Participants

Administrators, teachers, and students in the district's nine middle schools that hosted a summer session provided information on program participants. Principals reported that, on average, three Grade 8 classes used CRI's program this summer (range=1-8), and 45 eighth-grade students typically[1] participated in the summer program in their schools (range=24-93). Administrators estimated that, of these students, 82% were "required to attend because of failure to meet promotion standards." This estimate suggested that other students attended for enrichment. In some cases, these were students who had marginally met the promotion requirements in June. Some were encouraged to attend summer school to strengthen their foundation in these core subjects before facing the challenging high school curriculum in the fall.

Students. Students were more likely to have been required to attend summer school because of very poor performance on the spring standardized mathematics test (i.e., 35% scored far below proficiency) than very poor reading test performance (11%). Over one-half of the students received a failing end-of-year course grade in mathematics. Sixty-one percent of Grade 8 summer students in this district were enrolled in the program for

reasons other than their spring 2000 standardized test scores (i.e., only 39% scored far below proficiency in either mathematics or reading on the spring tests).

Most students in the summer session were young men (61%, n=149)[2]. Although they ranged in age from 12 to 16 years, their average age was 14. Prior to this summer program, nearly all had used a computer in a class in school (89%, n=216) and had worked in teams in classes (86%, n=210).

Teachers. There were two sources for our information on the 27 summer session teachers—a pre-program survey conducted at the end of the initial training (n=28) and an end-of-program survey (n=24).

The 24 teachers across the nine schools who completed an end-of-program survey represented a range of teaching experience—from 2 to 33 years (M=11 years, n=24). Two-thirds had earned a Master's degree (67%, n=16). Over two-thirds had taught summer school in previous years (71%, n=17). The district estimated that virtually all of the teachers were certified (at least 93%—either 25 or 26 of the 27 summer teachers).

Less than one-third reported prior experience using computer simulations with their classes or in CRI training prior to this summer program.

- 29% (n=7) had used computer simulations in their work with students, prior to this program. Those with prior classroom simulation experience reported using CRI's *The Chelsea Bank* (n=3) or *The Court Square Community Bank* simulation (n=1), or Dino Park, Oregon Trail/Amazon/African Trail, or Where in the World is Carmen San Diego?
- 21% (n=5) had previously attended a CRI Level I Institute (i.e., CRI's standard initial training for educators).

Prior to this program, approximately 90% had had their students working in teams as part of their regular coursework (88%, n=21) or had used an interdisciplinary curriculum in their work with students (92%, n=22).

Administrators. The summer session administrators typically were the school-year administrators for these schools. Four of the seven administrators who returned an end-of-program survey had administered a summer session in prior years, typically for the last two years (range=1 to 4 years). Principals reported having a basic familiarity with their teachers' work with the CRI summer program (M=3.9, n=7).

Findings

Evaluation data indicate that, even in this condensed form (in terms of length of teacher training and student exposure to program materials, simulations, and related activities) and with some variability in implementation across sites, the program fostered positive outcomes for students.

The program engaged previously disengaged students. Across the district, administrators reported substantial improvement in attendance, disciplinary referrals, and academic engagement as compared to the performance of these students during the regular school year, and as compared to student performance in earlier years' Grade 8 summer programs. Some teachers who initially considered the reading required to negotiate the simulation too challenging for their students, later found that their students were able to make full use of the simulation. Along with teachers, district and school administrators reported noteworthy improvement in the overall quality of student work (e.g., research, writing, weekly projects) over that done by these students during the school year and that completed by earlier Grade 8 summer classes. In routine classroom visits, CRI (and district and school administrators) met students very proud of their summer work and eager to present it to school and summer program administrators. Indiana University's analyses of performance assessment data revealed that students modestly increased their problem-solving abilities during the summer program. Students were promoted to Grade 9 at the end of the summer at a higher rate than were their peers city-wide.

Traditional Student Progress Indicators

Attendance. The district reported that 303 Grade 8 students were mandated to attend the summer program. Over 90% of the mandated Grade 8 students attended at least one day of the summer program in this district, very close to the citywide figure for Grade 8 of 91% (New York City Board of Education, 2000a).

Students who participated in CRI's program in this district attended over 80% of the summer sessions. Teachers reported that their students typically attended 23 of the 27 sessions (85%) in the core summer program (M=22.9, n=190), although the district reported an 82% rate (n=280). Twenty-five of the 27 teachers provided these data on their students.

Predictably, student attendance appeared linked to other key outcomes. Students who were promoted had attended more summer sessions (M=24 sessions, n=171) than students who were retained (M=14 sessions, n=19) ($r=0.64$, $p<0.01$). Students with higher summer attendance typically received higher teacher-assigned scores on summer coursework.

Standardized test scores. Only students who failed the spring standardized tests were required to be retested. Data provided by the district in mid-August indicated that 145 eighth grade students were retested at the end of the program—50 in language arts and 95 in mathematics.

