

2003-04



**WAKE COUNTY
PUBLIC SCHOOL SYSTEM**

STUDENT SUPPORT TEAM EVALUATION

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ABSTRACT

Student Support Teams (SST) are designed to strengthen and support students who are experiencing academic, behavioral, family, and/or emotional difficulties that interfere with learning. SSTs develop and implement action plans using classroom-, school-, family-, and/or community-based strategies. In 2003-04, 80% of the 4,944 students served by SSTs were elementary students. Over half of the students referred for academic reasons scored on grade level *before* SST participation. Earlier SST meetings and family-based strategies were correlated with positive academic outcomes. Classroom-based strategies were correlated with fewer suspensions. Schools varied in their success in improving SST students' achievement. SST participants' growth in achievement was generally smaller than a matched comparison group over one year, but students could have differed in ways related to referral reasons. SST students closed the gap between their achievement and that of the district overall in some elementary grades but not at the secondary level.

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TABLE OF CONTENTS

Summary	2
Program Overview	4
Methods.....	5
Evaluation Plan	5
Data Collection	5
Analysis.....	6
Demographics	8
Implementation	12
Results.....	20
SST Academic Performance vs. Comparison Group.....	20
K-2 Assessment	20
End-of-Grade Tests.....	22
SST Academic Performance vs. WCPSS	27
K-2 Assessment	27
End-of-Grade Tests.....	29
End-of-Course Tests	37
Retention	37
Suspensions.....	38
Achievement by School	40
Behavior by School.....	45
Achievement by Strategy Type.....	45
Testing for Special Education.....	48
Recommendations.....	49
Attachments	51

STUDENT SUPPORT TEAM EVALUATION 2003-04

SUMMARY

The Student Support Team (SST) is a multidisciplinary team of school staff that provides support to students who are experiencing academic, behavioral, family, and/or emotional difficulties that interfere with learning. SST works with school staff and parents/guardians to gather resources and develop strategies to help students succeed in the regular education classroom.

The goal of SST is to strengthen and support the student by developing and implementing an action plan using classroom-, school-, family-, or community-based strategies. SST strategies involve school personnel, families, and/or community members as part of the action plan.

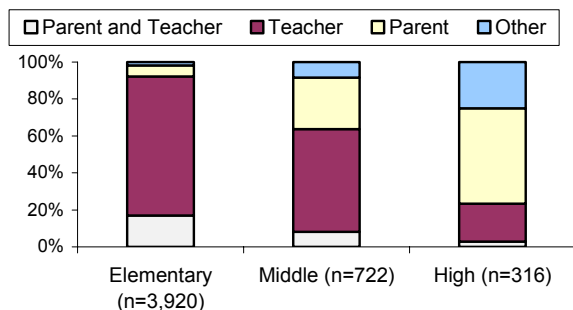
IMPLEMENTATION

- There were 4,944 students served by SST in 2003-04. Almost 80% of SST students were in elementary, 14% were in middle, and 6% were in high school.
- The most initial SST meetings occurred in February and March, followed by October.
- Although the SST process recommends at least two meetings for each student, over 40% of students had only one SST meeting.
- Teachers, including a teacher alone or with parents, referred 92% of elementary SST students. Teachers referred only 64% of middle school SST students, and only 24% of high school SST students were referred by teachers. Most of the remaining students were referred by their parents.
- Eighty-nine percent of SST students were referred for academic reasons; 41% were referred for behavior reasons. Middle schools were most likely to refer students for both academic and behavior reasons.
- About half of students in grades 3-5 and 70% of students in grades 6-8 scored at grade level on the EOG before SST service.

Demographics

	SST	WCPSS
Black	44.7%	26.9%
White	40.0%	58.0%
Latino	10.1%	7.5%
Male	61.7%	51.0%
Female	38.3%	49.0%
FRL	46.3%	25.2%

SST Referral Source



- Of the four categories of strategies - classroom, school, family and community - classroom strategies were used most often; community strategies were used least often but rated as most effective by school staff.

OUTCOMES

- SST students did not demonstrate greater gains in achievement than matched comparison students. We could not match on referral reason; SST was not sufficient to overcome any initial differences based on these challenges. However, SST students at kindergarten and at grades 3-5 showed greater achievement gains than WCPSS overall.

Increase in Percent of SST Students Scoring On Grade Level from Pre-SST to Post-SST vs. Comparison Group and WCPSS Print Concepts, Book Level, EOG, and EOC

		vs. Comparison Group	vs. WCPSS
Kindergarten	Print Concepts	Similar	More
Grades 1-2	Book Level	Less	Less
Grades 3-5	Reading EOG	Less	More
	Math EOG	Less	More
Grades 6-8	Reading EOG	Less	Less
	Math EOG	Less	Less
Grades 9-12	English I EOC	N/A	Less

- SST students had a much higher percent increase in suspension rates at the elementary and high school levels than WCPSS, but not at middle school. The use of classroom strategies was positively correlated with a reduced number of suspensions at the middle school level.
- Suspension and achievement outcomes varied widely by school.
- In the elementary grades, school-based strategies as a whole were negatively correlated with EOG scale scores. Family-based strategies had a significant positive correlation with EOG scale scores.
- The earlier in the school year that the SST first met about a student, the more positive the outcome was likely to be.
- Nineteen percent of SST students were tested for possible special education placement. Of those tested, 64% were then placed in special education.

RECOMMENDATIONS

- Reconsider the implementation of SST at the middle and high school levels.
- Emphasize the need for SSTs to meet earlier in the school year.
- Define appropriate academic referrals more clearly. More than half of SST students began with EOG scores at level III and IV.
- Discuss ways to involve hard-to-reach parents.
- Share strategies from effective schools.
- If new programs or processes are implemented, evaluate using an experimental design.
- Report whether SST students make progress on specific, student-level goals.

STUDENT SUPPORT TEAM EVALUATION 2003-04

PROGRAM OVERVIEW

The Student Support Team (SST) is a multidisciplinary team of school staff that provides support to students who are experiencing academic, behavioral, family, and/or emotional difficulties that interfere with learning. SST works with parents/guardians to gather resources and develop strategies to help students succeed in the regular education classroom.

The goal of SST is to strengthen and support the student by developing and implementing an action plan using classroom-, school-, family-, or community-based strategies. Strategies used depend on the availability of resources most appropriate to promote the student's success. SST strategies involve school personnel, families, and/or community members as part of the action plan.

In addition to parents or guardians, SST can be comprised of:

- teachers
- an administrator
- a school psychologist
- a school counselor
- a school social worker
- the student (in middle and high school)
- others as appropriate

Students are typically referred to SST through a classroom teacher or parent. Once the student is referred, the team begins the six-step SST process, which includes the following steps:

1. identify concerns
2. assess the situation
3. search for strategies
4. select strategies
5. implement strategies
6. evaluate strategies

The SST process is cyclical; if the strategy evaluation in step six does not show student improvement, the process begins again.

METHODS

EVALUATION PLAN

The evaluation plan was developed through a collaboration between Evaluation and Research Department (E&R) and SST central office staff. The following evaluation questions are addressed in this report:

1. How many and what categories of students were served by SST?
2. Which school staff were members of SST?
3. How was SST implemented?
4. How did SST students achieve academically?
5. Did SST students' behavior improve?
6. Did student outcomes vary by:
 - a. school?
 - b. strategy?
 - c. other implementation characteristics?
7. How many SST students were tested for special education, and of those how many were placed?

DATA COLLECTION

SST staff and E&R collected scan sheets from the schools that provided information about each student's SST experience. SST Coordinators sent the names of initial student requests for SST every month, which were then recorded in the mainframe database. Pre-coded scan sheets were printed at the end of the year for distribution to SST Coordinators. Pre-coded scan sheets and return courier envelopes were given to the SST Coordinators at the end of the year meeting. Completed scan sheets were sent back to central office for processing.

The scan sheets included:

- student ID and other demographic information
- current services the student was receiving
- date of first SST meeting
- total number of SST meetings, as well as total SST hours spent on the student
- source of SST request
- parent involvement in SST
- presenting concerns
- strategies used with student and perceived effectiveness of each strategy

These data collected from the scan sheets were then merged with data available through Evaluation and Research. Each database and its source are listed in Figure 1.

SST staff requested SST team composition from all schools. Of those, 105 schools responded.

Figure 1
Data Sources
SST Evaluation 2003-04

Data type	Database	Source
Demographics, Income data, School, Grade, Retention	June 2004 Locator from Mainframe	Information Systems
Kindergarten Initial Assessment, K-2 Assessment	Data capture forms	Evaluation and Research
End-of-Grade and End-of-Course scores and dates	Masterbuild	Evaluation and Research
GPA	NC Wise	Information Systems
Suspensions	Mercury Database	Due Process Office

ANALYSIS

A number of standardized tests were used to measure academic outcomes of SST. They included the Kindergarten Initial Assessment (KIA), the K-2 Assessment, End-of-Grade tests (EOG), and End-of-Course tests (EOC).

Kindergarten students' achievement was measured using a scale called print concepts, which classroom teachers use to assess their students at the beginning of kindergarten as a part of the KIA, as well as at the end of kindergarten as a part of the K-2 Assessment. Although the scale measures the same skills for all students, teacher judgment still makes the measure somewhat subjective.

Achievement of students in grades 1 and 2 was measured using a standardized scale called book level, which measures the level at which the student is reading. Classroom teachers assess the students at the end of kindergarten, first, and second grade. All teachers are trained in the use of a standardized rubric to measure book level, which increases consistency of ratings, but the assessment is still somewhat subjective. Results using print concepts and book level should be interpreted with care.

Standardized EOG tests in math and reading are given to students in grades 3 – 8. These multiple-choice tests are created and field tested at the state level, and are a more reliable method of assessing student performance on the overall North Carolina standard course of study. In addition, the state also provides standardized EOC finals after high school courses. For this evaluation, the English I EOC was used.

All outcomes were calculated using SST students whose initial meeting was prior to April 1, 2004. Analysis was limited to ensure that SST strategies would have time to be implemented before testing began.

Many outcomes in this report were reported using a comparison group. The comparison group was created using a one-to-one match of students based on a number of characteristics. All students were matched on the following:

- free or reduced-price lunch eligibility (FRL)
- school percent FRL
- limited English proficiency (LEP)
- race
- sex
- grade
- retention status
- special education exceptionality and level of service

In addition, Figure 2 lists the additional characteristics that were matched for at each grade level.

Figure 2
Comparison Students Identified by Matching on Additional Characteristics

	Reading	Math
Kindergarten	<ul style="list-style-type: none"> • Print Concepts on Kindergarten Initial Assessment • Title I Status 	
Grades 1-2	<ul style="list-style-type: none"> • 2002-03 Book Level on K-2 Assessment • Title I Status 	
Grades 3-5	<ul style="list-style-type: none"> • 2002-03 Reading EOG Scale Score • Whether student was never suspended, suspended once, or more than once • Title I Status 	<ul style="list-style-type: none"> • 2002-03 Math EOG Scale Score • Whether student was never suspended, suspended once, or more than once • Title I Status
Grades 6-8	<ul style="list-style-type: none"> • 2002-03 Reading EOG Scale Score • Whether student was never suspended, suspended once, or more than once 	<ul style="list-style-type: none"> • 2002-03 Math EOG Scale Score • Whether student was never suspended, suspended once, or more than once
Grades 9-12	<ul style="list-style-type: none"> • Reading EOG Scale Score (grade 8) • Date EOG was taken • Whether student was never suspended, suspended once, or more than once 	Sample size was too small to analyze

While this list of matching variables is extensive, the groups may be different on some dimensions unavailable to us for analysis.

