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ABSTRACT

This report analyzes the longitudinal effects of schoolwide Chapter 1 initiatives on student reading achievement in 40 elementary schools in a large urban school district. The analyses find that, compared to control students, first-graders in schoolwide projects showed no achievement effects, second-graders showed positive significant effects, third-graders showed negative effects, and fourth- and fifth-graders showed positive but nonsignificant effects. Strong gender, age, and race effects occur throughout the grades; by fifth grade, however, the race effects are no longer significant. Analyses were also conducted of the effects on student reading achievement of various components implemented in schoolwide project sites. The components were examined in three categories: (1) minimal requirements within the central/district framework, such as funding school-community coordinators and program support teachers; (2) how schools allocated their resources within schoolwide projects, such as for tutors, full-day kindergarten, or classroom assistants; and (3) other existing Chapter 1 funded programs still operating within the schoolwide project framework. (Contains 35 references.) (Author)

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Longitudinal Effects of Chapter 1 Schoolwide Projects on the Achievement Of Disadvantaged Students

Linda F. Winfield

Randolph Hawkins

Report No. 46

November 1993

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The Center

The mission of the Center for Research on Effective Schooling for Disadvantaged Students (CDS) is to significantly improve the education of disadvantaged students at each level of schooling through new knowledge and practices produced by thorough scientific study and evaluation. The Center conducts its research in four program areas: The Early and Elementary Education Program, The Middle Grades and High Schools Program, the Language Minority Program, and the School, Family, and Community Connections Program.

The Early and Elementary Education Program

This program is working to develop, evaluate, and disseminate instructional programs capable of bringing disadvantaged students to high levels of achievement, particularly in the fundamental areas of reading, writing, and mathematics. The goal is to expand the range of effective alternatives which schools may use under Chapter 1 and other compensatory education funding and to study issues of direct relevance to federal, state, and local policy on education of disadvantaged students.

The Middle Grades and High Schools Program

This program is conducting research syntheses, survey analyses, and field studies in middle and high schools. The three types of projects move from basic research to useful practice. Syntheses compile and analyze existing knowledge about effective education of disadvantaged students. Survey analyses identify and describe current programs, practices, and trends in middle and high schools, and allow studies of their effects. Field studies are conducted in collaboration with school staffs to develop and evaluate effective programs and practices.

The Language Minority Program

This program represents a collaborative effort. The University of California at Santa Barbara and the University of Texas at El Paso are focusing on the education of Mexican-American students in California and Texas; studies of dropout among children of recent immigrants have been conducted in San Diego and Miami by Johns Hopkins, and evaluations of learning strategies in schools serving Navajo Indians have been conducted by the University of Northern Arizona. The goal of the program is to identify, develop, and evaluate effective programs for disadvantaged Hispanic, American Indian, Southeast Asian, and other language minority children.

The School, Family, and Community Connections Program

This program is focusing on the key connections between schools and families and between schools and communities to build better educational programs for disadvantaged children and youth. Initial work is seeking to provide a research base concerning the most effective ways for schools to interact with and assist parents of disadvantaged students and interact with the community to produce effective community involvement.

Abstract

This report analyzes the longitudinal effects of schoolwide Chapter 1 initiatives on student reading achievement in forty elementary schools in a large urban school district. The analyses find that, compared to control students, first-graders in schoolwide projects showed no achievement effects, second-graders showed positive significant effects, third-graders showed negative effects, and fourth- and fifth-graders showed positive but nonsignificant effects. [illegible]ng gender, age, and race effects occur throughout the grades; by fifth grade, ho[illegible], the race effects are no longer significant. Analyses were also conducted of the effects on student reading achievement of various components implemented in schoolwide project sites. The components were examined in three categories: (1) minimal requirements within the central/district framework, such as funding school-community coordinators and program support teachers; (2) how schools allocated their resources within schoolwide projects, such as for tutors, full-day kindergarten, or classroom assistants; and (3) other existing Chapter 1 funded programs still operating within the schoolwide project framework.

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Introduction

Evaluations of Chapter 1 (formerly Title I) programs have generally failed to find substantial long-term achievement effects for students receiving services (Carter, 1984). Recent studies suggest that students receiving Chapter 1 services attain larger increases on standardized achievement tests than comparable students who do not, but these gains do not move them substantially toward the achievement of more advantaged students (Kennedy, Birman & Demaline, 1986).

The variability of program effects, while due in part to methodological differences, is also due to the variation in the actual educational program and implementation. Chapter 1 is a funding program that provides supplemental services to the regular school program. The typical mode of delivery of instructional services has been the "pull out." Previous research has documented the disruptive impact of pullouts, the waste of materials and time trying to keep non-eligible children from benefiting from Chapter 1 services, and the limitations on use of effective programs imposed by the principle that only test-eligible children may be served (Glass & Smith, 1977; Leinhardt, Bickel, & Palley, 1982; Allington & Johnston, 1989; Winfield; 1986). Additional problems occur when special education enters the equation (Birman, 1981). The focus on remediating subpopulations rather than improving the effectiveness of the entire school has kept Chapter 1 from achieving its full potential, especially in schools that serve large numbers of disadvantaged students.

Recognition of many of these problems led to the recent approval of revised federal regulations which allow the use of Chapter 1 funding for schoolwide projects designed to upgrade the entire school program of "disadvantaged" students. Prior to the Hawkins-Stafford Elementary & Secondary School Improvement Amendments (April, 1988), local districts were permitted to conduct Chapter 1 programs on a schoolwide basis in certain schools where 75% or more of pupils were from low-income families only if the LEA provided matching funds. The recent amendment removed the matching funds requirement and included a provision for program improvement which includes specific regulations regarding pupil performance over time, school-level improvement, and the responsibility of the LEA and SEA in bringing about change.

In schoolwide project sites, the act permits schools considerable flexibility in defining pupil outcomes, using resources, and designing programs to meet the needs of students. However, schools will also be accountable for improving the achievement of these students. After three years of being a schoolwide project, schools must show that Chapter 1 eligible students have an average achievement gain comparable to other students in the school/district.

The Hawkins-Stafford amendments (1988), by allowing the use of Chapter 1 funding for schoolwide projects in schools where 75% or more of the students are economically disadvantaged, are designed to reduce fragmentation and upgrade the entire school program. The federal direction in specifying the scope and model for evaluating Chapter 1 has shifted from one of compliance to one of improving the effectiveness of Chapter 1 programs. The shift is away from separateness to collaborative effort, from specialist teachers in separate rooms to improving classroom instruction. The purpose is to impact the entire school program and not just "add on" instructional components.

Few schools implemented schoolwide projects in the first year under the new regulations (Schenck, in press). But since the passage of the amendment, the number of schoolwide projects has grown from 621 schools in 1989-90 to 1,362 schools in 1990-91 (Turnbull, Zeldin & Cain, 1990). Of these, almost all are in elementary schools, which generally are the schools with the

highest rates of poverty based on free lunch counts (Millsap, Turnbull, Moss, Brigham, Gamse & Marks, 1992). Over half of schoolwide project schools are in districts that have 25,000 or more students enrolled, and typically are in urban areas (Schenck, in press).

The new regulations require a school-based planning component which involves a self-study of local needs, consensus building on the part of the school staff, and a building leadership team. About one-third of schoolwide project schools reported that the schoolwide project plan serves also as a program improvement plan for the Chapter 1 program in the school (Schenck, in press). These sites also emphasize raising staff expectations for student achievement and providing strong instructional leadership as characteristics emphasized in needs assessment and staff development (Millsap et. al, 1992).

Flexibility in federal regulations comes at a time when the knowledge base has been advanced concerning effective schools (Purkey & Smith, 1983), effective literacy instruction (Allington & Walmsley, 1993; Hiebert, Colt, Catto & Gury, 1992), the change process (Fullan, 1991; Johnson, 1992; Lytie, 1992), successful programs in urban schools (Slavin, Karweit & Madden, 1989), and factors contributing to resilience and persistence in disadvantaged populations (Winfield, 1991a).