Of the 50 students retested in language arts, 30% (n=15) earned a passing score; 70% (n=35) failed. Of the 95 students retested in mathematics, 31% (n=29) earned a passing score; 69% failed (n=66).

The comparable citywide figures for Grade 8 end-of-summer testing, released at the end of August, were 31.7% passing in reading (n=1,835) and 23.6% passing in mathematics (n=4,521) (New York City Board of Education, 2000a).

Assuming that these late August data were accurate and that students were appropriately identified for August testing, we were encouraged that 30% of the students who previously were unable to earn passing scores in reading and mathematics were able to do so at the conclusion of this relatively brief summer program. The fact that the remaining 70% were unable to do so, and that many of these students were promoted (based on other criteria such as attendance and the work they produced), is problematic.

Compared to students city-wide, a greater proportion of eighth-grade students in this district improved in mathematics, and about the same proportion improved in reading.

Summer performance in core subjects. We found evidence that, in the course of their summer work, students were able to demonstrate an enhanced understanding of the four core subject areas. On average, their course grades prior to summer school were just above the cutoff for course failure, except in mathematics, where the average was a failing grade. At the end of the summer program, however, teachers reported that virtually all students achieved a passing performance level in these subjects, including mathematics. Those who did not, most often were not promoted to Grade 9. In Table 2, we present a summary of students' average June 2000 course grades and the scores teachers assigned for students' summer work in each of the core subjects using a rubric CRI, in concert with the district, developed for this program (see below).

TABLE 2. Students' Performance in Core Subject Areas

	June 2000 Course Grades[ab]					Summer 2000 Performance Levels[c]				
	M	Median	SD	Range	N	M	Median	SD	Range	N
Subjects										
English language arts	63.9	65.0	9.7	30-96	278	2.41[d]	2.60	0.83	0-4	269
Science	63.1	65.0	10.5	10-99	271	2.46	2.80	0.89	0-4	270
Social studies	66.0	65.0	10.3	25-95	274	2.50	2.90	0.88	0-4	270
Mathematics	60.3	55.0	8.5	40-91	275	2.57	3.00	0.97	0-4	250

Notes:

[a] Teachers recorded these grades on the pre-program Student Data Summary.

[b] Teachers advised us that a grade of 55 or lower is considered a failing course grade.

[c] Entries represent performance levels students achieved in their work throughout the week focused on this subject and on their work on the exit project for that week.

[d] Scale: 1=significantly below standard, 2=approaching standard, 3=meets standard, 4=exceeds standard. A score of two or above is considered a passing grade.

Promotion decisions. The overwhelming majority of students were promoted at the conclusion of the summer program. Teachers reported that 88% of their students were promoted (n=252), while the district reported a different figure—79 percent—based on a higher number of students (n=302). Both figures are higher than the citywide figure for Grade 8 promotions—72% (New York City Board of Education, 2000a).

Non-traditional Indicators

Problem-solving performance assessment results. Students from 27 classes took the performance assessment. A total of 308 students took either Form A (pre-program) (n=275) or Form B (post-program) (n=257) or both forms (n=225).

Table 3 summarizes the performance assessment results by class, as well as for the full sample (see next page). Overall, students' scores improved in the four weeks between administrations (pre-M=9.8 out of a maximum score of 20 points; post-M=10.7; M change=0.87, n=225). Of the 27 classes, scores for 18 improved, although those for 2 classes decreased substantially and those for 7 others decreased modestly.

TABLE 3. Problem-Solving Performance assessment Summary

School	Class	Pre-Program* (N=275) Mean Total	Post-Program (N=257) Mean Total	Pre-/Post- Difference (N=225)
A	1	15.09	6.50	-8.59
	2	10.29	12.91	2.62
B	1	13.40	13.33	-0.07
	2	4.80	3.88	-0.92
C	1	7.45	8.40	0.95
	2	8.36	9.10	0.74
	3	7.16	10.00	2.84
	4	11.20	10.45	-0.75
D	1	10.38	11.00	0.62
	2	18.42	9.57	-8.85
	3	13.88	13.25	-0.63
E	1	8.00	9.25	1.25
	2	6.86	8.70	1.84
	3	8.67	6.67	-2.00
F	1	9.83	11.64	1.81
	2	5.46	11.31	5.85
	3	7.80	11.90	4.10
G	1	11.67	12.00	0.33
H	1	9.45	9.5	0.05
	2	9.70	11.72	2.02
	3	13.00	10.85	-2.15
	4	9.36	12.73	3.37
	5	14.29	13.57	-0.72
	6	5.00	9.46	4.46
	7	10.50	10.86	0.36
	8	8.50	10.45	1.95
I	1	9.14	11.75	2.61
M score -- all students:		9.91	10.40	0.48
M score -- matched cases:		9.80	10.67	0.87
Number of students with "matched" cases:			225 (73%)	
Number of schools:		9		
Number of classes:		27		

* Maximum score=20points.

