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IMPACTS OF SCHOOL RESTRUCTURING INITIATIVES

FINAL REPORT

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A Research Report from the School Dropout
Demonstration Assistance Program Evaluation

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EXECUTIVE SUMMARY

Since the early 1980s, the increasingly global and competitive world economy has led to an increase in the economic benefits of education. During the same period, however, America's schools have made little progress in increasing the rate at which youths complete high school. In 1990, one year after the national educational goal of a 90 percent high school completion rate by the year 2000 was set, 86 percent of young adults (18 to 24 years old) had a high school credential. Five years later, only 85 percent had a high school credential. The trend is clear: the dropout rate is not improving. Too many students--about half a million a year--are dropping out of school at a time when the economy needs and rewards high skills.

This report presents the findings of an evaluation of initiatives for restructuring schools to reduce the dropout rate. The initiatives operated from 1991 to 1995 in Dallas, Grand Rapids, Philadelphia, Phoenix, and Santa Ana. The evaluation examines the initiatives' effect in terms of student, teacher, and parent outcomes.

Restructuring to Reduce the Dropout Rate

Traditional approaches to the dropout problem have provided students with services designed to mitigate problems that may be hindering their academic progress. For example, a program may link students at risk of dropping out with tutors or mentors who work with students to improve their learning or to help them deal with issues outside of school. In general, traditional approaches have not attempted to change the fundamental nature of schools.

Beginning in the late 1980s and early 1990s, educators and policymakers began formulating "restructuring" approaches to improving schools. The general intent of restructuring is to move beyond traditional modes of school organization and try to make schools more interesting and responsive places where students learn more and are able to meet higher standards. Restructuring strategies include (1) developing curricular and instructional methods to promote higher-order thinking as well as more active and team-oriented learning, (2) having teachers play a more active role in managing schools, and (3) encouraging schools to be more sensitive to the concerns of their "clients"--parents and students.

Restructuring's potential as a dropout-prevention strategy was recognized through grant awards to schoolwide programs under the School Dropout Demonstration Assistance Program (SDDAP) in 1991. First, the U.S. Department of Education (ED) used a large share of SDDAP grant funds to support restructuring, in addition to supporting programs serving at-risk youths using traditional approaches. Grants to support restructuring in eight districts averaged about $1 million a year each for the first four years of the SDDAP.

Evaluating the Restructuring Initiatives

In 1991, ED contracted with Mathematica Policy Research, Inc. (MPR) and its subcontractors, Policy Studies Associates and RMC Research Corporation, to evaluate projects supported by SDDAP funds. Evaluation staff and ED identified seven restructuring projects they considered suitable for an analysis of program implementation, along with five of the seven thought suitable for an analysis of project impacts.

Evaluating effects on students, teachers, and parents

The evaluation team was interested in the effects of restructuring initiatives on important outcomes for students, staff, and parents (see Table 1). Some outcomes, such as dropout and absenteeism rates, are important as overall measures of restructuring viewed as a dropout-prevention strategy. Other outcomes, such as test scores, provide a means of assessing whether restructuring affected learning in ways that could be measured by existing tests. Outcomes like teacher and parent views of school climate provide insight into the ways restructuring may have changed schools.

The evaluation used a consistent design for measuring outcomes, with the same instruments and outcomes in all sites. The analysis looked closely at the dropout rate as a key indicator of the ultimate success of the initiatives in keeping students in school. Because the initiatives had different emphases, however, the analysis focused on different outcomes in the various sites.

Selecting comparison schools

A key feature of the evaluation design was the use of comparison schools. During the 1991-1992 school year, the evaluation team identified comparison middle schools and high schools, using district data indicating that the comparison schools served students who were similar to those in restructuring schools. Generally, one comparison school was identified for each restructuring school. In Santa Ana, two comparison middle schools were selected for the three restructuring middle schools.

TABLE 1

OUTCOMES FOR THE RESTRUCTURING ANALYSIS

Student Outcomes	Teacher Outcomes	Parent Outcomes
Dropout rate	School climate	School climate
Absenteeism rate	Involvement with school management	Quality of education
Math test score	Contact with parents	School involvement
Reading test score		
School climate		
Self-esteem		
Locus of control		

Collecting longitudinal data

Another key feature of the design was longitudinal data collection. The evaluation was based on samples of students in two cohorts, as well as on baseline and follow-up data. The two cohorts were selected in the fall of the 1992-1993 school year and in the fall of the 1993-1994 school year. The evaluation selected 7th graders in middle schools and 10th graders in high schools (9th graders were selected in Phoenix and Philadelphia to accommodate features of the programs in these districts). Altogether, the evaluation followed 3,830 students in the first cohort and 3,625 in the second, collecting baseline data for nearly all students in the sample and follow-up data for more than 80 percent of students. Students in the first cohort completed two follow-up questionnaires; those in the second completed one follow-up questionnaire.

Questionnaires also were administered in 1993, 1994, and 1995 to all teachers in restructuring and comparison schools (with more than 80 percent of teachers responding) and to parents of students who completed baseline questionnaires (with more than 40 percent of parents responding).

The Restructuring Initiatives

The number of schools involved in the initiatives varied from 17 in Philadelphia to 4 in Phoenix. Elementary, middle, and high schools were part of the initiatives. Baseline data from middle schools and high schools show that the schools had many students who, according to conventional criteria, were at risk of dropping out.

Improving instruction and providing services

The initiatives all had elements that focused on changing classroom instruction and providing services for at-risk students. All of them devoted attention to staff development as the engine for change. Efforts stressing instruction devoted the most attention to staff development. Instructional innovations included block scheduling, thematic curricula, team teaching, extending the length of the school day, family groups, and schools within schools. Services were provided by counselors, mentors, health clinics, and staff teams set up to identify at-risk students and plan service packages to assist them.

Approaches differed across school levels and schools

Some initiatives emphasized instruction and others emphasized services. Middle schools were more likely than high schools to emphasize instruction. For example, the restructuring high school in Dallas focused on providing services, whereas the restructuring middle school in Dallas focused on improving instruction using the "accelerated schools" model. As the example suggests, the activities of the initiatives differed across school levels and schools even within a district (Table 2).

TABLE 2

CHARACTERISTICS OF SDDAP RESTRUCTURING PROJECTS

Location/Grantee/Enrollment	Cluster Schools	Project Description

Dallas, Texas
    Southwest Texas State University; Dallas Independent School District [a]
    Total enrollment: 135,000
	Spruce High School
	Comstock Middle School
	Florence Middle School
	11 elementary schools
		Comer model or other school-based decision-making model in all schools (early in the initiative)
		Accelerated schools model in five schools (later in the initiative); small groupings of teachers and students in others
		School-within-a-school in the high school
		A school-based health clinic in the high school and two middle schools; child care for teenage mothers
		Automated attendance monitoring equipment

Grand Rapids, Michigan
    Grand Rapids Public Schools
    Total enrollment: 35,000
	Ottawa Hills High School
	Iroquois Middle School
	8 elementary schools
		Outcomes-based decision making (OBDM) as curriculum reform in elementary and middle schools
		Full-time staff development specialist; consultant for OBDM
		Four specialists to deal with individual and group problems
		Eight student advocates
		"Family groups" featuring block scheduling and cross-disciplinary themes for half the ninth graders
		Mentoring for high schoolers

Philadelphia, Pennsylvania
    School District of Philadelphia
    Total enrollment: 195,000
	Gratz High School
	Gillespie Middle School
	Rhodes Middle School
	FitzSimons Middle School
	13 elementary schools
		School councils in each school
		Training for core teams of teachers in each school
		Parents as attendance monitors and participants in adult education classes

Phoenix, Arizona
    Phoenix Union High School District
    Total enrollment: 22,250
	Central High School
	Phoenix Preparatory Academy (middle school)
	2 elementary schools
		A ninth-grade enclave in Central High School
		"Family groups" for academy students
		Three transitional counselors for the academy
		Additional services provided by three community-based organizations

Santa Ana, California
    Santa Ana Unified School District
    Total enrollment: 46,500
	Century High School
	Lathrop Intermediate School
	Willard Intermediate School
	Carr Intermediate School
	1 elementary school
		A program specialist at each school
		Early intervention for language development and smaller class sizes for language arts in the elementary school
		Teaming and interdisciplinary instruction in intermediate schools
		School-within-a-school in the high school
		Support services provided by project nurse and outreach specialist
		Project outreach consultant and half-time psychologist to work with families

[a] This project is a partnership between the Center for Initiatives in Education at Southwest Texas State University and the Dallas Independent School District.

Main Findings

Analysis of student, teacher, and parent outcomes led to four main findings: (1) no effect on dropout rates, (2) improvement of some classroom outcomes, (3) no effect on teacher involvement in school management, and (4) no effect on parents' views of school climate.

- *Restructuring had no effect on dropout rates*

  None of the five initiatives resulted in lower dropout rates. In fact, in some cases, dropout rates were higher in restructuring schools. The restructuring initiatives, however, faced difficult implementation challenges and the evaluation followed students from restructuring schools for only a few years. In this context, it would have been surprising to see lower dropout rates.

- *Restructuring improved classroom outcomes in some schools*

  A focus on improving classroom instruction distinguished the three initiatives that had improved teacher and student outcomes. Restructuring schools that focused on providing services for at-risk students yielded little evidence of improved outcomes.

  Students in restructuring middle schools in Dallas and Santa Ana had improved test scores relative to comparison-school students, although in both sites, improved scores were evident for only one of the two cohorts. Teachers in these schools reported improved school climate and stronger support from the principal and administrators relative to teachers in comparison schools. Teachers at the restructuring high school in Phoenix also reported improved school climate and stronger support from the principal and administrators.

  Because of the design used to measure effects, the evaluation cannot say that the effects observed were due unambiguously to restructuring. In some schools, other factors contributed to the observed effects. Other factors, however, do not explain all the improved outcomes.

- *Restructuring did not affect teacher involvement in school management*

  Teacher involvement in school management showed no change across sites and schools. In principle, greater involvement in school management is a key aspect of restructuring. However, the initiatives were supported largely by grant funding and involved only a few schools within their districts. These aspects may have affected the ability or willingness of districts to modify governance and change procedures to promote greater involvement of teachers in school management.

- *Restructuring did not affect parents' views of school climate and quality*

    Parents' views of school climate and quality did not show any improvement across sites and schools. However, parents had strongly positive views of schools and it would have been difficult for restructuring to improve on these positive views. These strongly positive views suggest that support for improving low-performing schools is not likely to come from parents.

Lessons

The evaluation results are consistent with those of other evaluations of restructuring efforts that focused on improving schools with many at-risk students. Synthesizing these results and findings from the implementation analysis of the SDDAP restructuring initiatives suggests two lessons for school-reform efforts.

- *Restructuring will not, in the short term, reduce the dropout rate*

    As a dropout-prevention strategy, restructuring is ineffective within the three- to four-year period of most demonstration programs. Reasons include the difficulty of changing schools and the limited role of schools in addressing factors leading to dropping out.

    Efforts to restructure frequently fall short of their implementation goals. They run up against initial resistance to change, skepticism about the value of restructuring, and differing views among staff about the best ways to restructure. The barriers weaken the ability of restructuring to affect dropout rates. Some of these barriers were evident in the SDDAP sites. For example, teachers at the Grand Rapids high school that was part of the restructuring initiative opposed and did not implement the major restructuring activity--outcomes-based education. Teachers at the Phoenix high school felt that the restructuring initiative was a way for the principal to impose his own views of education on the staff. Teachers in many SDDAP schools felt that restructuring was only the latest fashion and likely to fade soon. Staff who led the restructuring initiatives devoted much of their effort to getting past these barriers.

    The dropout problem itself has systemic and cumulative origins. Students drop out for myriad reasons related to personal, family, school, and community factors. The nature of schools is only one part of the equation, and it may not be the largest part. Efforts to restructure schools may cause some students not to drop out, but the number of students affected might be small. In addition, students may need to be in restructuring schools for a long time--perhaps from elementary school on--for the benefits of restructuring to affect their dropout decision.

- *Focus on teaching and learning*

   Facing resistance to change, and with grant funding in hand to help at-risk students, it is tempting for districts and schools to use grant funds to provide services for at-risk students. Doing so sidesteps difficult issues of change while doing something for students in need.
   Evidence from the SDDAP suggests that this temptation should be resisted. Schools were more likely to improve student and teacher outcomes when the schools focused on improving teaching and learning. Although dropout rates were not reduced in schools that restructured, other outcomes improved; ultimately, these improved outcomes may affect the dropout rate.

   Evidence from the SDDAP corroborates the views of researchers who have found that restructuring is most effective when it is consistent with and supports a school's or district's desire to change. On the basis of the evidence, supporting restructuring is a useful goal for policy if that support can be channeled to schools that want to change.

I. INTRODUCTION

Since the early 1980s, the increasingly global and competitive world economy has led to an increase in the economic benefits of education. However, America's schools have not been able to increase the rate at which youths complete high school. In 1990, 86 percent of young adults (18 to 24 years old) had a high school credential. In 1995, 85 percent had a high school credential (National Education Goals Report 1996). Disparities in completion rates between white and minority young adults also did not narrow. Too many students are dropping out of school in an economy that needs and rewards high skills.

To address the dropout problem, educators and policymakers traditionally have directed services toward students who fall behind in school or who appear to be at risk of not completing school. More recently, strategies to reduce dropping out by improving schools have become prominent. Underlying these strategies is the rationale that schools themselves need to restructure what they do and how they operate. In various degrees, restructuring strategies promote (1) more active and team-oriented learning, in place of rote drill and traditional lecture methods of teaching; (2) school-based management in place of centralized control; and (3) responsiveness to parent and student needs in place of a passive, nonresponsive bureaucracy.

The federal role in promoting restructuring to reduce dropping out began in 1991, when Congress reauthorized the School Dropout Demonstration Assistance Program (SDDAP). The SDDAP had been created in 1988 as a way to support and test innovative approaches to reduce dropping out, but initially it had focused little on school restructuring. When the SDDAP was re-authorized in 1991, the U.S. Department of Education (ED) set aside a large portion of SDDAP funds to support school restructuring. Grants to eight school districts or district consortia to support

school restructuring averaged about $1 million a year each for the first four years of the SDDAP (a fifth year was added later). Federal funds were matched by local funds, with the match rate rising during the four-year period.

The focus on restructuring that was part of the 1991 SDDAP created an important opportunity to learn about restructuring's implementation and its effectiveness as a way to reduce dropping out. In 1991, ED contracted with Mathematica Policy Research, Inc. (MPR) and its subcontractors, Policy Studies Associates and RMC Research Corporation, to evaluate the SDDAP. As part of this effort, evaluation staff and ED identified seven restructuring programs for an implementation analysis, and five of the seven for an impact analysis. This report presents the findings of the impact analysis. Findings from the implementation analysis are presented in a separate report, as are findings from an impact analysis of other programs that provided targeted services for at-risk students.[1]

The evaluation was a large-scale effort involving many schools, students, teachers, and parents. Longitudinal data were collected from more than 7,000 students in 21 schools in the five school districts participating in the evaluation. Students were followed for as long as three years. To provide a benchmark for assessing change, the evaluation compared outcomes of students in schools undergoing restructuring with outcomes of students in similar schools not included in the SDDAP-funded restructuring effort. Data were also collected from teachers and parents in the restructuring and comparison schools.

The major findings from the impact analysis highlight the significant challenges in changing schools to improve student performance. For most restructuring schools, student outcomes, such as dropout rates, absenteeism, and test scores, did not change. In some schools and districts, however,

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[1]Other reports describe the evaluation design (Dynarski et al. 1992), project characteristics (Adelman and Rubenstein 1995), project implementation (Hershey et al. 1995), characteristics of students in the research samples in targeted and restructuring project sites (Gleason and Dynarski 1994 and 1995), and impacts of targeted projects (Dynarski et al. 1998).

modest improvements in student outcomes were coupled with significant improvements in teachers'
perceptions of both school climate and support from principals and administrators. Because
restructuring is likely to affect teacher outcomes before it affects student outcomes, the results
suggest that restructuring holds promise for improving schools. In general, the schools in which
results were most positive were those that were changing curricula and instruction rather than
providing dropout-prevention services--which has implications for directions that future restructuring
or reform efforts might take. Chapter IV provides a fuller synthesis of the results and places them
into the context of other restructuring and reform efforts.

A.   APPROACHES TO RESTRUCTURING IN FIVE SCHOOL DISTRICTS

School restructuring means different things to different people. In funding the restructuring
efforts, ED required school districts to include specific elements in their efforts, but approaches to
restructuring varied greatly across the five districts that are part of the impact analysis. Some
programs emphasized changing the decision-making process in schools, others stressed improving
the academic content of classroom instruction, and still others provided services to support at-risk
students. To set the stage for the analysis to follow, we highlight here the main features of the five
efforts and summarize them in Table I.1.

An important element of restructuring across the five districts in the impact evaluation is that
the efforts focused on only a few schools within each district, generally one high school and its
feeder middle schools and elementary schools. The limited number of schools was part of ED's
design of the SDDAP, which called for districts to identify a "cluster" for restructuring. The limited
range of the restructuring effort benefited the evaluation because we could identify similar schools
that were not restructuring, something not possible with districtwide restructuring efforts. However,
the cost was that some restructuring efforts were not rooted in broad policies of district reform; thus

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		School-within-a-school in the high school
		A school-based health clinic in the high school and two middle schools; child care for teenage mothers
		Automated attendance monitoring equipment

Grand Rapids, Michigan
    Grand Rapids Public Schools
    Total enrollment: 35,000
	Ottawa Hills High School
	Iroquois Middle School
	8 elementary schools
		Outcomes-based decision making (OBDM) as curriculum reform in elementary and middle schools
		Full-time staff development specialist; consultant for OBDM
		Four specialists to deal with individual and group problems
		Eight student advocates
		"Family groups" featuring block scheduling and cross-disciplinary themes for half the ninth graders
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		Support services provided by project nurse and outreach specialist
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[a] This project is a partnership between the Center for Initiatives in Education at Southwest Texas State University and the Dallas Independent School District.

the efforts were buffeted by turnover of key staff and changes in district policies, which undermined support for the restructuring and may have attenuated its ability to affect important outcomes significantly.

1. The Spruce Cluster Program in the Dallas Independent School District

The Dallas school district, in partnership with Southwest Texas State University, devoted most of its restructuring effort to developing services that staff felt were urgently needed by students and their families in the Spruce Cluster, a group of elementary and middle schools and Spruce High School. Operating in an area of high poverty with few social services, the Spruce Cluster program taught parents of preschoolers to read to their children. The program also set up health clinics in the high school and two middle schools; a child care center at the high school; and consultation and assistance teams of counselors, mental health professionals, and teachers to develop strategies for improving the school climate and helping individual students with behavioral problems. In addition, Spruce Cluster schools installed automated telephone systems for communicating with parents about absences, homework, and school events.

The Spruce Cluster program also made an effort to reform school governance. The restructuring effort began at a time when the school district was operating the "School-Centered Education" (SCE) initiative, which was trying to adapt a model developed by James Comer at Yale University. Staff and parents were trained by Dr. Comer and his staff to assume increased responsibility for governance, management, and decision making at the school level. However, after several years, the district reduced its support for the SCE initiative in favor of a more general approach of allowing schools to identify and adopt their own reforms. This school-level decision making led to different restructuring approaches at the schools in the Spruce Cluster. Five schools adopted the accelerated-schools model, which promotes both a positive school climate and teaching and learning to high

academic standards. Other schools focused on creating small teacher groups within schools. Part of the project budget went toward training staff in school-based decision-making approaches.