Academic outcomes are reported for students referred for that particular academic concern. Reading outcomes are calculated for students referred for language arts/English, reading (oral, phonics), or reading comprehension. Math outcomes are calculated for students referred for math computation or math problem solving.

DEMOGRAPHICS

1. How many and what categories of students were served by SST?

There were 4,944 students served by SST in 2003-04. The analysis in this report includes 15 duplicates. These students were retained in the data set because they were served by SST at two different schools during the school year, bringing the data set total to 4,959.

SST students' demographics compared to WCPSS as a whole are shown in Figure 3. SST students are more likely to be Black than WCPSS as a whole (44.7% vs. 26.9%) and less likely to be White (40.0% vs. 58.0%). In addition, SST students are more likely to be male than female (61.7% vs. 38.3%). Finally, SST students are almost twice as likely to be eligible for free or reduced-price lunch (FRL) than WCPSS as a whole (46.3% vs. 25.2%).

Figure 3
Demographics of SST Students vs. WCPSS in June 2004

	SST		WCPSS	
	Number	Percent	Number	Percent
Asian	58	1.2%	4,691	4.3%
Black	2,208	44.7%	29,204	26.9%
American Indian	20	0.4%	292	0.3%
Hispanic/Latino	497	10.1%	8,176	7.5%
White	1,978	40.0%	62,974	58.0%
Multiracial	183	3.7%	3,156	2.9%
Female	1,893	38.3%	53,236	49.1%
Male	3,051	61.7%	55,257	50.9%
LEP	413	8.4%	5,947	5.5%
FRL	2,287	46.3%	27,341	25.2%

Of SST students served, almost 80% were in the elementary grades. (See Figure 4.) SST served far fewer students in middle (14.4%) and high school (6.4%).

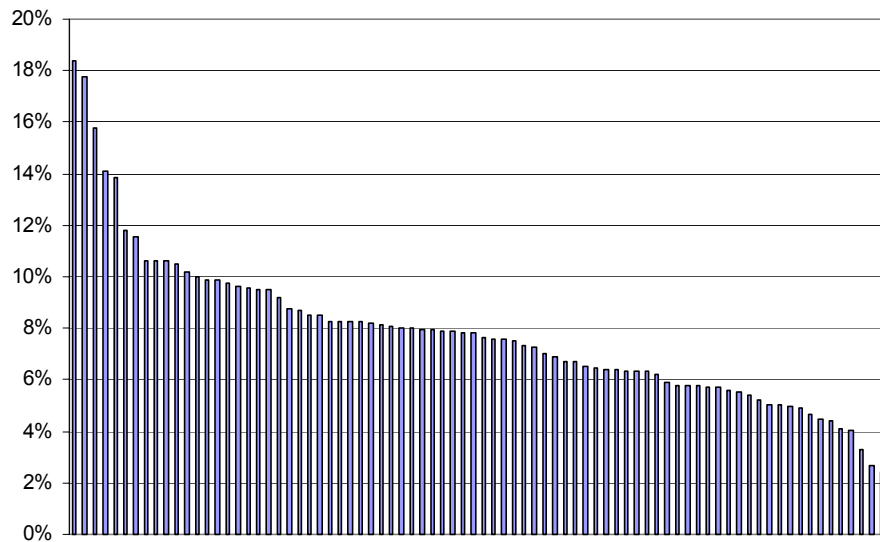
Figure 4
Number and Percent of SST Students in Each Grade
2003-04

		Number	Percent
Pre K	Pre K	1	0.0%
Elementary	Kindergarten	631	12.8%
	Grade 1	958	19.4%
	Grade 2	743	15.0%
	Grade 3	821	16.6%
	Grade 4	454	9.2%
	Grade 5	308	6.2%
	Total	3,915	79.2%
Middle	Grade 6	276	5.6%
	Grade 7	267	5.4%
	Grade 8	169	3.4%
	Total	712	14.4%
High	Grade 9	161	3.3%
	Grade 10	87	1.8%
	Grade 11	54	1.1%
	Grade 12	14	0.3%
	Total	316	6.4%*
All Levels	Total	4,943	100.0%

* Does not total exactly due to rounding.

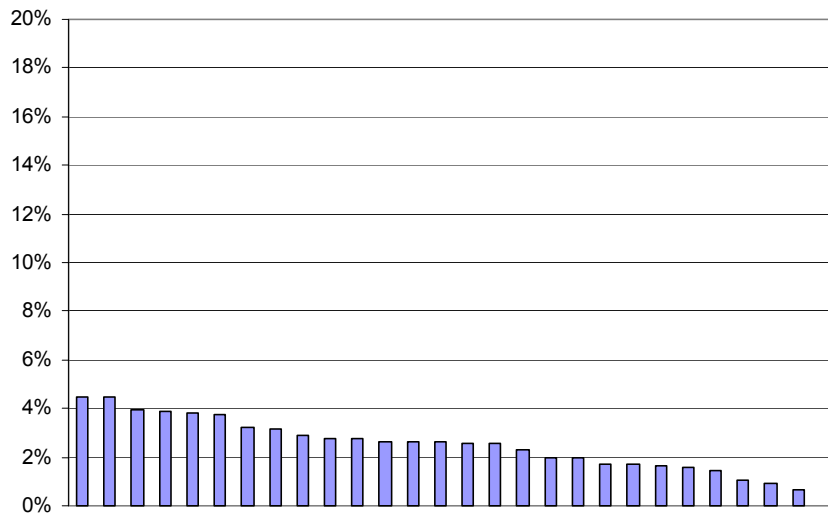
The percentage of students served by SSTs varied among schools. Between 2.4% and 18.4% of students at various elementary schools participated in SST. (See Figure 5.) The variation in percentage of participation does not have any correlation with the school's percent of FRL. However, there is a significant negative correlation between the percent of students scoring level III or IV on the reading EOG and the percent of the student body served by SSTs; as the percent of students scoring on grade level decreases, the percent of students served by SSTs increases ($r=-0.30$, $p<0.01$). This indicates that although implementation may vary between schools, part of this difference is accounted for by the academic need of students at a particular school. The total number of SST students at each school is shown in Attachment A.

Figure 5
Percentage of Students Served by SSTs - Elementary School
2003-04



Middle schools served many fewer students in SST than elementary schools. Figure 6 illustrates that there was still some variation in the number of students served among middle schools as well. The percentage of SST students served in a middle school varied from 0.7% to 4.5% per school. High schools served the fewest SST students. The percentage of students served in SST at high schools ranged from none to 1.8%. Although there was some variation in SST implementation in the secondary schools, it seems that overall SST was a smaller part of secondary schools' interventions than at the elementary school level. Two alternative schools, Longview School and Phillips High, did not have SSTs. Mt. Vernon Middle School, another alternative school, used SSTs with all students.

Figure 6
Percentage of Students Served by SSTs - Middle School
2003-04



IMPLEMENTATION

Below is a summary of implementation for SST students in the school system overall. Individual schools' implementation data was provided to each school directly.

2. Which school staff are members of SST?

Figure 7 shows the combined composition of various schools' SSTs. Of the 100 schools that responded that have only one SST, over 70% have an administrator, regular education teacher, and school psychologist as members. A special education teacher is included at over half of the schools. A counselor is on the team more often at the elementary than middle or high levels. On average, schools had six to seven members on their teams, with slightly more people on the elementary SSTs (6.9), followed by high school (6.5). Middle school SSTs had the smallest average number of SST members (6.0). The range of number of staff members on SSTs varied from 2 to 11 by school.

Figure 7
Percent of Schools With One SST That Reported Team Composition
2003-04

Staff Position	Elementary n=66	Middle n=21	High n=13
Administrator	85%	71%	85%
Counselor	59%	29%	31%
Regular Education Teacher	89%	95%	85%
Special Education Teacher	52%	52%	62%
Title I Teacher	23%	--	--
IRT	9%	--	--
School Social Worker	3%	14%	8%
School Psychologist*	100%	100%	100%
Other	36%	29%	69%
Average number of SST members	6.9	6.0	6.5

* As reported by SST central office staff

Three elementary schools reported that they had multiple SSTs. Durant Road Elementary, a year-round school, had a separate SST for each track. The SSTs were very similar, varying only in the number of teachers who were regular versus special education. Fuller Elementary and Lynn Road Elementary had separate SSTs for K-2 and 3-5. The composition of their teams varied quite a bit by level. For the distribution of SST members for these schools as well as others, see Attachment C.

3. How was SST implemented?

SST implementation information was captured for each student by SST staff members at each school. Included below is information about how much time SSTs spent on each student and when initial meetings were held. In addition there is the type of referral and where the referral came from, the academic achievement of students coming in to the program, and the different type and perceived effectiveness of different strategies.

At least two SST meetings are required for each student - an initial planning meeting and a follow-up meeting to assess the student’s progress. However, over 40% of students served by SST had only one meeting. About 46% of students are served by two SST meetings. About 65% of students are served by SSTs for one or two hours. Some SSTs spend much more time on a few students; SSTs met for 10 or more hours for 150 students. (See Figures 8 and 9.)