In addition to looking at scores for the overall sample and those for individual classes, Indiana University researchers examined differences in score changes for sub-groups. They divided the total group into three groups—low, middle, and high—based on initial problem-solving scores, and analyzed the raw score gains using a paired-sample t-test. They found that the lowest scoring group and the middle scoring group both increased their scores significantly from the pre-test to the post-test (pre-/post- mean change: 4.5 to 8.3, $p < 0.0001$; 9.8 to 10.9, $p < 0.01$ respectively). However, the highest scoring group declined significantly from pre-test to post-test scores (15.1 to 12.8, $p < 0.0001$). The results also show that the standard deviations for all three groups increased significantly from pre-test to post-test. This indicates that the scores were more variable on the post-test suggesting that instruction had an impact in making the student performance more variable.

In scoring the assessments, the Indiana University team noticed that many students in the two classes with very high pre-program scores gave virtually the same answers to the pre-program assessment questions. The scorers assumed that the teachers guided a few students and others overheard the discussion. To understand students' scores in classes without this unusual circumstance, they analyzed scores for the other 25 classes (n=210 students). Excluding these "guided" classes, they found a statistically significant improvement in students' problem-solving scores over the four weeks of the program (pre-M=9.3; post-M=10.9; M change=1.6, n=210, $p < 0.0001$).

Using this sample of "unguided" classes, the Indiana team again examined differences in score changes for sub-groups. They divided the total group into three groups—low, middle, and high—based on initial problem-solving scores, and analyzed the raw score gains using a paired-sample t-test. They found more substantial

and statistically significant increases in problem solving for the lowest scoring group and the middle scoring group between the pre-test to the post-test (pre-/post- mean change: 4.3 to 8.3, $p < 0.0001$; 9.2 to 10.7, $p < 0.0001$ respectively). Using only the "unguided" classes, they found a non-significant decline in the scores for the highest scoring group (14.4 to 13.6, $p < 0.06$).

The Indiana team also examined scores for the unguided classes in terms of quartiles, and looked at score changes for sub-groups. They divided the total group based on initial problem-solving scores, and analyzed the raw score gains using a paired-sample t-test. Students across the spectrum improved in problem solving. They found significant increases in problem solving for students in the first, second, and fourth quartiles—the changes are presented in Table 4 below.

TABLE 4. Problem-solving Scores by Quartile

	Pre-program (n=210)	Post-program (n=210)	Difference	Significance
First Quartile	3.6	7.9	4.3	0.0001
Second Quartile	7.5	9.7	2.2	0.0001
Third Quartile	11.2	12.0	0.8	0.08
Fourth Quartile	15.1	14.0	-1.1	0.03

Note. These were the mean scores of students in the 25 "unguided" classes out of the full 27 classes that completed the problem-solving performance assessments. Again, the highest possible score on both forms was 20 points.

Overall, the performance assessment scores showed a small, but significant improvement. The improvement was noteworthy over this short period. The change was most dramatic for the lowest performing students at program entry. It may be worth noting that the readability level was more difficult on the post-assessment than on that used for the pre-test (i.e., using the Dale-Chall and Fry formulae, the form used in the post-test was estimated to be at a readability level nearly one grade level higher than was the form used in the pre-test). Although the assessment developers at Indiana University did not consider the readability issue critical, the principal Indiana University researcher was "astonished that there was any significant improvement after only a few weeks of instruction with only the use of [four episodes of the 12-episode simulation] and with students who have been experiencing problems in school. With significant improvement in such a short period of time with these students, one could argue that if they were in the program longer, with [teachers more experienced with the CRI program], one could expect much greater improvements" (R. Farr, personal communication, October 30, 2000).

Performance on the exit projects. The instructional activities for each week included an interdisciplinary culminating project that students were required to develop as a group. The projects, each linked to the subject area that was the focus of the week, included creating a community newspaper, a plan for an environmentally sound city, an exhibit highlighting significant events of a late 20th century decade, and a design for a room.

In weekly classroom visits, district and CRI staffers were struck by comments from teachers and students regarding student work on the exit projects. Teachers were seeing a notably higher quality of work than they had expected from these students. Students were interested in the projects and were very proud of the work they were doing on the projects. Students were eager to show their work to program, school, and district administrators. As the summer progressed, administrators were also struck by the quality of work on the exit projects. Near the end of the summer, CRI invited schools to send examples of student work on the exit projects and some classes to join in a celebration of student work, hosted by the school with the largest number of Grade 8 summer classes. District, school, and CRI administrators attended the event, along with summer teachers and students. Students displayed their projects and explained their work on the projects for the visi-

tors in ways that were very compelling. Most of these students, who had little prior experience of accomplishment, joy, or recognition for their schoolwork, demonstrated and explained their work on the projects and what it meant to them. Students were articulate, poised, and candid in describing how they had grown over the summer.

In feedback from this event and comments earlier in the summer, it seemed that these projects provided a particularly valuable experience for many students and teachers. We decided to interview a few teachers to learn a little more about students' work on the exit projects. In late September, we did telephone interviews with four teachers.