A major task confronting urban school systems and schoolwide project schools is how to make use of this new knowledge and also take advantage of the increased flexibility to improve the learning outcomes of low achieving students (Rotberg & Harvey, 1993). These opportunities come at a time when poverty has increased dramatically in major urban school districts (Hill, Wise & Shapiro, 1989; Wacquant and Wilson, 1989) and contextual factors -- such as size, demographics, diversity, density, a growing "underclass," the underground economy of drugs, the politics of school boards, and an eroding tax base -- create uncertainty and turbulence in the school environment (Englert, 1993).

There is a pressing need to provide high quality education in our poorest communities. Previous reports have identified qualitative changes -- for example, changes in roles and responsibilities, and professional development activities -- in schools implementing schoolwide projects (Winfield, 1991b; Winfield, Hawkins & Stringfield, 1992). In brief, in the urban school system being studied here, five main thrusts were identified:

(a) a whole-school approach that supports student success in the daily program, provides special support for students who require it, and is based on "effective schools" research;

(b) school-based management which requires that the school staff and parents determine the nature of the intervention within specified program guidelines and contractual requirements (Chapter 1 funds were provided to each school as a block grant averaging about $250,000 – $300,000, or $900/pupil);

(c) an approach that monitors individual student, class, and school performance on an ongoing basis and gives particular attention to those students targeted for intensive services and those who would be designated as Chapter 1 eligible should they attend a non-schoolwide project;

(d) district-based support provided by the central and subdistrict offices to provide parent and staff training on an "as requested" basis. (This support targeted leadership development and team building, ongoing leadership team meetings for principals and key staff, and monitoring school improvement plans.); and

(e) concentration of resources, so that funds beyond the minimum amounts would be committed from Chapter 1 and operating budgets.

The degree of implementation of changing from a traditional Chapter 1 program to a whole school approach varied among schools within the urban school system (Winfield, Hawkins & Stringfield, 1992). Nationally,

there is considerable variation in schoolwide project (SWP) implementation (Stringfield, et al., 1992). In general, scores of students in Chapter 1 schoolwide project sites are generally higher than scores of students in non-schoolwide project sites and are similar to students in other high poverty schools. However, as SWP students move from third to fourth grade, their reading performance declines more than that of Chapter 1 students in comparable high poverty schools (Abt, 1993). This study examines the longitudinal effects on student achievement of students participating in schoolwide projects sites in a major urban school district.

Methodology

The sample of schools included in this study is a non-random subset of schools that were implementing schoolwide project sites in a major urban school district in 1990-91. Forty of the schools included are those which responded to a mail survey administered at the end of the 1989 school year. The survey was designed to collect information on program components, changes in class size, school site management, parent involvement, and other changes as a result of the implementation of schoolwide projects. Twenty additional elementary schools matched for level of poverty and meeting the eligibility requirement based on percent of free lunch in 1988-89 (or close to the eligibility requirement; i.e., at least 65%) were included as comparison sites. By 1990-91, all of the comparison schools in the sample had become schoolwide projects.

Schools that began as schoolwide projects in 1986 in this district were targeted for additional resources based on an extreme level of need (Lytle, Davidoff, Pierson, Kemp & Herron, 1990). These schools typically had the lowest student achievement and attendance in the district, as well as other problems. The second cohort of schools implemented schoolwide projects in 1988-89, after the matching fund requirement was removed. One consideration for analysis in untangling the effects of schoolwide projects in this sample of schools was the year of implementation. A second consideration, because of the high transiency rate of students, was the achievement growth of a cohort of students who remained in a schoolwide project (SWP) site over time.

Two studies were undertaken to examine the relationship between the characteristics of schoolwide projects and student outcomes over time. The first study examines student achievement outcomes for a cohort of students who are attending schoolwide projects as compared to students in comparable non-schoolwide projects in schools matched for school level poverty. The second study investigates program implementation and school organizational characteristics of schoolwide projects and relationships to student reading achievement.

Study 1: A comparison of achievement in schoolwide and non-schoolwide project schools

Data and Sample

Data for this study were taken from a longitudinal file of student level CTBS standardized test scores between 1986-90. The district uses a customized version of CTBS, Form U, published by CTB McGraw Hill. It is the most recent version of this instrument and is capable of generating both norm-referenced and criteria-referenced scores. Testing occurs in June of each year and falls within the acceptable norming dates provided by the publisher for this instrument. The norm-referenced reading tests contain both basic and advanced skills items. Scoring is provided by CTB McGraw Hill. By district policy, all students are tested on-level.

Forty schools for which we had supplemental survey information comprised the schoolwide

project sample. Twenty additional schools comparable in level of poverty and who were not schoolwide project sites were included as a comparison group. Students who were in grades one through five with matched (spring-spring) test scores from year to year comprised the longitudinal data set. Sample size for fifth grade was 1,870; for fourth grade, 2,486; for third grade, 2,901; for second grade, 3,425; for first grade, 3,771.

Data Analysis

Both descriptive and analytic techniques were used. The descriptive analysis examined the achievement growth of students in SWP sites over time. For evaluation purposes, the schoolwide average achievement is important; however, of particular interest is the achievement of students who are in the bottom quartiles and who would be considered eligible for Chapter 1 services.

We describe the growth of these students. The values of the reading achievement scale scores of students in the bottom quartile were calculated over the time period students were attending a schoolwide project site. The values are for a cohort of students -- first graders in 1986, second graders in 1987, third graders in 1988. Students who were retained in grade were excluded from the analysis. Comparisons are made between SWP and non-SWP sites for two cohorts of students: first, for schools implementing SWP in 1986, and second, for schools implementing SWP in 1988. Schools included in the non-schoolwide comparison are those that in 1986 were eligible or close to eligibility but were not yet schoolwide projects. By school year 1990-91, all the schools in the sample were schoolwide projects.

Regression Analyses. To compare the performance of students in schoolwide projects to that of students in non-schoolwide, students' individual achievement test scores were aggregated across grade levels for all schools in the sample. Multiple regression analysis was used to estimate the effects of schoolwide project status (1=SWP, 0= non-SWP), gender, race, and age, controlling for student's previous achievement. For example, fifth graders' 1990 spring scores were the criterion and their first-grade test scores (spring) were used as a control for prior achievement. The other school-level variables entered in the regression were level of poverty (ranging from 70 to 100%), and average daily attendance. All variables were entered simultaneously as a block, and pairwise deletion of missing cases was used.

Results

Figure 1 presents the average reading achievement scale scores of students in the bottom quartile in schoolwide project sites (N=8) implemented in 1986. As shown in the graph, over the five-year period, a cohort of students in the bottom quartile in a group of the lowest achieving SWP schools made gains roughly comparable to a cohort of students in non-schoolwide project sites. Figure 2 shows that a cohort of students beginning in first grade in a sample of SWP schools implementing the program in 1988 are performing slightly better at grades 1 and 2, and roughly equal at grade 3, compared to students in the bottom quartile in non-schoolwide project sites. In both of these comparisons, what is missing is a comparison group of "no treatment," i.e., students in the bottom quartile in high poverty schools who had no compensatory or Chapter 1 programs.

Insert Figures 1 and 2 about here

The results of the regression analyses for each grade level are shown in Table 1. As shown in the table, first graders in SWP sites performed the same as first graders in non-SWP sites. Older students at this grade level performed less well, and African American students performed slightly higher than their white counterparts (reference group was white and other).

In second grade, the effects of being in a schoolwide site were positive -- that is, second graders in SWP performed better than

their counterparts in non-schoolwide projects. Girls performed better than boys, and older students scored less well than their younger counterparts. African American and Hispanic students performed less well than their white counterparts.

At third grade, students in SWP sites do less well than their counterparts in non-schoolwide. The same patterns for gender, age, and race/ethnicity hold. At fourth and fifth grade, the effect of being in a schoolwide project was positive but not statistically significant. A similar pattern for gender, age, and race/ethnicity is seen.

Insert Table 1 about here

These preliminary findings provide some tentative evidence of the long-term effects of being in a schoolwide project; however, the findings are mixed with respect to grade level. It is encouraging that the directions of the regression effects at grades 4 and 5 were positive, suggesting long-term impact for students who remain in SWP sites, but the negative effect at third grade is puzzling. The strong gender, race, and age effects which occur throughout the grades are discouraging. By fifth grade, however, the race effects, although negative, are no longer significant.