2.   The Outcomes-Based Decision-Making Model in the Grand Rapids Public Schools District

The Grand Rapids restructuring effort was designed as a pilot effort of an outcomes-based decision-making (OBDM) approach to instruction. Beginning with one high school, one middle school, and eight elementary schools, the OBDM model called for "mastery learning," in which teachers introduce a skill, test for mastery of the skill, allow those who have demonstrated mastery to proceed to enrichment activities, and reteach those who have not demonstrated mastery, using alternative approaches until students succeed. The district provided staff development to prepare teachers for the new approach to curriculum definition and instruction, including workshops on how to vary curriculum presentation and help all students reach mastery. Faculty resistance, however, prevented participation of the cluster's high school (Hershey et al. 1995 provide a fuller description). Instead, the high school introduced a ninth-grade program organized around "family groups," block scheduling, and interdisciplinary themes.

The SDDAP initiative in Grand Rapids also included a variety of student services. More than a quarter of the grant went toward "student advocates" in each school, who followed up on chronic absenteeism among students. Advocates established a high school mentoring program, an after-school tutoring program, and an elementary school self-awareness/self-enhancement program. The grant also supported a social worker, speech pathologist, student behavior specialist, and substance abuse specialist.

3. The Gratz Connection in the Philadelphia School District

The Gratz Connection in Philadelphia tried to build collaborative decision-making skills among teachers and to promote communication across school levels, in a cluster including Simon Gratz High School and 16 elementary and middle schools feeding into Gratz High School. The program formed "connection councils" in each school and trained teachers who volunteered to be council members to serve as "connectors" among cluster schools. The 64 connectors attended staff development sessions on team building, improving communication and school climate, and developing new models of student learning. They were expected to serve as catalysts for reforming curricula and instruction in their schools. The Gratz Connection also worked with a few parents by training them to serve as attendance aides for a half-day and providing them with adult-education classes for the other half-day. However, the parent program was ended in the third year of the effort and funds were redirected for student services.

4. The School Dropout Initiative in the Phoenix Union High School District

The primary restructuring effort in Phoenix was a ninth-grade enclave at Central High School. The enclave was created for ninth graders because of high dropout rates among that group. It featured block scheduling, smaller classes, and interdisciplinary instruction. Three community-based organizations provided student-based support services as part of the restructuring effort, including a transitional reentry program for students who had dropped out of high school, support for pregnant or parenting teenagers, and a community involvement program.

5. Santa Ana 2000 in the Santa Ana Unified School District

The restructuring effort in Santa Ana, California, focused on Century High School, three middle schools, and one elementary school. The middle schools created teams of teachers to implement

interdisciplinary instruction emphasizing critical thinking skills and to make greater use of technology. The high school implemented block scheduling to give students three 90-minute periods each day, with a class in each of six core subjects every other day. Among other activities were tutoring of middle school students by college work-study students; peer tutoring at the high school; and a team consisting of a nurse, outreach consultant, and psychologist to work with schools to strengthen relationships with parents.

B. MEASURING THE EFFECTS OF RESTRUCTURING ON OUTCOMES

We have already noted that restructuring typically has centered on three themes: (1) improving the academic content of classroom instruction; (2) empowering teachers (or schools, students, and parents); and (3) raising accountability of schools to their "clients"--students, parents, and the community (Elmore 1991). To varying degrees, the restructuring approaches in the five districts emphasized activities in these categories.

The ways in which the efforts varied have implications for both how particular outcomes are likely to be affected by the efforts and when the effects occur. For example, the restructuring effort in Philadelphia, which focused on teacher relationships across schools and on governance issues, would be less likely to affect student academic outcomes than would the effort in Phoenix, which focused on improving ninth graders' academic experiences. Regardless of the variability in the approaches used by the five districts, it is clear that each district had a legitimate vision of restructuring in at least one of the dimensions described by Elmore, as well as a design to accomplish it.

The key question for the impact evaluation is whether restructuring improved student, staff, and parent outcomes. An affirmative answer would suggest an important new strategy for helping at-risk students. Outcomes, however, can be affected by events or trends other than restructuring; therefore,

simply looking at student outcomes before and after a school restructures could lead to invalid

conclusions about the effects of restructuring. To get a clearer view of restructuring's effects, the

evaluation identified comparison schools, which were similar to restructuring schools in terms of

student and school characteristics but which were not taking part in restructuring efforts.[2] The

evaluation then selected random samples of students in the comparison and restructuring schools for

baseline and follow-up data collection; it also collected data from teachers and parents of students

in these schools. The impact analysis then compared outcomes for students, staff, and parents in

restructuring schools with outcomes for these groups in comparison schools.[3]

Just as perspectives differ on what it means to restructure a school, they also differ on what it

means to evaluate a restructuring effort. The notion of evaluation implies asking whether

restructuring efforts met key objectives, but researchers assessing a restructuring effort and program

staff taking part in the effort can differ even about its objectives. The evaluation task is more

complicated when more than one district participates in the evaluation. Since each district can have

differing objectives, an evaluation needs to trade off whether it should assess each district with

respect to the district's own objectives, or whether it should use consistent criteria and look at all

districts in the same way.

For this evaluation, we opted for consistency and analyzed the same impacts across the five

participating districts. The rationale for the consistent approach is that the evaluation is designed

to provide information for federal policy. Judging districts by whether they meet their individual

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[2]An earlier report provides a fuller description of the evaluation's design (Dynarski et al. 1992).

[3]Some SDDAP restructuring initiatives involved elementary schools in addition to middle schools and high schools. However, assessing outcomes for elementary students would have involved expanding the data collection effort beyond available resources. Elementary schools were included in the implementation analysis, but the impact analysis focused on middle schools and high schools.

objectives is less useful for federal policy than is judging whether the overall restructuring effort was fruitful in meeting objectives valued by this policy. These objectives are captured in the choice of student outcomes examined by the evaluation: attendance, dropout rates, test scores, school climate, disciplinary incidents, and students' personal outcomes (self-esteem, locus of control, and education aspirations). Improvement in these outcomes would be evidence that the federal vision of restructuring promoted in the SDDAP has promise.

The student outcomes we analyzed fall into three domains: (1) student involvement in school (dropout and attendance), (2) academic performance (test scores), and (3) attitudes and perceptions about school and about themselves (Table I.2 shows the outcomes analyzed as part of the evaluation). Dropout rates and attitudinal variables were collected from student questionnaires and, as such, were consistently measured across districts. Data on attendance and test scores were collected from district records; thus values for these outcomes need to interpreted carefully because their specific content depended on district policies and practices. For example, districts used different standardized tests and had different policies for marking students absent. Absenteeism rates in our data clearly show these differences. However, the use of comparison schools and the fact that we gathered data for at least several years allows us to go beyond the levels of these variables and focus more on the effects of restructuring.

Teacher outcomes were in three domains related to restructuring: (1) teachers' perceptions about their school's academic and professional climate, (2) teachers' perceptions of support from administrators and participation in school-based management activities, and (3) teachers' contact with parents. Most restructuring efforts tried to affect all these outcomes to varying degrees. We also show the number of hours teachers reported spending in training and professional development activities, as an indicator of whether restructuring led to more staff development.

TABLE I.2

OUTCOMES FOR THE RESTRUCTURING ANALYSIS

Student Outcomes	Teacher Outcomes	Parent Outcomes
Dropout rate	School climate	School climate
Absenteeism rate	Involvement with school	Quality of education
Math test score	management	School involvement
Reading test score	Contact with parents	
School climate		
Self-esteem		
Locus of control		

Parent outcomes were in two domains: (1) parents' perceptions about the climate and quality of the school, and (2) the extent of contact parents had with the school. Some parents may be affected directly by restructuring (for example, if the effort includes having parents serve on school governance committees or volunteering in classrooms). However, relatively few schools engaged many parents in this way. Parents' perceptions about school climate are more likely to be affected by the experiences of their son or daughter in a restructuring school. Contact with teachers was explored to assess whether restructuring schools focused more on parents as "clients," as the restructuring model encourages.

The impact estimates presented here are based on samples of (1) students enrolled in the restructuring and comparison schools, (2) teachers in the restructuring and comparison schools, and (3) parents of students in restructuring and comparison schools. An important distinction in the data structure is that students are followed longitudinally, with students leaving a school continuing to be followed for data collection. In contrast, teachers and parents are sampled each year only if they are attached to the particular schools in the study. The data structure is consistent with the view that restructuring is a "treatment" at the level of students, and that students who received the treatment should continue to be followed if possible, to assess the effects of the treatment. Restructuring is not a treatment at the level of teachers and parents, however. Teachers' and parents' perceptions of school climate and relationships with school staff and each other depend on their being associated with a particular school that is restructuring. Consistent with this view, the evaluation collected data only for a cross-section of teachers and parents in each school each year.

II. SCHOOL RESTRUCTURING AND STUDENT OUTCOMES

The ultimate goal of school restructuring is to improve student performance by making schools better places for teachers to teach and students to learn. Success in these dimensions may be evident from improved student outcomes, such as attendance, dropout rates, and test scores, as well as improved teacher outcomes, such as more positive views about school climate and a greater sense of accomplishment and growth.

The evaluation analyzed the effects of restructuring on student outcomes, in 11 schools, including attendance and dropout behavior; scores on standardized tests; perceptions of school climate and locus of control; and sense of self-esteem. The key finding is that there is some evidence that restructuring can improve student outcomes. During the period of the evaluation, with students being followed over two to three years after restructuring activities began, student outcomes improved in restructuring middle schools in Dallas and Santa Ana. The picture is not entirely clear, however. In Dallas, other events may have contributed to improved outcomes. In Santa Ana, although the restructuring initiative is the most likely factor generating improved test scores, higher scores are evident only for a later cohort of students, but not for an earlier one.

The same evidence could be read more pessimistically. Restructuring was not associated with improved student outcomes in most districts and schools taking part in the effort. Indeed, some restructuring schools even had lower outcomes at the end of the follow-up period than they did at the beginning. From this perspective, the restructuring initiatives can be viewed as ineffective efforts to change schools in ways that lead to reduced dropout rates and better school outcomes.

There is some truth in both perspectives, and combining them is useful. Restructuring initiatives may improve student outcomes but do not necessarily do so. This raises issues about the contextual factors contributing to restructuring's success, to which we return in Chapter IV.

A. THE CONTEXT: CHARACTERISTICS OF STUDENTS IN RESTRUCTURING AND COMPARISON SCHOOLS

The characteristics of students may affect the type of restructuring initiative put in place, as well as the outcomes of the initiatives; so it is useful to look first at simple descriptive statistics about the students (Table II.1). The baseline data also provide some insights into the quality of the match between the restructuring and comparison schools.

Patterns in the baseline data correspond to the plan used to sample students and features of the districts and schools in the evaluation. Students were sampled for the evaluation if they were in 7th grade in middle school and 9th or 10th grade in high school (9th grade in Phoenix and Philadelphia, and 10th grade in Dallas, Grand Rapids, and Santa Ana).[1] On average, students at baseline were age 13 in the middle schools and age 15 or 16 in the high schools. Males and females are about equally balanced except in the Grand Rapids middle schools, where the restructuring middle school was a math-science magnet and the comparison middle school was a performing-arts magnet. The sharpest difference across districts is in the race/ethnicity of students. Most students were black or Hispanic, with some districts nearly all one or the other. More than 90 percent of Philadelphia students were black, and about 90 percent of Santa Ana students were Hispanic.

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[1]Initially, plans called for sampling 10th graders. However, in Phoenix, the restructuring effort targeted the 9th grade, and in Philadelphia, district staff reported that many students dropped out before reaching the 10th grade. The evaluation sampled 9th graders in the two districts to accommodate these factors and sampled 10th graders in Dallas and Grand Rapids according to the initial plan.

TABLE II.1

CHARACTERISTICS OF STUDENTS IN RESTRUCTURING AND COMPARISON SCHOOLS

	Dallas				Grand Rapids			
	Middle School		High School		Middle School		High School	
	Restructuring School Mean	Comparison School Mean	Restructuring School Mean	Comparison School Mean	Restructuring School Mean	Comparison School Mean	Restructuring School Mean	Comparison School Mean
Demographics								
Age (In Years)	13	13	16	17*	13	13	16	16
Gender (Percentage)								
Male	52	52	54	49	59	37*	49	49
Female	48	48	46	51	41	63*	51	51
Ethnicity (Percentage)								
Black, non-Hispanic	50	51	55	69*	54	44*	58	36*
White, non-Hispanic	11	0*	11	0*	33	41*	34	54*
Hispanic	36	47*	33	26*	7	4	3	4
Other	3	2	1	4*	7	10	5	6
Risk Factors (Percentage)								
Does Not Live in Two-Parent Household	41	47*	40	54*	41	37	37	35
Household Receives Public Assistance	27	40*	18	46*	20	18	7	6
Primary Language at Home Is Not English	14	18*	15	14	2	1	2	1
Has Sibling Who Dropped Out of School	23	27	29	35	24	19*	13	16
Below Grade Level	39	41	41	53*	34	32	22	23
Average Grades Below C	6	8	8	4*	13	15	16	23*
Discipline Problems at School	58	65*	50	52	54	44*	41	42
Absent More than 20 Days	6	4	10	12	9	6	7	9
Two or More Risk Factors	68	80	65	78	59	53	47	47
F-Statistic for Test of Equal Restructuring-Comparison Means	8.2‡		9.9‡		6.3‡		2.37‡	
Sample Size[a]	**495**	**481**	**419**	**263**	**526**	**456**	**431**	**448**

TABLE II.1 (*continued*)

| | Philadelphia | | | | Phoenix | | Santa Ana | | | |
| | Middle School | | High School | | High School | | Middle School | | High School | |
	Restructuring School Mean	Comparison School Mean	Restructuring School Mean	Comparison School Mean	Restructuring School Mean	Comparison School Mean	Restructuring School Mean	Comparison School Mean	Restructuring School Mean	Comparison School Mean
Demographics										
Age (In Years)	13	13	15	15	15	15	13	13*	16	16
Gender (Percentage)										
Male	53	51	47	48	45	62*	50	47	58	51*
Female	47	49	53	52	55	38*	50	53	42	49*
Ethnicity (Percentage)										
Black, non-Hispanic	92	94	94	97	7	11*	2	1	0	0
White, non-Hispanic	1	1	0	0	38	30*	3	2	4	1*
Hispanic	1	1	1	2	47	46	90	83*	89	96*
Other	7	4	5	2	8	13*	6	14*	7	3*
Risk Factors (Percentage)										
Does Not Live in Two-Parent Household	45	55*	66	55*	31	35	18	24*	24	39*
Household Receives Public Assistance	37	40	49	29*	17	17	21	24	13	21*
Primary Language at Home Is Not English	4	1*	2	1	18	17	45	43	55	54
Has Sibling Who Dropped Out of School	24	17*	32	20*	24	27	23	23	20	34*
Below Grade Level	33	28	48	42	31	27	21	21	31	41*
Average Grades Below C	13	8*	42	24*	8	12*	14	18	21	19*
Discipline Problems at School	64	47*	52	40*	32	36	36	41	29	35*
Absent More than 20 Days	10	6	25	24	6	5	5	5	12	13
Two or More Risk Factors	65	61	77	65	52	53	60	65	65	78
F-Statistic for Test of Equal Restructuring-Comparison Means	2.16‡		4.33‡		2.7‡		2.8‡		6.9*	
Sample Size[a]	**131**	**221**	**105**	**124**	**313**	**331**	**456**	**449**	**445**	**327**

SOURCE: School Dropout Demonstration Assistance Program Evaluation, Baseline questionnaire. Sample includes both cohorts except in Philadelphia, where only one cohort was sampled. Middle school students were not sampled in Phoenix.

[a] Sample sizes represent the number of sample members who completed baseline questionnaires.

*Restructuring and comparison means significantly different from zero at the .10 level, two-tailed test.

‡Restructuring and comparison means of full set of baseline characteristics significantly different from zero at the .10 level, two-tailed test.

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The five districts share the feature that, according to baseline data, many of their students are at risk of school failure. For example, almost half the students in the Philadelphia restructuring high school lived in households receiving public assistance. Rates of public assistance receipt were much lower for students in the Santa Ana high school (13 percent), but more than half of Santa Ana students lived in households where English was not the primary language, another important risk factor. Grand Rapids and Phoenix had the lowest proportions of students with two or more risk factors (about 50 percent), while Dallas and Philadelphia had the highest proportions of students with two or more risk factors (about 70 percent). However, all these proportions are high relative to the national average, which is about 20 percent (National Center for Education Statistics 1990). The restructuring initiatives clearly were focused on schools that had many students at risk of dropping out.

Although the comparison schools in the evaluation were selected to be similar to restructuring schools based on aggregate student outcomes, more detailed baseline data in Table II.1 show that comparison schools and restructuring schools are nowhere near identical. Statistical tests reject the equivalence of the restructuring and comparison schools in all cases, and the baseline data show that some student characteristics differ widely. For example, the Dallas comparison schools clearly serve a greater proportion of at-risk students than do the restructuring schools (larger fractions of students in the comparison schools lived in single-parent households and live in households on public assistance, and more students had behavioral problems in school). The Grand Rapids comparison high school also served more at-risk students than the restructuring high school.

The differences between restructuring and comparison schools means that simple comparisons of outcome levels would mingle differences due to restructuring effects and differences due to

student characteristics. This underscores the rationale for using net-difference and regression methods (discussed in Appendix B), which can adjust for difference in student characteristics.

B. METHODS FOR ANALYZING RESTRUCTURING OUTCOMES AND EFFECTS

The purpose of restructuring is to improve learning and other outcomes associated with school, such as attendance and the dropout rate. Many factors can affect student outcomes. The challenge for the evaluation is to separate the influence of other factors from the influence of restructuring.

The evaluation design for assessing the effects of restructuring balances considerations of precision and resource constraints. Maximizing precision pushes in the direction of using as many comparison schools as possible. Using comparison schools is useful to control for districtwide changes or general trends that may influence outcomes, and using many comparison schools makes the results less sensitive to events at particular schools. Resource constraints push in the direction of including few schools. In particular, the costs of gaining cooperation and setting up survey data collection efforts in many schools can be significant.

The design balanced these concerns by using one comparison school for each restructuring school, except in Santa Ana, where special circumstances prevailed. Using a single comparison school conserved resources while allowing the evaluation to better separate trends from restructuring effects. However, using one comparison school also meant that particular events at the comparison schools--such as staff changes or policy shifts--could heavily influence results.

The net-difference approach used by the evaluation to assess the effects of restructuring can be explained with an example. For a particular outcome, such as test scores, baseline and follow-up data yield two numbers for a restructuring school (the baseline average and the follow-up average) and two numbers for a comparison school. Subtracting the baseline value from the follow-up value for each school yields the trend value of the outcome for that school--an increase or decrease in the

outcome since the baseline point. Subtracting the trend value of the comparison school from the trend value of the restructuring school yields an estimate of restructuring's effect on the outcome. This method uses the baseline measures to adjust for preexisting differences between schools, which can skew comparison of their students' later outcomes.

The net-difference method is powerful. It reduces the influence on outcomes of preexisting trends across schools that may be due to local or district factors, while also reducing the influence of differences between schools that may be due to differences in student characteristics, school cultures, staffing, or other school characteristics. Even if comparison schools selected for the evaluation are not exact matches for restructuring schools, the net-difference procedure can still generate valid estimates of restructuring effects--as long as factors peculiar to one school or the other remain about the same from year to year. Much of the work of interpreting the outcome differences lies in trying to assess the extent to which factors remained the same throughout the period during which data were collected.