Each of the four teachers reported being surprised by the quality of students' work on the projects. All had learned something about their students and about instructional practices in their work with the exit projects. The projects seemed to bring students and teachers a little closer together. They learned more about each other and were impressed by what they learned. Teachers learned that their students could do a higher quality work and could handle more complex projects than teachers originally thought that they could. Even these highly experienced teachers recognized that certain instructional strategies were more effective than others in this situation (e.g., helping students to break a complex project into smaller, more manageable sections; recognizing students who have rarely been recognized for their academic accomplishments; providing opportunities for hands-on work and for students to demonstrate "multiple intelligences"). They also appreciated the smaller class size that allowed them to spend more time with individual students—this was particularly important to a teacher working with students with special needs.

For one teacher, the most important thing she learned during the program was

> That you have to keep praising them, especially these kids who don't do well in school. The more praise they receive, they really can do the work that you would expect of a more average student. Then you're more inclined to give them a big project. You have to work with them step by step. You can't, like with an above average group, give them guidelines and they'll take it from there. You've really got to go step by step.

Teachers uniformly found students engaged in the social studies "Decades Project." Students were very much interested in a teacher describing his memory of voter registration drives in the U.S. South in the 1960s. They found a deeper connection between their own experience and an historical era, as well as with their teacher. It also seemed important to the teacher that he could help bring academic content alive for students.

Some teachers enjoyed the science project and reported that the students "loved all the experiments," "did a lot of work in their journals," and "felt very successful with the science." One teacher reported that his school did not receive the materials needed to conduct the experiments. The science project presented another challenge to at least one teacher on a cloudy, still day. This experienced mathematics teacher was thrown by the lack of sun and wind needed for an experiment. It occurred to her later that she could have improvised with a multi-speed fan. She is ready to teach her next science lesson, though!

Overall, the exit projects provided an opportunity for students to do research on the Internet, use art and poetry to present their research findings, do hands-on learning, write, and try out engaging roles to present their findings (e.g., take on the role of a reporter in the midst of a breaking event in the civil rights struggle). These projects gave students an intimate experience of learning, a chance to immerse themselves in what might otherwise have been dry facts. For example, students could explore the civil rights movement from the role of a person their own age. Some students also interviewed family members and community residents, merchants, etc.

A highly experienced mathematics teacher described students' work on the projects this way:

> It was far beyond what I expected, I must admit that. I think that they were working hard to get out and not have to go back to junior high. But they really, really put their best feet forward. They really worked hard.

A teacher reaffirmed the survey responses of both students and teachers that the group work was valuable to students. In response to an interview question about whether "students seemed to be getting anything special from their work on the projects," an experienced teacher recognized the importance of

> working together … total group learning. Everybody worked in groups, everyday … one of the things I noticed was the people trying to help one another. If one student was done, and one student was working on the second part of a project, one student would say, "Do you want me to type this for you until you're finished?" And they really were collaborating together, it was really amazing.

Although impressed by the quality of students' work on these projects, teachers were candid in their overall assessment of it. A social studies teacher put it this way:

> I was satisfied. I don't consider it fantastic, but then again, you're not going to learn in five weeks what you haven't learned in 180 days. But I think they did improve in their work. I think they did give it an effort … I got work out of them which some had so much trouble they didn't get during the year. There was one kid in particular whom I got a lot of work out of and I spoke to his mother, and I said, "What the heck is going on here? [He's] doing fantastic. Why didn't [he] do this during the year?" And his mother said "Yeah. I know. He came home and said the same thing." … A lot of them did good work. I don't understand why they didn't do it during the year.
>
> I thought they were going to be lazy, but we pushed them real hard … and they continued to work … they enjoyed the computer simulations.

Another teacher described her students' learnings from the exit projects this way:

> I think they really did have a very good sense of accomplishment. I think they liked seeing their work there. And they liked every week someone from the district or CRI coming and [offering] praise for their work. I think that helped a lot. [Was this something new for these kids?] I guess it really was. [Regular school year classes can have] almost 40 kids in classrooms … and I guess they don't get that feeling. Especially children in the bottom exponents, they're not used to this kind of praise. The kids who always do well of course, they get the praise from their families. But these, I guess there's less of that at home and I guess there was less of it at school, too. That seemed to work for them.

Students' Views of the Program

Students typically reported that they used all four selected episodes of the GMPC simulation in the summer program ($\underline{M}$=3.8, n=231). On average, they worked on the simulation in three-student teams ($\underline{M}$=3.1, n=235).

Most said that they enjoyed using the simulation (86%, n=208). In response to a series of Likert-type scales, students reported that they learned a great deal about working with others on a team and writing. They felt that they had learned something about problem solving, science, reading, social studies, mathematics, and the world of work. In Table 5, we summarize students' ratings, alongside those given by teachers (see below).

TABLE 5.