Study 2: Implementation effects in schoolwide projects

This study explored the relationship between various components implemented in schoolwide project sites (N=40) in a large urban school district and student reading achievement in school year 1989. Information on implementation was obtained from a survey sent to school principals in the fall of 1990 to sixty-one schools that were designated as schoolwide projects. A repeat mailing occurred in the spring to twenty-nine of the sites. Responses were received from forty-one SWP sites, for a return rate of 66%. (The response of one school was omitted because it was a middle school rather than an elementary school).

Descriptive Analysis

Out of the forty schools in the sample, 2.7% were in the first year of implementation, 15.6% were in their second year of implementation, and 50.6% were in their third year of implementation. Table 2 shows the major programmatic components in the schoolwide project sites and the percentages of schools implementing each. The components are listed in three categories: (1) components that were specified as minimal requirements within the central/district framework -- for example, schools were required to fund a school-community coordinator and program support teachers out of their schoolwide project budget (Winfield, Hawkins & Stringfield, 1992); (2) how schools allocated their resources within schoolwide projects -- for example, tutors, full-day kindergarten, and classroom assistants; and (3) other existing Chapter 1 funded programs still operative within schoolwide projects.

Table 2 shows that by 1989-90, four of the required components had been implemented by at least 50% of the schools. Over the three-year period, slightly higher percentages reallocated resources to provide instruction to all students. Finally, at least one-fourth or more of the schools had pre-existing Chapter 1 programs that were still operative within the schoolwide project framework.

Insert Table 2 about here

Schoolwide project sites provide services to an extremely impoverished student population. As shown in Table 3, principals in schoolwide projects indicated that poor home supervision, poor nutrition, insufficient rest, and insufficient clothing tended to be moderate to serious problems for many of the students attending their schools. A majority of the principals also indicated that moderate to serious problems occurred with absenteeism, tardiness, and fighting. However, extremely violent crimes -- such as robbery, theft, vandalism, and gang involvement -- were very minor problems for their school populations.

Insert Table 3 about here

Site-based management is one of the major components of schoolwide projects within the district. Table 4 provides information concerning the implementation of this component, based on principals' responses to the level of involvement of teachers in making decisions. Roughly one-third of the principals indicated that teachers have either informal or formal input in assigning students. Another one-third indicated that the teachers and administrators decide jointly.

Eleven percent of the principals indicated that teachers are not involved in assigning teachers to classrooms. However, the majority indicate that teachers have some level of involvement in this decision. Five percent indicate that teachers and administrators decide jointly. With respect to hiring staff, 8% of the principals indicate that teachers have no input, whereas roughly one-third indicate that teachers have either informal or formal input. In one quarter of the sites, the teachers and administrators decide jointly.

The distribution of responses is slightly different for decisions regarding substitutes or replacing existing faculty. Eleven percent indicate that teachers have no input, about 44% indicate teachers have some input, and 7% indicate that teachers and administrators decide on these matters jointly. The decisions regarding selecting basic materials or purchasing hardware are typically ones in which teachers are involved. In a majority of the schools, principals indicated that teachers have formal input or that they decide together.

Insert Table 4 about here

Parental involvement is viewed as another important component of schoolwide project sites. Each site has several mechanisms for involving parents -- for example, a home demonstrator, or a school-community coordinator (Winfield, Hawkins & Stringfield, 1992).

In Table 5, principals indicated the level of parental involvement in various school activities. They indicated that small percentages (5 to 10%) of parents are involved in volunteering in classrooms and attending workshops. Higher proportions of parents are involved (20 to 35%) in various school activities; however, this occurs in only a few of the schools. Nine percent of the schools indicated that at least half of the parents received information from home demonstrators; another 13% indicated that these services reached 75% or more of the parents. In part, the low number may be due to the variation in year and level of implementation.

Insert Table 5 about here

Data Analysis

Major components (as shown in Table 2) of schoolwide projects were included as input variables in the regression analysis. Components listed in Table 2 were scaled on two dimensions. First, the actual number of components listed under the three categories (District Framework, Resource Allocation, and Existing Programs) formed additive scales. Second, for each of the three scales, the number of years (ranging from one to three) that any of the components had been implemented were summed to form three time variables. These variables -- labeled DFTIME (District Framework Time), RATIME (Resource Allocation Time), and XPTIME (Existing Program Time) -- were included in the analysis to take into account implementation effects over time.

Other scales were formed from questionnaire items to tap major components of schoolwide projects and the student population served. We briefly describe each of these scales. (See Appendix A for items comprising each scale).

Site based management/teacher empowerment. Principals were asked to respond to a list of areas of interest regarding teachers" involvement in decision making about how human resources were used. Some of the items included: assignment of students to classes, assignment of teachers to class, hiring additional classroom teachers or aides. Five decision-making options were provided, ranging from "administrators decide with no input from teachers" to "teachers decide with no input from administrators." Responses to this item were scaled to provide a measure of how teacher human resources were used at the school level (TESHRSC). The scale ranged in value from 6.21 to 10.01, with a mean of 7.2.

A teacher empowerment-instructional scale (TEHDWSC) consisted of items which measured teachers' involvement in selecting basic material and purchasing instructional tools. This scale ranged from 5.27 to 7.02, with a mean of 6.6.

Parent-School Involvement Scale. Principals were asked to estimate the percentage of parents involved in various types of activities -- volunteer time frequently in classroom, attend parent workshops, receive information from classroom teachers on how to help their child at home on specific skills or homework, receive information frequently from home demonstrators or school community coordinator on how to help their child at home on specific skills or homework, regularly monitor homework and assist child with homework and needed skills, actively and regularly participate at PTA meetings, attend scheduled parent-teacher conferences.

A Parent School Involvement Scale (PRTSCHSC) consisted of the sum of these items and ranged from 8.78 to 25.10, with a mean of 16.5. Parent Teacher Conference (PATPCNF) was left as a separate item and consisted of the percentage of parents who attended parent teacher conferences. This scale ranged from a low of two to a high of seven, with a mean of 6.2.

Home Environment Scale. The Home Environment Scale (HMENVSC) consisted of items measuring the principal's indication of the degree to which poor nutrition, insufficient rest, and insufficient clothes were moderate to serious problems for the student population. This scale ranged from 3.72 to 11.82, with a mean of 8.1. The Nonschool Behavior Scale (NSCSBVSC) consisted of the degree to which tardiness and fighting were viewed as problems of the school population. The scale ranged from 1.95 to 4.97, with a mean of 3.5.

Demographic variables. The percentage of school level poverty was indicated by the percentage of students receiving free lunch (UPCPOOR). This variable ranged from 75% to 100%, with a mean of 86.1%. School size (UREGENRL) was indicated by school regular enrollment, ranging from 350 to 1200, with a mean of 675.

School special education enrollment (USEDENRL) ranged from 35 to 142, with a mean of 60. Average daily attendance (UPCATTND) ranged from 78% to 99%, with an average of 87%.

The schools that students attend, regardless of grade, can be characterized as large (the average enrollment numbers 700), have a majority of students receiving free lunch (86%), and have average daily attendance in the high eighties. The number of pre-existing programs at these elementary schools averages about six, and the schools have implemented seven (or about half) of the components included within the district framework.

The means and standard deviations for variables entered in the regressions for each grade level are shown in Table 6. Students in this sample of schools are close to the average age for each grade level, with slightly higher average ages in the upper grades. For each grade level, with the exception of fourth grade (NCE gain = 0), the cohort of students attained gains in NCEs over the period examined. For second grade, the average NCE gain was 4.0 over a one-year period; for third grade, three NCEs were gained over a two-year period; and for fifth grade an average of roughly one NCE was gained over a three-year period.

While these are not huge gains, we are reminded (1) that these schools were not selected into this sample based on high achievement growth, (2) that these schools have the highest concentrations of poverty within the district, and (3) because the sample is mixed with respect to year of implementation, many are in their first year of implementation in 1988-89.

Insert Table 6 about here

Student level test scores were aggregated by grade across the SWP sites included in the sample. Separate regressions were conducted for each of the five grade levels included in the schoolwide project sites. The dependent measure for each grade was the student level reading scale score for school-year 1989. Prior achievement, used as a covariate, was the student's score obtained three-to-four years earlier. For fifth graders, the second grade test score was used; for fourth, third, and second graders, the first grade test scores were used. For first graders, the spring score was the dependent measure, and the fall score was used as prior achievement.

