

Archived Information

IV. Implementation and Impacts of Elementary School Centers

To study the implementation of elementary school centers, the evaluation used the same procedures and instruments it used to study middle school centers. It also analyzed a range of outcomes for elementary school centers, including activities after school, grades, test scores, behavior, and feelings of safety after school. Unlike the approach for middle school centers, the evaluation used experimental designs to estimate whether elementary school centers affected outcomes. Students and their parents applied to participate in the centers in the fall of the 2000-2001 school year, and applicants were randomly assigned either to a treatment group that was offered the chance to enroll in a center or to a control group that was not. (Dynarski et al. [2001] describe the operational aspects of random assignment in more detail.) In the first year, the experimental design was implemented in 18 centers operated by seven grantees. As noted in Chapter I, another set of elementary school grantees was included in the national evaluation in its second year and a future analysis will examine findings from the full set of grantees.

The first-year findings indicate that centers had improved grades in social studies and had improved some aspects of involving parents with their child's schooling, including attendance at after-school events. However, treatment group students scored about the same as control students on a standardized reading test and, according to student and teacher reports, were as likely to complete their homework. Treatment students were as confident as control students in reading and in interpersonal skills, such as working with others in a team or as a group. Treatment students also felt as safe as control students during after-school hours and were as likely to engage in (and be disciplined for) bad behavior.

A. Implementation of Elementary School Centers

The seven grantees and 18 elementary school centers in the national evaluation formed a select group, because oversubscription allowed them to support an experimental evaluation design. Because high demand for the after-school program was a major factor in their selection, considerations about appealing to students and encouraging enrollment in the after-school programs were generally secondary for program designers. Poor academic performance was the primary consideration that shaped the content and design of these elementary programs, as nearly all the schools were performing below their states' average achievement level (Table IV.1). Program designers did include enrichment and recreation activities but mainly to keep students productive and energized.

Table IV.1
Objectives of 21st-Century Elementary School Centers
in the National Evaluation

	Percentage		
	Major	Minor	None
Help Children to Improve Academic Performance	83	17	0
Help Children to Develop Socially	39	33	28
Provide a Safe Environment for Children After School	44	56	0
Provide Recreational Opportunities for Children	28	56	17
Provide Cultural Opportunities for Children	17	56	28
Help Parents and/or Other Adults with Literacy or Other Skills (Such as Parenting)	28	11	61

SOURCE: Site visitor assessments based on visits to 18 centers.

Most of the elementary centers followed a similar approach to structuring after-school activities, but there were notable exceptions. Some centers, for example, focused on building skills for state assessment tests. A handful emphasized skills for parents and other adults in the community. Four centers that were part of one district's grant built their programs on a model of serving adults in the school's community. Children attended the center only when they accompanied their parent or grandparent. By using computer-oriented instruction and requiring adult participants to volunteer in the schools for a specified period, these centers expected to improve student performance and improve the lives of students out of school.

The elementary centers tended to be open most of the after-school hours (about 15 each week). A typical after-school schedule in an elementary school center included time for a snack and homework, followed by one or two sessions of academic activities or enrichment and recreation. In general, students had 45 minutes to an hour to work on homework, an hour of another academic activity, and one to two hours for other activities. Several centers gave students little opportunity to select after-school activities. At four grantees that focused on academic support, centers required students to attend both the homework period and the cognitive activity. In another two grantees, center staff members allowed students more choice.

The elementary center schedules changed little during the school year. The schedule for academic activities changed hardly at all, and the schedule for nonacademic activities often followed cycles. For example, students would rotate through 10 activities during a 10-week period and begin the rotation again at the beginning of the next 10-week cycle.

At eight centers, the purpose of the academic program was to help students complete homework; at four, it was to help them master material taught during the day; and at six, it was to help them perform better on state or district tests. Some of the academic activities used small-

group tutoring, self-paced computer-aided instruction, and purchased curricula. Students often were grouped by grade level during academic activities.

Centers had different approaches to homework sessions. Some insisted that students work on homework (or other cognitive activities if they had no homework) during the session. Others did not emphasize completing homework (for example, they combined the homework session with snack time). Consistent with these differences, the quality of homework help varied in its orderliness and supportiveness. Site visitors witnessed several chaotic homework sessions in which few students focused on their work and few staff members were engaged with students. Although some other centers maintained better control, centers did not give students much help with their homework. Homework help was particularly limited if the after-school staff members were not regular day teachers and there were no procedures for logging students' assignments or tracking their progress on them.

Additional academic content provided by centers focused on reading and writing. In some cases, the content was linked to areas that schools had identified from achievement or assessment test scores as needing improvement. Five centers used purchased curricular materials to help students with their reading and writing. Another center used hands-on activities designed to complement instruction during the regular school day.

Students could work on computers, either as an elective or as a component the center required. Four centers at one grantee required second- through fifth-graders to use a computer-based instructional program in reading and spelling. Centers at another grantee provided at least 30 minutes a week of computer instruction. In other centers, students could choose to spend time in the computer lab as part of their nonacademic activity time.

Centers at three grantees had strong links with the regular school program. The links arose from shared curricula or lessons that focused on the same standardized tests, and natural links

created when centers hired staff members from the regular school to run or supervise activities. A common element among grantees that did not have strong links was that few teachers from the regular school worked in the after-school centers.

All grantees placed some emphasis on activities beyond academic ones. Center staff viewed providing recreation activities as a major objective at 5 of the 18 elementary centers, and promoting social opportunities was a major objective for 7. The nonacademic activities were often used as incentives or

Illustrative Recreation and Enrichment Activities

Art
Dance
Drama
Free gym time
Karate
Leadership

rewards for the time students spent in the academic activities. While some nonacademic activities had cognitive aspects, most were recreational and designed to be fun (see box).