The net-difference procedure could not be used for all outcomes or for all schools. Because the procedure relies on baseline data, it could not be used for the dropout rate--which, by definition, equals zero for all students at baseline (the evaluation sampled only students attending school). Also, ninth-grade students in the Phoenix high school that was part of the restructuring initiative came from many local elementary school districts; collecting baseline data from all these districts was not feasible. For the cases for which we could not use the net-difference procedure, we estimated restructuring effects using regression models that accounted for differences in student characteristics (Appendix B provides more details about estimation methods).

C. RESTRUCTURING AND STUDENT OUTCOMES

The districts approached restructuring in different ways. The evaluation used a consistent framework for the five districts, with the same outcomes and data instruments; we present the results separately for each district, however, so that the different emphases underlying the results receive greater focus. To provide context for the results here, we draw heavily on findings from the implementation analysis (Hershey et al. 1995).

1. Results for the Dallas Restructuring Initiative

The design of the Dallas initiative called for schools to implement the Comer model of school reform and for the schools to increase their student services. Consistent with the model, schools set up "assistance and consultation teams" comprising counselors, mental health professionals, and teachers to develop strategies for improving school climate and to intervene with students who were performing poorly in school or had other problems. When district support for the Comer model weakened, some of the restructuring schools identified and implemented models of reform that they felt were appropriate for their own setting. Five schools, including the middle school in the impact analysis, adopted the "accelerated-schools" model popularized by Henry Levin, which focuses on creating a more positive school climate and more powerful learning experiences (Levin 1987). Student services also implemented as part of the restructuring initiative included a child care center at Spruce High School and a health clinic at the high school and two middle schools.

Positive outcomes are evident for the restructuring middle school in Dallas, which improved its reading test scores for the first two years (Table II.2). Interestingly, reading scores in the third year fell sharply, when students would have been in their first year of high school (for most students, this would have been the restructuring high school). Math scores fell, but less so than in the comparison

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TABLE II.2

STUDENT OUTCOMES IN RESTRUCTURING AND COMPARISON SCHOOLS:
DALLAS

	Middle School Cohort 1				Middle School Cohort 2				High School Cohort 1				High School Cohort 2			
	Restruc-turing School Mean	Compar-ison School Mean	Simple Difference	Net Difference	Restruc-turing School Mean	Compar-ison School Mean	Simple Difference	Net Difference	Restruc-turing School Mean	Compar-ison School Mean	Simple Difference	Net Difference	Restruc-turing School Mean	Compar-ison School Mean	Simple Difference	Net Difference
Dropout Rate at End of																
Follow-up year 2	7	10	-3	NC	6	5	1	NC	18	20	-2	NC	14	12	2	NC
Follow-up year 3	11	12	-1	NC	--	--	--	--	19	14	5	NC	--	--	--	--
Absenteeism Rate																
Baseline year	6	5	1	NC	12	13	-1	NC	6	10	-4*	NC	6	10	-4*	NC
Follow-up year 1	8	6	2	1	8	8	0	1	9	14	-5*	-1	12	15	-3*	1
Follow-up year 2	9	8	1	0	11	10	1	2	15	17	-2	2	10	19	-9*	-4*
Follow-up year 3	10	12	-2	-3*	--	--	--	--	10	18	-8*	-4*	--	--	--	--
Math Test Score																
Baseline year	33	44	-11	NC	28	35	-7*	NC	21	23	-2	NC	--	--	--	--
Follow-up year 1	24	28	-4	5	30	32	-2	5	32	29	3	5	--	--	--	--
Follow-up year 2	28	32	-4	7*	27	33	-6	1	--	--	--	--	--	--	--	--
Follow-up year 3	21	28	-7*	4	--	--	--	--	--	--	--	--	--	--	--	--
Reading Test Score																
Baseline year	24	24	0	NC	28	32	-4	NC	24	17	6*	NC	--	--	--	--
Follow-up year 1	30	23	7*	7*	26	26	0	4	26	17	8*	2	--	--	--	--
Follow-up year 2	30	24	6*	6	32	28	4	8	--	--	8*	--	--	--	--	--
Follow-up year 3	20	20	0	0	--	--	--	--	--	--	--	--	--	--	--	--
School Climate Is Poor (Percentage)																
Baseline year	52	47	5	NC	38	47	-9*	NC	38	24	14*	NC	37	23	14*	NC
Follow-up year 2	46	47	-1	-6	44	51	-8	1	39	30	9	-5	31	33	-2	-16*
Follow-up year 3	27	24	3	-2	--	--	--	--	25	17	8	-6	--	--	--	--
"Very Sure" of High School Graduation (Percentage)																
Baseline year	57	65	-9*	NC	65	67	-2	NC	73	72	1	NC	80	77	3	NC
Follow-up year 2	64	62	2	11	70	69	-1	3	76	72	4	3	78	68	10*	7
Follow-up year 3	71	78	-7	2	--	--	--	--	86	76	10*	9	--	--	--	--
Low Self-Esteem (Percentage)																
Baseline year	35	32	3	NC	38	36	2	NC	21	19	2	NC	14	18	-4	NC
Follow-up year 2	36	31	5	2	34	33	1	-1	21	18	3	1	14	23	-9*	-5
Follow-up year 3	32	30	2	-1	--	--	--	--	15	21	-6	-8	--	--	--	--
External Locus of Control (Percentage)																
Baseline year	47	57	-10*	NC	46	54	-8*	NC	35	34	1	NC	39	44	-5	NC
Follow-up year 2	41	43	-2	8	46	49	-3	5	33	44	-11	-12	37	41	-4	1
Follow-up year 3	39	47	-8	2	--	--	--	--	37	37	0	-1	--	--	--	--
Sample Size	**223**	**227**			**228**	**222**			**203**	**107**			**190**	**135**		

SOURCE: School Dropout Demonstration Assistance Program Evaluation, student questionnaires and school records.

NOTE: The net difference estimate is not defined for the baseline year or for sites and outcomes with no baseline data.

-- = not available.
NC = not calculated.

*Significantly different from zero at the .10 level, two-tailed test.

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school, which also generated a positive net difference.[2] As was true of reading scores, math scores fell in the first year of high school.[3]

Evidence for the Dallas high school provides a mixed view of the effects of restructuring. Absenteeism at the restructuring high school fell sharply from the second to third year of the follow-up period--from 15 percent of days absent to 10 percent of days absent (the third year would have been the 12th grade for the first cohort, for students who were making normal progress). In contrast, from the second year to the third year, absenteeism at the comparison school rose from 17 percent to 18 percent. Absenteeism data for the second cohort showed the same pattern, falling from 12 percent to 10 percent for the restructuring high school and rising from 15 to 19 percent at the comparison high school. Relative to students in the comparison high school, students in the first cohort at the restructuring school also were more likely over time to rate the school climate as positive, to be sure of graduating from high school, and to have high self-esteem. None of these differences, however, was large enough to be statistically significant; only the school-climate result was also evident for the second cohort, and dropout rates for both cohorts were somewhat *higher* at the restructuring high school than at the comparison high school (although the differences were not statistically significant).

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[2]Scores for the Texas Assessment of Academic Skills (TAAS), a criterion-referenced test, are consistent with those reported in Table II.2 for middle school students. TAAS results show that in the 1993-1994 school year, more students at the restructuring middle school passed all components of the reading test (51 percent of restructuring students and 35 percent of comparison students), which is consistent with the higher norm-referenced test scores for the restructuring school reported in Table II.2. Fewer students passed all components of the math component of the TAAS (28 percent of restructuring students and 30 percent at comparison students), also consistent with the norm-referenced test scores.

[3]Because the first cohort of middle school students was followed to high school, school climate results for the middle school in the third year actually pertain to student experiences in high school. Interestingly, the data show that students perceived the high school where their scores fell to have a more positive climate than the middle school they previously attended.

Interpreting the Results. The implementation analysis described events in Dallas that affected schools in the restructuring initiative (Hershey et al. 1995). Before ED awarded the SDDAP grant, the Dallas district was carrying out a school-based management initiative centered on the School Development Program model designed by James Comer. The district abandoned the model after about two years, when a district evaluation found that the model was having no effect on test scores. In place of the Comer model, the district continued to support school-based management (which was required by the state) but modified its approach to allow schools to adopt their own reforms. Comstock Middle School opted to become an "accelerated school" and received training from a former principal who had adopted the accelerated schools model with success in her school. The SDDAP grant paid for the training.

One component of ED's restructuring model was promotion of "autonomy for administrators and teachers to determine curriculum and instructional strategies." Partly because of district policy and partly because of the SDDAP grant, administrators and teachers at Comstock Middle School had more autonomy to seek out the reform approach that best suited them. They used this autonomy to identify the accelerated-schools model as the approach they wanted to follow. In effect, the model became the restructuring initiative for Comstock Middle School. It appears to have had some success in improving school climate and test scores. However, test scores improved at a time when efforts to set up the accelerated-schools model were just getting under way; thus, other factors may explain some of the positive effects. In particular, at the beginning of the third year of the initiative, a new principal took over at the restructuring middle school. The principal focused on promoting an orderly environment, and teacher outcomes (examined in the next chapter) suggest that staff felt the effects of this shift. Given its design, the evaluation cannot separate the effects of restructuring from the effects of having a new principal.

2. Results for the Grand Rapids Restructuring Initiative

The Grand Rapids restructuring initiative was intended to serve as a pilot effort for a districtwide move to outcomes-based curriculum and instruction. The effort was intended to involve 10 schools--a high school, a middle school, and 8 elementary schools--and was to be implemented primarily through staff development. In the design phase, teams of teachers developed outcomes in various subject areas; in the implementation phase, students tried to attain mastery of the outcomes, as demonstrated by an assessment. Those who mastered the outcome moved on to enrichment activities; those who did not were retaught, using different instructional techniques. Grades were A, B, C, or "in progress," with no failures. Importantly, the high school opted not to implement outcomes-based education; instead, it used its funds to create a ninth-grade program that blocked students together and organized instruction around interdisciplinary themes, while matching some ninth-grade students with mentors from the community.

The restructuring initiative also supported specialists in helping students who were struggling in school. Among the specialists were a social worker, behavior expert, speech pathologist, and substance abuse expert--all of whom worked with individual students or with groups of students-- and "advocates," who monitored students who frequently were absent and intervened to help them attend more often.

Restructuring showed no effects in the Grand Rapids middle school. None of the outcome trends differed for the restructuring middle school and its comparison school (Table II.3). The outcomes themselves show a distinct pattern--generally worsening from the baseline year, when students were in their last of elementary school, to the first follow-up year, when students were in their first year of middle school--and staying about the same thereafter. Rates of absenteeism, for example, increased from 6 to 12 percent from the baseline to the first follow-up year for students in

TABLE II.3

STUDENT OUTCOMES IN RESTRUCTURING AND COMPARISON SCHOOLS:
GRAND RAPIDS

| | Middle School | | | | | | | | High School | | | | | | | |
| | Cohort 1 | | | | Cohort 2 | | | | Cohort 1 | | | | Cohort 2 | | | |
	Restruc-turing School Mean	Compar-ison School Mean	Simple Difference	Net Difference	Restruc-turing School Mean	Compar-ison School Mean	Simple Difference	Net Difference	Restruc-turing School Mean	Compar-ison School Mean	Simple Difference	Net Difference	Restruc-turing School Mean	Compar-ison School Mean	Simple Difference	Net Difference
Dropout Rate at End of																
Follow-up year 2	11	6	5*	NC	20	6	14	NC	10	19	-9*	NC	14	11	3	NC
Follow-up year 3	12	10	2	NC	--	--	--	--	12	22	-11*	NC	--	--	--	NC
Absenteeism Rate																
Baseline year	6	8	-2	NC	6	7	-1	NC	9	11	-2	NC	9	11	-2	NC
Follow-up year 1	12	15	-3*	-1	13	16	-3*	-2	14	16	-2	0	13	17	-4*	-2
Follow-up year 2	15	17	-2	0	16	17	-1	-1	14	19	-5	-3	17	20	-3*	-1
Follow-up year 3	--	--	--	--	--	--	--	--	16	20	-4	-2	--	--	--	--
Math Test Score																
Baseline year	57	57	0	NC	53	56	-3	NC	53	58	-5	NC	48	55	-7*	NC
Follow-up year 1	42	50	-8*	-8	32	47	-6*	-4*	53	60	-7	-2	51	56	-5*	2
Follow-up year 2	37	45	-8	-8	32	33	-1	1	37	32	5	10	42	50	-8*	-1
Follow-up year 3	--	--	--	--	--	--	--	--	40	42	-2	1	--	--	--	--
Reading Test Score																
Baseline year	46	50	-4	NC	40	43	-3*	NC	56	59	-3	NC	47	58	-9*	NC
Follow-up year 1	30	41	-11	-7	35	40	-5*	-2	50	58	-8*	-5	54	58	-4	5
Follow-up year 2	33	39	-6	-2	25	33	-8*	-5	--	--	--	--	18	24	-6	3
Follow-up year 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
School Climate Is Poor (Percentage)																
Baseline year	19	21	-2	NC	30	27	3	NC	44	28	16*	NC	29	41	-12*	NC
Follow-up year 2	48	44	4	6	46	47	-1	-2	37	41	-4	-20*	39	41	-2	10*
Follow-up year 3	20	33	-13*	-11	--	--	--	--	30	29	2	-14*	--	--	--	--
"Very Sure" of High School Graduation (Percentage)																
Baseline year	68	66	2	NC	67	69	-2	NC	88	88	0	NC	89	83	6*	NC
Follow-up year 2	71	73	-2	-4	77	76	1	3	91	84	7*	7	87	84	3	-3
Follow-up year 3	85	83	2	0	--	--	--	--	96	89	7*	7*	--	--	--	--
Low Self-Esteem (Percentage)																
Baseline year	23	31	-8*	NC	25	29	-4	NC	19	22	-3	NC	16	25	-9*	NC
Follow-up year 2	24	30	-6	-2	28	28	0	4	15	21	-6	-3	10	16	-6*	3
Follow-up year 3	23	21	2	10	--	--	--	--	10	13	-3	0	--	--	--	--
External Locus of Control (Percentage)																
Baseline year	38	38	0	NC	40	35	5	NC	30	31	-1	NC	33	32	1	NC
Follow-up year 2	34	39	-5	-5	40	33	7*	2	28	34	-6	-5	24	26	-2	-3
Follow-up year 3	31	33	-2	-2	--	--	--	--	25	22	3	4	--	--	--	--
Sample Size	**222**	**226**			**272**	**255**			**179**	**211**			**253**	**237**		

SOURCE: School Dropout Demonstration Assistance Program Evaluation, student questionnaires and school records.

NOTE: The net difference estimate is not defined for the baseline year or for sites and outcomes with no baseline data.

-- = not available.
NC = not calculated.

*Significantly different from zero at the .10 level, two-tailed test.

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the restructuring middle school, and from 12 to 15 percent from the first follow-up year to the second follow-up year. Test scores and student perceptions of school climate also fell sharply when students entered middle school. However, the similarity of patterns in the restructuring and comparison middle schools suggests that the restructuring effort itself was not responsible for the deterioration of student outcomes.

Some differences in outcome are evident for students in the restructuring high school and its comparison high school, but not in any consistent way. For example, the dropout rate for the first cohort in the third follow-up year was 12 percent in the restructuring high school and 22 percent in the comparison high school; more students at the restructuring high school viewed their school's climate positively than did students at the comparison school. However, these results are not corroborated by outcomes of the second cohort, for which the proportion of students who dropped out or viewed the school's climate as poor was higher for the restructuring high school.

Interpreting the Results. Sharp declines in student outcomes at both the restructuring and the comparison middle schools may be attributable to a magnet-school initiative begun by the district at the same time that restructuring began. The district converted its middle schools from conventional zoned schools to magnet schools in 1993, but the initiative was not considered a success and support for it soon eroded.

The moderate evidence of improvement for the restructuring high school is at odds with what is known about implementation of the restructuring initiative at the school. The initiative was designed as a pilot test of outcomes-based education, but staff at the high school opposed outcomes-based education and the school did not implement it. Restructuring activities at the high school consisted primarily of a staff member who served as a case manager for about 50 students with severe absenteeism problems, and a program that organized ninth-grade students into family groups

and supported interdisciplinary teaching. The outcome results, however, are based on a sample of 10th-grade students. The first cohort could not have been affected by the 9th-grade program because that program was started after the first cohort of 10th graders was sampled for the evaluation. The second cohort could have been affected by the ninth-grade program, but results for that cohort do not favor the restructuring high school.

Because the scope of activities at the restructuring high school was limited, the observed effects are likely due to other factors. Part of the explanation is suggested by the pattern of outcomes. The observed net differences in student outcomes in Grand Rapids arose more from declines in comparison high school outcomes than from increases in restructuring high school outcomes. Site-visit reports note that the district installed new administrators at the comparison high school the year after students were sampled for the evaluation. The restructuring high school had the same principal throughout the study period, who was noted for his high academic standards and strong emphasis on discipline. The timing and pattern of outcome differences suggests that administrative changes at the comparison high school account for differences between the restructuring and comparison schools.

3. Results for the Philadelphia Restructuring Initiative

The objectives of the Philadelphia restructuring initiative were to improve transitions from one school level to the next and to improve school climate. To do so, the initiative developed staff using a "train the trainer" model. In each of the 17 schools that comprised the Gratz High School cluster, teachers, called "connectors," formed teams that participated in bimonthly staff development sessions. The sessions were devoted to topics such as building teams, improving communication and climate within schools, creating shared decision making within schools, and exploring new instructional approaches. Connectors then trained staff at their own schools. The grant primarily

supported consultants who trained the connectors and substitute teachers, so that connectors could participate in training.

In addition, each school formed a council--usually the principal, key teachers, and interested staff--that coordinated restructuring activities in each school. Although institutional factors limited council authority, councils devoted attention to fostering parent involvement, improving school climate, and improving curricula.

Difficulties in obtaining school and student cooperation limited the amount of data the evaluation could collect. The response rate for the baseline student questionnaire was too low for the data to be useful, and no further efforts were made to administer questionnaires. Instead, the evaluation relied on records provided by the school district, which gave information on absenteeism and test scores. Table II.4 shows that trends in absenteeism were equivalent for the restructuring and comparison middle schools, suggesting little or no impact of restructuring. Absenteeism rose sharply as students progressed through middle school. Absenteeism was 13 percent for students in the restructuring middle school in the sixth grade, and 35 percent for the same students in the ninth grade.

Absenteeism for high school students showed that the middle school trend continued through high school. Absenteeism was 45 percent for restructuring high school students in the 9th grade and 49 percent for the same students in the 11th grade.[4] Informal discussions with teachers suggest that the very high absenteeism levels were due at least partly to district or school policies in which teachers continue to mark students as enrolled and absent even after the students have not attended school for months. Consistent with this policy, about 15 percent of high school students in the

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[4]In Philadelphia, the evaluation sampled 9th graders rather than 10th graders. As a result, data for the baseline year relate to the eighth grade, and the first follow-up year to the ninth grade.