Perceptions of Student Learning

	Students[a]		Teachers[b]	
	M	N	M	N
Working with others on a team	1.6	239	1.4	24
Writing	1.5	241	1.2	24
Solving problems	1.5	238	1.2	24
Science	1.4	239	0.9	24
Reading	1.4	241	1.1	24
Social studies	1.4	238	1.0	23
Mathematics	1.3	241	1.1	24
The world of work	1.3	236	1.1	24

[a] As reported by students in response to an end-of-program survey scale item (scale: 0=nothing to 2=a great deal.)
[b] As reported by students in response to an end-of-program survey scale item (scale: 0=nothing to 2=a great deal.)

Over four-fifths of the students would recommend that a friend use the *GMPC* simulation in their schoolwork (81%, n=196).

When asked how much they *learned from their work on the weekly projects,* students reported that they learned something —particularly from the "Making History (Decades Project)" [M=1.5 (out of a possible rating of 2), n=236] and the City Planning Project (M=1.4, n=241). They also learned *something*, but a little less from the Galaxy Mall (M=1.3, n=238), Designing a Room (M=1.3, n=228), and The Community Newsletter (M=1.3, n=240).

The program may have tapped a new pool of urban planners and historians! Students particularly enjoyed working on the City Planning Project (M=1.5, n=235). They were slightly less enthusiastic about Making History (Decades Project) (M=1.4, n=230), Designing a Room (M=1.3, n=222), Galaxy Mall (M=1.2, n=232), and The Community Newsletter (M=1.2, n=235).

Students' responses to the open-ended survey questions reflected their focus on academic work. The *most valuable things they learned* in summer school were one or more specific core academic subjects (viz., language arts, mathematics, science, social studies) (39%, n=94), teamwork (17%, n=40), and work on the exit projects (13%, n=31).

The parts of summer school that students *liked* most were work in one or more of the core academic subjects (25%, n=61), the exit projects (23%, n=55), using computers (15%, n=36), and the simulation (11%, n=27).

The parts of the summer students *liked* least were one or more of the core academic subjects (44%, n=107) and something related to one of the exit projects (18%, n=43).

Teachers' Views of the Program

We asked teachers to complete two written surveys—one at the conclusion of their initial training in late June, and another at the end of the summer program in August.

Following the pre-program teacher training. At the end of the two-day pre-program training, we asked teachers to evaluate the preparation the training provided them. They considered the training *very successful* in preparing them to teach using the summer curriculum [M=2.6 (out of a possible rating of 4.0), n=27]. They found the training *very successful* in preparing them to use the simulation and *The Plant Manager's Workbook* with their classes (M=2.6, n=27). They felt that the training largely provided sufficient opportunity to practice using the simulation and *The Plant Manager's Workbook* (M=2.5, n=26). Although some teachers were very

enthusiastic about the program following the initial training, others were apprehensive, particularly about the high reading load required to use the simulation, and the volume of work required of students and themselves during a very short summer session.

After their initial training, teachers saw the following as the biggest challenges they would face in the summer session: completing the entire curriculum, teaching outside of their content area(s), dealing with technological problems, and helping students to meet standards. The major challenges teachers saw for their summer students were these: accurately reading and following directions, meeting standards, focusing on tasks, and self-discipline.

At the conclusion of the pre-program training, teachers felt that the summer program's expectations of both teachers [M=2.6 (out of a possible rating of 4), n=25] and students (M=2.6, n=27) were largely clear. Teachers anticipated that the CRI program would be very successful in meeting the needs of Grade 8 summer students, when compared to other summer school programs (M=3.0, n=23).

End-of-program survey responses. Teachers typically reported using the *GMPC* simulation with 11 students in their summer class (range=3 to 15 students) and that their students used four episodes of the simulation.

We asked teachers to describe the amount they felt their students learned about eight key content areas from the summer program. As presented in Table 5, teachers typically reported that students learned *a modest amount* about these areas from their work in the program. Their ratings indicated that students learned most about working with others on a team, writing, and mathematics; and notably less about science and social studies.

The district's primary objective for the summer program was to prepare students who had failed to meet a promotion standard by the end of the 1999-2000 school year to meet that standard by the end of the summer. Teachers had several devices available to help them make the promotion-retention decision (viz., standardized test scores, exit projects, homework, class work/activities, and students' workbook completion). We asked teachers the extent to which each of these was helpful in making the decision. Teachers gave the heaviest weight to students' activities [M=1.7 out of a possible rating of 2), n=19] and exit projects (M=1.7, n=20). They reported that homework (M=1.5, n=20), student workbook entries (M=1.4, n=19), and standardized test scores (M=0.9, n=17) played lesser roles in their promotion decisions.

Nearly four-fifths would teach this program again (79%, n=19). Those who would teach it again considered it an interesting program that engaged students and integrated technology into instruction in a relatively well-organized curriculum. They also noted that the program had district support, provided materials that "made it to the classroom," and required limited preparation by teachers. The program facilitated interdisciplinary instruction and collaborative learning, and provided manipulative materials "to help students complete their projects. [The number] of activities also helped students comprehended the subjects taught."