Other aspects of the implementation of these selected elementary school centers were analogous to those of middle school centers. School districts administered elementary school centers, and center staff had characteristics similar to those of middle school centers. In general, they enjoyed support from their host schools but were weakly linked with community organizations and had not made much progress in planning for sustainability.

B. Student Participation Was Moderate

Analysis of data from records of elementary school centers shows that attendance was moderate during the 2000-2001 school year (Table IV.2). Students who were randomly assigned to the program and attended at least one day attended an average of 58 days during the year. While about one-quarter attended the program for fewer than 25 days, nearly 40 percent did so for more than 75 days.

Table IV.2

21st-Century Elementary School Center Attendance
(2000-2001 School Year)

Average Days Attended in School Year ^a	58.3
Number of Days Attended (Percent of Participants)	
1 to 25 Days	27.0
26 to 50 Days	19.8
51 to 75 Days	14.6
76 to 100 Days	21.7
101 to 125 Days	14.8
More than 125 Days	2.1
Attendance Rate ^b (Percent of Participants)	
10 Percent or less	23.8
11 to 25 Percent	15.7
26 to 50 Percent	22.3
51 to 70 Percent	22.3
71 to 85 Percent	14.9
86 to 100 Percent	1.0

SOURCE: Center Attendance Records. Sample size is 395 participants.

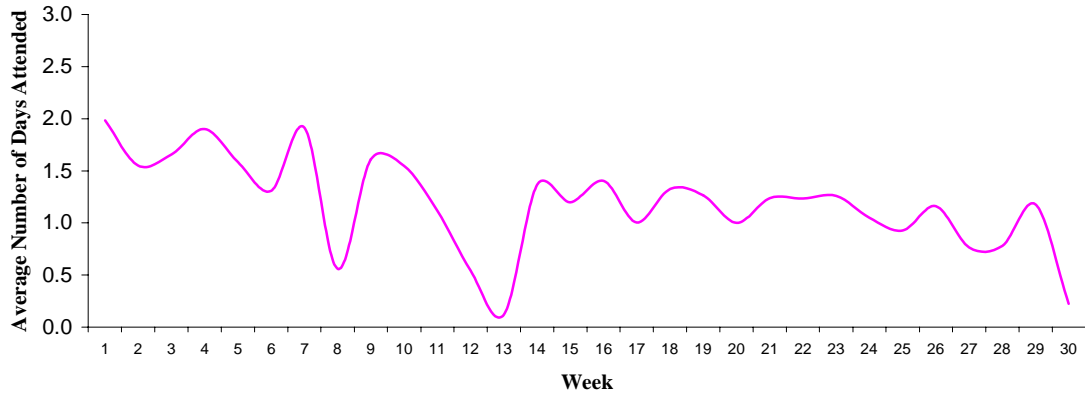
^aAverage number of days is calculated for program participants who attended the program at least one day after being randomly assigned to the program. Participation data from one grantee could not be used.

^bThe attendance rate is the number of days participants attended as a proportion of the number of days centers were open, which is obtained from grantee annual performance reports.

The pattern of attendance during the school year shows a slow but steady decline in attendance, with sharper (and temporary) declines around major holidays. Figure IV.1 plots average days attended a week for the school year for elementary school students. The downward trend of average attendance during the school year is evident, as is the sharp decline around the Thanksgiving and Christmas holidays. Most of the decline is due to students who no longer attend. Figure IV.2 plots the decline in attendance throughout the school year. A sizable group of elementary school students attended centers for long periods, although they may not have attended often within the time period. Figure IV.2 shows the distribution of calendar days between the first day and last day an elementary school participant attended a center. The relatively straight aspect of the line indicates that students were not more likely to stop attending

Figure IV.1

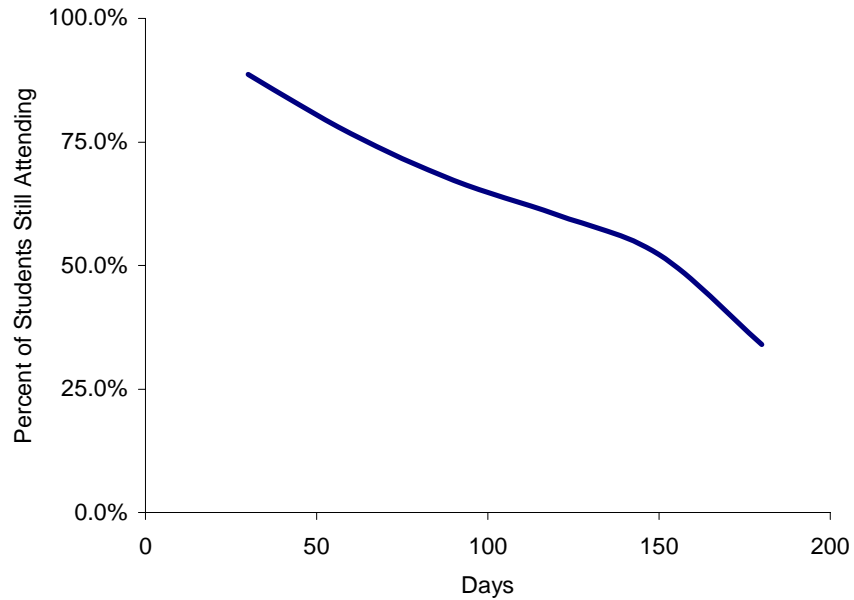
Average Days Attended Per Week
(Elementary School Centers, 2000-2001 School Year)



Source: Center attendance records.

Figure IV.2

Distribution of Length of Time Attending Centers
(Elementary School Centers, 2000-2001 School Year)



Source: Center attendance records.

during any particular times of the year. About 25 percent of participants had stopped attending after about two calendar months, which suggests that a group of students may be trying out centers before they stop attending. The median time period of attendance was about 160 days for participants, which suggests that students who continue to attend beyond the first few months were likely to attend for a much longer time. Twenty-five percent of elementary school students were still attending centers more than 190 days after the first day they attended.