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TABLE II.4

STUDENT OUTCOMES IN RESTRUCTURING AND COMPARISON SCHOOLS:
PHILADELPHIA

| | Middle School | | | | | | | | High School | | | | | | | |
| | Cohort 1 | | | | Cohort 2 | | | | Cohort 1 | | | | Cohort 2 | | | |
	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference
Absenteeism Rate																
Baseline year	13	11	2	NC	11	15	-4*	NC	29	26	3	NC	33	24	9*	NC
Follow-up year 1	18	14	4*	2	15	20	-5*	-1	45	35	10*	7*	42	35	7*	-2
Follow-up year 2	24	18	6*	4	21	24	-3*	1	47	43	4	1	52	40	12*	3
Follow-up year 3	35	31	4*	2	--	--	--	--	49	43	6	3	--	--	--	--
Math Test Score																
Baseline year	16	24	8*	NC	18	19	-1	NC	14	18	-4	NC	13	20	-7*	NC
Follow-up year 1	17	21	-4*	4	17	14	3*	4*	9	19	-10*	-6*	9	15	-6*	1
Follow-up year 2	17	22	-5*	3	16	16	0	1	10	24	-14*	-10*	--	--	--	--
Reading Test Score																
Baseline year	16	22	-6*	NC	16	13	3*	NC	21	22	-1	NC	17	24	-7*	NC
Follow-up year 1	19	21	-2	4*	21	31	-10*	-13*	12	20	-8*	-7*	9	16	-7*	0
Follow-up year 2	23	41	-18*	-12*	21	25	-4	-7*	13	22	-9*	-8*	--	--	--	--
Sample Size	247	240			392	277			235	238			880	855		

SOURCE: School Dropout Demonstration Assistance Program Evaluation, school records.

NOTE: The net difference estimate is not defined for the baseline year or for sites and outcomes with no baseline data. No follow-up questionnaires were administered in Philadelphia.

-- = not available.
NC = not calculated.

*Significantly different from zero at the .10 level, two-tailed test.

evaluation sample were marked absent for more than 75 percent of a school year. Trends in high school absenteeism were equivalent for the restructuring and comparison high schools, suggesting little or no impact of restructuring on absenteeism.

Test score trends also indicate that restructuring had no positive effects. Test scores for students at the restructuring middle school improved moderately (in the eighth grade for the first cohort and the seventh grade for the second cohort) but were overshadowed by sharper increases in scores at the comparison middle school in the same time period. The net effect was that the restructuring middle school was comparatively further behind the comparison school, even though its scores increased. In addition, scores for students at the restructuring high school slid relative to scores for students at the comparison high school. Score levels were also very low. Tenth graders at the restructuring high school were, on average, at the 10th percentile in reading.

The data clearly show that the Philadelphia restructuring initiative did not improve absenteeism or test scores during the evaluation period. Considering that the initiative also focused on staff training and development, it would have been surprising if these outcomes improved in only a few years. It is clear, however, that the initiative also was not able to stem the decline of outcomes relative to comparison schools. A picture emerges of much effort being devoted to training and staff development while key student outcomes declined. The evaluation will not last long enough to know whether the staff development efforts ultimately may be fruitful in terms of student outcomes. It is evident that, at least initially, staff development efforts may do little to push student outcomes in the right direction.

4. Results for the Phoenix Restructuring Initiative

The restructuring initiative in Phoenix was structured differently than in other districts, which led to important differences in how the initiative unfolded and what the evaluation was able to learn.

In the Phoenix metropolitan area, high schools are in a separate district from elementary and middle schools (which are in 14 different districts). The restructuring initiative in Phoenix was a collaboration of the Phoenix Union High School District, which spanned grades 9 through 12, and one of the 14 elementary districts, Phoenix Elementary, which spanned grades K through 8. At the high school level, the initiative focused on improving the ninth-grade experience; consistent with this focus, the evaluation sampled ninth graders. Students entering the ninth grade, however, were coming from many elementary school districts other than Phoenix Elementary. Collecting baseline records data would have meant collecting eighth-grade records from many small school districts, some of which had no automated records systems. To avoid imposing significant burden on these schools, a decision was made not to attempt to gather baseline school records data. The high school district administered the Test of Achievement and Proficiency to ninth-grade students early in the fall, however, so the evaluation used ninth-grade test scores as a baseline measure of skills.

The second attribute of the restructuring initiative that affected the evaluation's structure was that the Phoenix Elementary school district had only one middle school. Selecting a comparison middle school would have meant working with another school district, which was not receiving grant funds, to find an equivalent middle school to act as a comparison school. However, after the evaluation narrowed its search to one school district and started negotiations, that district was awarded its own ED dropout prevention grant in a new competition. A decision was made to drop the middle school from the evaluation and focus attention on the high school, for which a similar high school in the district had been identified as a comparison school. The net result is that evaluation of the Phoenix restructuring initiative focuses on one high school and has limited baseline data.

At the high school, the restructuring initiative was designed to improve the ninth-grade academic experience. The initiative included reducing class sizes, adding an additional class period to help students earn more credits, building instruction around interdisciplinary themes, and instituting block scheduling. Teachers received summer training in promoting Socratic dialogues and using interdisciplinary instruction, among other topics. Although the effects of the ninth-grade experience could carry over through high school, the initiative itself did not extend past the ninth grade, with the exception that students who dropped out could attend a grant-funded, alternative diploma program operated by a community-based organization.

The evidence indicates that the ninth-grade initiative did not improve most student outcomes. Absenteeism was essentially the same in restructuring and comparison schools. First-cohort dropout rates at the end of 10th grade were somewhat higher for the restructuring school--15 percent, compared with 9 percent in the comparison school--but were essentially the same by the end of the 11th grade (19 percent, compared with 20 percent). Math and reading test scores in the restructuring school were somewhat higher at the beginning of 10th grade and the beginning of 11th grade, relative to the comparison school, but not by statistically significant amounts. For the second cohort, reading scores went from the 53rd to the 47th percentile at the restructuring school, and from the 46th to the 35th percentile at the comparison school--a larger drop.

Interpreting the Results. More than other restructuring initiatives, the Phoenix initiative had clear objectives of improving the experiences of a well-defined student group--ninth graders--by making instruction for them more academically challenging and interesting, while providing added 'support services. However, the evidence shows that test scores improved little from the 9th to the 10th grade (Table II.5). Because standardized tests can be unreliable measures of the value of some academic enhancements, it is perhaps more useful to focus on absenteeism and dropout rates as

TABLE II.5

STUDENT OUTCOMES IN RESTRUCTURING AND COMPARISON SCHOOLS:
PHOENIX

High School

	Cohort 1				Cohort 2			
	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference
Dropout Rate at End of								
Follow-up year 2	15	9	6	NC	15	11	4	--
Follow-up year 3	19	20	-1	NC	--	--	--	--
Absenteeism Rate								
Baseline year	--	--	--	--	--	--	--	--
Follow-up year 1	7	8	-1	NC	6	5	1	NC
Follow-up year 2	7	6	1*	NC	8	6	2*	NC
Follow-up year 3	8	7	1	NC	--	--	--	--
Math Test Score								
Baseline year	45	47	-2	NC	50	42	8*	NC
Follow-up year 1	49	47	2	4	50	42	8	0
Follow-up year 2	47	41	6	8	--	--	--	--
Follow-up year 3	--	--	--	--	--	--	--	--
Reading Test Score								
Baseline year	50	50	0	NC	53	46	7	NC
Follow-up year 1	50	49	1	1	47	35	12*	5
Follow-up year 2	47	43	4	4	--	--	--	--
Follow-up year 3	--	--	--	--	--	--	--	--
School Climate Is Poor (Percentage)								
Baseline year	31	24	7	NC	30	25	5	NC
Follow-up year 2	34	27	7	0	28	37	-9	-14*
Follow-up year 3	27	30	-3	-10	--	--	--	--
"Very Sure" of High School Graduation (Percentage)								
Baseline year	76	75	1	NC	73	70	3	NC
Follow-up year 2	79	80	-1	-2	84	83	1	-2
Follow-up year 3	80	77	3	2	--	--	--	--
Low Self-Esteem (Percentage)								
Baseline year	35	22	14*	NC	23	26	-3	NC
Follow-up year 2	26	12	14*	0	18	16	2	5
Follow-up year 3	16	15	1	-13	--	--	--	--
External Locus of Control (Percentage)								
Baseline year	38	39	-1	NC	41	38	3	NC
Follow-up year 2	39	25	14*	15*	33	21	12*	9
Follow-up year 3	33	30	3	3	--	--	--	--
Sample Size	**183**	**204**			**157**	**188**		

SOURCE: School Dropout Demonstration Assistance Program Evaluation, student questionnaires and school records.

NOTE: The net difference estimate is not defined for the baseline year or for sites and outcomes with no baseline data.

-- = not available.
NC = not calculated.

*Significantly different from zero at the .10 level, two-tailed test.

indicators of student satisfaction with school. Here, too, the picture is that the initiative had no effects: rates of absenteeism and dropout were nearly identical in restructuring and comparison schools. Neither do results for other outcomes--such as school climate, education aspirations, self-esteem, and locus of control--point to positive effects of the ninth-grade initiative.

5. Results for the Santa Ana Restructuring Initiative

The primary restructuring component in Santa Ana was professional development for teachers to create a new learning experience for students. Five schools participated in the initiative--an elementary school, three middle schools, and a high school. At each school, a staff development specialist supported by the ED grant ran workshops on topics such as thematic instruction, block scheduling, interdisciplinary team teaching, critical thinking, multimedia instruction, and other alternative teaching methods, and worked with teachers in the classroom to implement new methods discussed in the workshops. A sixth specialist coordinated activities across the five schools. The initiative also supplemented existing school services with counseling services (including tutoring for at-risk students), parent outreach, and health services.

Unlike other sites, in which one middle school and one high school were the focus of the evaluation, in Santa Ana three middle schools and one high school were the focus. The three middle schools were matched with two comparison middle schools. The use of five middle schools helped create a more balanced design (random events in various schools were more likely to offset each other), and the general homogeneity of schools with the district and use of multiple restructuring and comparison schools contributed to the close match between middle schools indicated in Table II.1. As was true at other sites, the participating high school was matched with a comparison high school.

Trends in test scores provide some evidence that restructuring activities improved student learning, at least as measured by the tests (Table II.6). This result is noteworthy because of the

TABLE II.6

STUDENT OUTCOMES IN RESTRUCTURING AND COMPARISON SCHOOLS:
SANTA ANA

| | Middle School | | | | | | | | High School | | | | | | | |
| | Cohort 1 | | | | Cohort 2 | | | | Cohort 1 | | | | Cohort 2 | | | |
	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference
Dropout Rate at End of																
Follow-up year 2	2	0	-2	NC	1	1	-1	NC	9	11	-2	NC	4	10	-6*	NC
Follow-up year 3	4	3	1	NC	--	--	--	--	5	8	-3	NC	--	--	--	--
Absenteeism Rate																
Baseline year	--	--	--	NC	--	--	--	NC	6	8	-1	NC	5	10	-5	NC
Follow-up year 1	--	--	--	NC	--	--	--	--	6	10	-4*	-3*	5	12	-7*	-2*
Follow-up year 2	--	--	--	NC	--	--	--	--	6	10	-5*	-3*	4	11	-7*	-2*
Follow-up year 3	--	--	--	--	--	--	--	--	2	9	-7*	-6*	--	--	--	--
Math Test Score																
Baseline year	35	33	2	NC	20	32	-8*	NC	32	30	2	NC	28	20	8*	NC
Follow-up year 1	27	28	-1	-3	19	25	-4*	3	30	25	5*	3	25	27	-2	-10*
Follow-up year 2	26	26	0	-2	21	20	1	9*	23	29	-6*	-8	27	26	1	-7
Follow-up year 3	26	24	2	0	--	--	--	--	27	31	-4	-6	--	--	--	--
Reading Test Score																
Baseline year	26	19	3*	NC	10	17	-7*	NC	26	18	6*	NC	21	16	5	NC
Follow-up year 1	23	26	-3	-6*	14	21	-7	0	26	14	8*	2	21	19	2	-3
Follow-up year 2	27	25	1	-2	19	21	-2	5	18	14	4*	-2	20	15	5	0
Follow-up year 3	27	25	1	-3	--	--	--	--	24	14	10*	4	--	--	--	--
School Climate Is Poor (Percentage)																
Baseline year	23	25	-2	NC	15	26	-11*	NC	17	25	-8*	NC	22	25	-3	NC
Follow-up year 2	25	34	-9*	-7	18	32	-14*	-3	20	25	-5	3	23	15	8	11
Follow-up year 3	15	14	1	3	--	--	--	--	20	18	2	10	--	--	--	--
"Very Sure" of High School Graduation (Percentage)																
Baseline year	61	58	3	NC	52	57	-5	NC	58	63	-5	NC	64	53	11*	NC
Follow-up year 2	66	69	-3	-6	67	77	-10*	-5	72	68	4	9	74	70	4	-7
Follow-up year 3	84	74	10*	7	--	--	--	--	74	83	-9*	-5	--	--	--	--
Low Self-Esteem (Percentage)																
Baseline year	38	44	-6	NC	38	41	-3	NC	33	37	-4	NC	31	41	-10*	NC
Follow-up year 2	39	43	-4	2	40	37	3	6	30	28	2	5	31	32	-1	9
Follow-up year 3	29	37	-8*	-2	--	--	--	--	27	29	-2	2	--	--	--	--
External Locus of Control (Percentage)																
Baseline year	50	52	-2	NC	55	52	3	NC	48	55	-7	NC	47	59	-12*	NC
Follow-up year 2	36	42	-6	-4	46	44	2	-1	46	46	0	7	38	45	-7	5
Follow-up year 3	31	34	-3	-1	--	--	--	--	41	45	-4	3	--	--	--	--
Sample Size	**226**	**233**			**229**	**217**			**222**	**174**			**223**	**152**		

SOURCE: School Dropout Demonstration Assistance Program Evaluation, student questionnaires and school records.

NOTE: The net difference estimate is not defined for the baseline year or for sites and outcomes with no baseline data.

-- = not available.
NC = not calculated.

*Significantly different from zero at the .10 level, two-tailed test.

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initiative's strong instructional focus. Math scores for the second cohort trended sharply downward at the comparison schools (from the 32nd to the 20th percentile) but held steady at the restructuring schools, resulting in a statistically significant net difference. Reading scores for the second cohort trended sharply upward for the restructuring schools (from the 10th to the 19th percentile); they trended more slowly upward at the comparison school (from the 17th to the 21st percentile). The score results are not corroborated by those of the first cohort, however; this group's scores show nearly identical trends in the restructuring and comparison schools. Other outcomes showed about the same trends across schools, although outcome levels sometimes were noticeably different. School climate was about the same in restructuring and comparison schools. In both sets of schools, students were much more positive about their school's climate in the third follow-up year, when students were in their first year of high school.

High school outcomes showed few effects of restructuring. Dropout rates were somewhat lower for the restructuring high school, although not significantly so. Score levels favor the restructuring high school. Students at the restructuring high school scored better on the reading test than students at the comparison high school; generally, they scored better in math as well. These differences may reflect preexisting differences across the schools in student composition or school policies. Score trends generally favor the comparison high school. Trends in other outcomes provide little or no evidence of restructuring effects. An important component of the Santa Ana restructuring initiative was an automated attendance-monitoring system, and the attendance data appear to show improved attendance for the high school. This result may be an artifact, however.

The new attendance system led to differences between the two schools in how days absent were coded. In addition, the very low absenteeism rates at the restructuring high school (rates range from

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two to six percent) may be due to the way absences were coded in the new system rather than to restructuring.

Interpreting the Results. The Santa Ana restructuring initiative at the middle school level consisted primarily of activities to improve instruction and learning. A major motivation for the restructuring initiative was that the district had undergone a massive demographic shift in recent years. The shift brought in many recent low-income immigrants, but schools had not yet adapted to the characteristics and needs of the new population. As part of the restructuring effort, middle school teachers assessed and modified their instructional methods. Middle schools also developed new services to intervene on behalf of at-risk students. The evidence shows that test scores (for the second cohort) increased in restructuring schools, consistent with the initiative's emphasis on improving learning. At the high school level, restructuring activities were not extensive--as reflected by the lack of differences between the restructuring and comparison schools.

III. RESTRUCTURING AND TEACHER AND PARENT OUTCOMES

A major challenge for the restructuring programs in the School Dropout Demonstration Assistance Program (SDDAP) was to improve their schools' climates for teaching and learning. Large urban schools are sometimes characterized as dispirited, bureaucratic places where teachers struggle to teach unmotivated or hostile students and parents ignore what is happening or are too timid to push for change. An important rationale for restructuring was to mitigate these negative aspects of schools and make schools more comfortable, motivating settings for teachers and students.

Data from high schools in the evaluation provide some support for the popular view of urban schools, but they also show a more positive side of the picture. As the popular view would suggest, only one in five high school teachers in the restructuring districts felt that students placed a high priority on learning or that teacher morale was high. Three out of four students, however, felt that people in their school cared about them, and the same proportion said they were proud to go to their school (Gleason and Dynarski 1995). Four out of five parents thought that school was teaching their children a lot; three out of four believed that school staff were interested in their child. If restructuring efforts could combine the evident pride students had in their schools with a better climate for learning and teaching, lower dropout rates and improved student achievement could result. Certainly, it is difficult to imagine that restructuring could improve learning if it did not also improve the climate for teaching and learning.

The promise of restructuring was that it could push for change on broad school dimensions. It could break schools down into smaller units that were more responsive to students, create interdisciplinary teacher teams that could develop thematic curricula, empower teachers to make decisions about pedagogy and curriculum, and develop new ways to integrate parents into the

education process. In terms of outcomes, these actions could create a more positive view of school climate from the perspective of teachers and parents, along with a greater role for teachers in school management activities.

The evaluation used teacher questionnaires to assess outcomes, such as school climate, in restructuring and comparison schools over a three-year span during which restructuring activities were at their peak. Parents also were given questionnaires asking them about school climate and their involvement with the school, which provides another way to assess trends in restructuring outcomes.

The results show that school climate, as perceived by teachers, improved in some districts and schools that were restructuring. In two of three districts for which we had information from middle schools, school climate in the restructuring middle schools improved, relative to comparison schools. A closer look at the middle school results, however, shows that, in some cases, other events could have been the source of improved school climate. School climate improved in two of the four restructuring high schools but worsened in the other two schools--although, again, events other than the restructuring efforts may have influenced both kinds of changes.

The type of restructuring initiative was related to improvements in school climate. Teachers were more likely to report improved school climate when they were part of initiatives that focused on improving curricula and instruction than when the initiatives provided support services for students. The evaluation found no evidence that teachers in restructuring schools became more involved in school management activities or had greater contact with parents.

Parents of students in restructuring schools did not report improvements in school climate, the quality of education they perceived in the school, or their involvement with the school. The levels of these outcomes, however, suggested that parents were quite satisfied with schools. Starting from

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such high levels, it would have been difficult for these outcomes to improve much. The irony is that schools enjoyed high levels of parent support while having low levels of student outcomes.

A. CHARACTERISTICS OF TEACHERS AND PARENTS

Teachers in restructuring and comparison schools were generally experienced and had long tenures at their schools (Table III.1). Across the four districts, 60 to 70 percent of teachers were older than 40, most were female (especially in middle schools), and most were white (except in Dallas). Two-thirds or more had a master's degree or higher (except in Dallas) and had taught for an average of 12 to 15 years, about half that time in their current school.

However, differences in teacher characteristics between restructuring and comparison schools made it advisable to adjust for differences in the analysis. Statistical tests show that teachers in restructuring and comparison schools generally differed on a few characteristics in most districts. Differences were more notable in the Dallas middle schools and the Santa Ana high schools. In Dallas, teachers in the restructuring middle school were older, more likely to be white, and more likely to have an advanced degree. In Santa Ana, teachers in the restructuring high school were older and had much less experience teaching in their current school. This finding is to be expected, because the school had only recently been built, so the entire staff was new to the school when it opened. To adjust for teacher differences, we used regression models in which teacher characteristics were used as explanatory variables, in addition to indicators for the year and the school. Regression models yield estimates of outcome differences between restructuring and comparison schools that are "adjusted" for differences in teacher characteristics. (Appendix B provides more detail about the regression models.)