The teachers who would not teach the program again gave these reasons: missing materials and "resources that were not helpful;" insufficient time spent on reading, writing, and math; summer students not having "the requisite skills to do the work;" asking teachers to know enough about multiple subjects to prepare students for high school in four areas, rather than in one that they knew well. Three teachers voiced a concern about a basic premise of the summer program:

> The program offers many great ideas, however, the content does not make up for the work the student failed during the school year. This program should be for enrichment only.
>
> Use the [CRI] program during the regular school year as enrichment.
>
> If promotional standards are going to be based on the minimal amount of knowledge imparted in this program, there is no reason why any student would want to go to school during a regular school year.

> The summer school program makes a mockery of the work the teachers do during the school year. Teachers have set high standards for their students and if they have not achieved it during the regular year, how can you justify just five weeks of summer school to accomplish what couldn't be done in ten months?

We asked teachers who had taught summer school prior to this year to *compare this summer's program with that offered in previous years*—along eight dimensions.

- They rated the 2000 program *far better* than previous summer programs in terms of the initial professional development [M=1.5 (with possible scores extending from -2.0 — +2.0), n=15].
- This year's program was *slightly better* than its predecessors in terms of materials for students (M=1.4, n=16), on-site support (M=1.4, n=16), curriculum content (M=1.3, n=16), student learning (M=1.1, n=16), student engagement (M=1.1, n=16), and student discipline (M=0.6, n=16).
- They reported *no difference* in the amount of teacher preparation time required for this year's program (M= -0.2, n=15) as compared to that required for previous summer programs.

In response to an open-ended question, teachers considered the *most valuable things their students learned* in summer school to be collaboration (50%, n=10) and specific academic skills (25%, n=5). Other teachers mentioned learning about the world of work, learning how to be part of a community, and recognizing the "relationship of all the subjects together—in a science lesson, English, math, and social studies were incorporated."

Administrators' Views of the Program

Administrators in seven of the nine schools participating in the program returned surveys offering feedback on program operation and efficacy in their schools.

Four of these seven principals had previously administered a Grade 8 summer session—typically for the last two years (range=1 to 4 years). Those who had done so typically reported that this summer's program compared favorably to that offered in other years. Principals indicated that the 2000 program was *far better* than the summer program offered in previous years in terms of initial professional development, curriculum content, materials for students, on-site support (i.e., from Classroom, Inc. and the school district), student engagement, student learning, the amount of teacher preparation time required, and discipline referrals.

Administrators wanted Grade 8 students better prepared for high school. Their primary objective for the Grade 8 summer program was to help students meet the promotional standards that had eluded them in the 1999-2000 school year. In addition, some administrators wanted to "have students work collaboratively to reach a common solution to various situations" and to offer a program that was "interesting and motivational" for students and teachers.

When asked to identify the most valuable aspects of the Grade 8 work with CRI this summer, two cited the curriculum as a "comprehensive blueprint" for teachers and students. They also recognized enhanced interaction among students and between students and teachers and student engagement.

All seven were interested in using a CRI program in future summer sessions and all would recommend the program to other administrators planning a summer session.

Summary of Findings

We used multiple measures to gauge the efficacy of this pilot program. Evidence from these measures indicates that students largely enjoyed the program. They attended over 80% of the sessions and modestly improved their problem-solving skills. Teachers gave their work on culminating projects in each of the four core subjects a passing grade. There was a noteworthy, but disappointing improvement in students' standardized test scores over the four-week program. District students were promoted to Grade 9 at the end of the summer at a higher rate than were their peers city-wide.

Students and teachers agreed that the areas of strongest learning were collaboration and writing. We also found evidence that the program strengthened the connection between students and teachers—teachers definitely learned more about their students, and in a few cases, students learned more about their teachers.

After their initial training, teachers identified the following as the major challenges they faced in the summer session: completing the entire curriculum, teaching outside of their content area(s), dealing with technological problems, and helping students to meet standards. The major challenges they anticipated for their summer students were these: accurately reading and following directions, meeting standards, focusing on tasks, and self-discipline.

When we examined the 2000 summer program in light of teachers' initial concerns, we found that although several teachers felt that the curriculum needed to be expanded and deepened, most teachers were able to complete the curriculum. Several teachers found it troublesome to teach outside their area, but most appreciated the interdisciplinary approach. Given the preliminary planning and the on-site support, few teachers reported technology-related problems. Teachers largely were pleasantly surprised by the quality of students' work—they were capable of more challenging work than teachers had anticipated. Most found students able to handle the reading required for the program, able to focus on tasks. Despite the number of summer students who presented discipline problems during the school year, discipline never became an issue in the summer program.

Discussion

Context

Before discussing the specifics of what we learned about the implementation and outcomes of CRI's pilot summer school program in one school district, it is helpful to provide some overall context about the city's program.

New York City's summer school policy was obviously a step in the right direction for strengthening the preparation of the city's lowest-achieving students, ending social promotion, reducing achievement disparities related to summer learning loss between advantaged and disadvantaged students, making better use of schools year-round, and meeting community needs for quality summer programming and activities for children.