C. Centers Did Not Affect Most Outcomes

Centers could affect a wide range of outcomes, as noted in the conceptual framework in Chapter I. Immediate effects might be observed in student activities, location, and supervision after school. Effects on some measures of academic performance also might be observed, especially those that are not cumulative by nature, such as completing homework and trying hard in class. Further, effects on personal development may be observed because of the nature of many of the enrichment activities the centers provided.

Because the groups were created through random assignment, the baseline characteristics of students in the groups should in principle be similar, and statistical tests indicate this generally to be the case. No statistically significant differences were found for most characteristics. When they were found, analyses revealed no pattern indicating that one group was more or less disadvantaged than the other.

Table IV.3 shows baseline characteristics of the groups. Gender, race and ethnicity, grade level (a proxy for student age), and parent age distributions are similar, with treatment group students being somewhat less likely to be white and more likely to be black. School absences, tardy arrivals, and incidences of suspension are similar, as are standardized test scores. Treatment students are somewhat less likely than control students to feel safe walking in their neighborhoods, but the views of their parents do not differ much in this area. However, although

Table IV.3

Characteristics of Treatment and Control Group Students at Baseline:
Elementary School Centers

Characteristic	Treatment Group	Control Group	p-Value ^a
Gender			
Male	46.4	50.6	0.24
Female	53.6	49.4	0.24
Race/Ethnicity			
White (non-Hispanic)	9.7	8.3	0.55
Black (non-Hispanic)	66.7	72.5	0.13
Hispanic	18.9	14.1	0.13
Other	1.6	2.3	0.57
Grade Level (percentages)			
Kindergarten	10.5	12.9	0.25
1 st grade	18.1	17.1	0.68
2 nd grade	17.0	18.0	0.67
3 rd grade	13.4	10.5	0.17
4 th grade	17.4	18.5	0.67
5 th grade	19.5	16.5	0.24
6 th grade	4.0	6.5	0.08*
Mother's Average Age (Years)	36.4	35.5	0.21
Father's Average Age (Years)	37.5	39.0	0.09*
Number of Tardy Arrivals During 1999-2000 School Year	3.4	3.6	0.78
Number of Absences During 1999-2000 School Year	7.2	7.5	0.62
Parent Feels It is Safe for Child to Walk in Neighborhood	59.8	54.9	0.16
Student Feels It is Safe to Walk in Neighborhood	72.3	78.5	0.14
Mean Reading Test Score (Percentile)	36.6	36.3	0.94
Sample Size^b	587	381	

SOURCE: Student Survey, Parent Survey, School Records.

NOTE: The percentages and mean values of outcomes for treatment and control students have been regression-adjusted for baseline differences between the groups. The control variables in the regression included 14 different student and household characteristics such as indicators of students' demographic characteristics, household socioeconomic status, and students' baseline test scores and attendance.

^aThe p-value is the smallest level of significance at which the null hypothesis that the difference in means between program participants and control group members equals zero can be rejected. If the p-value is less than .01, the difference is significant at the 1 percent level. If the p-value is less than .05, the difference is significant at the 5 percent level, and so on.

^bSample sizes differ depending on the data source.

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

**Significantly different from zero at the .05 level, two-tailed test.

***Significantly different from zero at the .01 level, two-tailed test.

random assignment appears to have done what it should in creating similar groups, we estimated impacts using regression adjustment techniques to remove remaining differences and to improve the precision of the impact estimates.

1. Centers Affected Student Location and Supervision after School

Centers increased time spent at school or in another place outside the home (Table IV.4).⁴⁸ For example, 48 percent of treatment students and 37 percent of control students spent at least three days at school or in a similar place after school (an effect size of 22 percent). Conversely, centers reduced time spent at home after school, with 65 percent of treatment students and 77 percent of control students being cared for in their own homes after school at least three days a week (an effect size of 27 percent). However, centers did not change the percentage of students in other locations, such as someone else's home or somewhere to "hang out."

Consistent with the changes in student locations, centers reduced time that students were in parent or sibling care and increased time spent in the care of non-parent adults by an offsetting amount (Table IV.4). For example, parents cared for 63 percent of treatment students and 70 percent of control students at least three days a week after school (effect size 16 percent). Centers reduced sibling care by more than half, with 2 percent of treatment and 5 percent of control students being cared for by siblings at least three days a week after school (effect size 12

⁴⁸Two impacts are estimated for elementary school students. The first and most formal is the impact for the full treatment and control groups, known as the "intent to treat" estimate. The second, shown in the following tables in the column titled "impacts on participants," is the impact adjusting for the proportion of treatment group members that did not participate in the program ("no-shows") after being randomly assigned to the treatment group. Across grantees, the proportion of no-shows ranged from 5 percent to 30 percent of the treatment group. To estimate impacts adjusted for no-shows, the estimated impact for the full group was divided by the proportion of treatment students that participated. This adjustment assumes that no-show students receive no benefits from the program, which seems reasonable in this context. However, the text focuses on the intent-to-treat estimator, which relies on fewer assumptions.