Variables were entered in blocks in the regression equation in the following order: (1) resource allocation, existing programs, district framework; (2) years of resource allocation, years of district framework, years of existing program; (3) gender, prior achievement, age, Hispanic, African American; (4) parent school inventory scale, regular enrollment, attendance, poverty, special education enrollment, home environment scale; and (5) teacher empowerment-instructional, teacher empowerment-human resource, parent teacher conference, nonschool behavior scale.

Results

Table 7 shows the standardized regression coefficients for regressions of schoolwide components on student achievement for each grade level. (The final regression results at each grade level for all variables entered in the equations as well as selected zero order coefficients are shown in Appendix B). We present the components (school district framework, resource allocation, and existing programs) initially unadjusted, then adjusted for length of implementation, and finally after controlling for all of the contextual and demographic variables in the equation. Although we discuss the "effects," several of the variables are intercorrelated, thus interpretations are of the relative importance of the effects. These results are presented by grade level.

Insert Table 7 about here

First grade. In the regression analysis, how resources get re-allocated in first grade schoolwide projects was initially significant; however, the effect is reduced after taking into account the length of time of implementation. After demographic variables are entered, the effect becomes negative. The opposite pattern occurs with inclusion of the district framework. It was initially negative and then becomes positive ($b=.117$, $p<.01$). However, other programs that existed prior to schoolwide projects consistently had a negative relationship with student achievement at first grade.

Teacher decisions about human resources, by themselves, were negatively related to higher student achievement. However, after taking into account the school context as measured by percent poverty, home environment, and other factors, this variable has a small positive effect ($b=.042$, $p<.05$). Teacher empowerment in terms of decisions about instruction was positively related to achievement but failed to reach statistical significance. The parent-school involvement scale was initially positive and significant, but became relatively less important after taking into account other variables. The effect of prior achievement is reduced slightly over time and with the inclusion of demographic variables.

Second Grade. Implementation of the central/district framework was positively related to student achievement at the second grade level (b = .241, p <.01); however, the re-allocation of resources was negatively related (b = -.215, p <.001). The shared decision making of teachers had an impact on student achievement outcomes over and above the programmatic and demographic variables included in the equation. Where teachers are involved in decision making about human resources, student achievement is higher (b = .133, p < .001). The decisions about instructional materials are also important as the implementation of schoolwide projects occur; however, they become relatively less important after taking into account the contextual and demographic variables.

Parent-school involvement and parent-teacher conferences are both positively related to student achievement. After including the time variables, the level of parental involvement increased (b = .043, p <.05), indicating that SWP components were having an impact on level of involvement. Parent-teacher conferences were also positive and significant for second graders' achievement level in schoolwide projects (b = .035, p <.05). The effect of prior achievement is reduced slightly only after the inclusion of demographic and contextual variables.

Third Grade. At third grade, how resources were re-allocated became increasingly important over time and with the addition of demographic variables (b = .206, p <.01) However, the central/district framework (which specifies minimal but necessary components and stresses a whole-school approach) had a small negative impact (b = -.332, p <.001). Existing programs prior to schoolwide projects had a positive effect, which became stronger over time and remained strong after taking into account the demographic and contextual variables (b = .217, p<.01).

Again, the effect of parent-school involvement increased over time after schoolwide projects were implemented. This is relevant in that neither of the parent scales were initially related to reading achievement in the bivariate correlations. However, when demographic and contextual variables were entered into the equation, this effect became nonsignificant and negative. Parent conferences at this grade level were negatively related to student achievement (b = -.046, p <.05). The effect of prior achievement is reduced only after the inclusion of demographic variables.

Fourth Grade. At fourth grade, how resources are re-allocated in schoolwide projects becomes increasingly important over time, particularly after taking into account contextual and demographic variables (b = .139, p <.05). Existing programs decrease in relative importance. Implementation of the district framework, which was initially negatively related to student achievement, is positive only after adjusting for demographic and contextual variables.

Teacher decision making which involved instructional issues was positively related to student achievement (b = .055, p <.05); while decisions involving human resources had a negative impact (b = -.055, p < .05). Parent conferences were positively related to higher student achievement (b = .055, p<.01), as was the level of parental involvement in other school activities; however this latter variable failed to reach significance. The effect of prior achievement increases over time and with the inclusion of demographic variables.

Fifth Grade. At fifth grade, how resources were re-allocated during the school year was negatively related to student achievement (b = -.203, p<.0001). This effect was less pronounced over time; however, it increased in importance once contextual and demographic variables were included in the analysis. Programs which existed prior to schoolwide projects were positively related to student achievement even after the inclusion of time and demographic variables. Implementation of the district framework was also positively related to students' longitudinal achievement (b = .148, p <.05).

The construct of teacher empowerment-human resources became increasingly important over time and with the inclusion of

the contextual and demographic variables, and was highly significant (b = .128, p <.0001). Teacher decisions about instructional materials, while initially positive, became negative after adjusting for other demographic variables. The level of parent-school involvement was negatively related to student achievement outcomes. However, parent teacher conferences were positively related (b=.093, p <.01). The effect of prior achievement is reduced slightly over time and with the inclusion of demographic variables.

Discussion

Achievement comparison of schoolwide and non-schoolwide project sites. The first analysis, which compared the achievement levels of students in schoolwide and comparable high poverty sites, provides some evidence (albeit inconclusive) of long-term achievement effects for students who attend and remain in these schools throughout the elementary years. Based on data from SWP sites implementing whole school programs in 1988, the growth rate for SWP students in the bottom quartile in reading achievement is comparable to or better than the rate of students in comparable high poverty schools. These are students traditionally served by Chapter 1 programs.

From our regression analyses, however, the average achievement of students in SWP sites varied by grade level, race, and gender. In general, students who attended SWP sites in second grade appeared to have an advantage relative to their counterparts in comparable high poverty sites. Similarly, students at first grade in SWP did as well as counterparts in other high poverty schools. However, students in third grade in SWP sites performed significantly lower than their counterparts in high poverty schools. By fourth and fifth grade, students in SWP had a slight advantage as compared to their counterparts in other high poverty schools. This conclusion, however, is based on the direction of the regression effects -- statistical significance was not obtained. These school level effects occurred after controlling for prior student achievement.

The lack of a positive effect at first grade may be artifactual in that these students have experienced the SWP program for one year only. The negative effect at third grade is more puzzling. We are not entirely sure why this occurs, but speculate that the ways in which SWP sites set priorities and re-allocate resources (both human and instructional) influence quality and may account for some of the variation across grade level. Other studies have indicated that for students in SWP, a performance decline appears from third to fourth grade (Abt, 1993).

In general, African American and Hispanic students tended to perform less well than white students throughout the grades. By fifth grade, however, the negative effect on African American students is much smaller and no longer significant. This suggests that the achievement gap differential between races becomes smaller in SWP sites over time. Larger negative effects indicating the differential between Hispanic and white students were also found; however, again by fifth grade, the effect was substantially reduced. No information however, was included in our analyses on language status or programs available to non-English speaking students. Beginning with second grade, girls in SWP sites performed better than boys and this effect continues throughout the grades.

Implementation effects in schoolwide project sites. The second study examined several school demographic and within-school organizational characteristics being implemented in SWP sites. Of particular interest was the implementation of the central/district framework for all SWP sites, the re-allocation of instructional resources to serve all students, and the use of shared decision making in operating the school's instructional program. In our analyses, we

examined these components as initially implemented and over a three-year time period. Different patterns of results emerged for analyses conducted at each grade level. We suspect that this is due partially to differences in emphases and priorities set at each grade level, to other non-school variables which mediate the relationship with achievement, and to other variables. We find it more meaningful to discuss results overall and in terms of student, teacher, and school level factors.

Student-level factors. As might be expected, prior student achievement was consistently related to achievement throughout all the grades. In grades one through three, the effect decreases as implementation of SWP components occurs. Controlling for other demographic variables, the effect of prior achievement is further reduced. This slight reduction in the effect provides some indirect evidence that SWP components when implemented facilitate student reading achievement at these early grade levels.