Figure 8
Number of Hours Spent on SST Students (n=4,744)
2003-04

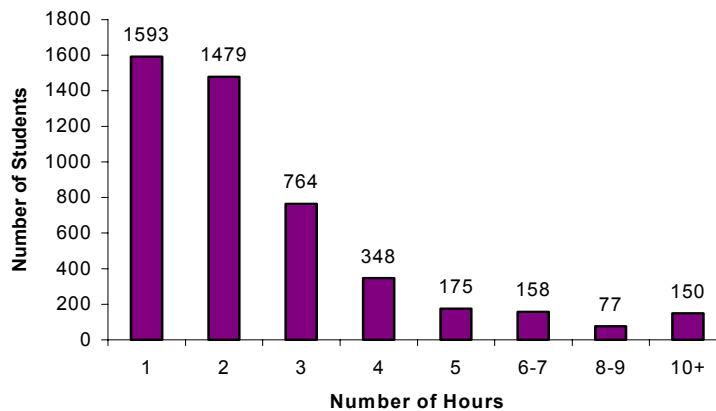
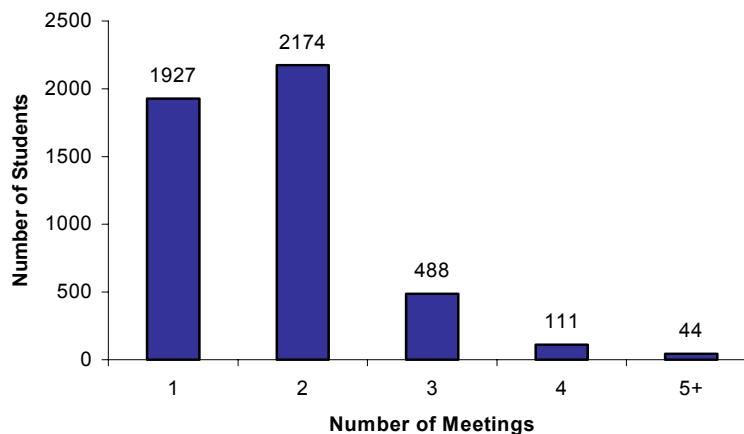
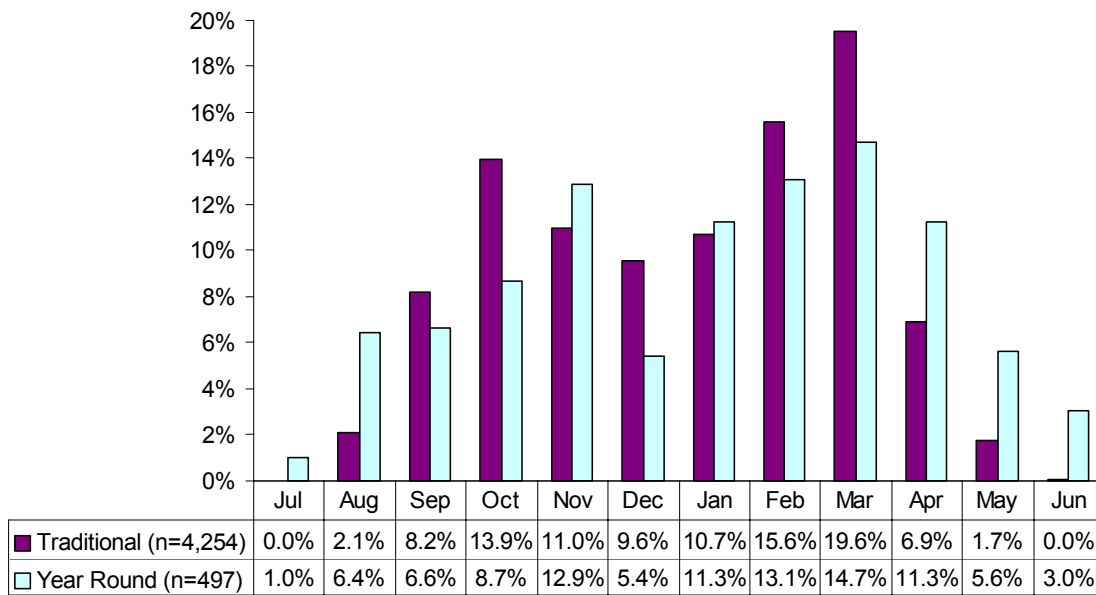


Figure 9
Number of Meetings About SST Students (n=4,744)
2003-04



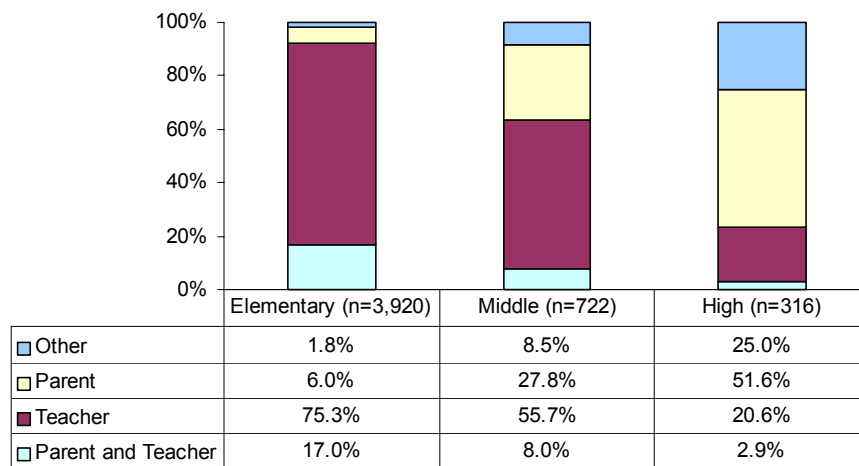
SSTs met for the first time about a student most often in February and March, followed by October in traditional schools and November in year-round schools. (See Figure 10.) The small number of meetings and hours spent per student may have been impacted by the trend toward serving students late in the year. SSTs may have served more students in February and March for a variety of reasons. In some cases, teachers may have tried to work with a student themselves through the first semester before referring to SST; in other cases they may have been trying to address issues before spring testing. The referral process is lengthy, and difficulty in scheduling students may have contributed to later initial SST meetings. In addition, the spike in serving SST students in the spring may have been impacted by schools' perception that SST is a requirement for retention. Using SST as a screening tool for retention rather than a substantive early intervention for struggling students may have had a negative impact on overall program academic outcomes.

Figure 10
Month of Initial SST Meeting
2003-04



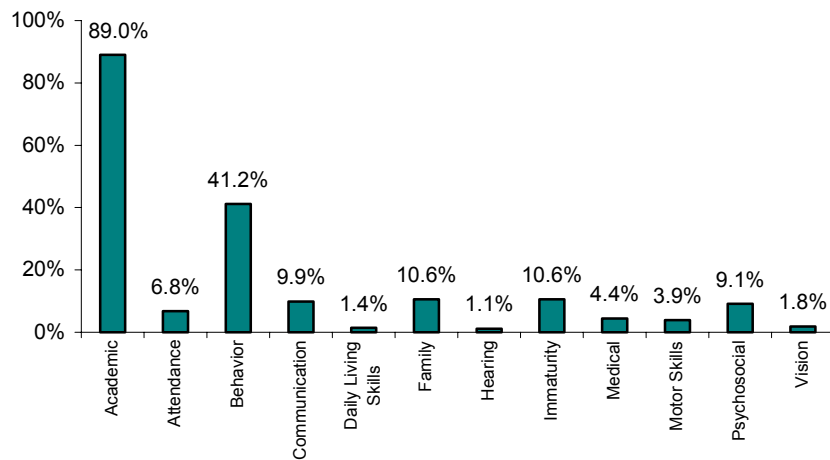
Referrals to SST came primarily from teachers and parents. Other referrals included counselors, nurses, and outside agencies. Figure 11 illustrates the differences between the source of referrals at the different levels. At the elementary level, teachers referred the students to SST over 92% of the time. By contrast, teachers referred 64% of the students at the middle school level, and only 24% of the time at the high school level. The distinct difference in method of identifying SST students indicates an important difference in the SST program between levels. A full list of referral sources is provided in Attachment B.

Figure 11
SST Referral Source by Level
2003-04



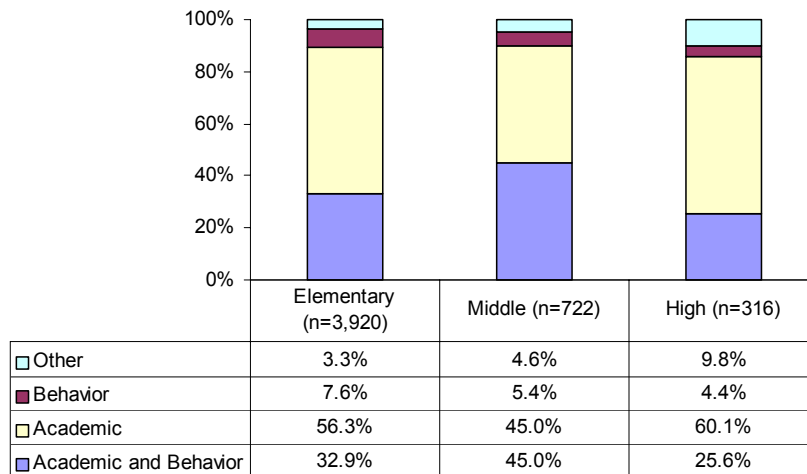
As illustrated in Figure 12, students were referred to SST primarily for academic reasons (89%). In addition, about 41% were referred for behavior reasons; a large proportion of students were referred to SST for both academic and behavioral reasons. Reasons for referral did not vary much between levels. Of SST students, 46% were referred for one reason, 31% were referred for two reasons, 13% were referred for three reasons, and 10% were referred for four or more reasons.

Figure 12
Presenting Concern of SST Students (n=4,959)
2003-04



The proportion of students referred for both academic and behavior reasons was higher at the middle school level (45%) than either the elementary (33%) or high school (26%) levels. (See Figure 13.)

Figure 13
Presenting Concern of SST Students by Level
2003-04



* Total is not equal to 100% due to rounding

Of students referred for academic reasons, most were referred for reading comprehension (68%) followed by work habits (62%) and written language (60%). Students were least often referred for social studies (17%) and science (16%). (See Figure 14.)

Figure 14
Academic Concern of SST Students Referred for Academics (n=4,415)
2003-04

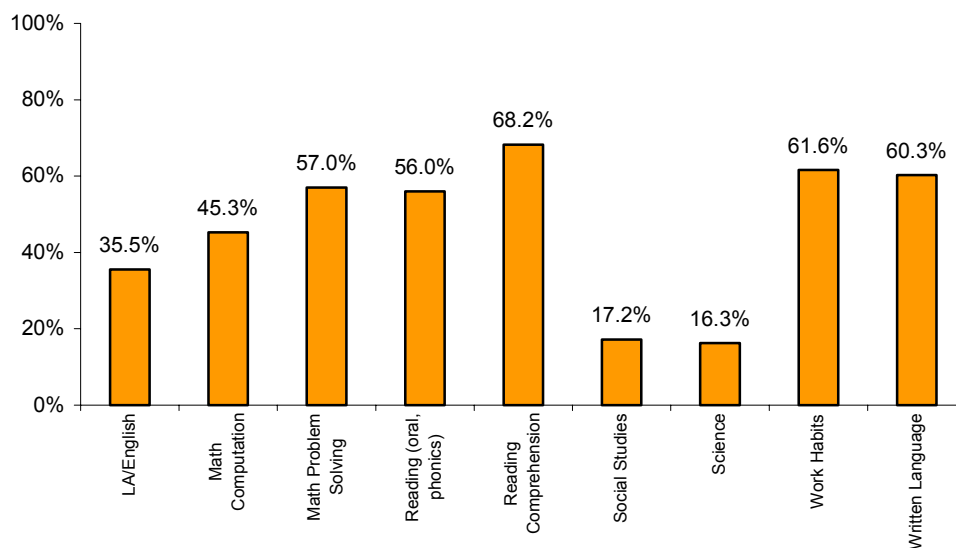
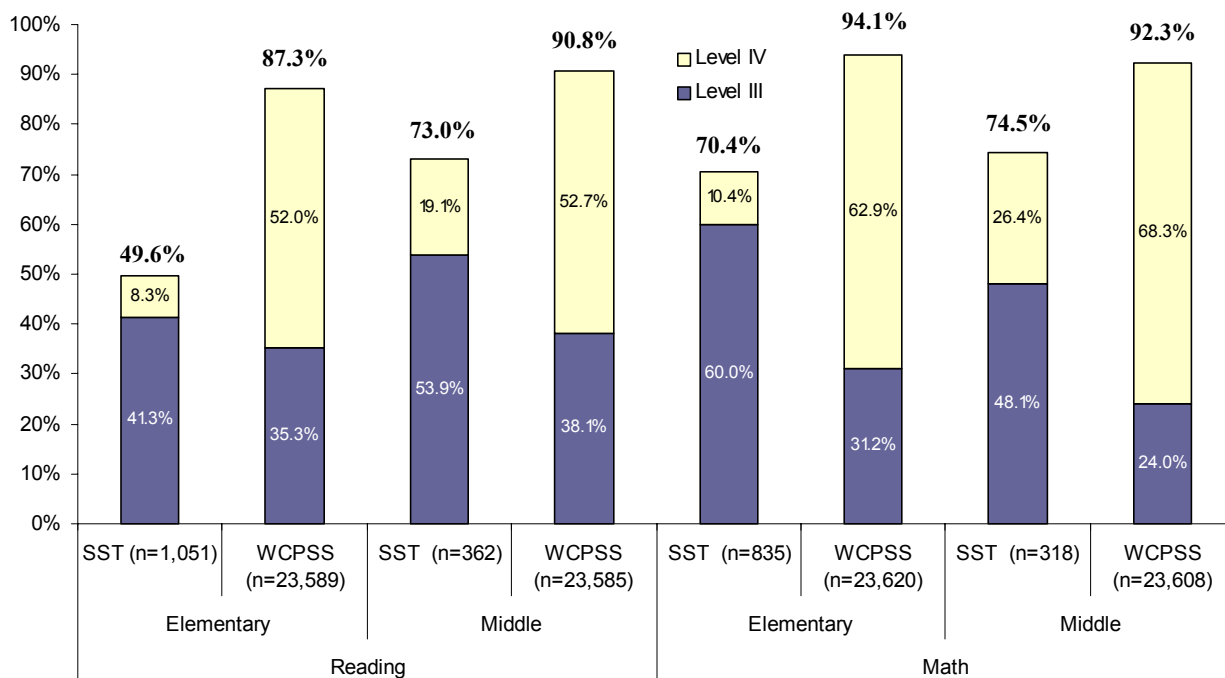