Table IV.4

Impacts on Location, Supervision, and Activities after School, Elementary School Centers

Outcome	Treatment Group	Control Group	Estimated Impact	p-Value ^a	Estimated Impact on Participants
Percentage of Students in the Following Locations after School at Least Three Days in a Typical Week according to Parent Reports:					
Self-care	1.6	2.2	-0.6	0.62	-0.9
Parent care	62.8	70.2	-7.4*	0.09	-6.2
Non-parent adult care	31.2	20.7	10.5***	0.01	11.0*
Sibling care	2.0	4.6	-2.7*	0.09	-4.0
Mixed care (not in any one category for at least three days)	2.5	2.3	0.2	0.90	0.1
Percentage of Students in the Following Types of Supervision at Least Three Days after School in a Typical Week, according to Parent Reports:					
Own home	65.4	76.7	-11.2***	0.01	-13.4**
Someone else's home	14.9	16.2	-1.3	0.70	-0.5
School or other place for activities	47.7	37.3	10.4**	0.02	12.9***
Somewhere to "hang out"	4.2	4.2	0.1	0.96	0.7
Mixed location (not in one location for at least three days)	1.6	2.2	-0.6	0.62	-0.2
Mean Number of Days Stayed after School for Activities in Typical Week, according to Parent Reports	1.8	0.9	0.9***	0.00	1.1***
Percentage of Students Who Reported Participating in the Following Activities Yesterday after School:					
Homework	80.6	76.0	4.7	0.36	7.6
Tutoring	8.2	10.9	-2.7	0.42	-3.0
Non-homework reading, writing, or science activities	34.3	30.5	3.8	0.50	5.6
School activities (band, drama, etc.)	28.9	22.7	6.3	0.24	7.9
Lessons (music, art, dance, etc.)	30.2	21.9	8.4	0.11	11.3
Organized sports	28.7	27.3	1.4	0.80	0.9
Clubs (Boy and Girl Scouts, Boys and Girls Club, etc.)	18.2	27.8	-9.6**	0.05	-13.0*
Activities at church, temple, or mosque	21.8	22.1	-0.2	0.97	0.8
Watched TV or videos	76.5	68.5	7.9	0.13	10.7
Surfed the Internet or did other things on the computer	37.6	35.2	2.4	0.69	0.0
"Hung out" with friends	55.3	46.2	9.1	0.14	12.9
Did chores around the house	56.3	51.5	4.8	0.43	6.8
Took care of a brother or sister	44.8	28.1	16.7***	0.01	25.6***
Played	8.5	8.9	-0.5	0.90	-1.4
Mean Time Students Reported Watching Television in the Past Day	2.0	1.9	0.1	0.63	0.2
Mean Time Students Reported Reading for Fun in the Past Day	0.4	0.4	0.0	0.93	-0.1
Sample Size^b	403	226			

SOURCE: Parent Survey, Student Survey.

NOTE: The percentages and mean values of outcomes for treatment and control students have been regression-adjusted for baseline differences between the groups. The control variables in the regression included 14 different student and household characteristics such as indicators of students' demographic characteristics, household socioeconomic status, and students' baseline test scores and attendance.

^aThe p-value is the smallest level of significance at which the null hypothesis that the impact equals zero can be rejected. If the p-value is less than .01, an impact is significant at the 1 percent level; if the p-value is less than .05, the impact is significant at the 5 percent level, and so on.

^bSample sizes differ for some outcomes due to nonresponse. Sample sizes for student-reported outcomes are 285 for the treatment group and 156 for the control group. Only students in third grade and above completed a student survey.

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

**Significantly different from zero at the .05 level, two-tailed test.

***Significantly different from zero at the .01 level, two-tailed test.

percent). Centers increased non-parent adult care, with 31 percent of treatment students and 21 percent of control students being cared for by non-parent adults at least three days a week after school (effect size 26 percent). Centers did not affect self-care, with 2 percent of both treatment and control students in self-care at least three days a week after school. Centers also had mostly insignificant effects on student activities after school.⁴⁹

2. Centers Did Not Improve Most Grades and Did Not Affect Behavior in School

Centers increased grades in social studies significantly (the effect size is 30 percent), but while grades in other subjects generally appeared higher for treatment students, the differences were not significant.⁵⁰ Centers did not have significant effects on reading test scores (Table IV.5). For example, treatment students had a percentile average reading score of 34.3, and control students had an average score of 34.2.

According to teacher and student reports, treatment students were as likely as control students to complete their homework (Table IV.5). Eighty-five percent of the treatment group and 87 percent of the control group reported doing the homework their teachers assigned. Teachers reported that treatment students were as likely as control students to complete their homework often and to be prepared and ready to learn in class. According to teachers, treatment students were more likely than control students to try hard in reading. However, according to

⁴⁹We used parent-reported data on location and care arrangements, as students in grades K-2 did not complete questionnaires. We used student-reported data on after-school activities, for students in grades 3 to 5.

⁵⁰We estimated impacts on reading test scores using two samples: (1) the set of students who had a follow-up test score (regardless of whether they had a baseline score), and (2) the set of students who had both follow-up and baseline test scores. The results were not affected by the method used. We also collected baseline and follow-up math test scores for small number of students when the scores were available from school records but samples were too small (only 170 students) to support reliable impact estimates.

Table IV.5

Impacts on Academic and Other In-School Outcomes, Elementary School Centers

Outcome	Treatment Group	Control Group	Estimated Impact	p-Value ^a	Estimated Impact on Participants
Mean Grade:					
Math	81.0	79.6	1.3	0.23	1.7
English/language arts	82.6	81.7	0.9	0.29	1.3
Science	84.0	83.5	0.5	0.61	0.5
Social studies/history	83.0	80.3	2.7**	0.01	3.3**
Mean Reading Test Score	34.3	34.2	0.1	0.96	0.4
Percentage of Students Who Report That They “Often” or “Always” Do the Homework Teachers Assign	85.0	86.6	-1.6	0.72	-2.5
Percentage of Students Whose Teachers Report That They “Often” Complete Their Homework	55.3	60.9	-5.5	0.20	-8.1
Percentage of Students Whose Teachers “Agree” or “Strongly Agree” That They Complete Assignments to the Teacher’s Satisfaction	56.1	59.3	-3.2	0.44	-5.9
Percentage of Students Whose Teachers “Agree” or “Strongly Agree” That the Student Comes to School Prepared and Ready to Learn	57.8	63.3	-5.5	0.18	-8.8
Percentage of Students Whose Teachers Report That They “Usually Try Hard” in Reading or English	57.0	49.5	7.5*	0.08	9.7
Percentage of Students Whose Parents “Agree” or “Strongly Agree” That Their Child Works Hard at School	80.7	87.4	-6.7*	0.06	-11.0**
Level of Effort Composite ^b (Mean)	3.6	3.6	0.0	0.72	0.0
Percentage of Students Whose Teachers Report Doing the Following “Two or More Times”:					
Disciplining the child for misbehaving	48.0	42.7	5.3	0.23	8.2
Sending child to the office for misbehaving	12.5	10.7	1.7	0.55	2.4
Giving child detention	18.9	14.3	4.6	0.16	7.2
Calling parents about child’s behavior	29.8	23.6	6.2	0.12	8.2
Percentage of Students Who Were Suspended During 2000-2001 School Year	7.1	5.2	1.9	0.41	2.3
Mean Number of Days					
Absent from class	8.2	8.2	0.1	0.91	0.0
Late for class	5.0	4.4	0.5	0.42	0.6
Reading Confidence Composite ^c (Mean)	3.1	3.0	0.1	0.24	0.1
Sample Size^d	403	226			