A similar pattern did not occur at fourth grade. At this grade, the effect of prior achievement increased over time. The inclusion of demographic/contextual variables did not reduce the size of the effect. We are not entirely sure why this occurs, but speculate that in fourth grade, other factors (such as the effects of ability grouping within schools and student nonschool behaviors) may mediate this relationship. Beginning in third grade, students' nonschool behaviors such as tardiness and fighting were negatively related to achievement and became increasingly so as students progressed throughout the grade level.

Similarly, as might be expected, the degree of impoverishment in the home was negatively related to achievement. However, this effect occurred at the beginning and end of elementary school (grades 1 and 2 and grades 5), which suggests that the transitions for students in high poverty schools may be more problematic. Girls performed better than boys in the early grades, but by third grade, gender was not related to achievement within this sample.

A considerable emphasis was placed on parental involvement in the central/district framework for operating SWPs. Based on the work of Epstein (1992), we expected this variable to be consistently related to student achievement; however, this was not the case in all grades.

At second and fourth grade a positive relationship with achievement was identified, but this effect did not occur at third grade. At fifth grade, the percentage of parents involved in school programs was negatively related to student achievement outcomes; however, the percentage of parents attending school conferences was positively related.

We speculate that different mechanisms operate with each of these constructs. (We are also aware that our measures are based on school level aggregates of parental involvement rather than individual.) At fifth grade, number of conferences may indicate disciplinary issues, but may also indicate parental concern over the transition to middle schools in a large urban school district. Alternatively, at both third and fifth grade, the findings may indicate that the parental scales act as suppresser variables, in that neither scale is related to achievement but they are both correlated with the district framework and teacher empowerment-human resources.

Teacher-level factors. A primary component in schoolwide projects was the implementation of a whole-school approach rather than a fragmented approach to delivering instruction. One way in which SWP sites accomplished this goal was in the use of teacher resources in terms of time, class size, and assignment of teachers and students to classes. Another method was through the involvement of teachers in the decision making and operation of the school program, in which teachers' problem-solving and intellectual capabilities (Little, 1993) were sought in hiring decisions and teacher and student placement.

Teacher empowerment (human resources) had a positive impact on student achievement at all grade levels except fourth. At fourth grade, teachers' decisions about instructional

resources appeared to be more important in facilitating student achievement. This finding may be due to the changing nature of the curriculum, as subject matter choices and materials/methods become relatively more important in the upper grades. Alternatively, it may be due to a combination of factors, including developmental changes occurring within students or the increasing importance of nonschool behaviors. Nelson-LeGall & Jones (1991) suggest that fundamental and dramatic changes occur in the teacher-student relationship between primary and intermediate grades.

The central/district framework for the operation of SWPs was positively related to achievement at all grades except for third grade. This variable became increasingly important over time, which suggests that implementing a whole-school approach and significantly changing existing ways of delivering services to students takes at least three or more years in order to be effective in raising achievement. At third grade, however, the effect of implementing this framework was negative. We speculate that this may have been due to pre-existing Chapter 1 programs which were still operative and successful in raising student achievement. Many of these programs operated traditionally as "pull out" or "add on" components. Pre-existing programs were found to be positively related to student achievement outcomes at third grade.

At fourth grade, the district framework effort is initially negative, but becomes positive with implementation and resource allocation, and after controlling for demographic variables. This pattern suggests that effectiveness was mediated over time by the particular student population.

How SWP sites re-allocate resources in terms of class size, tutors, and paraprofessionals varied across sites. Within schools, this re-allocation is typically targeted toward a particular grade level or subject matter area and depends on the leadership team and decisions made locally. At first and second grade, a negative relationship occurred between resource allocation and student achievement after controlling for other variables in the analysis. This was surprising for two reasons. First, the zero order correlations between resource allocation and achievement, although small, were positive. Second, in many SWP sites, resources were targeted toward these grades in attempts to prevent reading failure (Winfield, Hawkins & Stringfield, 1992). This result suggests that some variables interact or occur during implementation to reduce the effectiveness of resource re-allocation. Existing programs which may still be operative appear to exert a strong negative effect.

At third and fourth grade, the effect of how resources were re-allocated was positive and became increasingly so over time. At fifth grade, the opposite occurred, as the effect of how resources were re-allocated became more negative over time. One explanation is that, over time, instructional resources continued to be targeted toward earlier grades, to the exclusion of fifth grade. Alternatively, the negative relationship may indicate that the reallocation of primarily instructional resources are not sufficient to overcome the greater mediating factors not measured (such as nonschool behaviors and motivation) which act to reduce the relationship with achievement.

Cautions and Conclusion

The methodological issues involved in examining school effects (Winfield, 1991b) and particularly for estimating effects of Chapter 1 (Abt, 1989) are reason for caution in making broad generalizations based on these studies. Additionally, the sample of schools consists of a non-random sample of schoolwide project sites, and we have examined these schools at the early stages of implementation. Meaningful and significant changes in schools take time because school culture, traditions and practices must change (Winfield & Manning, 1992).

Moreover, students and schools within SWP sites are among the neediest. Initial differences in the poverty level of schools have a large effect on the achievement gains of students (Richardson, 1993). The achievement scores of all students decline as the proportion of poor students in a school increases (Kennedy, Jung, and Orland, 1986).

Isolating the long-term achievement effects of schoolwide projects will not only require adequate controls for school level poverty, but also robust measures of level and reallocation of resources and how these translate both quantitatively as well as qualitatively into instructional opportunities and exposure for individual students. This is particularly necessary for the students at the lower end of the achievement distribution whom Chapter 1 programs traditionally serve. Thus, a continuous measure of the quality and quantity of services provided to individual students or groups of students is required. This qualitative school-level exposure or quality variable varies across SWP sites (Winfield, Hawkins & Stringfield, 1992; Stringfield, et. al, 1992).

The analyses conducted here may be considered an extremely conservative estimate of the overall SWP school effect. It is encouraging, however, that effects due to implementation and resource re-allocation were identified (even though not always in the direction we would like). The scales used here take into account only the quantitative dimensions in terms of how many components were implemented. Similarly, it is encouraging to find effects that could be attributed to the importance of shared decision making and allowing teachers a say in the operation of the school. We speculate that these empowerment variables may be one indicator of attempts of schools to change from more bureaucratic to more participatory, shared decision making organizations. These constructs, in interaction with other school and contextual variables, were consistently related to achievement.

The results of our studies indicate the complexity and interaction of organizational variables in changing how schools deliver services to students in Chapter 1 programs. In conclusion, the studies present some modest evidence of potential long-term achievement effects of schoolwide projects for serving disadvantaged students. More longitudinal research is needed to clarify the long-term outcomes in terms of changing the life chances of students in these circumstances.

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Figure 1

Score value of students in bottom quartile over time

(SWP in 1986)