The policy was based on several key assumptions, primarily that students with severe academic deficiencies—and often, very poor attendance patterns—who had not met promotional criteria by the end of the regular school year could meet those criteria and be promoted as the result of a 100-hour summer program. Another critical assumption was that the multiple promotional criteria and the evidence needed to show that students met those criteria were appropriate, clearly defined, communicated, and understood by all levels of participants in the system.

These assumptions are monumental. The promotional criteria for eighth-graders, for example, require that students meet all performance standards in four core subject areas (viz., English, mathematics, science, and social studies) and achieve a particular proficiency level on a standardized test. Meeting the middle school performance standards alone (viz., the *New Standards* for the first three subject areas, and the state standards for social studies) is the ultimate objective for three full years of schooling—Grades 6 through 8. Expecting severely academically challenged students—who have not met some or all of these objectives by June—to meet all of them by early August is indeed a "great expectation."

Improving on a standardized test from the lowest proficiency level to the next level is also extremely difficult to accomplish over a period of weeks. These tests and proficiency levels are designed to measure progress over the course of a year (not day-to-day or week-to-week growth) and, as such, are virtually incapable of showing the more likely incremental or modest growth that can occur during a short (although intense) intervention such as summer school.

Finally, even if the attempt is made to have students reach such goals over the course of a summer program,

the definition, communication, and clarification of that policy in a system the size of New York City's is challenging indeed, and, almost by definition, will result in varying interpretations and implementations across the city despite Herculean efforts to the contrary.

Student Outcomes

The most critical issue for both CRI and our district partner was the extent to which the program helped students meet desired outcomes.

First of all, students came to this program. It served eighth-graders, many of whom had rarely or sporadically attended school during the regular school year. Although we would hope for closer to 95% attendance, achieving an overall attendance figure of 85%, particularly for these oldest and lowest-achieving students, was gratifying. Teachers and principals frequently shared with us anecdotes about individual students who had rarely shown up during the year but rarely missed a day over the summer. Particularly on computer days, students were there. (There was substantial confusion among teachers about using attendance as one of the criteria for promotion; although initially a 90% attendance rate had been included as a criterion by the central board, it was later eliminated. Many teachers believed strongly that students should have been required to attend a specified portion of summer classes in order to be promoted.)

Students not only came to this program, they were engaged. They worked on the computers in teams on Wednesdays, and worked in groups on projects during the rest of the week. Teachers told us they were amazed at the level of interest and engagement these students showed, and students (at the end-of-year exhibition) again and again told us that working with their classmates in groups had made summer school fun and interesting, and had helped them to learn. They said that working in groups in this fashion was not typical in their school experience. Principals told us that anticipated disciplinary problems and referrals among this tough-to-engage older group of students did not materialize.

Teachers told us that they were amazed that many of these students could handle the challenges of the simulation and of the projects. The small class size, the software, the teachers' comfort level with the materials, and requiring the students to work in teams, likely all contributed to this.

Students improved their problem solving skills. Although not a stated goal of summer school, problem solving does figure prominently in all of the *New Standards* and state standards, and is a hallmark and focus of the CRI simulations. Within a relatively brief period of time, we found students, particularly those with extremely poor problem solving skills to begin with, showing modest growth in this area.

Most students were promoted. Those who were promoted tended to be those who attended regularly and who achieved passing course grades at the end of the summer (based on rubric-guided assessments of substantial amounts of student work). However, many of those promoted continued to score at low levels on standardized tests.

Standardized test scores and their relationship to promotional decisions have implications for the central board, the district, and CRI. When the policy stipulates that "the decision to promote or retain may not be based on consideration of a sole criterion," it is clear that there will be some subjectivity in the decisions made. This can result in varying interpretations of policy by districts, and in some cases, promoting students with low levels of achievement as measured by standardized tests. Although theoretically, low test scores can be "outweighed" by the quality of student work produced over the summer, it is problematic to assume that many of these students can truly meet and demonstrate all performance standards over a five-week period and that their teachers can adequately assess that work. This policy can thus result in ill-prepared students being promoted and, in short order, being faced with rigorous high school programs and graduation requirements.

Implications for the district include a continuing need to provide ongoing and substantial professional development in the area of standards and assessment of student work—not just during summer school but during the regular school year as well.

CRI would have preferred to see more growth in standardized test scores. Although that growth is very difficult to achieve—particularly during the short time frame and with a program such as ours that was not devoted solely to standardized test preparation, but had broader objectives—to get students to attend and be engaged, to be interdisciplinary, and to foster collaboration and problem solving—it is something CRI needs to consider seriously as it modifies the pilot program it developed and develops programs for additional grades.

Next Steps in Program Implementation

CRI built on what it learned during this pilot program to develop programs for Grades 6, 7, and 8 to offer to New York City districts in summer 2001. The program was scaled up tenfold in 2001, and served 269 classes in 27 schools in four districts.