SOURCE: Student Survey, Parent Survey, School Records, Teacher Survey.

Table IV.5 (Continued)

NOTE: The percentages and mean values of outcomes for treatment and control students have been regression-adjusted for baseline differences between the groups. The control variables in the regression included 14 different student and household characteristics such as indicators of students' demographic characteristics, household socioeconomic status, and students' baseline test scores and attendance.

^aThe p-value is the smallest level of significance at which the null hypothesis that the impact equals zero can be rejected. If the p-value is less than .01, an impact is significant at the 1 percent level; if the p-value is less than .05, the impact is significant at the 5 percent level, and so on.

^bThe level of effort composite is based on five teacher-reported items regarding student (1) effort, (2) performance at ability level, (3) attentiveness, (4) participation, and (5) volunteering. Values on these items range from 1 to 5; a value of 1 on the composite indicates a low level, and a value of 5 indicates a high level.

^cThe reading confidence composite is based on students' reports on three items: (1) reading is hard to learn, (2) they are a good reader, and (3) they would read better if they had more help. Values on these items range from 1 to 4; a value of 1 on the composite indicates a low level, and a value of 4 indicates a high level.

^dSample sizes differ for some outcomes. For teacher-reported outcomes, the sample sizes are 409 treatment group members and 253 control group members; for student-reported outcomes, the sample sizes are 285 treatment group members and 156 control group members; for records outcomes, the sample sizes are 537 treatment group members and 317 control group members.

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

**Significantly different from zero at the .05 level, two-tailed test.

***Significantly different from zero at the .01 level, two-tailed test.

parents, treatment students were less likely than control students to work hard in school (Table IV.5). Treatment students also had the same value as control students on a composite variable combining various measures of effort such as performing at the student's ability level, attentiveness, participation, and volunteering in class (Table IV.5).

Suspensions, absences, tardy arrivals, and teacher reports of discipline problems showed no significant differences for treatment and control students (Table IV.5). For example, treatment and control students were both absent 8.2 days a year on average, and treatment and control students were late for class 5.0 and 4.4 times a year, respectively. In addition, 7 percent of treatment and 5 percent of control students were suspended during the school year, an insignificant difference.

3. Center Had Few Effects on Other Outcomes

Centers had no effects on student interpersonal skills (Table IV.6). Treatment students were as likely as control students to report getting along with others their age, as likely to report feeling left out of things, and as likely to rate themselves highly on working with others on a team, using a computer to look up information, or setting a goal and working to achieve it (Table IV.6). For example, 76 percent of both treatment and control students rated themselves as "good" or "excellent" on working with others on a team. Treatment students also were as likely as control students to rate themselves highly on sticking to what they believe in even if their friends do not agree.

Centers did not affect how safe or unsafe students felt after school. For example, 74 percent of treatment group students and 76 percent of control students reported feeling "very safe" after school (Table IV.6). Two percent of treatment students and 5 percent of control students did not feel safe at all after school, but the difference between the groups was not significant (Table IV.6).

Table IV.6

Impacts on Other Outcomes, Elementary School Centers

Outcome	Treatment Group	Control Group	Estimated Impact	p-Value ^a	Estimated Impact on Participants
Percentage of Students Who Report the Following Are “Somewhat True” or “Very True”:					
They get along with others their age	81.2	84.2	-3.1	0.54	-6.4
They feel left out of things	32.4	29.2	3.2	0.58	2.8
Percentage of Students Who Do the Following “Some” or “A Lot”:					
Help another student in school	78.0	79.2	-1.1	0.84	-2.8
Help another student after school	60.8	49.5	11.3*	0.07	15.0
Percentage of Students Who Rate Themselves as “Good” or “Excellent” on the Following:					
Working with others on a team or group	76.0	76.2	-0.3	0.96	-0.8
Feeling bad for other people who are having difficulties	71.4	75.4	-4.0	0.47	-7.7
Believing the best about other people	80.4	77.6	2.7	0.61	4.0
Percentage of Students Who Rate Themselves as “Excellent” on the Following:					
Using a computer to look up information	51.9	42.3	9.6	0.12	13.9
Setting a goal and working to achieve it	56.6	61.2	-4.6	0.46	-7.5
Percentage of Students Who Rate Themselves as “Excellent” on Sticking to What They Believe in, Even if Their Friends Don’t Agree					
	60.0	52.4	7.7	0.21	10.2
Percentage of Students Who Report Feeling the Following Levels of Safety after School up until 6 p.m.:					
Very safe	74.3	75.5	-1.1	0.83	-2.0
Somewhat safe	24.0	19.3	4.6	0.37	6.9
Not at all safe	1.7	5.2	-3.5	0.14	-4.9
Negative Behavior Composite ^b	1.6	1.6	0.0	0.77	0.0
Percentage of Students Whose Parents Report Doing the Following:					
Helped their child with homework at least three times last week	68.4	58.3	10.1**	0.02	12.9**
Checked on their child’s homework completion at least three times last week	91.7	91.9	-0.2	0.93	-0.4
Asked their child about things they were doing in class at least seven times last month	73.1	65.4	7.7*	0.07	10.1*
Percentage of Students Whose Parents Did the Following at Least Three Times Last Year:					
Attended an open house at the school	37.2	39.1	-1.9	0.68	-3.6
Attended parent-teacher organization meetings	53.3	50.5	2.7	0.55	3.8
Attended an after-school event	51.5	42.2	9.2**	0.04	11.5*
Volunteered to help out at school	31.5	37.2	-5.7	0.19	-8.4
Sample Size	403	226			

Table IV.6 (Continued)

SOURCE: Student Survey, Parent Survey.