Figure 15 illustrates the EOG levels that SST students scored *before* beginning SST. Reading EOG is shown for students referred for language arts/English; reading (oral, phonics); or reading comprehension. Math EOG is shown for students referred for math computation or math problem solving.

In reading, about 50% of students in grades 3-5 scored above grade level before they began the SST process. In grades 6-8, more than 70% began on grade level in reading. Math referrals were similar in grades 3-5 and grades 6-8, with about 70% starting on grade level. This is lower than the system overall, but is still higher than expected. (See Figure 15.)

Figure 15
EOG Levels of Referred SST Students vs. WCPSS
Pretest 2002-03



SST staff members may want to consider the target population and goals of SST. Some of the students served who had been scoring on grade level may have been referred for both academic and behavioral reasons. Such a student might have had the ability to perform on exams, but was struggling in his or her coursework for various reasons. In addition, a student might have been struggling academically, but the issue may not have been reflected in previous EOG scores. In spite of these reasons for the higher percentage of SST students beginning on grade level, a closer look should be taken at the target population of SST. These referrals may not have been appropriate if SST wanted to target the lowest achievers in WCPSS. To more effectively implement SST and measure expected outcomes, staff could more clearly define the nature of appropriate achievement referrals.

Of the 4,696 students for whom data was available, 79.4% of families had a parent or guardian involved in the SST process. The remaining 20% of SST students presented a challenge to SST staff. Staff members have indicated frustration with not having family support behind interventions, especially family- or community-based strategies. To improve the effectiveness of the SST process, brainstorming or sharing successful strategies to better involve parents may be helpful. For applicable schools, Partnership for Educational Success (PES) might be used as a strategy.

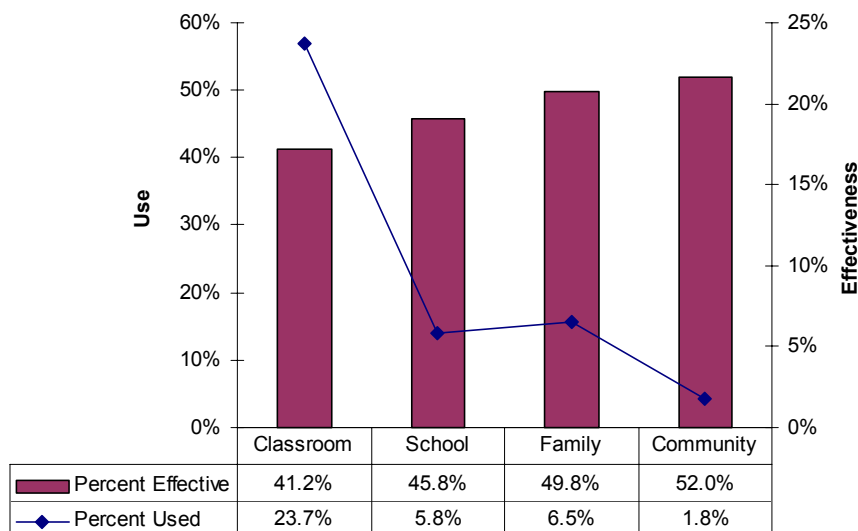
Of the 4,434 students with available data, 22.9% had been served by SST in 2002-03. In addition, 72% of current SST students were expected to either be monitored by or fully involved with SST in the 2004-05 school year.

A list of 55 strategies were provided by SST staff to elicit details about how students' issues are addressed by the SST. There was some overlap of strategies between categories. In addition, the perceived effectiveness of each strategy was given. The strategy with the highest percent rated effective was Empowerment/Human Development, at 71.4%, although it was listed only nine times. The highest rated strategy used with more than 40 students was Title I, at 63.7%. A list of the use and reported effectiveness of each individual strategy by category is provided in Attachment D.

SST strategies are divided into four categories: classroom, school, family, and community. Figure 16 illustrates the implementation of each category of strategies compared to the perceived effectiveness. The bars represent the percent of students for whom the strategies in each category were reported as effective by SST staff, indicated by the scale on the left y-axis. The dots represent the percent of time that strategies in each category were used, indicated by the scale on the right y-axis.

The strategies used most often by far were those in the classroom category. These strategies were easiest to implement, only impacting the student within his or her classroom. However, the perceived effectiveness of these strategies was the lowest. School, family, and community strategies were utilized much less frequently, most likely because they are more difficult to implement, and often use scarce resources. However, SST staff members indicate that when they were used, they are perceived to be somewhat more effective.

Figure 16
Percent of SST Strategies Used Compared to Reported Effectiveness of Strategies 2003-04



RESULTS

4. How did SST students achieve academically?

SST Academic Performance vs. Comparison Group

SST students' academic performance was calculated below by comparing SST students to a match group that was created based on a number of demographic and achievement variables (see "Methods" section). Using the match group indicated how SST students performed compared to similar students, which was the most accurate representation of the effectiveness of SST. However, because SST is available in all schools, the pool of similar students is somewhat limited, and not all SST students had a matching student available. As a result, the group of SST students who were matched looks somewhat different than SST students as a whole (i.e. pre-EOG scores are higher for matched SST students than SST students as a whole). In addition, non-SST students may have been receiving interventions that we were not aware of, that may influence their academic performance. Regardless, the matched comparison is the most accurate measure of success that we have available for SST.

K-2 Assessment

For the purposes of measuring SST student achievement in grades K-2, specific measures from the KIA and K-2 assessment have been used. Kindergarten students are considered on grade level by local guidelines when they achieve 6 print concepts in the fall and 17 print concepts in the spring. Students in grades 1 and 2 are assessed using the book level measure from the K-2 assessment. Students are considered on grade level when they score a book level of 3-4 in the spring of kindergarten, 15-16 in the spring of grade 1, and 23-24 in the spring of grade 2. While administration methods are standardized for these K-2 measures and they are the best measures available at these grade levels, it must be recognized that teacher judgment makes results more subjective than those for EOG tests.

Change in print concepts and book level is reported only for those students referred for language arts/English; reading (oral, phonics); or reading comprehension. In addition, only students whose initial SST meeting was before April 1 were included in the analysis.

As shown in Figure 17, a lower percentage of SST students referred for reading scored on grade level initially than WCPSS kindergarten students. The increase was very similar to the comparison group. The difference was not statistically significant using the chi-square test ($\chi^2=0.0173$, $p>.05$). Although additional gains are not being scored by SST students, it is an important finding that SST students are keeping pace with the comparison group despite possible additional challenges.

Figure 17
Kindergarten SST Students Referred for Reading and Comparison Group
Percentage On Grade Level
Pre and Post Print Concepts 2002-03 to 2003-04

Grade		N	Pre Fall 2003	Post Spring 2004	Change
K	SST	120	48.3%	59.2%	+10.9%
	Comparison	120	48.3%	60.0%	+11.7%
	WCPSS	4,559	68.8%	85.8%	+17.0%

For the purpose of this report, students are considered on grade level when they have book level scores of 3-4 in the spring of kindergarten, 15-16 in the spring of grade 1, and 23-24 in the spring of grade 2.

For matched students, the percentage of SST students with scoring on grade level as measured by book level decreased by more than 10 percentage points in both grades 1 and 2, while the percentage of students scoring on grade level in the comparison group increased by more than 10 percentage points. Differences are significant using the chi-square test (grade 1: chi-square=36.50, $p<.01$; grade 2: chi-square=21.36, $p<.01$). (See Figure 18.)

Figure 18
Grades 1 and 2 SST Students Referred for Reading and Comparison Group
Percentage on Grade Level
Pre and Post Book Level 2002-03 to 2003-04

Grade		N	Pre 2002-03	Post 2003-04	Change
1	SST	227	61.2%	49.8%	-11.4%
	Comparison	227	61.2%	77.1%	+15.9%
	WCPSS	7,114	78.1%	82.5%	+4.4%
2	SST	123	65.9%	48.8%	-17.1%
	Comparison	123	65.9%	77.2%	+11.3%
	WCPSS	6,705	83.9%	85.6%	+1.7%

SST students' median book level in both grades 1 and 2 did not show quite as high an increase as both the comparison group and WCPSS. This suggests that SST students in grades 1 and 2 may not be improving in their literacy skills at the same rate as other similar students. (See Figure 19.)