TABLE III.1

CHARACTERISTICS OF TEACHERS

	Dallas				Grand Rapids			
	Middle School		High School		Middle School		High School	
	Restructuring School Mean	Comparison School Mean	Restructuring School Mean	Comparison School Mean	Restructuring School Mean	Comparison School Mean	Restructuring School Mean	Comparison School Mean
Age (in Years)								
Less than 30	11	11	13	3*	13	5	4	9
30 to 39	16	36*	28	19	15	10	6	18*
40 to 49	41	30	34	43	63	63	49	53
50 or more	32	23	25	34*	9	22*	41	21*
Gender (Percentage)								
Male	34	28	46	48	36	51	52	56
Female	66	72	54	52	64	49	48	44
Race/Ethnicity (Percentage)								
Black	46	52	39	59*	27	15	18	13
White	49	35*	55	33*	68	83*	80	82
Hispanic	5	7	5	6	3	0	0	2
Other	0	6	2	2	2	2	2	4
Highest Degree (Percentage)								
Bachelor's	56	61	51	55	38	17*	26	29
Master's	28	34	39	32	58	76*	68	63
More than a master's	16	5*	9	13	5	7	6	8
Years of Teaching Experience	14	14	14	16*	14	19*	21	18*
Years of Teaching Experience in the Current School	8	4*	7	10	7	12*	13	10
Primary Subject Taught (Percentages)								
English or foreign language	25	26	27	24	14	16	14	24
Math	14	23	13	10	14	11	12	9
Science	11	6	12	7	7	13	10	16
Social science/social studies	8	10	11	10	12	14	14	9
Fine arts/vocational education/physical education	7	8	22	27	10	11	15	16
Other	16	12	14	21	43	34	35	25
F-Statistic for Test of Equal Restructuring-Comparison Means on All Characteristics	6.0*		3.8*		2.3*		2.3*	
Sample Size[a]	67	108	113	72	67	47	53	59

TABLE III.1 (*continued*)

	Phoenix		Santa Ana			
	High School		Middle School		High School	
	Restructuring School Mean	Comparison School Mean	Restructuring School Mean	Comparison School Mean	Restructuring School Mean	Comparison School Mean
Age (in Years)						
Less than 30	13	9	8	7	17	24
30 to 39	21	13	23	14*	27	38
40 to 49	40	38	35	45*	35	22*
50 or more	26	39*	30	28	21	16
Gender (Percentage)						
Male	34	41	40	26*	50	51
Female	66	59	60	74*	50	49
Race/Ethnicity (Percentage)						
Black	3	2	5	6	1	2
White	84	86	77	76	83	75
Hispanic	8	9	15	11	14	15
Other	4	2	3	6	3	8
Highest Degree (Percentage)						
Bachelor's	32	31	39	33	41	37
Master's	55	53	49	53	43	47
More than a master's	13	16	12	14	16	16
Years of Teaching Experience	14	16	15	15	12	16*
Years of Teaching Experience in the Current School	6	8*	10	7*	3	12*
Primary Subject Taught (Percentages)						
English or foreign language	36	28	26	29	27	29
Math	14	12	14	12	15	14
Science	10	13	13	13	14	11
Social science/social studies	11	10	10	10	17	12
Fine arts/vocational education/physical education	17	18	12	16	13	17
Other	12	18	25	20	15	17
F-Statistic for Test of Equal Restructuring-Comparison Means on All Characteristics	2.6*		3.8*		10.0*	
Sample Size[a]	**121**	**126**	**211**	**101**	**109**	**109**

SOURCE: School Dropout Demonstration Assistance Program evaluation questionnaire.

[a] Sample sizes represent the total number of teachers who completed questionnaires in 1993, 1994, and 1995. Teachers are not counted more than once in the total sample size but could respond in all three years.

*Restructuring and comparison means of single baseline characteristic significantly different from each other at the .10 level, two-tailed test.

Parent characteristics add (though not consistently) to the image of restructuring sites as disadvantaged areas. Most parents were black or Hispanic and disadvantaged, which matched student characteristics (Table III.2). As expected, parents of middle school students were generally younger than parents of high school students.[1] Education levels of parents differed considerably across districts. In Santa Ana, with its largely immigrant population, about three-quarters of the parents had not completed high school, whereas in Grand Rapids, only 10 percent of parents had not completed high school. Ten to 20 percent of parents received public assistance, except in the Dallas comparison schools, where more than 40 percent of parents received public assistance.

Statistical tests show that characteristics of parents in Dallas and Grand Rapids differed in the restructuring and comparison schools. In both districts, the key difference was the racial/ethnic composition of parents. As with teachers, we accounted for these differences by using regression models to adjust observed outcomes.

B. OUTCOMES FOR TEACHERS AND PARENTS

To examine the major dimensions that could be affected by restructuring, we developed three indexes for teacher outcomes and three for parent outcomes. The teacher indexes corresponded to teachers' perceptions of school climate, support from school administrators and involvement in school management activities, and level of contact with parents. The parent indexes corresponded to parents' perception of school climate, quality of education the school offered, and level of involvement and contact with the school.

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[1]We use the term "parent" to mean the primary caregiver who responded to the parent questionnaire. About 80 percent of respondents were mothers or stepmothers of students in the restructuring or comparison schools; about 10 to 15 percent of respondents were fathers or stepfathers. The other 5 to 10 percent of respondents were mostly grandparents or foster parents.

TABLE III.2

CHARACTERISTICS OF PARENTS

| | Dallas | | | | Grand Rapids | | | | Phoenix | | Santa Ana | | | |
| | Middle School | | High School | | Middle School | | High School | | High School | | Middle School | | High School | |
	Restruc-turing School Mean	Compar-ison School Mean	Restruc-turing School Mean	Compar-ison School Mean	Restruc-turing School Mean	Compar-ison School Mean	Restruc-turing School Mean	Compar-ison School Mean	Restruc-turing School Mean	Compar-ison School Mean	Restruc-turing School Mean	Compar-ison School Mean	Restruc-turing School Mean	Compar-ison School Mean
Age (Percentage)														
Less than 30	10	10	3	3	9	5*	2	3	3	6	4	3	6	6
30 to 39	60	60	49	52	57	63	44	44	46	53	62	64	49	40
40 or more	30	30	48	45	35	32	54	53	51	41*	34	33	45	54
Race/Ethnicity (Percentage)														
Black	46	50	53	70*	49	35*	55	71*	5	7	0	1	1	1
White	13	0*	14	0*	42	58*	39	23*	44	38	2	3	3	1
Hispanic	39	47	32	26	5	4	3	2	42	46	96	93	93	97
Other	2	2	1	5	4	4	3	4	9	9	2	3	3	1
Relationship to Child (Percentage)														
Mother	78	77	78	79	80	79	75	79	80	72	74	76	67	76
Father	11	12	12	8	14	16	20	16	13	16	22	22	24	15
Other	11	11	10	13	5	5	5	5	7	12*	4	2	9	9
Highest Education Level (Percentage)														
Less than high school	40	53*	34	40	18	14	3	6	30	36	75	76	74	81*
High school/GED	28	23*	28	33	31	29	23	23	17	14	12	12	12	7
Some college	28	4*	32	25*	38	42	46	52	35	36	9	12	12	9
College or more	5	3	6	2*	13	15	27	19	19	14	3	0*	2	2
Employment														
Not employed	39	49*	34	50*	25	17*	15	14	27	27	42	18	38	39
Employed, earning $9/hour or less	42	42	41	45	41	41	25	34	39	46	47	38	49	51
Employed, earning more than $9/hour	19	9*	26	6*	33	43*	60	52	34	27	11	14	14	10
Receives AFDC or Food Stamps	30	45*	20	46*	25	21	10	9	14	15	18	23	15	16
F-Statistic for Test of Equal Restructuring-Comparison Means on All Characteristics	7.4*		9.4*		2.0*		5.3*		1.2		1.4		1.3	
Sample Size[a]	**440**	**543**	**113**	**72**	**366**	**357**	**263**	**238**	**231**	**122**	**320**	**288**	**156**	**108**

SOURCE: School Dropout Demonstration Assistance program evaluation questionnaire.

[a] Sample sizes represent the total number of parents who completed questionnaires in 1993, 1994, and 1995.

*Restructuring and comparison means of single characteristic significantly different from each other at the .10 level, two-tailed test.

[+]Restructuring and comparison means of full set of characteristics significantly different from each other at the .10 level, two-tailed test.

AFDC = Aid to Families with Dependent Children.

The teacher climate index is based on measures of teachers' perceptions in five areas: (1) teacher morale, (2) whether teachers perceived students as motivated, (3) whether teachers viewed the school as a safe and drug-free setting, (4) whether discipline was enforced, and (5) whether the school set challenging and attainable academic standards. The school management index for teachers is based on two areas: (1) whether teachers were supported by administrators (most questions were about the principal); and (2) whether teachers were involved in specific activities related to school management, such as planning and conducting staff development activities and revising curriculum. Indexes were measured on zero-to-100 scales, similar to test scores, with zero representing the worst possible school climate, the lowest possible level of involvement in school management activities, and so on, and 100 representing the highest possible levels. (Appendix C gives more detail about the construction of the indexes.)

For teacher and parent outcomes, we assessed restructuring effects by comparing average outcome levels of restructuring and comparison schools for each of the three follow-up years. We also examined changes in the specific indexes that comprised the main indexes to gain a detailed sense of factors underlying changes in the main indexes. (Appendix C contains the full set of tables for the subindex results.)

The analysis of teacher and parent outcomes was limited because we did not have measures of parent and teacher outcomes for the period before the restructuring efforts began. As a result, we could not use the difference-in-differences method we used for most student outcomes.[2] The lack of baseline data has important implications for our ability to measure the effects of restructuring. Differences in teacher and parent outcomes between restructuring and comparison schools may have

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[2]Because the evaluation began at the same time restructuring grants were awarded, it was not possible to collect baseline data on teachers and parents.

existed before restructuring. Regression models can identify the component of the observed differences that arises because of differences in teacher (or parent) characteristics. However, differences also could arise for reasons we do not observe, such as differences in school policies, staff values, and neighborhood features. Without baseline measures, we cannot adjust for these unobserved differences. As a result, we cannot be confident that restructuring caused the outcome differences we measured. Given this limitation, it is prudent to view the results as being suggestive of impacts but not definitive.[3]

1. Results for the Dallas Restructuring Initiative

The previous chapter described how the Dallas restructuring initiative at the middle school focused on improving school climate and increasing teachers' involvement in school management through adoption of Levin's accelerated-schools model. The model also called for all teachers in the middle school to play a role in some aspect of school management activity. The high school did not adopt a reform model but was working within a district initiative called "school-centered education," which was based loosely on Comer's School Development Program and promoted stronger school-based management. High school and middle school teachers also attended professional-development workshops at Southwest Texas State on such topics as team building, learning styles, and developing action plans for reform.

Results suggest that climate improved somewhat in the middle school (Table III.3). However, the primary elements of improvement were increased levels of student discipline and school safety

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[3]This caution works both ways. Results pointing to a lack of effects of restructuring also need to be viewed as potentially misleading, due to lack of baseline data. For example, a school may have a measured climate in the first follow-up year equal to the climate of the comparison school, which would suggest no effects of restructuring. But the school may have had a worse climate in the baseline year that we did not observe. The inference from the measured outcomes that restructuring had no effect would have changed if we had baseline data.

TABLE III.3

TEACHER AND PARENT OUTCOMES:
DALLAS

	Middle School				High School			
	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference
Teacher Outcomes								
School Climate Index (0 to 100)								
1993	44	42	1	NC	35	63	-27*	NC
1994	59‡	42	17*	12*	41‡	68	-28*	0
1995	52	42	10*	7	40	60	-20*	8
Involvement in School Management Index (0 to 100)								
1993	44	40	4	NC	34	45	-12*	NC
1994	48	40	8*	4	29‡	48	-18*	-8*
1995	45	38	7*	3	32	47	-14*	-4
Parental Contact Index (0 to 100)								
1993	44	47	-4	NC	41	48	-6	NC
1994	45	51	-7*	-3	45	45	1	7
1995	47	50	-3	1	46‡	55	-8*	-2
Instructional Staff Hours for In-Service Training								
1993	72	79	-7	NC	75	67	8	NC
1994	66	65	1	8	60‡	71	-11	-20
1995	76	72	5	12	69	73	-4	-12
Parent Outcomes								
School Climate Index (0 to 100)								
1993	66	70	-4	NC	61	66	-5	NC
1994	69	67	2	6	68‡	69	-1	3
1995	69	75	-6	-3	72‡	76	-4	0
Quality of Education (0 to 100)								
1993	73	80	-7*	NC	69	73	-4	NC
1994	77	78	-1	6	71	77	-6*	-2
1995	76	78	-3	5	78‡	83‡	-5	-1
Parental Involvement Index (0 to 100)								
1993	45	46	-1	NC	39	49	-10*	NC
1994	47	46	1	2	36	43	-7*	3
1995	47	50	-3	-2	36	49	-13*	-3
Teacher Sample Size								
1993	**47**	**70**			**86**	**36**		
1994	**53**	**76**			**87**	**63**		
1995	**47**	**69**			**79**	**63**		
Parent Sample Size								
1993	**171**	**196**			**127**	**52**		
1994	**134**	**191**			**169**	**116**		
1995	**122**	**135**			**108**	**38**		

Please see note at the bottom of Table III.6.

(Appendix Table C.1). These components were not a focus of the restructuring initiative per se, and the changes may have had more to do with a change of principal at the middle school in the 1993-1994 school year. The new principal placed a high priority on creating an orderly and safe school. Surprisingly, teachers' involvement in specific school management activities, a priority of the accelerated schools model, showed no differences between the two schools, although teachers' perceptions of support from the principal increased. Taken together, changes in the indexes suggest that teachers felt supported by the new principal and that the principal had made the school safer and more orderly. While these changes in climate are important, it is difficult to determine whether they relate to the specific restructuring activities undertaken as part of the SDDAP.

At the high school level, school climate and involvement in school management were clearly lower in the restructuring high school than in the comparison school. Teachers in the restructuring high school reported substantially lower teacher morale, weaker student motivation, and lower levels of school safety than did teachers in the comparison school. These aspects did not change significantly during the three-year follow-up period; at the end of the three years, climate had improved slightly, but outcomes for teachers in the restructuring high school remained well below those for teachers in the comparison school.

Parent outcomes were generally high, stable during the follow-up period, and nearly equal between the restructuring and comparison schools. The high levels would naturally make it difficult for schools to improve them. The greatest room for improvement was in the area of parental involvement, but in none of the four schools did the index change by a statistically significant amount during the follow-up period. These results suggest little change in parents' perceptions of the restructuring schools or in their involvement with the schools.

2. Results for the Grand Rapids Restructuring Initiative

The restructuring initiative in Grand Rapids focused on implementing an outcomes-based curriculum and creating more student support services in the schools. However, implementation was affected by two key events, one at the middle school level and one at the high school level. Both affect how we interpret observed teacher outcomes.

At the same time the Grand Rapids district began its restructuring initiative, it received substantial federal funding to convert its conventional, zoned middle schools into magnet schools. Apparently this experiment was not viewed as a success; several years after the magnet school initiative started, the district began moving back to a conventional zoned structure. Given the timing of the magnet school and restructuring initiatives, teacher outcomes combined effects of restructuring and effects of the shift to magnet schools.

The evidence suggests that the short-lived magnet school initiative may have had a negative effect on teachers' views of their schools (Table III.4). For both middle schools, values for the school climate and school management indexes generally declined, especially from 1993 to 1994 (when the magnet school initiative was reaching full implementation) and sometimes by substantial amounts. The declines were attributable to declines in all components of the indexes, including teacher morale, student motivation, and academic standards. None of the parent outcomes changed by noteworthy amounts; also, as in Dallas, levels of parent outcomes were generally high.

It is possible that the restructuring initiative played a role in attenuating the decline brought about by the magnet school initiative. Attenuating a decline is conceptually similar to a positive effect of restructuring. Some outcomes for the restructuring middle school declined by smaller amounts than the same outcomes in the comparison middle school, resulting in statistically significant differences in trends. Moreover, the outcomes-based curriculum was implemented in the

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TABLE III.4

TEACHER AND PARENT OUTCOMES:
GRAND RAPIDS

	Middle School				High School			
	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference
Teacher Outcomes								
School Climate Index (0 to 100)								
1993	50	51	-1	NC	59	43	16*	NC
1994	38‡	46	-8	-6	46‡	34‡	12*	-7
1995	47	28‡	18	20*	61	42	19*	4
Involvement in School Management Index (0 to 100)								
1993	45	40	4	NC	43	37	6*	NC
1994	43	39	5	1	39	33	6	0
1995	45	30‡	15*	10*	43	42	2	-5
Parental Contact Index (0 to 100)								
1993	44	43	1	NC	39	35	4	NC
1994	43	44	-1	-3	40	39	1	-3
1995	42	36	6	-5	43	37	6	2
Instructional Staff Hours for In-Service Training								
1993	60	41	18*	NC	44	48	-5	NC
1994	50	45	4	-14	30	62	-32	-28
1995	66	35	31*	12	48	58	-10	-6
Parent Outcomes								
School Climate Index (0 to 100)								
1993	74	71	3	NC	73	70	4	NC
1994	69	74	-5	-8	73	64	9	5
1995	75	74	1	-2	71	66	5	2
Quality of Education (0 to 100)								
1993	79	80	-1	NC	74	71	3	NC
1994	76	80	-4	-3	75	78	-3	-6
1995	79	76	2	3	74	71	3	0
Parental Contact and Involvement Index (0 to 100)								
1993	43	43	0	NC	46	44	2	NC
1994	42	47	-5*	-5	54	44	10*	9
1995	42	48‡	-6*	-6	50	46	4	2
Teacher Sample Size								
1993	**46**	**42**			**35**	**48**		
1994	**40**	**38**			**28**	**40**		
1995	**41**	**14**			**30**	**27**		
Parent Sample Size								
1993	**81**	**98**			**72**	**86**		
1994	**165**	**154**			**52**	**58**		
1995	**118**	**101**			**140**	**90**		

Please see note at the bottom of Table III.6.

middle school and had the support of the district and school staff. However, a confluence of the restructuring and magnet school initiatives severely limits our ability to assess the effects of restructuring.

The possibility of drawing conclusions about the effects of implementing outcomes-based education was also limited because of events at the restructuring high school. Staff at the high school raised strong objections to the outcomes-based curriculum and, with the principal's support, refused to implement it. Instead, the high school made some changes to its ninth-grade program and set up support services to improve attendance. At the same time, an administrative shakeup brought in a new principal and assistant principal to the comparison high school.

The results show minor differences between the restructuring and comparison high schools, with most of the changes in teacher outcomes taking the form of declines at the comparison high school. This pattern reflects events in the schools. The restructuring plan was mostly blocked at the high school and could not have affected outcomes there, except perhaps in creating a sense of greater solidarity between the principal and the teachers. The administrative shakeup at the comparison high school appears to have had a rocky start, with outcomes generally declining from 1993 to 1994 but improving from 1994 to 1995. In the end, the restructuring high school had teacher outcomes that were more positive, but it had had them from the outset.