NOTE: The percentages and mean values of outcomes for treatment and control students have been regression-adjusted for baseline differences between the groups. The control variables in the regression included 14 different student and household characteristics such as indicators of students' demographic characteristics, household socioeconomic status, and students' baseline test scores and attendance.

^aThe p-value is the smallest level of significance at which the null hypothesis that the impact equals zero can be rejected. If the p-value is less than .01, an impact is significant at the 1 percent level, if the p-value is less than .05, the impact is significant at the 5 percent level, and so on.

^bThe negative behavior composite is based on student responses to five questions regarding how often they do the following: (1) break something on purpose, (2) punch or hit someone, (3) argue with their parents, (4) lie to their parents, and (5) give a teacher a "hard time." Values on these items range from 1 to 4; a value of 1 on the composite indicates a low level while a value of 4 indicates a high level.

^cSample sizes differ for outcomes depending on the source. For teacher-reported outcomes, the sample sizes are 409 treatment group members and 253 control group members; for student-reported outcomes, the sample sizes are 285 treatment group members and 156 control group members; for records outcomes, the sample sizes are 537 treatment group members and 317 control group members.

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

**Significantly different from zero at the .05 level, two-tailed test.

***Significantly different from zero at the .01 level, two-tailed test.

Centers did not affect student behavior outside school. A composite variable measuring delinquent behavior—and the items upon which the composite are based—did not differ significantly (Table IV.6).

Centers increased the percentage of parents helping their child with homework at least three times in the last week, with 68 percent of parents of treatment students and 58 percent of parents of control students doing so, an effect size of 21 percent (Table IV.6). Centers also increased the percentage of parents asking their child about classwork: 73 percent of parents of treatment students and 65 percent of parents of control students asked about classwork at least seven times in the past month (effect size 16 percent). Centers also increased parent attendance at after-school events: 52 percent of parents of treatment students and 42 percent of parents of control students attended at least three after-school events in the past year (effect size 19 percent). Centers did not affect several other indicators of parent involvement, such as whether parents checked that their child had completed homework, attended school events such as open houses and parent-teacher organization meetings, or volunteered in the school.

D. No Effects Were Evident for Student Subgroups

We estimated effects for four subgroups based on characteristics that programs might use to target services: (1) gender, (2) grade level, (3) high versus low reading test scores, and (4) a high versus a low number of discipline problems. For example, centers could focus on serving particular grade levels, students with low test scores, students with high discipline problems, or a combination of these characteristics. The findings indicate few subgroup impacts (Table IV.7 and IV.8). Some differences appear large but statistical tests of the differences are not significant. Small sample sizes may be a factor in the lack of significance.

Table IV.7
Impacts on Academic Outcomes by Subgroup,
Elementary School Centers

Outcome	Estimated Impact								
	Gender		Grade Level			Baseline Reading Test Scores ^a		Baseline Disciplinary Problems Composite ^b	
	Male	Female	K-2	3-4	5-6	Low	High	Low	High
Mean Class Grade									
Math	0.3	0.7	-0.5	3.1	0.2	1.4	-0.4	0.1	2.5
English	0.5	-0.4	1.0	1.3	0.3	2.5	-0.1	-1.3	1.0
Science	0.5	-0.4	0.6	0.1	-0.2	0.9	-0.3	-0.1	-0.3
Social studies	2.4	2.0	2.7**	9.6***	0.7	3.0	0.3	5.0*	2.0
Reading Test Score	0.2	0.2	-1.7	-0.3	2.3	-1.3	-0.4	-1.9	-2.5
Percentage of Students Whose Teachers “Agree” or “Strongly Agree” That:									
Student completes assignments to my satisfaction	-4.2	-0.3	1.1	-2.7	-18.5	14.6	-10.1	-21.9***	15.6
Student comes prepared and ready to learn	0.8	-8.4	-3.4	-14.9*	-3.9	9.0	-12.8*	-7.9	0.8
Percentage of Students Whose Teachers Report That They “Usually Try Hard” in Reading or English	13.1**	-0.9	10.1	-0.5	-2.4	24.3**	-1.1	7.0	-0.4
Percentage of Students Whose Teachers “Agree” or “Strongly Agree” That:									
The student is attentive in class	0.6	-1.1	2.2	-7.1	-7.8	19.5**	-13.8**	-11.8	4.0
The student participates in class	4.1	-3.0	2.7	-5.8	4.7	5.7	1.9	-5.4	15.3
Percentage of Students Whose Parents “Agree” or “Strongly Agree” That Child Works Hard at School	-8.0	-2.0	-0.8	-12.5*	-7.7	4.7	-8.7	-11.0	-31.6**
Percentage of Students Whose Teachers Report Disciplining for Misbehaving “Two or More Times”	0.7	6.2	1.8	5.3	13.1	3.5	6.4	13.2	2.3
Teacher-Reported Disciplinary Problems Composite (Mean)	.02	.07	-.01	.15	.28	-.01	.13	.17	.16
Percentage of Students Whose Teachers Report That They Are “Often” Disruptive	0.0	0.2	1.2	1.6	4.9	-4.7	-1.3	8.2	-9.8
Percentage of Students Who Were Suspended During the 2000-2001 School Year (School Records)	3.7	3.3	-0.9	5.8	1.5	5.5	1.7	-0.2	8.3