Figure 19
Grades 1 and 2 SST Students Referred for Reading and Comparison Group
Median Book Level
2002-03 to 2003-04

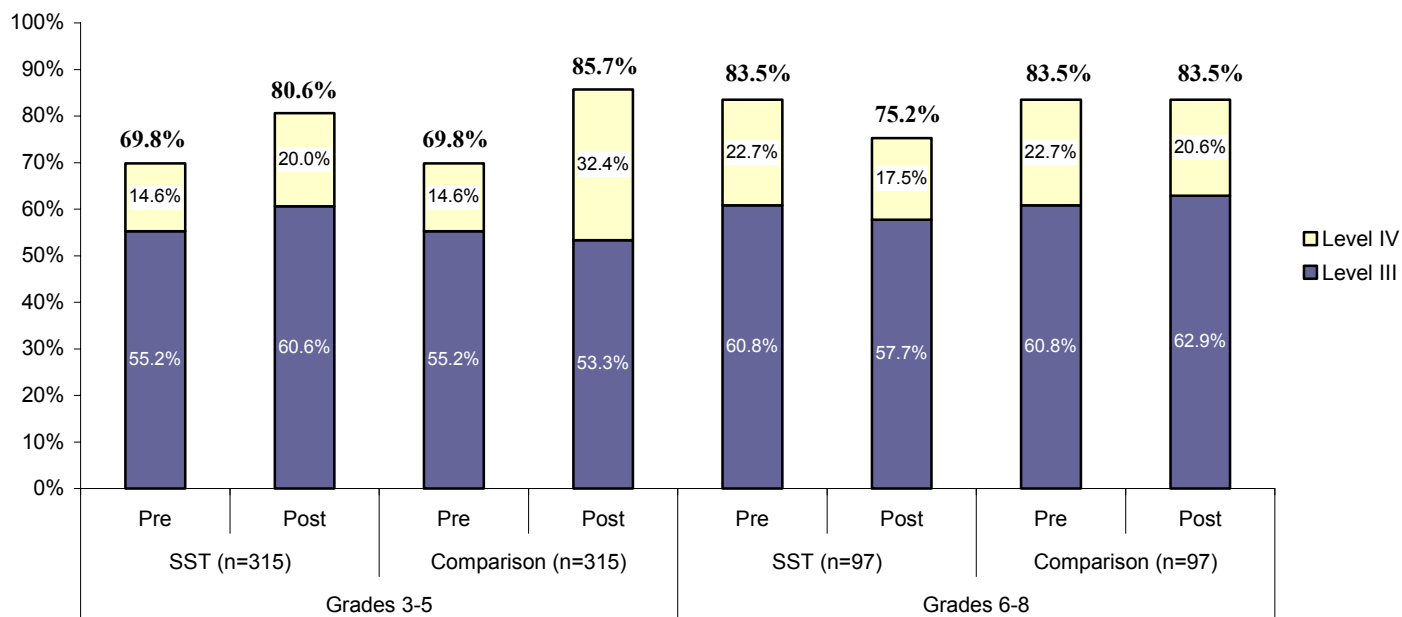
Grade		N	Pre 2002-03	Post 2003-04	Change
1	SST	227	3-4	13-14	10
	Comparison	227	3-4	15-16	12
	WCPSS	7,114	5-6	17-18	12
2	SST	123	15-16	21-22	6
	Comparison	123	15-16	23-24	8
	WCPSS	6,705	17-18	25-26	8

End-of-Grade

Figure 20 illustrates the change in percentage of students referred for reading scoring level III or IV on the reading EOG versus the comparison group. The percentage of elementary SST students scoring on grade level increased 10.8 percentage points, compared to a 15.9 percentage point increase for the comparison group. This difference is statistically significant ($X^2=14.41$, $p<.01$). Elementary SST students made gains, although not as large as the comparison group.

The percentage of middle school SST students scoring on grade level in reading decreased 8.3 percentage points, while the comparison group stayed the same, although the difference is not statistically significant ($X^2=2.98$, $p>.05$). Such a difference in results points to the possibility that SST is not effective in improving student reading skills in middle school.

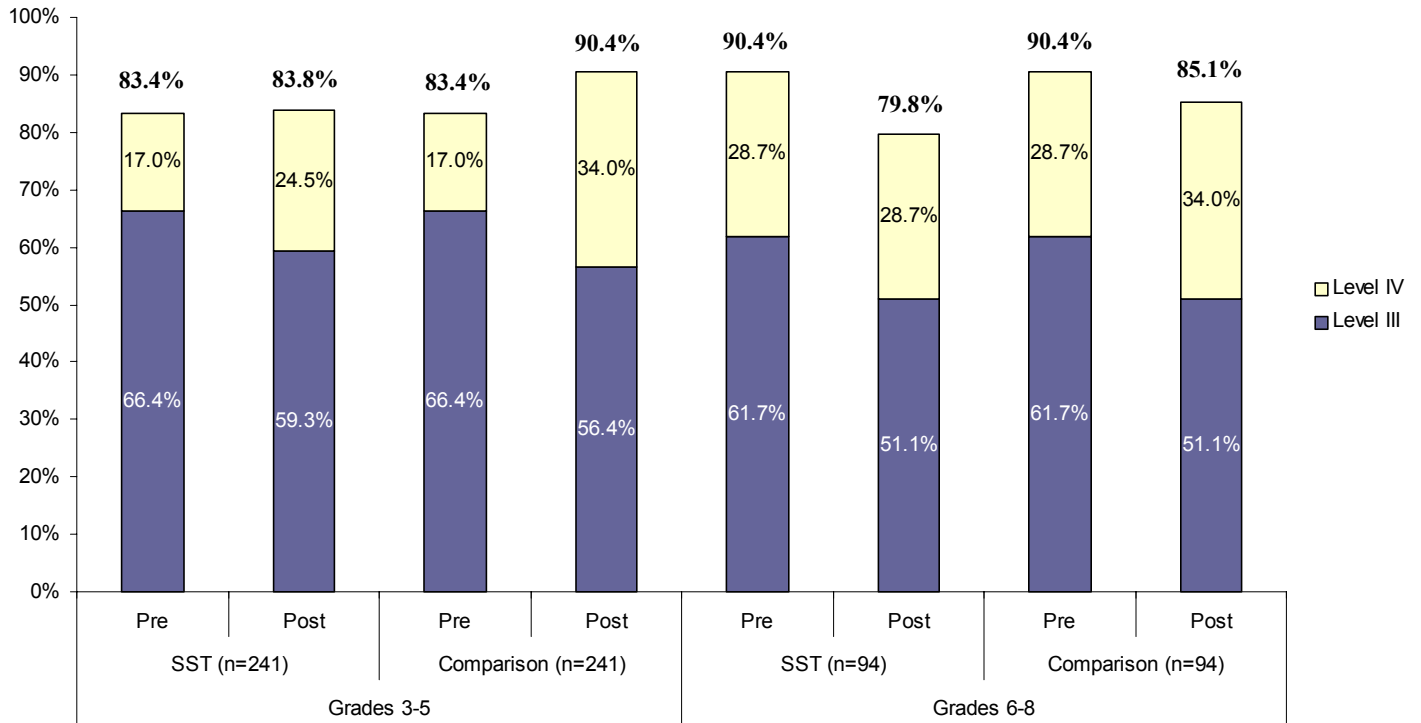
Figure 20
Elementary and Middle SST Students Referred for Reading and Comparison Group
Pre and Post Reading EOG Percentage at Grade Level
2002-03 to 2003-04



The percentage of elementary SST students referred for math that attained grade level on the math EOG increased 0.4 percentage points, while the percentage of the comparison group scoring on grade level increased 7.0 percentage points. This difference is statistically significant ($X^2=8.07, p<.05$). Elementary SST students were not more likely to score on grade level, although their comparisons were.

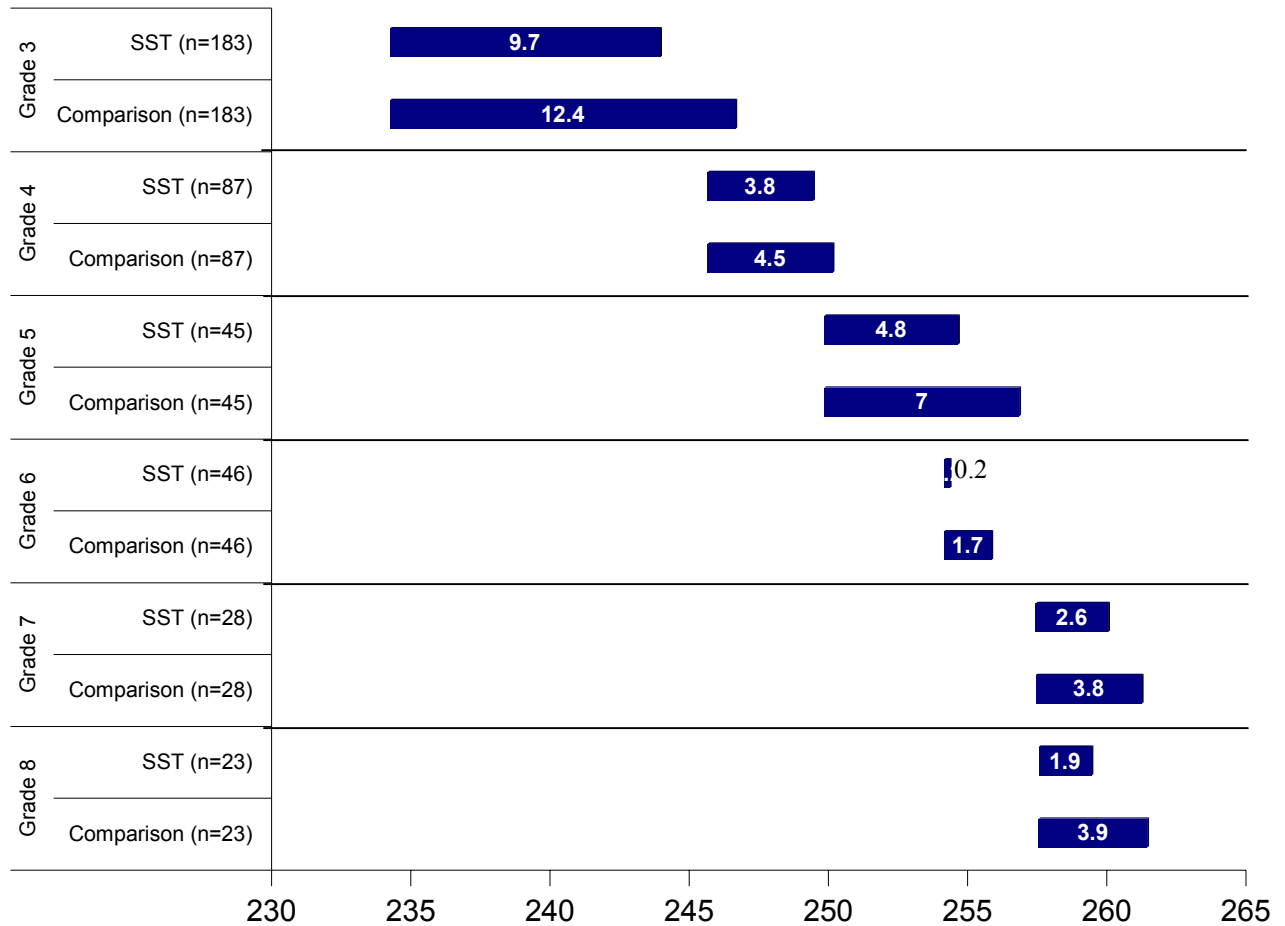
The percentage of middle school SST students referred for math scoring level III or IV decreased 10.6 percentage points, while the comparison group decreased 5.3 percentage points, which is not a statistically significant difference ($X^2=2.37, p>.05$). Although middle school SST students were less likely to score on grade level in math, their comparisons were less likely as well. (See Figure 21.) The comparison group is most likely showing statistically more growth at the elementary but not at the middle school level due to the much larger sample size at the elementary level.