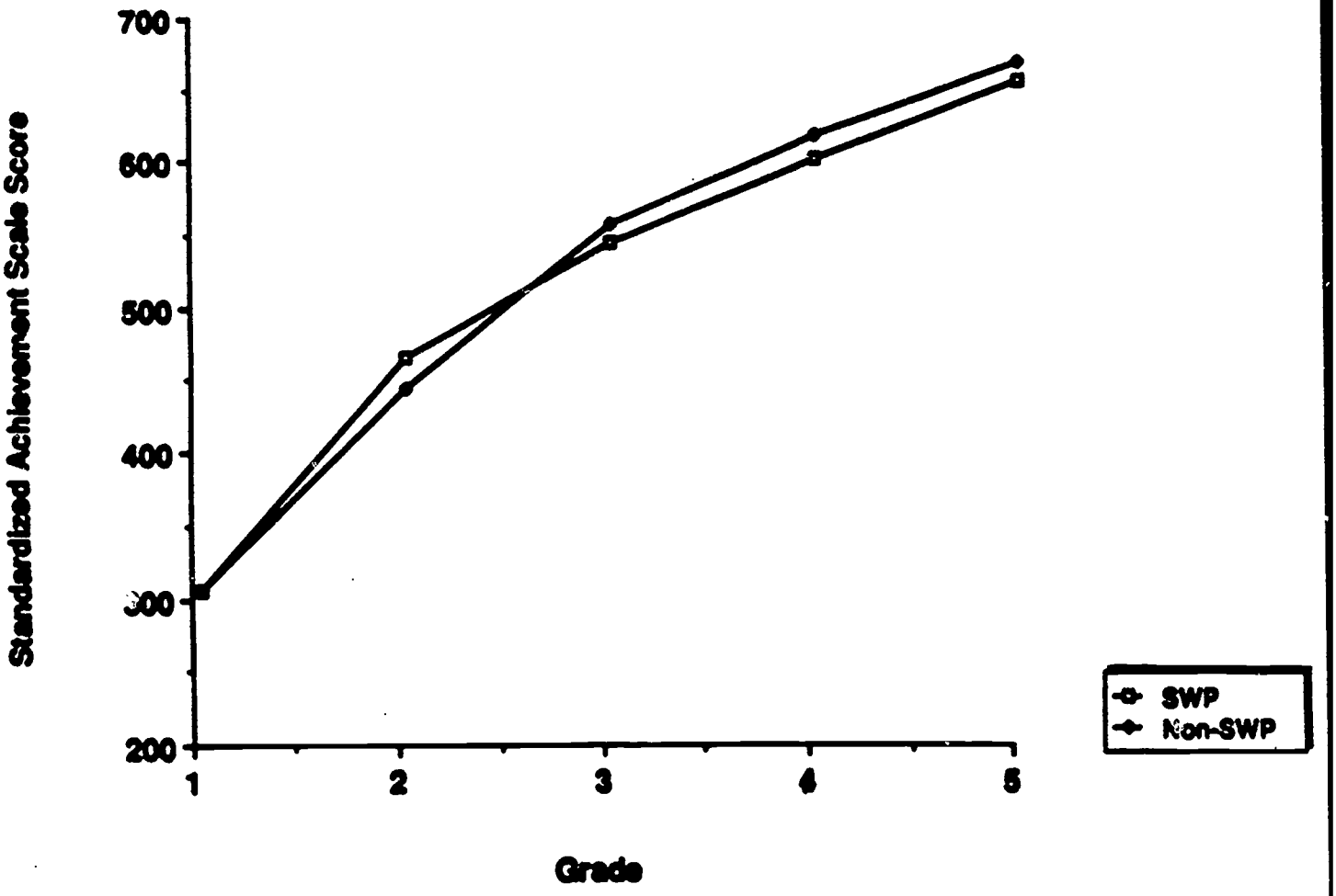

Figure 2

Score value of students in bottom quartile over time (SWP in 1988)

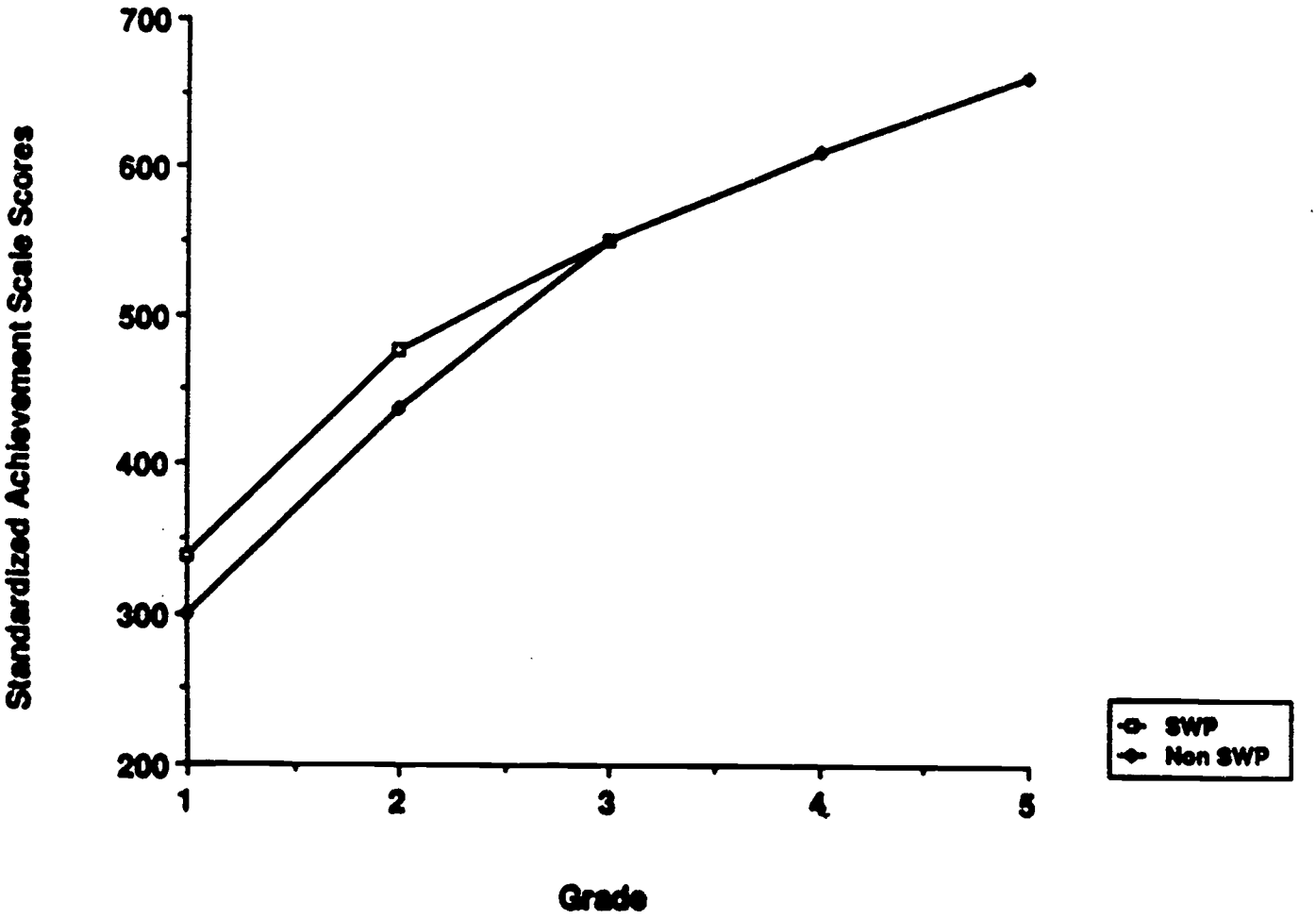

Table 1

Longitudinal Effect of Schoolwide Project Status on Student Reading Achievement in 1989 Standardized Regression Coefficients

	Grade 1 (2277)	Grade 2 (4314)	Grade 3 (3593)	Grade 4 (3044)	Grade 5 (2277)
Schoolwide Project (Yes=1, No=0)	.00	.05**	–.05**	.03	.02
Gender	.06	.14***	.08***	.08***	.04*
Age	–.05***	–.13***	–.08***	–.24***	–.20***
Prior achievement	.49***	.31***	.32***	.30***	.36***
African American	.05*	–.06***	–.07***	–.09***	–.04
Hispanic	–.03	–.13***	–.11***	–.12**	–.05
Multiple R	.42	.41	.39	.37	.42

* = $p < .05$
** = $p < .01$
*** = $p < .001$

Table 2

Percentage of Schoolwide Project Components Implemented by Year (N=40 schools)

	Year Implemented		
	1987-88	1988-89	1989-90
School District Framework			
Program Support Teacher*	20.0	55.0	50.0
Basic Skills Teacher	15.0	15.0	22.0
Elementary Math Resource teacher	65.0	37.5	37.5
School community coordinator*	65.0	40.0	52.5
Parent Scholars*	47.5	45.0	52.5
Home demonstrator*	12.5	32.5	37.5
Parent trainer*	27.5	45.0	50.0
Resource allocation			
Provide alternative classroom setting with reduced student-teacher ratio for students having difficulty	27.5	30.0	42.5
Eliminate split grade classes	25.0	35.0	42.5
Paraprofessionals			
Provide full time classroom assistants in primary grades	27.5	27.5	35.0
Provide part time classroom assistants in primary grades	27.5	40.0	45.0
Provide full time classroom assistants in upper grades	10.0	20.0	25.0
Provide part time classroom assistants in upper grades	27.5	35.0	45.0
Tutoring			
Provide one to one tutoring during school day	20.0	35.0	40.0
Provide one to one tutoring before or after school	20.0	35.0	30.0
Provide small group tutoring during school day	35.0	45.0	62.0
Provide small group tutoring before or after school	45.0	45.0	55.0
Full-day kindergarten	40.0	12.5	17.5
Transition classes for first graders (repeaters or students with no prior school experience)	32.5	25.0	30.0
Auxiliary Substitute	25.0	22.5	25.0
Other Existing Programs			
Math Lab	35.0	22.5	20.0
Computer Lab	32.5	32.5	27.5
Resource Room Teacher	37.5	17.5	20.0
Reading Laboratory	32.5	22.5	25.0
Option 4	25.0	20.0	10.0
Project Success	25.0	5.0	2.5
Facilitator	17.5	15.0	17.5
Other	5.0	7.5	10.0

* Required within central office framework. Other components were optional, and dependent on local needs.