Table IV.7 (Continued)

Outcome	Estimated Impact								
	Gender		Grade Level			Baseline Reading Test Scores ^a		Baseline Disciplinary Problems Composite ^b	
	Male	Female	K-2	3-4	5-6	Low	High	Low	High
Percentage of Students Whose Teachers “Agree” or “Strongly Agree” That Student Is a Proficient Reader	-6.5	-1.9	0.1	-13.5*	8.3	-1.2	-4.1	-1.7	-1.1
Sample Size									
Parent-reported outcomes	191	228	290	187	150	219	194	203	98
Teacher-reported outcomes	304	337	311	201	139	211	194	208	104
School records outcomes (suspensions)	384	397	330	229	155	266	227	223	135
School records outcomes (grades)	234	261	203	154	132	221	204	195	96
School records outcomes (reading scores)	296	302	300	156	136	236	220	178	82

SOURCE: Parent Survey, Teacher Survey, School Records.

NOTE: The percentages and mean values of outcomes for treatment and control students have been regression-adjusted for baseline differences between the groups. The control variables in the regression included 14 different student and household characteristics such as indicators of students’ demographic characteristics, household socioeconomic status, and students’ baseline test scores and attendance.

^aStudents were classified into the “low baseline test scores” subgroup if their baseline test scores were less than the median baseline test score among all sample members with valid test scores. Those whose baseline test scores were above the median were classified into the “high baseline test scores” subgroup. Students with missing baseline test scores were not included in either of these subgroups.

^bStudents were classified into the “low number of disciplinary problems” subgroup if their baseline disciplinary problems composite score was less than the median composite score among all sample members. Those whose baseline disciplinary problems composite scores was above the median were classified into the “high number of disciplinary problems” subgroup. Students with missing baseline disciplinary problems composite scores (including all kindergarten through second grade students) were not included in either of these subgroups.

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

**Significantly different from zero at the .05 level, two-tailed test.

***Significantly different from zero at the .01 level, two-tailed test.

Table IV.8
Impacts on Other Outcomes by Subgroup,
Elementary School Centers

Outcome	Estimated Impact								
	Gender		Grade Level			Baseline Test Scores ^a		Baseline Disciplinary Problems Composite ^b	
	Male	Female	K-2	3-4	5-6	Low	High	Low	High
Student-Reported Social Engagement Composite (Mean)	.05	.07	n.a.	-.04	-.00	.17	-.23	-.01	.04
Student-Reported Negative Behavior Composite (Mean)	.13	-.14	n.a.	.01	-.01	.05	.08	-.04	.03
Percentage of Students Whose Parents Report That They Break Something on Purpose “Some” or “A Lot”	-3.9	-0.2	-5.1*	-0.6	5.7*	-1.2	2.3	2.7	2.9
Percentage of Students Whose Parents Report Helping Them with Homework at Least Three Times Last Week	11.2*	12.0**	12.1**	6.8	4.3	-9.3	1.4	6.2	3.0
Percentage of Students Whose Parents Did the Following at Least Three Times Last Year:									
Attended an open house at school	10.9*	-7.7	-4.3	-9.5	20.4*	12.4	13.4	2.1	9.8
Attended a PTO meeting	1.2	6.2	-0.5	3.0	10.2	21.6	1.9	-3.7	12.3*
Attended an after-school event	15.7**	0.5	6.1	-0.6	10.0	13.6	19.1**	4.9	16.5
Volunteered to help out at school	0.2	-5.5	-5.3	-8.3	-3.4	-0.0	4.0	-10.4	12.7
Sample Size									
Student-reported outcomes	195	229	0	241	199	189	135	264	146
Parent-reported outcomes	285	322	290	187	150	216	194	203	98

SOURCE: Parent Survey, Student Followup Survey.

NOTE: The percentages and mean values of outcomes for treatment and control students have been regression-adjusted for baseline differences between the groups. The control variables in the regression included 14 different student and household characteristics such as indicators of students’ demographic characteristics, household socioeconomic status, and students’ baseline test scores and attendance.

^aStudents were classified into the “low number of baseline test scores” subgroup if their baseline test scores were less than the median baseline test score among all sample members with valid test scores. Those whose baseline test scores were above the median were classified into the “high number of baseline test scores” subgroup. Students with missing baseline test scores were not included in either of these subgroups.

^bStudents were classified into the “low number of disciplinary problems” subgroup if their baseline disciplinary problems composite score was less than the median composite score among all sample members. Those whose baseline disciplinary problems composite scores was above the median were classified into the “high number of disciplinary problems” subgroup. Students with missing baseline disciplinary problems composite scores (including all kindergarten through second grade students) were not included in either of these subgroups.

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

**Significantly different from zero at the .05 level, two-tailed test.

***Significantly different from zero at the .01 level, two-tailed test.

E. Greater Attendance Was Not Related to Higher Outcomes

Treatment students may have experienced larger impacts if they attended centers more frequently. As noted in Chapter III, frequent attenders may differ from infrequent attenders in ways that affect outcomes but are not controlled for by the experimental design. For example, if more-motivated students attend centers more often and also have higher outcomes because of their motivation, comparing their outcomes with those of less-motivated students may create an incorrect perception of the impacts of greater attendance. Under the assumption that more-motivated students attend centers more often, positive outcome differences may arise because of the assumed motivation difference and are not interpreted here as causal evidence that frequent attendance improves outcomes.⁵¹

Frequent participants in after-school programs spent more time in a variety of activities at school (Table IV.9). Parents of frequent participants reported that their children spent less time with them and more time in the care of other adults: 66 percent of children who attended moderately were in parent care for at least three days a week, versus 57 percent of frequent participants, and non-parent care was higher by about 12 percentage points for frequent participants. Parents of frequent attenders also reported that their children spent more time in organized activities such as tutoring, band, music lessons, and clubs. The additional time spent in these activities came at the expense of activities that participants could have done while at home, such as household chores, volunteer work, and taking care of siblings.