Figure 21
Elementary and Middle SST Students Referred for Math and Comparison Group
Pre and Post Math EOG Percentage at Grade Level
2002-03 to 2003-04



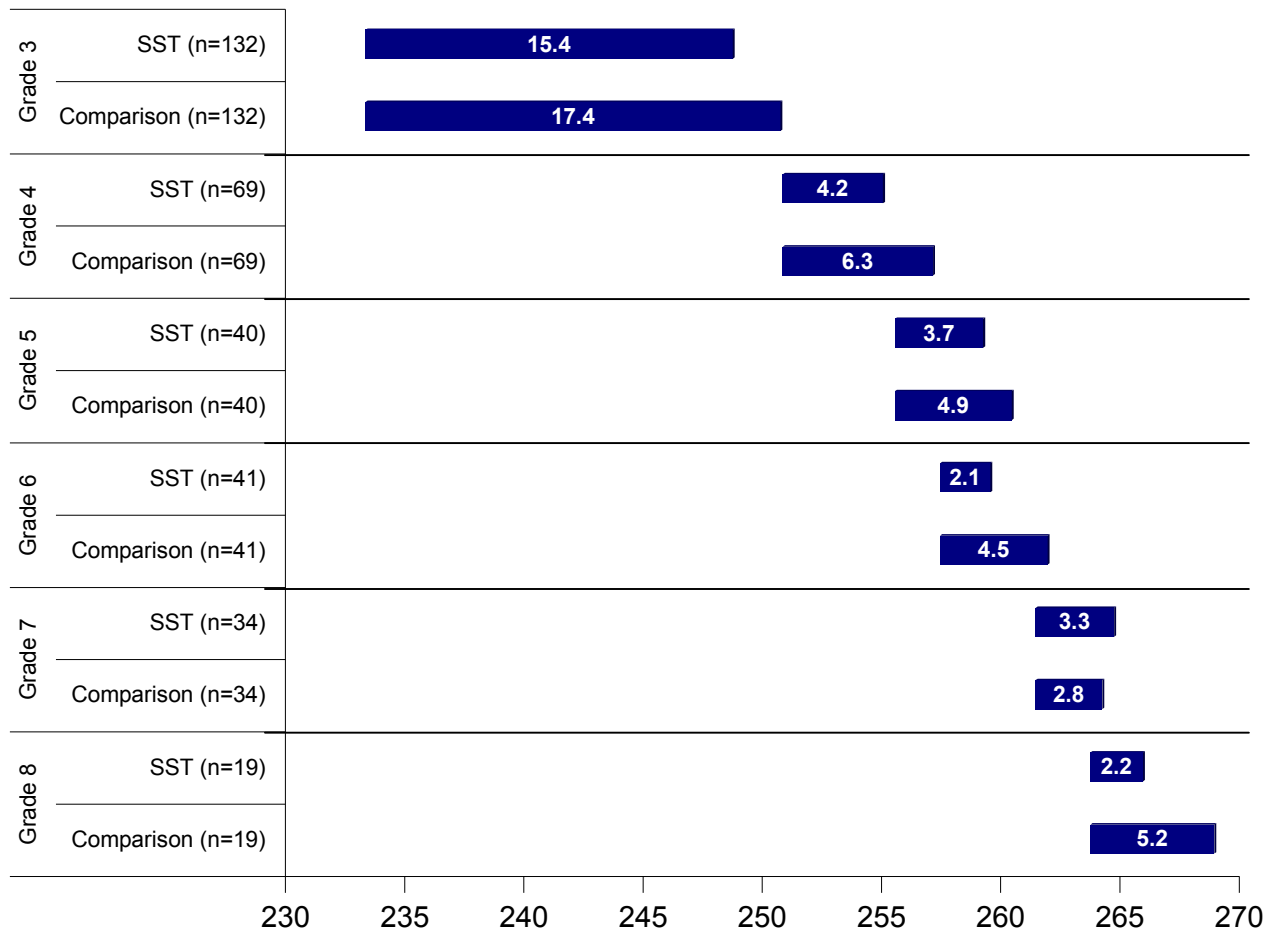
The pattern of increase in mean scale score for the reading EOG was the same as that of percent on grade level just described. In each grade, the comparison group had higher growth than the SST students. (See Figure 22.)

Figure 22
Elementary and Middle SST Students Referred for Reading and Comparison Group
Pre and Post Reading EOG Mean Scale Score Growth
2002-03 to 2003-04



Again, the pattern of increase in mean scale score for the math EOG was the same as that of percent on grade level above. In each grade, the comparison group had higher growth than the SST students, except 7th grade. The 7th grade SST students had slightly higher growth than their comparison group. (See Figure 23.)

Figure 23
Elementary and Middle SST Students Referred for Math and Comparison Group
Pre and Post Math EOG Mean Scale Score Growth
2002-03 to 2003-04



The pattern of results does not support a positive impact of SST on EOG achievement. However, the pattern may look more negative than it truly is to the extent that students in the SST group had additional challenges to learning than the comparison group. On the one hand, this seems likely since students referred to SST stood out to schools as different from other students. On the other hand, the considerable variation in use of the SSTs between schools

indicates that some students with similar problems may or may not have been referred to SST depending on their school placement. In addition, at-risk students not served by SST may have been in other programs with similar goals that might have increased their achievement as well. As a result, the students for whom matches were found had a higher initial rate of success on their K-2 and EOG assessments than SST students as a whole, and they are not completely representative of the SST population. The only way to know for sure whether a student was more or less academically successful after participating in SST is to compare these students to a randomly assigned control group. Specific suggestions are given in the “Recommendations” section for possible ways to use experimental design.

End-of-Course

Finding comparison groups for students based on their referral matching EOC scores resulted in very small numbers of students per group (less than 15 per group for English I, less than 5 per group for Algebra I). Therefore, analysis of high school students based on these scores was considered unusable.

SST Academic Performance vs. WCPSS

The following analyses of all SST students’ academic outcomes are shown along with WCPSS data. The WCPSS data provides useful context to examine whether SST students were closing the gap between their performance and WCPSS overall.

K-2 Assessment

For the purposes of this report, kindergarten students are considered on grade level if they score six or more print concepts in the fall, and 17 or more print concepts in the spring.

The percentage of SST kindergarten students who scored on grade level increased about seven percentage points more than WCPSS as a whole. However, the percentage of SST students in grades 1 and 2 who scored on grade level actually decreased, while the percentage of WCPSS students increased. (See Figure 24.)

Figure 24
SST Students Referred for Reading
Pre and Post Print Concepts and Book Level: Percent on Grade Level
2002-03 to 2003-04

Grade		n	Pre	Post	Change
K	SST	288	37.5%	61.8%	+24.3%
	WCPSS	4,559	68.8%	85.8%	+17.0%
1	SST	560	53.6%	38.4%	-15.2%
	WCPSS	7,114	78.1%	82.5%	+4.4%
2	SST	324	51.2%	43.2%	-8.0%
	WCPSS	6,705	83.9%	85.6%	+1.7%

Figure 25 shows the median book level attained by SST students in grades 1 and 2, as well as WCPSS as a whole. It illustrates not only the achievement of students referred specifically for reading, but also subsets of SST including all of those students referred for academic reasons, those referred for behavior reasons, and those referred for both academic and behavior reasons. In addition, the achievement of the entire population of SST, as well as the entire population of WCPSS, are given for context.

Grade 1 SST students' median book level increased 10 points in grade 1, two points less than the median of all grade 1 students. Grade 2 SST students' median book level increased eight points, the same as the median of all grade 2 students. However, the median book level of students referred for reading only increased six points. SST students in grades 1 and 2 were not making greater gains in literacy skills as WCPSS as a whole. Median book levels and percent of students on grade level indicate that strategies for SST students in grades 1 and 2 should be considered to perhaps increase effectiveness at improving literacy.

Figure 25
SST Students Referred for Reading, SST Students Referred for Any Academic and/or Behavior Reason, and All SST and WCPSS as a Whole
Pre and Post Median Book Level 2002-03 to 2003-04

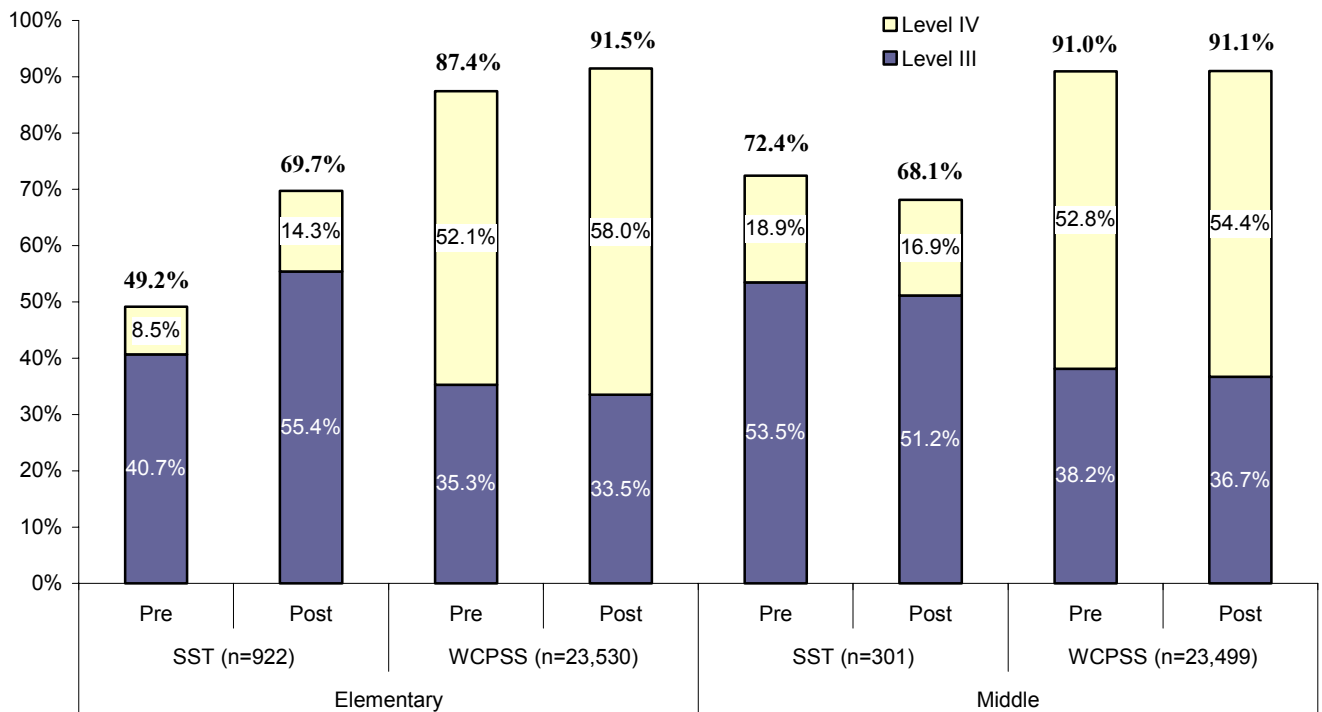
Grade		n	Pre	Post	Change
1	Reading	560	3-4	13-14	10
	Academic Only	385	3-4	13-14	10
	Behavior Only	48	5-6	17-18	12
	Academic & Behavior	216	3-4	13-14	10
	All SST	659	3-4	13-14	10
	WCPSS	7,114	5-6	17-18	12
2	Reading	324	15-16	21-22	6
	Academic Only	272	15-16	23-24	8
	Behavior Only	39	21-22	27-28	6
	Academic & Behavior	147	15-16	23-24	8
	All SST	472	15-16	23-24	8
	WCPSS	6,705	17-18	25-26	8

End-Of-Grade Tests - Percent of Students at Grade Level

In addition to overall SST groups, reading EOG outcomes are calculated for students referred for reading, and math EOG outcomes are calculated for students referred for math. In addition, only students who had their initial SST meeting before April 1 were included.