3. Results for the Phoenix Restructuring Initiative

The Phoenix restructuring initiative focused on creating a better ninth-grade educational experience by having staff adopt sophisticated pedagogical techniques, adding an extra class period so students could obtain more credits toward graduation, and adding support services to help students

deal with problems hindering their education.[4] Teachers responding to the questionnaire were drawn from throughout the school, but because most teachers taught at least some ninth-grade classes, the initiative could have affected teachers throughout the school.

Results show that school climate improved in the restructuring high school (Table III.5). Teachers in the restructuring high school reported improved morale and student motivation, as well as a more collaborative relationship with the principal. Teacher views of school safety and their sense that academic standards for students were challenging also showed improvement, but these outcomes were smaller and not statistically significant. Parent outcomes were high, with little change occurring during the study period.

4.   Results for the Santa Ana Restructuring Initiative

The Santa Ana restructuring initiative focused heavily on providing staff development to encourage teachers to adopt innovative teaching techniques that were more responsive to the needs of at-risk students and that provided more support services. This staff development focus was stronger at the three participating middle schools than at the participating high school. Activities at the high school focused more on developing a tracking system to monitor attendance, providing support services, and implementing block scheduling.

At the high school level, evaluation results were confounded by an important characteristic of the school. A brand-new building, it contained much more technology than other high schools in the district. The high school also experienced an abrupt administrative shakeup during the follow-up period, when the school's principal was replaced. These factors, coupled with the low profile of

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[4]The Phoenix restructuring initiative included a middle school in another district, which was not part of the impact evaluation.

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TABLE III.5

TEACHER AND PARENT OUTCOMES:
PHOENIX

	High School			
	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference
Teacher Outcomes				
School Climate Index (0 to 100)				
1993	59	47	11*	NC
1994	67‡	52	15*	4
1995	66‡	48	17*	6
Involvement in School Management Index (0 to 100)				
1993	45	49	-4*	NC
1994	50‡	48	2	6*
1995	47	44‡	3	7*
Parental Contact Index (0 to 100)				
1993	44	38	5*	NC
1994	37‡	39	-2	-8
1995	41	42	-2	-7
Instructional Staff Hours for In-Service Training				
1993	77	67	11	NC
1994	70	68	3	-8
1995	53‡	63	-9	-20
Parent Outcomes				
School Climate Index (0 to 100)				
1993	75	64	12*	NC
1994	71	NA	NA	NA
1995	73	62	12*	0
Quality of Education (0 to 100)				
1993	82	82	-1	NC
1994	80	NA	NA	NA
1995	83	79	5	5
Parental Contact and Involvement Index (0 to 100)				
1993	44	38	6	NC
1994	41	NA	NA	NA
1995	36‡	40	-4	-11*
Teacher Sample Size				
1993	**91**	**94**		
1994	**67**	**73**		
1995	**52**	**50**		
Parent Sample Size				
1993	**91**	**42**		
1994	**62**	**NA**		
1995	**72**	**77**		

Please see note on the bottom of Table III.6.

restructuring activities in the high school, suggest that changes in teacher outcomes are likely to have arisen from sources other than restructuring.

The results provide clear evidence that school climate improved in the restructuring middle schools (Table III.6). The improvement was broad based, with all five specific indexes increasing relative to the comparison schools, and some specific indexes more than doubling in value. For example, in 1993, 21 percent of teachers in the restructuring middle schools thought teacher morale high, whereas in 1995, 49 percent of teachers thought it high. Other teacher outcomes did not change much. Involvement in school management increased, but by about the same amount as it increased in the comparison schools. As in other districts, parent outcomes were generally high, with little change during the study period.

Results for the high school paint a different picture. The school climate became more negative at the restructuring high school, even as climate was improving moderately at the comparison high school. Specific indexes showed that teacher morale and student discipline plummeted at the restructuring school (45 percent of teachers thought morale was high in 1993, whereas 14 percent thought it was high in 1995). Teachers' involvement in school management at the restructuring high school also declined. Parent outcomes were generally high and did not change much.

It is clear that some factor or set of factors was driving down the restructuring high school's climate and causing teachers to feel more negatively about its administration. The negative changes were probably not due to the effects of restructuring. Site visitors reported that the major restructuring activity--implementing block scheduling--was greeted with enthusiasm by students and teachers. The change of principals may have been an important contributing factor, and site visits did not uncover other disruptive factors that could account for the changes.

TABLE III.6

TEACHER AND PARENT OUTCOMES:
SANTA ANA

	Middle School				High School			
	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference	Restructuring School Mean	Comparison School Mean	Simple Difference	Net Difference
Teacher Outcomes								
School Climate Index (0 to 100)								
1993	45	60	-15*	NC	63	64	1	NC
1994	61‡	59	2	17*	55‡	67	-11*	-11*
1995	63‡	65	-2	13*	49‡	66	-17*	-16*
Involvement in School Management Index (0 to 100)								
1993	42	49	-6*	NC	48	49	0	NC
1994	45	51	-6*	1	41	49	-8*	-7*
1995	46‡	53‡	-6*	0	38‡	49	-11*	-10*
Parental Contact Index (0 to 100)								
1993	43	41	2	NC	28	29	0	NC
1994	41	37	4	2	31	25	5*	6
1995	40	40	0	-2	26	25	1	1
Instructional Staff Hours for In-Service Training								
1993	86	79	6	NC	62	74	-11	NC
1994	63‡	70	-7	-13	51	50‡	1	12
1995	51‡	56	-4	-11	57	41‡	16	27*
Parent Outcomes								
School Climate Index (0 to 100)								
1993	85	85	0	NC	85	85	0	NC
1994	87	89‡	-1	-2	88	84	4	4
1995	92‡	90‡	2	1	89	87	2	2
Quality of Education (0 to 100)								
1993	89	88	1	NC	90	85	5*	NC
1994	89	88	2	1	89	89	0	-5*
1995	92	87	4*	3	90	89	1	-4
Parental Contact and Involvement Index (0 to 100)								
1993	58	52	6*	NC	55	46	8*	NC
1994	55	56‡	-1	-7*	54	56	-2	-10*
1995	58	61‡	-2	-8*	56	53	4	-4
Teacher Sample Size								
1993	**182**	**92**			**87**	**102**		
1994	**173**	**78**			**87**	**88**		
1995	**143**	**69**			**82**	**78**		
Parent Sample Size								
1993	**145**	**143**			**159**	**122**		
1994	**195**	**165**			**138**	**191**		
1995	**172**	**172**			**157**	**192**		

SOURCE: 1993, 1994, and 1995 teacher and parent surveys.

TABLE III.6 *(continued)*

NOTE: The simple difference represents the difference between the restructuring school mean and the comparison school mean. The net difference for a particular year represents the difference between the simple difference for that year and the simple difference for 1993. The 1994 parent survey was not administered in the Phoenix comparison high school.

* Significantly different from zero at the .10 level, two-tailed test.

‡ Significantly different from the 1993 value at the .10 level two-tailed test.

NA = not available.

NC = not calculated.

IV. INTERPRETING THE FINDINGS

The School Dropout Demonstration Assistance Program (SDDAP) school restructuring initiatives had the potential to affect students, teachers, and parents at the same time. It is useful to pull together the evidence about their effects, compare the evidence with evidence from other studies of restructuring, and identify lessons and new directions that emerge from the synthesis. The types of restructuring activities and evaluation designs used in other studies differ widely, making it difficult to compare studies directly. Nevertheless, it is valuable to look across the various studies for evidence that restructuring, as commonly conceived, offers promise of achieving the kinds of changes envisioned by their authors.

A. SUMMARY OF STUDENT AND TEACHER FINDINGS

The SDDAP restructuring initiatives approached the dropout-prevention problem in two ways: (1) by changing the way a school was organized, with a focus on changing the ways students learned; and (2) by adding services to address the problems of high-risk students. Both approaches were intended to make school more attractive to high-risk students, thereby increasing the likelihood that the students would stay in school. The classroom approach tried to make learning more interesting and useful, while the service approach tried to offset problems that prevented students from succeeding in school.

The four restructuring initiatives on which we focus most of our attention all had elements of both approaches.[1] For example, Dallas provided ample opportunities for professional development and set up teams to direct appropriate services to students who were having difficulty in school. Phoenix also focused

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[1]Because of our poor experience with data collection there, we exclude Philadelphia from this discussion.

on professional development but coordinated with outside organizations to provide more services to reduce dropping out.

The emphasis also differed depending on school level. Middle school initiatives often were classroom oriented; high school initiatives often were service oriented. This pattern itself is interesting, suggesting that changes in classroom practices face greater resistance in high schools. The experience in Grand Rapids, where teachers at the restructuring high school rejected the plan to implement outcomes-based education, certainly is consistent with the view that classroom practices and other organizational features are more difficult to change in high schools than in lower-level schools.

Within the limits imposed by the evaluation design, it is fair to say that restructuring played a role in improving teacher and student outcomes in the Dallas and Santa Ana middle schools. Teacher outcomes improved in the Phoenix high school as well, although student outcomes did not. The nature of the restructuring initiatives in the three districts in which teacher outcomes improved--Dallas, Santa Ana, and Phoenix--provides a clue about the type of initiative teachers respond to. The middle schools in Dallas and Santa Ana and the high school in Phoenix focused their restructuring efforts on improving curricula and instruction through staff-development workshops, summer training sessions, and classroom implementation. The Dallas and Santa Ana high schools emphasized the approach of providing services related to dropping out. It is not surprising that teacher outcomes failed to improve in schools in which restructuring consisted mostly of providing more student services; but neither did student outcomes improve in these schools. A lesson for future efforts is that restructuring efforts have more potential when they focus on curriculum and instructional themes--which are more central to the idea of restructuring--than on student services.

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B. OTHER STUDIES OF RESTRUCTURING

Impact analyses of restructuring's effects on teachers are rare in other evaluations, but our evidence for student outcomes is consistent with evaluations of other efforts to reduce dropping out through restructuring. For example, New York City's dropout-prevention initiative in the late 1980s funded schoolwide efforts to reduce absenteeism and dropout rates; however, an evaluation found that student outcomes continued to worsen (Grannis 1994). The Annie E. Casey Foundation's "New Futures" initiative promoted systemic change in five school districts designed to make schools more responsive to the needs of at-risk students, but an evaluation found a "lack of significant progress in student educational outcomes" (Center for the Study of Social Policy 1995).

Restructuring efforts may not improve student outcomes for different reasons. Efforts may fail to change schools, or changes may fail to improve outcomes, or real outcome improvements may be undetected. In the literature on restructuring, the first explanation dominates. A recent study argues that teachers and administrators in particular operate in different institutional spheres, and that the differences have important implications for changing schools (Weiss 1995). Principals and other district administrators are more likely to be exposed to new ideas about school change, and to be rewarded by districts for instituting change. In contrast, teachers view their classrooms and relationships with students as private domains, and they are skeptical about ideas for change from the outside because most have not been tested in real classrooms. One teacher put it bluntly: "Teachers are likely to favor decisions that promise to bring order to the classroom so that they can get on with the business of teaching" (quoted in Weiss 1995). Principals and administrators are more likely to push for change and to be rewarded if change succeeds. Ultimately, however, it is teachers who must implement change, and often they do not agree that they should make changes. Moreover, they may not perceive any incentives to change.

This institutional explanation is consistent with findings of the SDDAP and New Futures initiatives. In the SDDAP districts, site visitors found during interviews that teachers often viewed restructuring as just the newest thing districts were imposing on schools, something that would be gone after a few years. The lack of teacher buy-in was not surprising, as the teachers who were expected to carry out restructuring activities were rarely part of the designing and planning of the activities. In the New Futures schools, teachers were more likely to view the basic problem as one of students failing to come to school ready to learn, rather than as schools failing to get the job of teaching them done. Similar to what was observed at SDDAP sites, with grant funding at the district level to create change and a lack of support at the school level for changing, a compromise solution was to use funds to create services and programs designed to help at-risk youths. Adding more services to help students stay in school is not in itself objectionable, but it does not amount to changing the core nature of schools.

The analysis of parent outcomes in Chapter III shows that support for change is not likely to come from parents. Parents' views about schools were strikingly uniform, but the direction may have undermined support for restructuring. In all districts and schools, and across the three years that data were collected, parents viewed schools as providing a high-quality education and school staff as caring about their children, even as the schools themselves had low levels of student outcomes and were being targeted by their own districts for improvement. With parents having such positive perspectives about schools, it seems clear that satisfying parents is not the impetus for restructuring schools.

The particular character of the SDDAP initiative also may have hindered restructuring. By design, federal grant funds were used to support change at a cluster of schools--a high school and its feeder elementary and middle schools--rather than at the entire district level. Limiting the initiative to a set of schools within a district enabled the evaluation to measure changes using comparison schools within the

districts. At the same time, limiting the initiative meant that districts did not need to commit fully to the initiatives, as they would have to if all schools in a district were to change. Instead, districts could view the initiatives as experiments being run in a few schools, and wait to see the results from the experiments before committing to the initiatives.

The result of the limited nature of the restructuring initiatives was that the districts did not modify personnel policies, alter procurement procedures, or shift real decision-making power to facilitate change at the few participating schools. Consistent with this observation, the analysis in Chapter III found that teachers in SDDAP schools did not report participating in more school-based management activities, such as recruiting and hiring school staff and selecting curricula. The schools included in the restructuring initiatives faced the challenge of trying to change while generally following standard operating procedures set by their districts.

Facing teachers' natural resistance to change, along with the lack of strong district commitment and parents' preexisting satisfaction with the schools, the SDDAP restructuring initiatives tended to lose momentum as energy originating from the new funding waned and key staff moved on to other positions and activities. Student outcomes are the result of cumulative processes, and the initiatives may not have been able to influence students long enough to improve such key outcomes as attendance and test scores. In particular, without changing schools dramatically and in directions that respond to important student needs, the initiatives were unlikely to affect the dropout rate, an outcome indicating a student's inability or unwillingness to continue in school that is determined by a complex mix of personal, family, school, and community factors.

Changing school climate in ways that teachers appreciate is a worthwhile objective--one that some of the restructuring initiatives focusing on classroom practice were able to achieve. Changing schools in

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ways that lead to improved student outcomes is the ultimate, but evidently more elusive, objective. Although the results for the Dallas and Santa Ana middle schools hint that such change can be achieved, the evidence is too weak for these schools to be considered models for replication.

C. LESSONS FOR POLICY AND PRACTICE

The SDDAP restructuring initiatives represented a federal investment to promote change in schools serving many at-risk students. The objective was to push schools to become places with teachers who were more motivated and empowered and students who were more engaged in learning and less likely to succumb to dropping out or other adverse outcomes. Using federal funding in this way preceded efforts to focus other federal programs--such as Title I, Goals 2000, and School-to-Work--to support systemic restructuring and school improvement. It is worthwhile to ask what can be learned from the SDDAP that could help improve other efforts to direct federal funds toward school improvement.

1. Identify Districts and Schools Ripe for Change

Implementing reform requires that districts, schools, and staff possess the commitment to confront issues and develop new approaches that may disturb established relationships and habits, change day-to-day activities, and require developing new skills. Providing funds to support restructuring is a start, but there is a long way to go before restructuring happens. In making grant awards, asking whether the preconditions for restructuring are present is one way to ensure that federal funding is used most effectively to change schools.

Preconditions include a plan for restructuring and demonstrated support for the goals of restructuring. The experience of the SDDAP schools shows that these preconditions are not always in place at the outset. In the Dallas and Santa Ana high schools, federal funding went mostly to underwrite services for at-risk

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students, which meant, in essence, that schools were not asked to restructure at all. In Grand Rapids, federal funding was supposed to support developing a new outcomes-based curriculum at the high school, but teachers did not support the curriculum and, in the end, the school did not implement it, opting instead to focus services on at-risk students. The precondition of demonstrated support for restructuring goals was not met.

One way to ensure that the preconditions for restructuring are in place would be to conduct a two-phase grant competition. In the first phase, districts and schools would receive planning grants to support efforts to pull together designs and set up processes for implementing the designs. In the second phase, the merits of the planning efforts would be judged and implementation grants given to districts that put together the best plans and that demonstrated the greatest support for change. Selecting only districts ripe for restructuring increases the likelihood that funds will promote restructuring.

2. Focus on Changing Teaching and Learning

SDDAP initiatives were attempting to change schools with many students at risk of dropping out. In these settings, it is tempting to use funds to support services for at-risk students, such as by hiring more counselors or attendance monitors, or contracting with community-based organizations that can help students deal with problems limiting their ability to succeed in school. There is a clear relationship between such services and the objective of keeping students in school, whereas the relationship between restructuring a school and keeping students in school is ambiguous.

SDDAP evaluation results suggest that this temptation should be resisted. Teacher and student outcomes improved in schools that grappled with the difficult issues of improving teaching and learning; outcomes did not improve in schools that focused on providing services. The evaluation's design for

measuring effects is not adequate to declare that outcomes will improve *only* if teaching and learning are the focus, but a focus on teaching and learning may indeed be necessary for outcomes to improve.

This is not to say that services for at-risk students should be ignored. Some schools may believe that restructuring is unnecessary, that only dropout-prevention services are necessary to address the needs of at-risk students. Other schools may believe that dropout-prevention services can complement the kinds of restructuring they deem best for their schools. Simply providing dropout-prevention services, however, should not be construed as restructuring. If the goal of federal support is to encourage restructuring, dropout-prevention services should be deemphasized in favor of helping schools understand how they want to improve classroom instruction.

Researchers studying school restructuring have cautioned that restructuring itself may not lead to school improvement (Newman and Wehlage 1994; Elmore et al. 1996; Rowan 1995). Instead, these researchers argue, restructuring--in the form of changing school organization or classroom structures, or creating new relationships of students with students and teachers with teachers through group activities and team teaching--is better viewed as an outcome of an intensive process by which schools identify how they want instruction to change and what types of restructuring should be done to support the change. According to this view, the step of getting school staff to agree on the necessity of change and on forms the change should take precedes restructuring. Certainly, as the example of the Grand Rapids high school showed, trying to restructure a school when staff support is lacking can lead to no restructuring at all. In contrast, restructuring a school to support previously identified reasons to change may be a potent recipe for improving schools.

Does restructuring reduce the dropout rate? The evidence here and from other evaluations suggests that it does not, at least not within the four- to five-year period common for demonstration efforts. Can

restructuring improve other outcomes? The evidence here suggests that it can, especially when it focuses

on improving teaching and learning. Even if restructuring were unable to demonstrate its effectiveness in

lowering dropout rates, it shows promise as a way to improve schools, especially in schools that want to

improve.

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APPENDIX A:

COLLECTING DATA ON STUDENTS, TEACHERS, AND PARENTS

The evaluation collected data from students, teachers, and parents using a variety of methods and with different rates of success. This appendix provides more details about the data collection methods and about the success of the effort in terms of sample sizes and response rates.

A. SURVEYING STUDENTS

Students in restructuring and comparison schools completed a self-administered baseline questionnaire and two or three follow-up questionnaires, depending on whether they were in the first or second cohort. Data on students in the sample were also collected from school records.

The baseline questionnaire was administered in schools in the fall and winter of the year in which students were sampled, with almost all students completing the baseline by December. Because some students were in school for three months before completing the baseline questionnaire, restructuring activities may have affected their responses to some questions. This is not likely to be a problem for the first cohort, as schools were still planning and setting up restructuring activities when students completed the baseline questionnaire. For the second cohort, however, some effects of the restructuring activities may be reflected in the baseline data items--which means that restructuring effects are underestimated.