Table 3

Schoolwide Projects Sites: Percentage of Schools Indicating Problems Related to Poverty

	% of school level problems				
	Not a Problem	Minor Problem	Moderate Problem	Serious	Missing
Poor home supervision	–	20.4	30.8	19.7	29.1
Poor nutrition	2.2	36.4	27.5	4.6	29.1
Poor rest	1.4	28.3	38.3	2.9	29.1
Insufficient clothing	2.7	44.2	19.6	3.2	30.3
Robbery or theft	33.8	22.1	8.3	3.0	32.8
Vandalism	31.9	25.5	8.4	3.0	31.1
Absenteeism	–	22.1	32.2	16.6	29.1
Cutting class	48.8	13.1	–	–	38.1
Involved in gangs	48.7	16.4	–	2.0	32.8
Tardy to school	–	23.1	28.8	19.0	29.1
Fighting in school	7.3	21.9	24.8	14.6	31.3

Table 4

Percentage of Schools Indicating Shared Decision Making in Schoolwide Project Sites

	Teachers have no input	Teachers have informal input	Teachers have formal input	Teachers & Administra-tors decide	Teachers have all input	Missing
Assigning students	–	9.1	25.0	32.8	1.8	31.3
Assigning teachers	11.9	25.4	26.2	5.2	–	31.3
Hiring faculty	8.5	14.6	15.7	25.9	–	35.3
Substitutes or replacing existing faculty	11.4	20.2	24.4	7.3	–	36.6
Selecting basic material	–	–	18.2	50.5	–	31.3
Purchasing instructional hardware	–	–	18.5	50.2	–	31.3

Table 5

Parental Involvement in Schoolwide Project Schools

	0%	5%	10%	20%	35%+	50%	75%+	Missing
Volunteer in classroom	1.8	41.5	12.5	13.1	2.0	–	–	29.1
Attend workshops	–	37.5	15.2	12.9	5.3	–	–	29.1
Receive information from classroom teachers	–	2.4	6.5	17.3	9.2	–	–	30.1
Receive information from home demonstrators	1.2	12.5	12.9	13.6	5.8	9.2	13.4	31.3
Monitor homework	–	7.1	8.9	7.3	27.6	15.7	2.1	31.3
Attend PTA regularly	–	28.9	23.4	8.3	3.3	2.8	1.5	31.3

Table 6

Means and Standard Deviations of Variables in the Regression

	1st grade (N=2295)		2nd grade (N=2527)		3rd grade (N=2200)		4th grade (N=1709)		5th grade (N=1159)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Age	6.0	.6	7.4	.7	8.5	.8	9.6	.8	10.5	.8
Prior Achievement (Reading Scale Score)	374.1	118.7	381.7	101.8	363.0	102.5	368.0	107.0	496.5	80.7
Current Achievement (Reading Scale Score)	426.3	137.	523.8	93.4	586.8	84.0	641.9	60.5	692.8	55.0
Gain in NCE			4.0	20.0	2.9	16.5	-2.0	14.7	.8	11.6
% Poor	86.1	7.2	86.1	7.2	86.0	7.4	85.9	7.4	85.9	8.3
% Attendance	86.9	1.8	87.0	1.8	87.0	1.8	87.0	1.8	87.1	1.8
School Regular Enrollment	739.2	237.0	741.4	236.7	737.9	230.1	727.0	23.1	675.0	189.0
Special Education Enrollment	61.6	25.6	61.4	25.1	62.1	25.3	62.1	25.0	65.0	26.0
HMENVSC	8.1	1.7	8.0	1.6	7.9	1.6	7.9	1.6	8.1	1.7
PRTSCHSC	16.5	4.5	16.4	4.4	16.5	4. 5	16.6	4.5	17.5	4.3
XISTNPRG	6.3	4.6	6.4	4.8	6.6	4.7	6.4	4.6	5.7	4.4
DSTFRAME	7.3	3.6	7.4	3.6	7.6	3.7	7.5	3.7	6.7	3.4
RESCALLC	12.7	7.5	12.8	7.3	13.2	7.6	13.1	7.6	11.6	7.1
XPTIME	2.2	.9	2.3	.9	2.3	.9	2.4	.8	2.2	.9
DFTIME	2.7	.5	2.7	.5	2.7	.5	2.7	.5	2.6	.6
RATIME	2.7	.5	2.8	.5	2.8	.5	2.8	.5	2.8	.5
NSCSBVSC	3.5	.8	3.5	.8	3.5	.8	3.5	.8	3.5	.9
TESHRSC	7.2	1.9	7.1	1.9	7.1	1.8	7.0	1.8	6.2	1.3
TEHDWSC	6.6	.7	6.6	.7	6.5	.7	6.6	.7	7.2	1.7
PATPCNF	6.2	1.3	6.3	1.3	6.3	1.3	6.2	1.3	6.5	.8

Table 7

Standardized Regression Coefficients of Student Achievement on SWP Components

	First grade			Second grade			Third grade			Fourth grade			Fifth grade		
	Schoolwide Components Unadjusted	Schoolwide Components W/Time	Schoolwide Components All Variables	SWP Components Unadjusted	SWP Components W/Time	SWP Components All Variables	Schoolwide Components Unadjusted	Schoolwide Components W/Time	Schoolwide Components All Variables	SWP Components Unadjusted	SWP Components W/Time	SWP Components All Variables	SWP Components Unadjusted	SWP Components W/Time	SWP Components All Variables
Resource allocation	.143***	.035	-.075	-.169****	-.120	-.215***	.044	.075	.206**	.129****	.133****	.139*	-.106	-.079	-.203****
Existing Programs	-.050	-.129****	-.105****	-.008	.030	.019	.095****	.112*	.217**	.046	.043	.001	.062	.096*	.072
District Framework	-.029	.028	+.117**	.168****	.146	.241**	-.113**	-.122*	-.332***	-.158**	-.154****	.161****	.057	.047	.148*
Teacher-Human Res.	-.066**	-.059**	.042*	.065**	.065	.133***	.016	.009	.081**	-.037	-.044*	-.052*	.008	.020	.128****
Teacher-Inst. Res.	-.038	-.024	.024	.065**	+.058	-.040	.036	.041*	-.011	.036	.045*	.055*	.039	.022	-.023
Parent-involvement	.092***	.081***	.008	.023	.043*	.035*	.033	.051*	-.010	.033	.051*	.020	-.055	-.048	-.096***
Parent conf.	.009	.006	-.020	.037*	.028	.035*	-.016	-.019	-.046*	.005	.004	.027	-.010	.015	.093**
Prior Achievement	.501***	.497***	.487***	.331***	.331***	.309***	.271***	.270**	.229***	.242****	.240****	.302**	.347****	.338****	.340***

* $p < .05$
** $p < .01$
*** $p < .001$
**** $p < .0001$

Appendix A

Questionnaire items used in the construction of scales

NONSCHOOL BEHAVIOR

Indicate the degree to which each of the following is a problem with students in your school. Circle one on each line. (The choices ranged from not a problem, to serious problem.)

Tardiness
Physical conflicts among students

HOME ENVIRONMENT SCALE

Indicate the degree to which each of the following is a problem with students in your school. (The choices ranged from not a problem, to serious problem.)