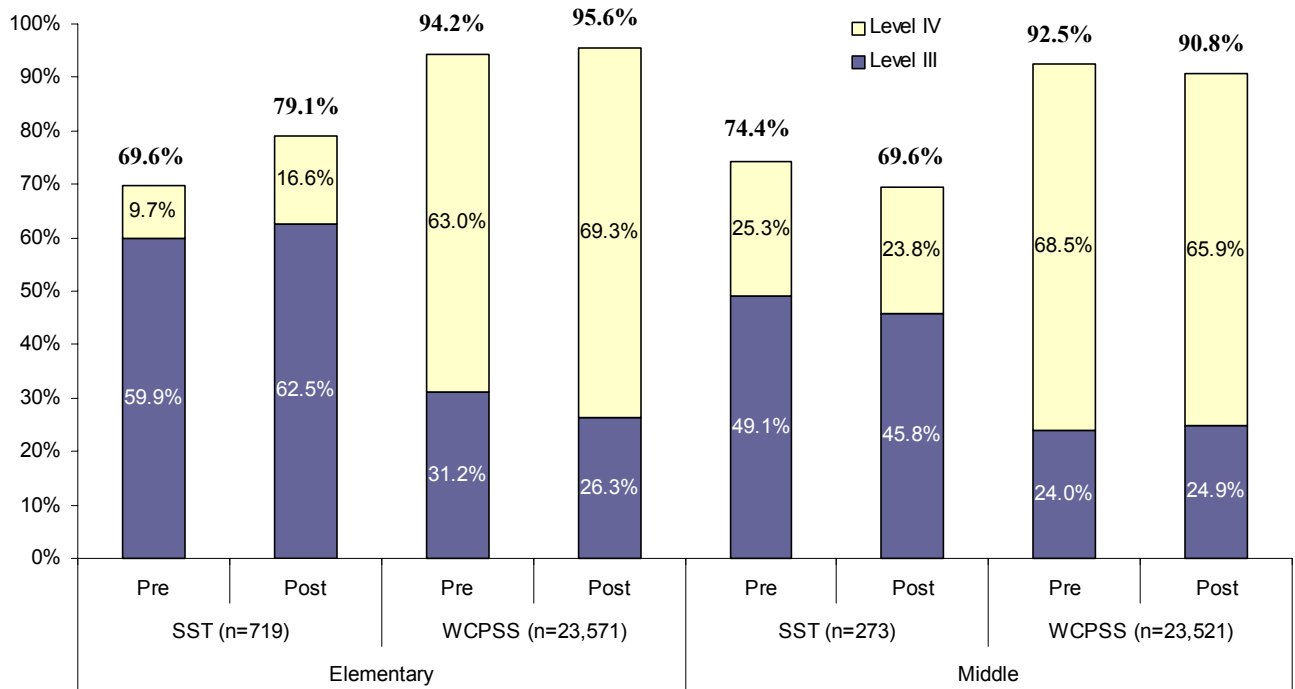
In reading, the percentage of elementary SST students who were referred for reading who scored level III or IV in reading increased over 20 percentage points between spring 2003 and spring 2004, while the percentage of WCPSS students scoring level III or IV only increased about four percentage points. A twenty percentage point increase indicates that a large improvement in reading achievement was correlated with SST participation. However, SST students referred for reading at the middle school level were less likely to score a level III or IV on the reading EOG after participating in SST (less four percentage points), while all middle school students were just as likely to score on grade level. (See Figure 26.)

Figure 26
SST Students Referred for Reading
Pre and Post Reading EOG Levels III and IV
2002-03 to 2003-04



In math, the percentage of elementary SST students referred for math who scored on grade level in math increased almost ten percentage points pre to post, compared to a WCPSS increase of 1.4 percentage points. Although the increase in math was important, the increase was not as high as that in reading. The percentage of middle school SST students referred for math scoring level III or IV on the math EOG decreased almost five percentage points, a slightly larger decrease than even that of reading. However, the percentage of middle school students as a whole scoring level III or IV decreased as well. (See Figure 27.)

Figure 27
SST Students Referred for Math
Pre and Post Math EOG Levels III and IV
2002-03 to 2003-04



End-Of-Grade Tests - Scale Scores

Because a limited number of SST students scored below grade level on the EOG prior to SST, growth in scale scores may have a more illustrative correlation with SST participation, and not just those beginning below grade level. Students referred to SST for reading reasons are included in the EOG reading analysis, and students referred to SST for math reasons are included in the EOG math analysis. In addition, growth of all students referred only for academic reasons is illustrated along with growth of all students referred for both academic and behavioral reasons for both reading and math. Students referred for behavior reasons only are not included because the group size in each grade was smaller than 30, and therefore not reliable. Finally, the growth of all SST students and all WCPSS students are included for context. These various groups are included to ascertain whether academic growth in reading and/or math may have occurred even when those specific skills were not necessarily being targeted.

SST students referred for reading reasons showed larger increases in scale scores for reading in the elementary grades than in middle school. (See Figures 28 and 29.) Although the trend is the same for WCPSS as a whole, the increases of SST students are higher than WCPSS in the elementary grades, and lower than WCPSS in middle school grades, with only a slight difference in grade 7. In addition, students referred for academic reasons show slightly higher growth than those referred for academic and behavior reasons, with the exception of grade 7. This trend is to be expected, as students with multiple issues have more to address, and are therefore more difficult to serve.

SST students made approximately the same gains as WCPSS students on the math EOG. (See Figures 30 and 31.) Grade 3 showed more than two points higher gain than WCPSS, but all other grades showed gains within one scale score point. As with reading, students referred for academic reasons only scored slightly higher on the math EOG than those students referred for both academic and behavior reasons.

Positive elementary results likely reflect students' overall situation, not necessarily SST as a specific intervention, since results with a matched group did not show such a positive pattern.

Figure 28
Increase in Elementary Reading EOG Scale Score 2002-03 to 2003-04
SST Students Referred for Reading, SST Students Referred for Any Academic Reason
Only or Both Academic and Behavior, and All SST and WCPSS as a Whole

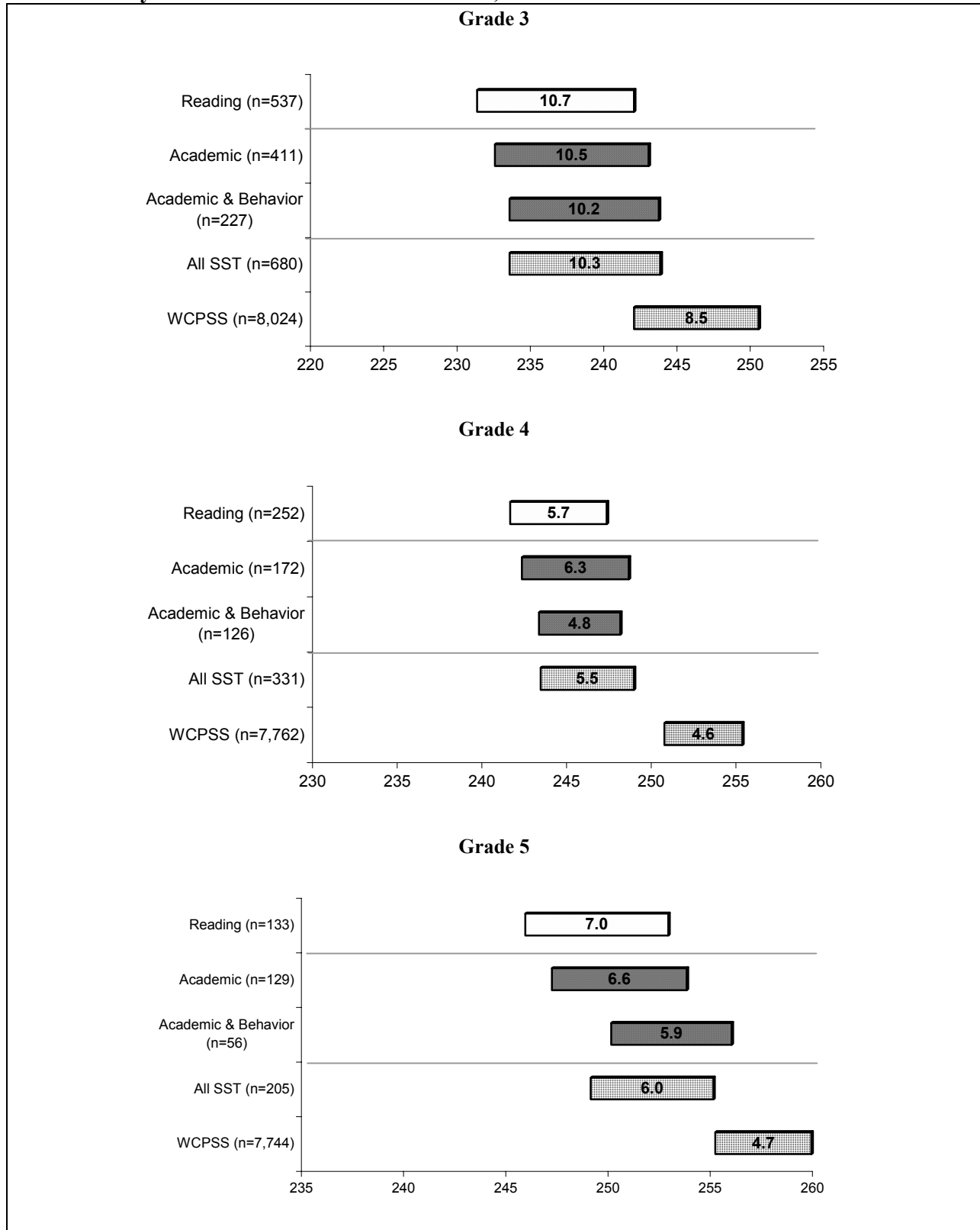


Figure 29
Increase in Middle School Reading EOG Scale Score 2002-03 to 2003-04
SST Students Referred for Reading, SST Students Referred for Any Academic Reason
Only or Both Academic and Behavior, and All SST and WCPSS as a Whole