Three modes were used to maximize response rates for the follow-up questionnaire. Teachers in restructuring and comparison schools first administered follow-up questionnaires to the students they could locate. MPR staff then interviewed by telephone students whom schools could not locate. Finally, MPR field interviewers located and interviewed students who could not be interviewed by telephone. Overall, 50 percent of the completed follow-up student questionnaires were administered in the restructuring and comparison schools, 45 percent were administered by MPR telephone interviewers, and 5 percent were administered by MPR field interviewers.

Response rates to the baseline and follow-up student questionnaires were generally high and were similar for restructuring and comparison schools (Table A.1). Four sites--Dallas, Grand Rapids, Phoenix, and Santa Ana--had a baseline response rate of 96 percent. In Philadelphia, however, the baseline response rate was only 60 percent, and it was less than 50 percent at the high school level. Because of this low response rate, follow-up questionnaires were not attempted in Philadelphia; only records data were obtained for students there.

Response rates for follow-up questionnaires followed two patterns. Middle school response rates were higher than high school response rates (by 7 to 9 percentage points), and first follow-up response rates were higher than second follow-up response rates (by 2 to 10 percentage points). The patterns result from the greater difficulty of tracking students as they get older and drop out or move away. On balance, the overall follow-up response rates were high, 84 percent for the first follow-up questionnaire (which was administered to both cohorts) and 83 percent for the second followup (administered to the first cohort).

Student records were obtained as extracts from district information systems. MPR staff worked with district staff to specify the items to be extracted and the format for the extract. The focus was on obtaining data on attendance and test scores. Generally, baseline record response rates were nearly 100 percent when the items were available. Test scores were not available in all years in Dallas and Grand Rapids, and attendance data from Santa Ana were not available for middle school students. Follow-up record response rates were less than 100 percent because record information was not available after students dropped out or transferred to other districts.

B. SURVEYING TEACHERS

Teachers in restructuring and comparison schools completed surveys during spring 1993, spring 1994, and spring 1995. The teacher survey was designed as a census, with each member of the

SAMPLE SIZES AND RESPONSE RATES:
FOR STUDENT SAMPLE

	Number of Students in Sample		Baseline Survey Response Rate		Year 2 Follow-Up Survey Response Rates		Year 3 Follow-Up Survey Response Rates	
	Restruc-turing School	Compar-ison School	Restruc-turing School	Compar-ison School	Restruc-turing School	Compar-ison School	Restruc-turing School	Compar-ison School
Cohort 1								
Middle Schools								
Dallas	229	231	97	98	92	98*	80	92*
Grand Rapids	212	213	100	100	98	93*	90	94
Philadelphia	247	240	53	92*	na	na	na	na
Santa Ana	226	233	100	100	92	83*	81	78
Total	914	917	87	97	94	91	84	88
High Schools								
Dallas	215	118	94	91	92	93	83	84
Grand Rapids	195	211	92	100*	88	96	84	91*
Philadelphia	235	238	45	52	na	na	na	na
Phoenix	183	204	86	71*	78	60*	84	70*
Santa Ana	222	178	100	98*	82	82	80	72*
Total	**1,050**	**949**	**82**	**92**	**85**	**84**	**83**	**80**
Cohort 2								
Middle Schools[a]								
Dallas	283	263	96	97	84	87		
Grand Rapids	336	300	93	81*	90	80*		
Santa Ana	249	244	92	89	81	82		
Total	868	807	94	91	85	84		
High Schools[a]							NO YEAR 3 SURVEY CONDUCTED	
Dallas	225	169	96	92	88	87		
Grand Rapids	288	249	88	95*	84	89		
Phoenix	266	261	59	72*	53	55		
Santa Ana	272	220	82	69*	78	59*		
Total	**1,051**	**899**	**81**	**81**	**78**	**74**		

SOURCE: Mathematica Policy Research, Inc., School Dropout Demonstration Assistance Program Evaluation, Survey Tracking Information System.

[a] In Philadelphia, students were followed up only through school records. The second student cohort included all students in the selected grade levels (seventh grade for middle schools and ninth grade for high schools).

na = not available.

*Significantly different from zero at the .10 level, two-tailed test.

instructional staff who taught at least one course in participating schools receiving a survey instrument. Because only one survey instrument was used, teachers who remained in the same school from one year to the next completed the same survey instrument.

The teacher survey had a high response rate of 82 percent (3,555 questionnaires were sent to teachers, and 2,917 completed questionnaires were returned). The same pattern found for students also was evident for teachers (Table A.2). Response rates were higher for middle school teachers than for high school teachers, and higher in the early years than in later ones. At the outset, there was concern that response rates would be higher for teachers in restructuring schools, where grant funding may have raised the level of interest in responding to the survey; however, response rates for teachers in restructuring and comparison schools did not follow a particular pattern. For some years and schools, response rates for teachers in comparison schools were higher than for teachers in restructuring schools.

C. SURVEYING PARENTS

Parents of students who completed a baseline questionnaire were sent a survey in spring 1993 for cohort 1 and in spring 1994 for cohort 2. No student cohort was sampled in 1995, so parents of all students enrolled in the grade levels that were part of the evaluation were sent a survey. The survey was mailed to students' home addresses, and one of the students' parents or their primary caregiver was asked to complete the survey.

By design, MPR did not attempt to follow up with parents who did not respond to the survey. Instead, MPR gave schools modest financial incentives to encourage them to take steps to raise survey completion rates. For example, schools that achieved an 80 percent completion rate for the parent survey were offered $500 or an in-kind equivalent, with lower amounts for lower response rates. It is difficult to determine whether the incentives raised response rates; nonetheless, response

TABLE A.2

SAMPLE SIZES AND RESPONSE RATES:
FOR TEACHER SAMPLE

	1993				1994				1995			
	Number Sent Year 1 Survey		Year 1 Response Rates (Percent)		Number Sent Year 2 Survey		Year 2 Response Rates (Percent)		Number Sent Year 3 Survey		Year 3 Response Rates (Percent)	
	Restruc-turing	Compar-ison	Restruc-turing	Compar-ison	Restruc-turing	Compar-ison	Restruc-turing	Compar-ison	Restruc-turing	Compar-ison	Restruc-turing	Compar-ison
Middle Schools												
Dallas	53	74	89	95	59	78	90	97*	56	81	84	85
Grand Rapids	50	43	94	98	45	43	91	88	49	41	84	34
Santa Ana	182	92	100	100	179	88	97	89*	194	84	74	82
High Schools												
Dallas	87	64	99	56*	91	63	96	100*	87	66	91	95
Grand Rapids	48	56	73	86	52	56	54	71*	48	52	63	52
Phoenix	113	112	81	84	121	123	55	59	127	127	41	39
Santa Ana	88	104	99	98	88	91	99	97	98	102	84	76

SOURCE: Mathematica Policy Research, Inc., School Dropout Demonstration Assistance Program Evaluation, Survey Tracking Information System.

*Significantly different from zero at the .10 level, two-tailed test.

rates were low (Table A.3). More than 12,000 questionnaires were sent out to parents and about 5,000 were completed, for a response rate of 41 percent. The general pattern observed with student and teacher surveys was observed with parent surveys. Response rates were higher for middle schools than for high schools, and higher for earlier years than for later years. Whether the parents had students in a restructuring or comparison school was not a factor in determining the response rate. Generally, the dominant factor in obtaining a high response rate was whether the school principal supported the survey.

The low overall response rate suggests that results from the parent survey need to be viewed with caution. In an earlier report, we compared the characteristics of students whose parents responded to the survey with the characteristics of students whose parents did not respond to the survey (Gleason and Dynarski 1995). The results showed that students whose parents responded had fewer risk factors: they were absent fewer days, they were less likely to be behind grade level, and they had higher grades and test scores. The degree of bias, however, was about the same for the restructuring and comparison schools, which suggests that differences between the schools are affected less by nonresponse than by simple characteristics. Therefore, we can use the parent data to explore whether restructuring had effects on parents, but we need to be cautious about using parent responses as if they apply generally to all parents in the schools.

TABLE A.3

SAMPLE SIZES AND RESPONSE RATES:
PARENT SAMPLE

| | 1993 | | | | 1994 | | | | 1995 | | | |
| | Number Sent Year 1 Survey | | Year 1 Response Rates | | Number Sent Year 2 Survey | | Year 2 Response Rates | | Number Sent Year 3 Survey | | Year 3 Response Rates | |
	Restruc-turing	Compar-ison	Restruc-turing	Compar-ison	Restruc-turing	Compar-ison	Restruc-turing	Compar-ison	Restruc-turing	Compar-ison	Restruc-turing	Compar-ison
Middle Schools												
Dallas	223	227	79	90*	283	263	49	75*	454	407	27	35*
Grand Rapids	206	179	39	54*	336	300	49	53	294	428	41	24*
Santa Ana	226	233	62	61	249	244	72	60*	423	407	41	42
High Schools												
Dallas	203	107	63	51*	225	169	76	71	300	183	37	23*
Grand Rapids	140	207	49	42	288	249	18	23	286	305	50	31*
Phoenix	162	151	57	29*	266	261	24	0*	676	700	11	11
Santa Ana	222	177	70	61*	272	220	49	56	616	410	26	47*

SOURCE: Mathematica Policy Research, Inc., School Dropout Demonstration Assistance Program Evaluation, Survey Tracking Information System.

*Significantly different from zero at the .10 level, two-tailed test.

APPENDIX B

MEASURING THE EFFECTS OF RESTRUCTURING

The key questions posed by the evaluation are whether restructuring projects improved students' academic outcomes and behavior, teachers' perceptions of their autonomy and school climate, and parents' views of and involvement with schools. To answer these questions, we compared outcomes for students, teachers, and parents in restructuring schools and comparison schools. Comparison schools were chosen on the basis of their similarity to restructuring schools in terms of student characteristics and academic outcomes; however, important differences between schools can exist in other key dimensions, making it important to use analytic strategies to obtain more reliable estimates of restructuring effects.

Depending on the outcome and availability of baseline data, we used two different methods to estimate impacts: (1) the "difference-in-differences" method, and (2) the "simple-difference" method. Both methods use regression models to derive estimates of effects.

A. THE DIFFERENCE-IN-DIFFERENCES METHOD

The difference-in-differences method was used to estimate restructuring effects for most student outcomes reported in the text. The method uses the baseline values of an outcome measure to adjust for differences between students in restructuring and comparison schools. The restructuring effect is derived as a difference of differences: (1) the change in the value of the outcome measure from baseline to followup among restructuring school students (a difference) minus (2) the change in the value of the outcome measure from baseline to followup among comparison school students (another difference).

The difference-in-differences model can be estimated straightforwardly as a regression model:

$$(1) \quad y_{it} = \alpha_1 R + \alpha_2 t + \alpha_3 Rt + \epsilon_i,$$

where y_{it} is the value of the outcome for student i in period t, R is an indicator variable for whether the student attended the restructuring school, t is an indicator variable for whether the outcome is being measured in the follow-up year (versus the baseline year), Rt is the product of R and t, and ϵ_i denotes random factors affecting the outcome. Note that each student contributes two observations to the analysis, one from the baseline year and one from the follow-up year.

In the model, the term $\alpha_1 R$ adjusts for differences between restructuring and comparison schools in an outcome in the baseline year, before restructuring begins. The coefficient α_2 is the trend value of the outcome over time. The coefficient α_3 is the restructuring-comparison difference in the outcome in the follow-up year, adjusted for the difference that existed during the baseline year. This is the key coefficient indicating whether restructuring affected the outcome of interest. Conventional t-tests for the statistical significance of the estimated value of α_3 enable us to assess whether the estimated value could have arisen by chance. When the outcome is a discrete variable, such as whether a student had low self-esteem, models were estimated using logistic regression techniques; otherwise, models were estimated using ordinary least-squares techniques.

B. THE SIMPLE DIFFERENCE METHOD

We used the simple difference method to estimate impacts for outcomes, including the dropout rate for students and all teacher and parent outcomes, for which we had no baseline values. For these outcomes, the simple-difference method estimates restructuring effects as the difference in the outcome for restructuring and comparison schools at followup, adjusting for differences in observed characteristics.

The simple-difference method is less powerful than the difference-in-differences method. Because it is less able to adjust for baseline differences, estimated effects may mingle true effects with differences that existed before restructuring began, which are not entirely removed by adjusting

for observed characteristics. For example, the principal of a school may create a positive climate with teachers, which results in higher teacher outcomes relative to an otherwise identical school. Adjusting for observed characteristics of the two schools would not completely separate the effect of the principal on teacher outcomes from the effects of restructuring. (In this example, if the restructuring school were also the school with the more positive principal, the simple-difference method would overestimate the effect of restructuring.) The strengths of the simple-difference method include its ease of use and its ability to be used with a wide range of outcomes.

The simple difference method can be specified in terms of a straightforward regression model:

(2) $Y_i = X_i\beta + \alpha R + \epsilon_i,$

where X_i is a set of characteristics related to outcome Y_i for student i, such as gender, race/ethnicity, and education level; B is a set of parameters to be estimated; R is an indicator variable for the restructuring school; and ϵ represents random factors affecting outcomes. The coefficient α represents the effect of restructuring on the outcome of interest. Because the regression model separates the influences of restructuring from those other characteristics, α is said to be the effect of restructuring "adjusted" for the characteristics contained in X.

With the relatively large samples of students, teachers, and parents here, it is useful for X to contain as many characteristics as the data reasonably can support. Table B.1 lists the characteristics used for student outcomes, and Table B.2 lists the characteristics for teacher and parent outcomes. The sets of characteristics includes 26 student characteristics, 16 parent characteristics (some of which are obtained by linking student and parent data), and 9 teacher characteristics. At some sites and schools, some characteristics had no variance and thus had to be dropped from the models. For example, no students in the Santa Ana high schools were black, so that variable had to be dropped

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TABLE B.1

VARIABLES IN SIMPLE-DIFFERENCE MODELS:
STUDENTS

Race/ethnicity	School problems in baseline year--drugs/alcohol
Gender	Whether student reads at least two times per week
Age	Student dropped out prior to baseline year
Mother's highest education level	Baseline-year attendance
Parents' employment status	Baseline-year grades
Number of siblings	Baseline-year test scores
Whether siblings have dropped out	Student risk factors
	Single-parent family
Parent disciplinary environment index	Family receives public assistance
	Non-native English speaker
Self-esteem	Overage for grade
	Low grades
School climate in baseline year	Disciplinary problems
	External locus of control
School problems in baseline year--truancy	Student is a parent
School problems in baseline year--fighting	

NOTE: Most of these data were collected from the baseline student questionnaire. A few items were collected from student records and were included in the simple-difference models in sites for which records data were available. Models include indicator variables for missing observations of selected variables.

TABLE B.2

VARIABLES INCLUDED IN SIMPLE-DIFFERENCE MODELS:
TEACHERS AND PARENTS

Teachers' Model	Parents' Model
Gender	Age
Race/ethnicity	Relationship to student
Age	Does not live with student part of the time
Educational attainment	Race/ethnicity
Part-time status	Primary language is not English
Respondent is not a teacher	Educational attainment
Years teaching	Employment status
Years teaching at current school	AFDC/food stamp receipt
Primary subject area	Student does not live with both parents
	Student is overage for grade
	Student is a parent
	Student's gender
	Student has sibling who dropped out
	Student has at least one working parent
	Household size
	Household possessions

NOTE: The variables for the teachers' model refer to teachers' characteristics. The variables for the parents' model include both students' characteristics (measured by the baseline questionnaire) and parents' characteristics. Both models include indicator variables for missing observations of selected variables.

AFDC = Aid to Families with Dependent Children.

from Santa Ana models. As with difference-of-difference models, ordinary least-squares techniques were used for continuous variables, and logistic regression techniques were used for discrete variables.

APPENDIX C

SUPPLEMENTARY TABLES FOR TEACHER OUTCOMES

TABLE C.1

RESULTS FOR COMPONENTS OF SCHOOL CLIMATE AND
SCHOOL MANAGEMENT INDEXES:
DALLAS

	Middle School		High School	
	Restructuring School Mean	Comparison School Mean	Restructuring School Mean	Comparison School Mean
School Climate				
Teacher Morale				
1993	22	21	5	33*
1994	18	18	5	56‡*
1995	18	5*	17‡	40*
Student Motivation				
1993	46	42	41	54*
1994	52	44*	43	57*
1995	49	45	43	53*
School Safety				
1993	56	53	55	74*
1994	64‡	51	59	78*
1995	54	60‡	54	75*
Student Discipline				
1993	44	36	24	76*
1994	86‡	42*	46‡	78*
1995	74‡	41*	37‡	69*
Challenging Standards				
1993	55	56	49	74*
1994	75‡	53*	51	73*
1995	66	59	47	64*
School Management				
Support from the Principal and Administrators				
1993	62	57	47	68*
1994	70‡	58*	41	71*
1995	67	50*‡	46	68*
Specific Involvement of Staff in School Management				
1993	24	23	21	22*
1994	25	22	17	24*
1995	24	24	19	25*

Please see notes at bottom of Table C.4.

TABLE C.2

RESULTS FOR COMPONENTS OF SCHOOL CLIMATE AND
SCHOOL MANAGEMENT INDEXES:
GRAND RAPIDS

	Middle School		High School	
	Restructuring School Mean	Comparison School Mean	Restructuring School Mean	Comparison School Mean
School Climate				
Teacher Morale				
1993	13	20	22	19
1994	2	11	20	4*‡
1995	12	2	27	7*
Student Motivation				
1993	48	51	49	47
1994	40‡	48*	47	43
1995	49	41	52	45*
School Safety				
1993	72	63*	80	66*
1994	59‡	63	74	63*
1995	63‡	49‡	78	75‡*
Student Discipline				
1993	56	52	64	28*
1994	45	39	40‡	7‡*
1995	49	28	62	32*
Challenging Standards				
1993	60	63	76	52*
1994	42‡	63	58	57
1995	61	24‡	84	50*
School Management				
Support from the Principal and Administrators				
1993	65	58*	60	48*
1994	60	52*‡	54	40*‡
1995	64	33*‡	61	56
Specific Involvement of Staff in School Management				
1993	24	24	25	25
1994	24	25	23	26
1995	26	27	25	28

Please see notes at bottom of Table C.4.

TABLE C.3

RESULTS FOR COMPONENTS OF SCHOOL CLIMATE AND
SCHOOL MANAGEMENT INDEXES:
PHOENIX

	High School	
	Restructuring School Mean	Comparison School Mean

School Climate

Teacher Morale
1993	20	35*
1994	41‡	41
1995	37‡	26

Student Motivation
1993	54	51
1994	59‡	49*
1995	59	46*

School Safety
1993	71	63*
1994	75	65*
1995	75	63*

Student Discipline
1993	86	37*
1994	83	43*
1995	81	54*‡

Challenging Standards
1993	65	50*
1994	70	62
1995	78	53*

School Management

Support from the Principal and Administrators
1993	56	68*
1994	67‡	65
1995	63‡	60‡

Specific Involvement in School Management
1993	33	29*
1994	34	30
1995	32	28

Please see notes at bottom of Table C.4.

TABLE C.4

RESULTS FOR COMPONENTS OF SCHOOL CLIMATE AND
SCHOOL MANAGEMENT INDEXES:
SANTA ANA

	Middle School		High School	
	Restructuring School Mean	Comparison School Mean	Restructuring School Mean	Comparison School Mean
School Climate				
Teacher Morale				
1993	21	37*	45	43
1994	43	42	32‡	44
1995	49	52	14‡	51
Student Motivation				
1993	52	58*	55	54
1994	61‡	58	55	55
1995	60‡	58	51‡	54
School Safety				
1993	60	68*	76	71*
1994	71	66*	75	73
1995	75	70	73	75
Student Discipline				
1993	40	68*	82	93
1994	60‡	62	62‡	98
1995	69‡	73	57‡	97
Challenging Standards				
1993	51	66*	59	59
1994	70‡	67	51	62
1995	63‡	73	51	52
School Management				
Support from the Principal and Administrators				
1993	58	67*	64	68
1994	63‡	68*	53‡	69
1995	65‡	72*	47‡	69
Specific Involvement of Staff in School Management				
1993	27	30	31	30
1994	27	34*	29	29
1995	27	34*	29	29

* Significantly different from zero at the .10 level, two-tailed test.
‡ Significantly different from the 1993 value at the .01 level, two-tailed test.