⁵¹To ensure that only unobserved characteristics affect outcome differences between frequent and infrequent attenders, we used regression models to adjust for observed characteristics. The adjustment variables are the same as those in the regression models used elsewhere in the chapter.

Table IV.9
Relationship between Attendance and Outcomes
Elementary School Centers

Outcome	Moderate Participation (49 Days)	Frequent Participation (105 Days)	p-Value ^a
Mean Grade:			
Math	81.4	80.8	0.50
English	82.3	82.0	0.65
Science	84.3	83.8	0.50
Social studies/history	83.6	82.8	0.31
Reading Test Score (Percentile)	31.4	30.9	0.80
Percentage of Students in the Following Locations after School at Least Three Days in a Typical Week:			
Own home	66.7	52.2	0.00***
Someone else's home	14.0	4.0	0.00***
School or other place for activities	44.5	59.5	0.00***
Somewhere to "hang out"	3.0	0.0	0.01***
Mixed location (not in one location for at least three days)	1.5	0.9	0.54
Percentage of Students in The Following Types of Supervision at Least Three Days after School in a Typical Week (According to Parents):			
Self-care	1.8	1.4	0.76
Parent care	66.1	57.4	0.01**
Non-parent adult care	26.8	38.6	0.00***
Mean Number of Days Stayed after School for Activities in Typical Week	1.7	2.8	0.00***
Percentage of Students Participating in Each Activity for at Least One Day After School (According to Parents):			
Homework	87.6	86.8	0.75
Tutoring	24.1	31.8	0.02**
School activities (band, drama, etc.)	26.9	34.1	0.03**
Lessons (music, art, dance, etc.)	25.8	35.2	0.00***
Volunteered or did community service	6.4	3.3	0.11
Did chores around the house	74.2	68.6	0.10*
Took care of a brother or sister	19.3	11.6	0.01**
Percentage of Students Who Report That They "Often" or "Always":			
Do the homework teachers assign	85.8	86.1	0.91
Do homework in same place each day	54.7	54.3	0.92
Do homework at same time each day	38.3	34.5	0.41
Write down homework assignments	65.0	67.1	0.64
Percentage of Students Who Receive Homework Help from:			
An adult besides their mother or father	31.6	39.6	0.05*
Their mother or father	61.2	58.2	0.50
Another child	15.2	9.0	0.08*
Percentage of Students Who Report the Following Are "Somewhat True" or "Very True":			
They have friends to play with	91.2	94.6	0.18
They are lonely	21.6	14.7	0.07*
They get along with others their age	82.9	87.9	0.16
Percentage of Students Who Do the Following "Some" or "A Lot":			
Help another student in school	77.2	74.3	0.46
Help another student after school	55.5	65.3	0.03**

Table IV.9 (Continued)

Outcome	Moderate Participation (49 Days)	Frequent Participation (105 Days)	p-Value ^a
Percentage of Students Who Rate Themselves as Good or Excellent at Working with Others on a Team or in a Group	73.7	84.4	0.01***
Percentage of Students Who Rate Themselves as “Excellent” on the Following:			
Using a computer to look up information	48.7	52.2	0.44
Setting a goal and working to achieve it	50.4	55.5	0.26
Planning for things in the future	51.3	55.8	0.33
Planning/Problem Solving Composite (Mean)	3.2	3.3	0.02**
Percentage of Students Whose Parents Report They Do the following “Some” or “A Lot:”			
Break something on purpose	3.5	0.8	0.08*
Punch or hit someone	14.2	11.1	0.23
Percentage of Students Whose Parents Report Doing the Following:			
Helped their child with homework at least three times last week	70.2	72.8	0.48
Checked on their child’s homework completion at least three times last week	92.9	96.3	0.10*
Asked their child about things they were doing in class at least seven times last month	70.4	72.6	0.54
Percentage of Students Whose Parents Did the Following at Least Three Times Last Year:			
Attended an open house at the school	37.3	37.9	0.87
Attended parent-teacher organization meetings	52.8	57.8	0.19
Attended an after-school event	46.5	53.2	0.08*
Volunteered to help out at school	28.4	29.7	0.73
Percentage of Students Whose Parents “Agree” or “Strongly Agree” with the Following:			
My child’s school is academically challenging	73.7	72.3	0.68
I am satisfied with class sizes	77.4	74.9	0.41
I am satisfied with teacher quality	75.9	74.1	0.57
I feel welcome at my child’s school	87.6	89.2	0.54

NOTE: The percentages and mean values of outcomes for treatment and control students have been regression-adjusted for baseline differences between the groups. The control variables in the regression included 14 different student and household characteristics such as indicators of students’ demographic characteristics, household socioeconomic status, and students’ baseline test scores and attendance.

^aThe p-value is for the significance of the attendance coefficient in the regression model. The p-value is the smallest level of significance at which the null hypothesis that the impact equals zero can be rejected. If the p-value is less than .01, an impact is significant at the 1 percent level; if the p-value is less than .05, the impact is significant at the 5 percent level, and so on.

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

**Significantly different from zero at the .05 level, two-tailed test.

***Significantly different from zero at the .01 level, two-tailed test.

Frequent participants were not significantly different from infrequent participants on most academic outcomes. Homework habits, grades, test scores, and regular school attendance were similar for frequent and less frequent attenders. The one difference between frequent and infrequent attenders was that frequent attenders received more help on their homework from a non-parent adult and less help from another child, which possibly is related to homework assistance the centers provided.

Frequent attenders reported feeling better about themselves and interacting better with others (Table IV.9). They were less likely than infrequent participants to report feeling lonely and more likely to believe they got along well with others their age. Frequent participants also were more likely to feel that they worked well in a group, more likely to help other students after school, and more likely to say they had good problem-solving skills.