Lack of parental supervision
Inadequate nutrition
Lack of proper rest
Insufficient clothing

TEACHER-HUMAN RESOURCE

Below are listed a number of areas of interest to schools, and ways in which decisions are made. For each area, indicate the one way that decisions concerning that area actually are made in your school. (Mark one column for each decision area.)

Column Choices were: Administrators decide with no input from teachers, administrators decide after informal suggestions from teachers, administrators decide after systematically getting input from teachers, administrators and teachers jointly decide, teachers decide with no input from administrators.

a. Assignment of students to classes.
b. Assignment of teachers to class.
c. Hiring additional classroom teachers or aides.
d. Substituting/replacing specialist teachers.

TEACHER-INSTRUCTIONAL RESOURCE

e. Selection of basic instructional materials.
f. Purchasing instructional materials or equipment.

PARENT SCHOOL INVOLVEMENT SCALE

Please estimate the percent of parents of your students who are involved in the following ways each year. Please circle one % on each line as a rough estimate for your school. (Percentages were 0, 5, 10, 20, 35, 50, 75+.)

a. Volunteer time frequently to help in classrooms or other school areas.
b. Regularly attend parent workshops.
c. Receive information frequently from classroom teachers on how to help their child at home on specific skills or homework.
d. Receive information frequently from home demonstrators or school community coordinator on how to help their child at home on specific skills or homework.
e. Regularly monitor homework and assist child with homework and needed skills.
f. Actively and regularly participate at PTA/PTO meetings or events.

PARENT-SCHOOL CONFERENCE

g. Attend scheduled parent-teacher conferences.

Appendix B

Standardized Regression Coefficients

Zero Order Correlation Coefficients

Table B.1

Standardized Regression Coefficients after Adjusting for All Variables

	First grade (N=2295)	Second grade (N=2527)	Third grade (N=2200)	Fourth grade (N=1709)	Fifth grade (N=1159)
RESCALLC	-.0753	-.2157****	.2064****	.1394**	-.2034****
XISTNPRG	-.1059***	.0194	.2178*****	.0016	.0721
DSTFRAME	.1174**	.2411***	-.3321****	-.1618***	.1480*
RATIME	.0051	-.0185	.0032	.0735*	.0841**
DFTIME	.0395*	.0312	-.0796*	-.0823*	.1036**
XPTIME	.1587****	-.1028***	-.0408	.0157	-.1310****
GENDER	.0599****	.0368**	-.0042	-.0049	.0424
AGE89	-.0329	-.0405**	.0386	.1204****	-.0053
PRIOR ACHIEVEMENT	.4872****	.3099****	.2704***	.3021****	.3401****
HISPANS	-.0334	-.0336	-.0413*	.0245	-.0396
AFROAMS	.0025	.0268	-.0062	-.0349	-.0250
UPCATTEND	.0342	.0156	-.0449	-.0699**	-.0196
PRTSCHSC	.0085	.0352	-.0011	.0200	-.0963**
USEDENRL	.0772***	-.0384	-.0126	.0106	.0167
UPCPOOR	.0343	-.0154	-.0609	-.0876****	.0735**
UREGENRL	-.0763***	-.0428	-.0276	-.0087	-.0996****
HMENVSC	.0603***	-.0712	.0001	.0278	-.0886**
PATPCNF	-.0206	.0351	-.0461**	.0554*	.0935**
NSCSBVSC	-.0240	-.0147	-.1115****	-.0820**	-.0914***
TEHDWSC	.0244	.0989****	.0812	.0554*	-.0239
TESHRSC	.0427*	.0834**	-.0111	.0914**	.1289****
MULT R	.53	.22	.15	.20	.43

* = $p < .05$
** = $p < .01$
*** = $p < .001$
**** = $p < .0001$

Table B.2

Selected Zero Order Correlation Coefficients
First Grade
(N=2,295)++

	Reading Achiev	Prior Achiev	Resource Allocation	District Framework	Existing Programs	Teacher Hum. Res.	Teacher Inst. Res.	Parent Involve	Parent Conference
Reading Achiev		.50****	.10**	.06	−.00	−.08	−.03	.10**	.02
Prior Achiev			.12*	.05	.00	−.13	−.06	.05	.05
Resource Allocation				.86****	.44***	−.18**	.12	.20*	.14*
District Framework					.65****	−.18	.21	.26**	.13
Existing Programs						.08	.08	.06	.07
Teacher Hum. Res.							.11	.16**	.16**
Teacher Inst. Res.								−.01	.08
Parent Involve									.16*
Parent Conference									

* p < .05
** p < .01
*** p < .001
**** p < .0001
++ minimum pairwise N

Table B.3

Selected Zero Order Correlation Coefficients
Second Grade
(N=2,527)++

	Reading Achiev	Prior Achiev	Resource Allocation	District Framework	Existing Programs	Teacher Hum. Res.	Teacher Inst. Res.	Parent Involve	Parent Conference
Reading Achiev		.33***	.04	.00	.03	.00	−.03	.09	.02
Prior Achiev			.33***	.00	.01	−.09	−.11	.08	.03
Resource Allocation				.85****	.45****	−.22**	.09	.15*	.10
District Framework					.64****	−.22**	.20*	.25***	.07
Existing Programs						.09	.10	−.00	.02
Teacher Hum. Res.							.08	.10	.05
Teacher Inst. Res.								−.04	.16*
Parent Involve									.06
Parent Conference									

* $p < .05$
** $p < .01$
*** $p < .001$
**** $p < .0001$
++ minimum pairwise N

Table B.4

Selected Zero Order Correlation Coefficients
Third Grade
(N=2,200)++

	Reading Achiev	Prior Achiev	Resource Allocation	District Framework	Existing Programs	Teacher Hum. Res.	Teacher Inst. Res.	Parent Involve	Parent Conference
Reading Achiev		.27	.01	−.00	−.00	−.02	.00	.00	−.02
Prior Achiev			.02	.00	−.02	−.05	−.05	.07	.00
Resource Allocation				.85****	.44***	−.19	.13	.17	.09
District Framework					.63****	−.20*	.24*	.28**	.05
Existing Programs						.10	.11	.03	.02
Teacher Hum. Res.							.09	.16*	.18*
Teacher Inst. Res.								−.04	.05
Parent Involve									.06
Parent Conference									

* p < .05
** p < .01
*** p < .001
**** p < .0001
++ minimum pairwise N

Table B.5

Selected Zero Order Correlation Coefficients
Fourth Grade
(N=1,709)++

	Reading Achiev	Prior Achiev	Resource Allocation	District Framework	Existing Programs	Teacher Hum. Res.	Teacher Inst. Res.	Parent Involve	Parent Conference
Reading Achiev		.24**	.03	.02	−.00	−.03	.00	.03	.00
Prior Achiev			−.00	.00	−.00	−.01	−.07	.07	.00
Resource Allocation				.86****	.44***	−.17*	.11	.13	.11
District Framework					.64****	−.17*	.22*	.23*	.03
Existing Programs						.08	.11	.03	.02
Teacher Hum. Res.							.05	.25**	.11
Teacher Inst. Res.								−.01	.07
Parent Involve									.11
Parent Conference									

* p < .05
** p < .01
*** p < .001
**** p < .0001
++ minimum pairwise N

Table B.6

Selected Zero Order Correlation Coefficients
Fifth Grade
(N=1,159)++

	Reading Achiev	Prior Achiev	Resource Allocation	District Framework	Existing Programs	Teacher Hum. Res.	Teacher Inst. Res.	Parent Involve	Parent Conference
Reading Achiev		.35*	.05	.03	.02	−.08	.05	−.04	−.01
Prior Achiev			−.01	−.04	−.05	−.13	−.01	−.07	.08
Resource Allocation				.81****	.39**	−.05	.03	.24*	.19*
District Framework					.63***	.03	.18	.31**	.23**
Existing Programs						.05	−.01	.15	.07
Teacher Hum. Res.							.08	.45***	.21
Teacher Inst. Res.								.10	−.06
Parent Involve									.35**
Parent Conference									

* $p < .05$
** $p < .01$
*** $p < .001$
**** $p < .0001$
++ minimum pairwise N