APPENDIX D

DEFINITIONS OF VARIABLES

The variables used in the data analysis often were constructed from sets of items in the student, teacher, and parent questionnaires and the school records; this appendix provides details on the variable constructions. It uses question numbers from the baseline and follow-up surveys, with items from the baseline questionnaire denoted as BLQ##, items from the follow-up questionnaire denoted as FUQ##, and items from records data denoted by easily understood names (for example, math grade).

A. DROPOUT RATE

The dropout rate for a given year is defined conceptually as the percentage of students in the sample who have not earned a high school degree or general equivalency diploma (GED) and who are not enrolled in school as of the end of the school year (May) or their interview month, whichever is earlier. This variable is based primarily on student responses to follow-up questionnaire items FUQ22 and FUQ23, on enrollment, and FUQ14 and FUQ41, on degree attainment. In addition, information from student records data on enrollment is used to define the dropout rate under certain circumstances.

1. High School Graduates

Students who graduated from high school or attained a GED certificate are, by definition, not high school dropouts. They are considered graduates if they report having a high school diploma (FUQ14A=1) or a GED certificate (FUQ14B=1). If information from these items is missing, we look at a similar question later in the survey, counting them as a graduate if they say that "they have a high school diploma or GED certificate" (FUQ41=1).[1]

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[1]However, this question (FUQ41) is asked only of individuals who attended school for at least one month since the previous July.

2. Enrollment at End of School Year

In the follow-up questionnaire, individuals are asked if they have attended "a regular middle or high school, an alternative middle or high school, a vocational high school, or a GED program" since July 1 of the previous year. If they say that they have not (FUQ22=2), and if they are not a high school graduate, they are considered a dropout.[2]

If individuals say that they have attended school since July 1 of the previous year (FUQ22=1), they are next asked which months of the previous year they attended school. Follow-up questionnaire number FUQ23 actually contains 12 separate items indicating whether individuals were enrolled in each month between July of the previous year and June of the current year. If they were interviewed prior to June of the current year, the items indicating enrollment status between the interview month and June are coded as missing.

For individuals who are not graduates and who have attended school since July of the previous year, dropout status is determined by their enrollment status either in May of the current year or in the interview month, whichever comes earlier.[3] If they say they were enrolled in May (FUQ23_5=5) or the interview month, they are not dropouts. If they say they were not enrolled in this May or in the interview month, one further check is made on their status. Question FUQ42 asks students whether they are "currently attending school (or on summer vacation)." If they answer yes to this question (FUQ42=1), they are considered not to be dropouts, regardless of whether they said they were enrolled in the earlier of May or the interview month. If, however, they say that are not

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[2]An exception to this generalization is made if their records data provide contradictory information (see the next section).

[3]The interview month is defined as the actual month in which the interview took place if it took place on or after the eighth day of the month. The interview month is defined as the month prior to the month in which the interview took place if it took place between the first and seventh days of the month. Thus, April is the interview month for individuals interviewed on May 7, and May is the interview month for individuals interviewed on May 8.

currently enrolled or on summer vacation (FU42=2), as well as not being enrolled in the earlier of May or the interview month, they are considered dropouts.

3. Check of Records Data

One problem with this definition of dropping out is that the wording of question FUQ22 caused some enrolled students to respond that they had not attended school since July of the previous year. For example, some students attended schools called junior high schools, elementary schools, or alternative middle schools. Because none of these names were referenced in FUQ22 (which referenced "regular middle or high school," "alternative middle or high school," "vocational high school," and "GED program"), students who interpreted the question literally would respond that they had not attended such schools.

Given this response, the skip pattern of the questionnaire caused these students to skip out of the questions on their months of enrollment (FUQ23) and on whether they were currently attending school (FUQ42). Following the logic of our dropout definition, these students should be considered dropouts even though they were attending school. To address this problem, which arose mainly at a few sites, we checked students' enrollment status from records data. In particular, for students who responded that they had not attended school since July of the previous year (FUQ22=2) and in sites with valid records data, we checked to see whether the enrollment information in the records data indicated that they had been enrolled at the end of the school year. If it did, we changed the value of the dropout status variable from indicating that the individual was a dropout to indicating that they were a non-dropout. We did not use records data to determine enrollment status in any other circumstances.

B. ABSENTEEISM

Absenteeism is based on student records data and is defined only over the period of time in which students were enrolled in school. In particular, it is defined as the number of days students were absent during the year, divided by the number of days in which they were enrolled. If a student was not enrolled at all during the year, this variable was set to "missing." In sites where distinctions were made between excused and unexcused absences, we treated both types as absences in calculating the absenteeism rate.

C. TEST SCORES

Math and reading test scores were obtained from district records. Students in different districts took different tests, but the tests were consistent across restructuring and comparison schools within each site. By district, the modal test and levels for students in the year they were sampled were:

	Middle School	High School
Dallas	NAPT (cohort 1) Iowa Test of Basic Skills (13) (cohort 2)	NAPT
Grand Rapids	California Achievement Test (17)	California Achievement Test (19)
Philadelphia	Comprehensive Test of Basic Skills (17)	Comprehensive Test of Basic Skills (19)
Phoenix		Test of Achievement and Proficiency
Santa Ana	Comprehensive Test of Basic Skills (17)	Comprehensive Test of Basic Skills (19)

D. SELF-ESTEEM AND LOCUS OF CONTROL

In measuring self-esteem and locus of control, we categorize students into three groups according to their levels of these measures relative to the population as a whole. For example, we categorize students as having "low" self-esteem if their value for the self-esteem measure places them in the third of the population with lowest self-esteem, "average" self-esteem if their value is

in the middle third, and "high" self-esteem if their average is in the upper third. If the SDDAP sample is similar to the population nationally, about a third of SDDAP students would fall into each category.

To compare our sample with the population nationally, we use data from the National Education Longitudinal Survey (NELS). For students in middle school, we compare their responses with the responses on the NELS baseline survey of 8th graders; for students in high school, we compare their responses to the responses on the NELS follow-up survey of 10th graders.

1. Self-Esteem

Our measure of self-esteem is based on the extent to which students agree with a series of statements about themselves. In particular, they are asked to rate the following statements on a scale of 1 to 4, based on how much they agree with the statements (1 indicating that they strongly disagree with the statement, and 4 indicating that the strongly agree with the statement):

- I feel good about myself. (BLQ22A, FUQ21A)

- I feel I am a person of worth, as good as other people. (BLQ22D, FUQ21D)

- I am able to do things as well as most other people. (BLQ22E, FUQ21E)

- On the whole, I am satisfied with myself. (BLQ22H, FUQ21H)

- I certainly feel useless at times. (BLQ22I, FUQ21I)

- At times I think I am no good at all. (BLQ22J, FUQ21J)

- I feel I do not have much to be proud of. (BLQ22L, FUQ21L)

These items were in the SDDAP baseline and follow-up questionnaires and in the NELS questionnaire. The process of creating the self-esteem variable entailed five steps:

1. To ensure that the numerical values of all the items are consistent (in other words, high values for each item should indicate high self-esteem), we reversed the scoring on the last three items listed above in both our data and the NELS data; for example, BLQ22I=4 was changed to 1, 3 was changed to 2, 2 was changed to 3, and 1 was changed to 4.

2. Using NELS data, we calculated the weighted means and standard deviations of the seven items. These means represent the average response to the items in the population as a whole.

3. We standardized responses of SDDAP students, using a nationally representative benchmark by subtracting the NELS mean from each student's response and dividing by the NELS standard deviation. We performed the same standardization procedure on NELS sample members.

4. For each individual (in our sample and in NELS), we generated a self-esteem score by calculating the average of the seven self-esteem items, as long as at least half the items were non-missing (if less than half were non-missing, the student's self-esteem score was considered to be missing).

5. In the NELS sample, we calculated the 33rd and 67th percentiles of the self-esteem score variable. We then created a variable using our data that indicated whether an SDDAP student fell into the lowest third of self-esteem nationally (that is, his or her self-esteem score was less than the NELS 33rd percentile), the middle third of self-esteem nationally (a self-esteem score between the NELS 33rd and 67th percentiles), or the top third of self-esteem nationally (a self-esteem score greater than the NELS 67th percentile).

2. Locus of Control

The locus-of-control variable was created analogously to the self-esteem variable. The variable is based on the extent to which sample members agree with statements about the extent to which they feel they are in control of their future (on a 1-to-4 scale). High values of locus of control indicate that students have an internal locus of control, meaning they believe they can control their future themselves. Low values indicate that students have an external locus of control, meaning they feel that external events control what happens to them. The statements on which locus of control is based are:

- I don't have enough control over the direction my life is taking. (BLQ22B, FUQ21B)

- In my life, good luck is more important than hard work for success. (BLQ22C, FUQ21C)

- Every time I try to get ahead, something or somebody stops me. (BLQ22F, BUQ21F)

- My plans hardly ever work out, so planning only makes me unhappy. (BLQ22G, FUQ21G)

- When I make plans, I am almost certain I can make them work. (BLQ22K, FUQ21K)

- Chance and luck are very important for what happens in my life. (BLQ22M, FUQ21M)

The five steps taken to create the variable indicating whether a person's locus of control is in the lower, middle, or upper third nationally are identical to those taken in creating the self-esteem variable. In step 1, the scoring on each of the items is reversed, except for item BLQ22K / FUQ22K.

E. SCHOOL CLIMATE

The school climate variable, created analogously to the self-esteem and locus-of-control variables, is based on questions about how students feel about their schools. The responses are compared with responses to the same questions for NELS students. Students are asked the extent to which they agree (on a 1-to-4 scale) with the following statements:

- Students get along well with teachers at this school. (BLQ24A, FUQ34A)

- My teachers don't pay much attention to me. (BLQ24E, FUQ34D)

- In class I often feel "put down" by my teachers. (BLQ24G, FUQ34F)

- I'm learning a lot at this school. (BLQ24M, FUQ34K)

- Students who break the rules at this school get into trouble. (BLQ24R)

- I feel safe at this school. (BLQ24U, FUQ34Q)

The same five steps used to indicate which third of students nationally our sample members fell into, with respect to self-esteem and locus of control, were used to determine whether the sample members' assessments of their schools' climate were in the lower third, middle third, or upper third nationally. In step 1, the scoring on the second and third items listed above was reversed (BLQ24E/FUQ34D and BLQ24G/FUQ34F).

F. RISK FACTORS

1. Does Not Live in Two-Parent Household

This item is based on BLQ11, which asks respondents to name the people with whom they live. The possibilities are: (1) mother; (2) stepmother, foster mother, or female guardian; (3) father; (4) stepfather, foster father, or male guardian; (5) grandparent(s); (6) other adult relative(s); (7) other adults who are not relatives; and (8-12) various types of children. Students are defined as not living in a two-parent household if any of the following conditions hold:

- They live with a mother or stepmother, but no other adults.

- They live with a father or stepfather, but no other adults.

- They do not live with a mother, stepmother, father or stepfather.

2. Household Receives Public Assistance

Students are considered part of a household that receives public assistance if they report that their family receives welfare (BLQ61=1), Medicaid (BLQ62=1), or food stamps (BLQ63=1). If they say that they "don't know" whether they receive these forms of public assistance, they are assumed not to receive them.

3. Primary Language at Home Is Not English

Individuals are considered to come from homes in which the primary language is not English if they report that all of the following conditions hold:

- The first language they learned to speak as a child was not English. (BLQ50>1)

- The language they usually speak outside of school is not English. (BLQ51>1)

- The language that the people with whom they live usually speak is not English. (BLQ52>1)

4. Has Sibling Who Dropped Out of School

This item is asked directly in BLQ35. If individuals have no brothers or sisters, they are considered not to have a sibling who dropped out of school.

5. Below Grade Level

This variable is based on the individual's reported age at the beginning of the baseline year (based on BLQ4 and BLQ5) and the grade in school they report they are in as of the baseline interview (BLQ1). Students are considered below grade level if they were at least 10 years old at the start of grade 4, or 11 years old at the start of grade 5, and so on, through higher grades.

6. Average Grades Below C

Students are asked on the baseline questionnaire about the grades they received during the previous year. If they say they received "about half C's, half D's" (BLQ28=7) or "mostly D's" (BLQ28=8) or "mostly below D's" (BLQ28=9), they are considered to receive average grades below C.

7. Discipline Problems at School

Students are asked how often they had experienced five types of disciplinary problems at school during the previous year (BLQ34A - BLQ34E). Responses were they had "never" experienced a given problem, had experienced it "1 or 2 times," or had experienced it "3 or more times." They are considered to have had discipline problems at school if (1) they experienced more than one type of problem at least one time each, or (2) they experienced at least one type of problem three or more times.

8. Absent More than 20 Days

Students are asked on the baseline questionnaire how many days of school they missed during the previous year (BLQ36). They are considered to have been absent more than 20 days if they report that they missed 21 to 30 days (BLQ36=7), 31 to 60 days (BLQ36=8), or more than 60 days (BLQ36=9).

G. INDEXES FROM THE TEACHER SURVEY

We analyzed three general indexes as part of the teacher analysis: (1) a school climate index, (2) a staff autonomy and involvement index, and (3) a parent contact index.

H. SCHOOL CLIMATE

This index was created by averaging five outcomes representing different aspects of a school's climate. The five outcomes were scaled to range in value from 0 to 100, with the resulting average ranging from 0 (the worst school climate) to 100 (the best school climate). Three outcomes were based on teachers' responses to the following statements:

1. "School standards for student achievement are challenging and attainable."
2. "Discipline is emphasized at this school."

3. "Teacher morale is high in this school."

The other two outcomes combined survey questions and represented teacher perceptions of:

1. The level of student motivation (combining six survey items).

2. The level of school safety and problems with crime and violence at the school (combining nine items).

The "student motivation" composite was created by averaging responses to whether teachers agreed with the following statements:

1. "Student morale is high."

2. "The school's standards for student achievement are challenging and attainable."

3. "Students place a high priority on learning at this school."

and whether they disagreed with the following statements:

1. "Teachers in this school have a negative attitude about students."

2. "Teachers in this school find it difficult to motivate students."

3. "I sometimes feel it is a waste of time to do my best as a teacher."

The "school safety" composite was constructed by averaging the responses to nine survey questions in which teachers were asked to rate the severity of the following problems (on a 1-to-4 scale) among their students:

1. Fights between students

2. Gang activities

3. Stealing while in school

4. Vandalism in the school

5. Coming to school under the influence of alcohol or drugs

6. Bringing weapons to school

7. Physical abuse of teachers

8. Verbal abuse of teachers

9. Racial and ethnic conflict among students[4]

1. Staff Autonomy and Involvement Index

This index was created by averaging two composite measures representing teachers' perceptions of (1) the level of support from the principal and administrators perceived by teachers at their school, and (2) teachers' level of involvement in school management activities. The "general level of support and involvement" composite was created by averaging the responses to nine survey items, representing the degree to which teachers agreed (on a 1-to-5 scale) with the following statements:

1. "Teachers often receive praise from the principal or school administrators for showing initiative."

2. "Teachers work together with the principal and other school administrators on areas which are causing problems and concerns in school."

3. "Teachers have enough opportunity to influence decisions that affect their work."

4. "The principal or school administrators support the teachers in this school."

5. "The principal or school administrators work to ensure that this school is a pleasant place to teach."

6. "The principal or school administrators collaborate with teachers to make decisions in school."

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[4]Under the original coding scheme for responses to these survey questions, 1 represented "not a problem," 2 represented a "minor problem," 3 represented a "moderate problem," and 4 represented a "major problem." To be consistent with other components of the school climate index, we reversed this scale when we constructed the school safety composite, so that a higher value for the measure represents a better school climate.

7. "The principal communicates a clear vision of what the school should accomplish."

8. "Teachers and the principal or school administrators work collaboratively to identify needs for school improvement."

9. "Teachers are given time to solve problems facing the school."

The "involvement in school management" composite was created by averaging teachers' level of involvement (reported on a 1-to-4 scale) in five areas of school management: (1) planning and conducting school improvement and staff development activities (covered in six separate survey items); (2) hiring administrators, department chairpersons, and new teachers (covered in three items); (3) setting school policy on discipline, attendance, and grading (covered in three items); (4) determining class assignments for teachers and students (covered in three items); and (5) determining curriculum content (covered in three items).

2. Parental Contact Index

The parental contact index was created by averaging five outcomes that measured the frequency and intensity of teachers' contacts with their students' parents or primary caregivers. Two of the five outcomes indicated whether teachers reported (1) usually communicating with parents in person, or (2) spending more than one hour a week contacting parents. The third outcome was the proportion of students whose parents were contacted by the teacher during the current school year. The fourth and fifth outcomes represented teachers' propensity to contact parents (1) when there was an academic or behavioral problem with their child, and (2) at other times (when there was no problem).

The "propensity to contact when there was a problem" composite was created by averaging teachers' responses to five questions indicating their propensity to contact a student's parent or primary caregiver when (1) the student had academic problems, (2) the student had discipline problems, (3) the student behaved in an unusual manner, and (4) there was a more general classroom problem. These responses were coded on a 1-to-5 scale, with 1 representing "never" and 5 representing "always." We

subtracted 1 from the average of these responses and divided by 4 to create the composite, the values of which then ranged from 0 to 1.

The "propensity to contact at other times" composite was created by averaging teachers' responses to four questions indicating their propensity to contact a student's parent or primary caregiver in order to (1) report that the student had shown academic excellence or improvement, (2) report that the student had shown disciplinary excellence or improvement, (3) offer encouragement or support to parents, and (4) introduce themselves to parents. These responses were coded on a 1-to-5 scale. We subtracted 1 from the average of these responses and divided by 4 to create the composite, the values of which ranged from 0 to 1.

I. INDEXES FROM THE PARENT SURVEY

We analyzed three indexes as part of the parent analysis: (1) a school climate index, (2) a quality of education index, and (3) a parent contact and involvement index.

1. School Climate Index

This index was created by averaging responses to whether parents agreed with three statements:

1. "My child likes school."
2. "The school seems interested in my child as an individual."
3. "The school is a safe place."

2. Quality of Education Index

This index was created by averaging responses to whether parents agreed with these six statements:

1. "People at the school think learning is very important."

2. "My child works hard in school."

3. "My child is not bored in school."

4. "The school is teaching the students a lot."

5. "The school is preparing students well for jobs."

6. "The school offers the kind of courses and programs I want for my child."

3. Parental Contact and Involvement Index

This index was created by averaging eight outcomes measuring parents' assessments of their level of involvement in and contact with their children's school. Three outcomes indicated whether parents reported doing the following during the school year: (1) attending a meeting of a parent-teacher organization, (2) volunteering to help out in school, and (3) visiting the school often. Three outcomes indicated whether parents agreed with the following statements:

1. "The school keeps me well informed about my child."

2. "Parents have enough say about how the school should be run."

3. "Parents work together to help the school."

Two outcomes measured the frequency during the current school year with which (1) the school contacted the parent, and (2) the parent contacted the school.