Some of the changes CRI made based on the pilot experience include:

- CRI is having students spend more time working with the simulations and the simulation-related activities in the student workbook
- For the 2001 summer program, CRI developed the entire curriculum package—both for the days the simulation is being used and for the rest of the week—and trying to make it a more integrated program. All activities will be related to an overall theme.
- CRI is including more skills-based "warm up" activities to better prepare students for the grade-level activities found in the simulation, and including more "follow-up" activities to reinforce skills
- In 2001, CRI had the curriculum for each grade include more reading and interpretation of real books: a fiction and a non-fiction book related to the simulation now are included as part of a literature component, to ensure that students do more sustained reading of literature and non-fiction. The student workbook activities now include more reading and mathematics "test-like" questions and activities, to address some teachers' desire for more test-preparation work, and to address the fact that students did not make significant improvements in their standardized test scores in 2000, despite other gains.
- In 2001, CRI produced complete classroom kits of teacher and student materials needed for this program, to make the program easier for teachers and administrators to use. The 2001 kits include, for example, a teacher curriculum guide, any evaluation materials needed, and class sets of 15 student activity workbooks, marble notebooks, and selected fiction and non-fiction books, as well as mathematics manipulatives and other basic supplies (e.g., markers, index cards).

There are other things CRI implemented during the 2000 summer program that it would like to continue. First, the program will continue to be interdisciplinary, with a heavy emphasis on communication arts and mathematics. We expect that this program will continue to meet New York City's program requirements, although those may change. We also expect that this program will meet the needs of some but not all districts. Some districts may decide to conduct separate programs by subject area, for example, rather than one interdisciplinary program.

The district with which we worked structured their program in such a way that all eighth-graders, regardless of the specific reason(s) for being in summer school, participated in the same interdisciplinary program, and received instruction from one teacher in all subjects. A student who failed only social studies, and a student who failed all four subject areas plus a standardized mathematics test, participated in the same interdisciplinary, four-hour per day, program. This facilitated scheduling, but meant that math teachers, for example, had to teach all subjects. The scripted nature of the program, and the interdisciplinary nature of the materials, helped to alleviate this potential problem.

Second, CRI has always worked in partnership with schools and districts, and it continued that approach with this program. We think that requiring districts to partner with us, rather than our bringing in the program as an "external vendor," is one of our strengths, and served us well in this pilot program. We plan to continue this

model, which includes having a district-appointed active project manager to work along with us, ensuring the teachers technology support, getting the buy-in of principals before proceeding, and facilitating the collection of evaluation information.

Such a partnership means that although we provide the student and teacher materials and the professional development materials, districts must provide a strong district-level "project manager" to plan, coordinate, problem-solve, and provide initial and ongoing professional development, monitoring, and support along with us. CRI also requires strong ongoing technology support from the district during the summer months. Teachers need to know that they will be able to get the support they need when they need it. Although CRI can offer simulation-specific help through a toll-free help line, it needs partner districts to ensure that computers are working and software is installed.

Conclusions

The results of this pilot indicate that, even with some variation in implementation across sites, this technology-enriched interdisciplinary curriculum can enhance student performance and help at-risk students to meet promotion requirements. The study highlighted the challenges that districts, schools, and educators face in their efforts to remediate students' earlier losses and to put students with little prior experience of academic success on the track for academic success.

We learned a great deal from this pilot, much of it related to curriculum development and a strong partnership between school districts and their summer school contractors. Part of the effectiveness of the program likely stemmed from a cornerstone of the partnership between the district and CRI—a comprehensive approach to summer programming. The approach has considerable potential to help districts support previously disengaged and academically challenged students.

Students seemed to find the opportunities for collaborative learning, meaningful computer use, and the theme-based work engaging and motivational. Yet, for CRI, the curriculum development challenge is to make a summer program more than a "technology program." It appears that an effective summer program comprises an engaging, standards-linked curriculum, well organized for teachers, and offered with good materials for students. Following 10 hours of professional development, teachers were presented with a self-contained "package" of curricular materials, including a core interdisciplinary curriculum, instructional software, supplementary materials for students, and guides for assessing student performance. In this case, CRI's contribution was based on eight years of experience partnering with New York City community school districts (four years in this district), a widely used simulation and related materials for students and teachers, an established professional development program, and an in-house research team.

Perhaps the most compelling lesson for CRI is that to be effective for students and the district, a summer school "contractor" cannot operate in the standard role of vendor (i.e., sending boxed materials with little other support). CRI's services to the district included planning, teacher training, materials development, weekly on-site support for teachers, and a formal program evaluation. In that the summer program included frequent opportunities for students to demonstrate their reading, writing, listening and speaking, and research skills, CRI ensured that teachers also had sufficient student work to consider in making promotion decisions.

Admittedly, the summer 2000 program presented a daunting challenge to districts and organizations such as CRI. We found it a valuable opportunity to apply our approach, materials, and services in an area of great need—high stakes remedial summer school programs.

Endnotes

[1] Throughout the report, we use "typically" to refer to a formal mean rating or average.

[2] This figure and those that immediately follow it were taken from the responses of the 243 students who returned an end-of-program survey.

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