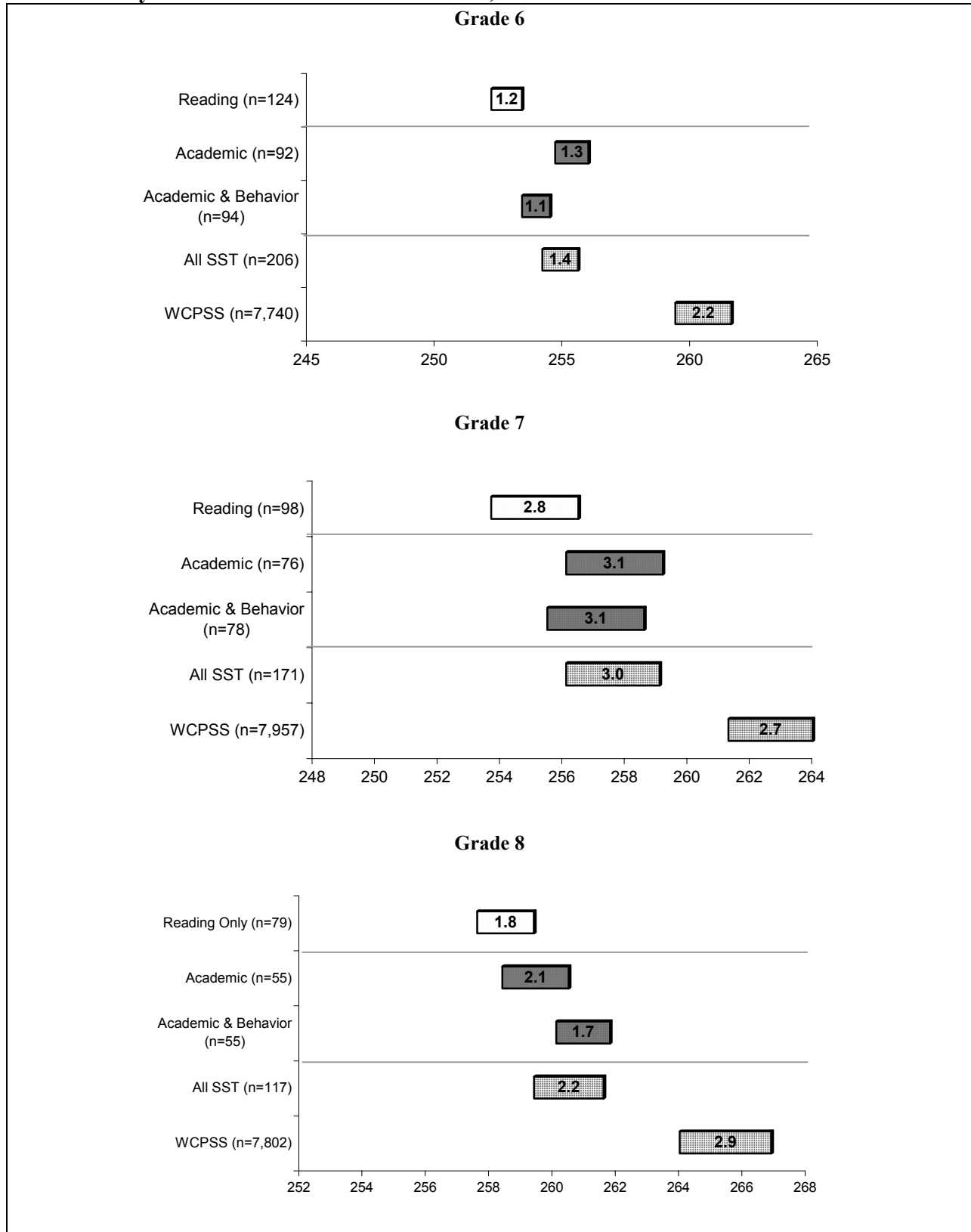


Figure 30
Increase in Elementary Math EOG Scale Score 2002-03 to 2003-04
SST Students Referred for Math, SST Students Referred for Any Academic Reason Only
or Both Academic and Behavior, and All SST and WCPSS as a Whole

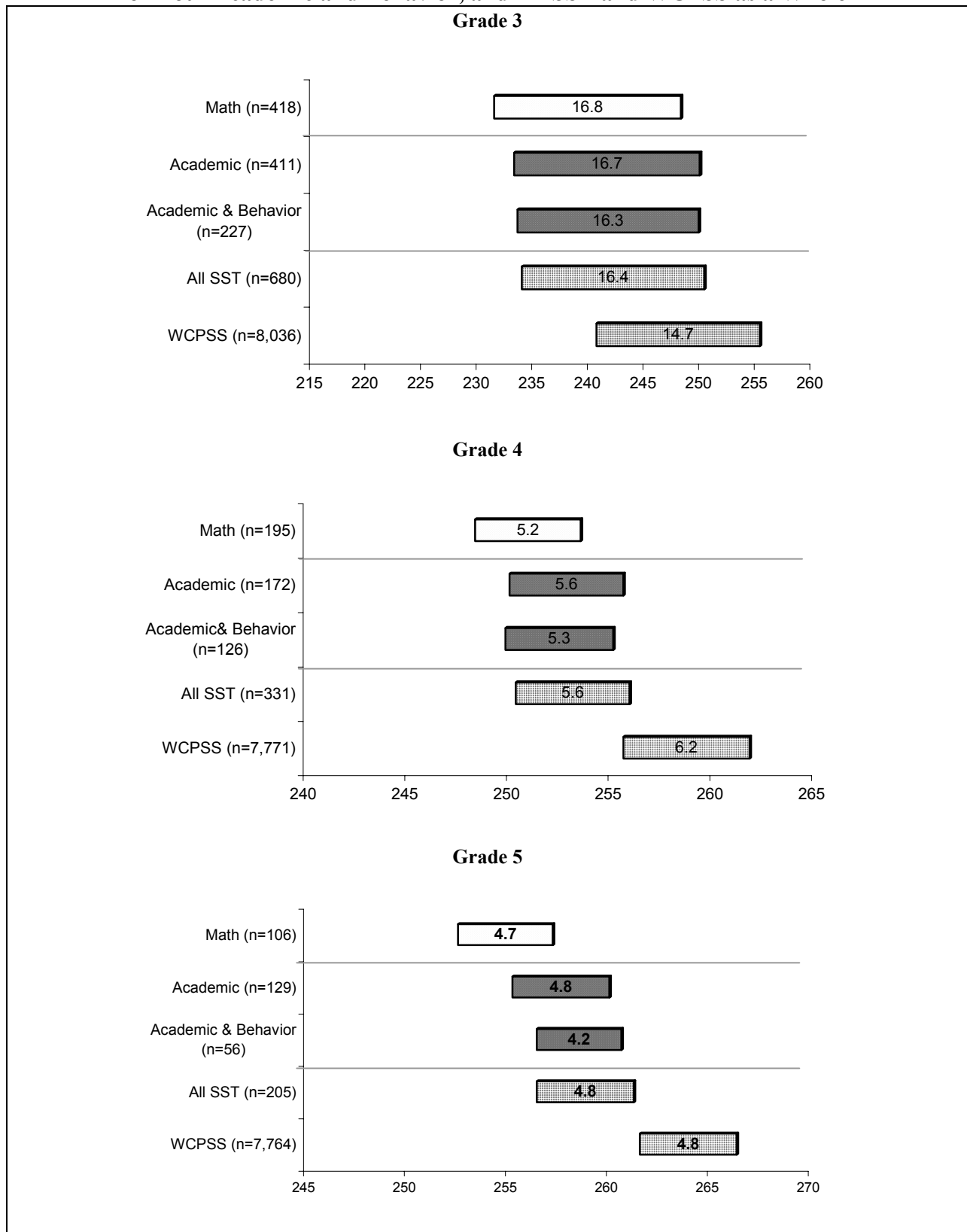
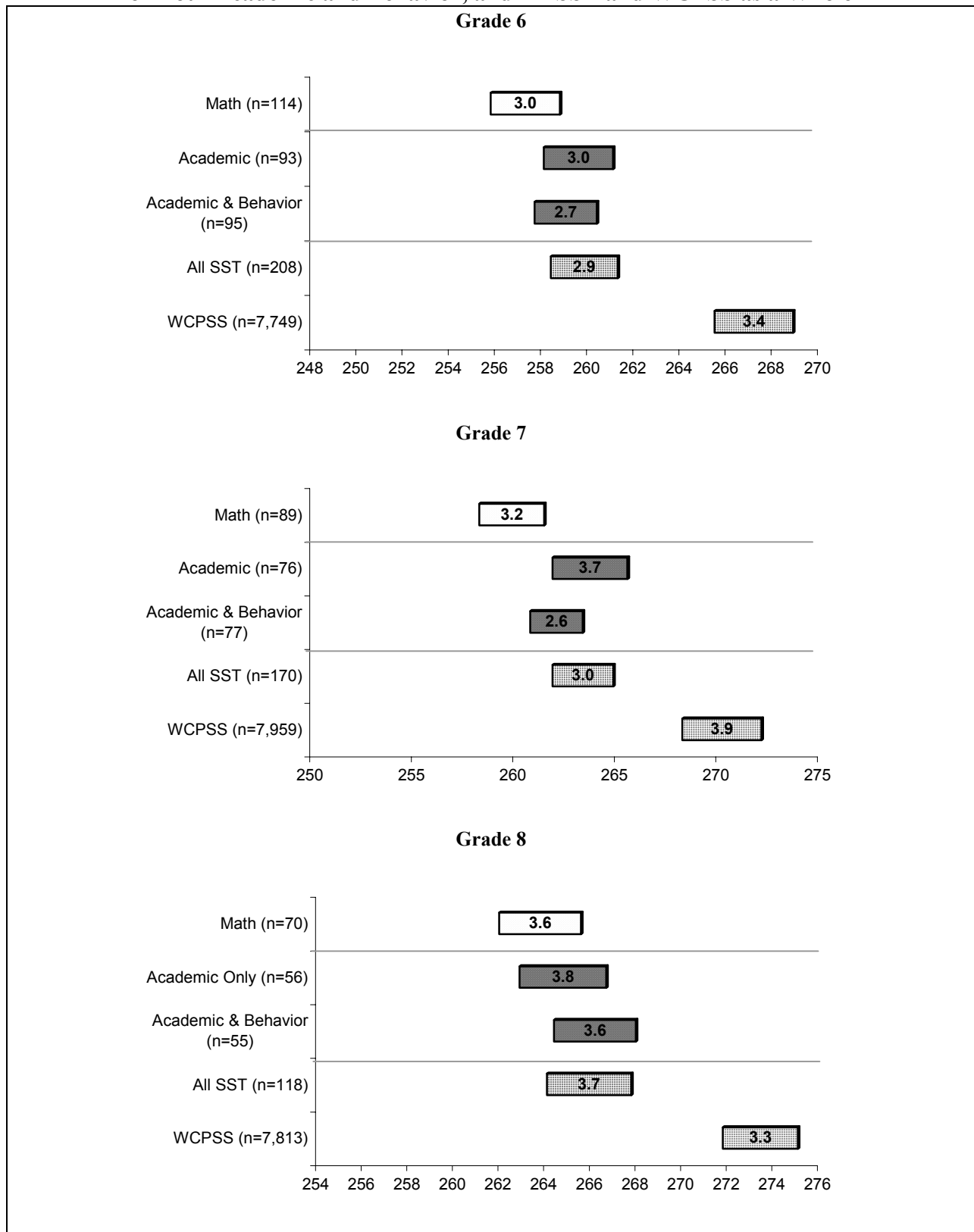


Figure 31
Increase in Middle School Math EOG Scale Score 2002-03 to 2003-04
SST Students Referred for Math, SST Students Referred for Any Academic Reason Only
or Both Academic and Behavior, and All SST and WCPSS as a Whole

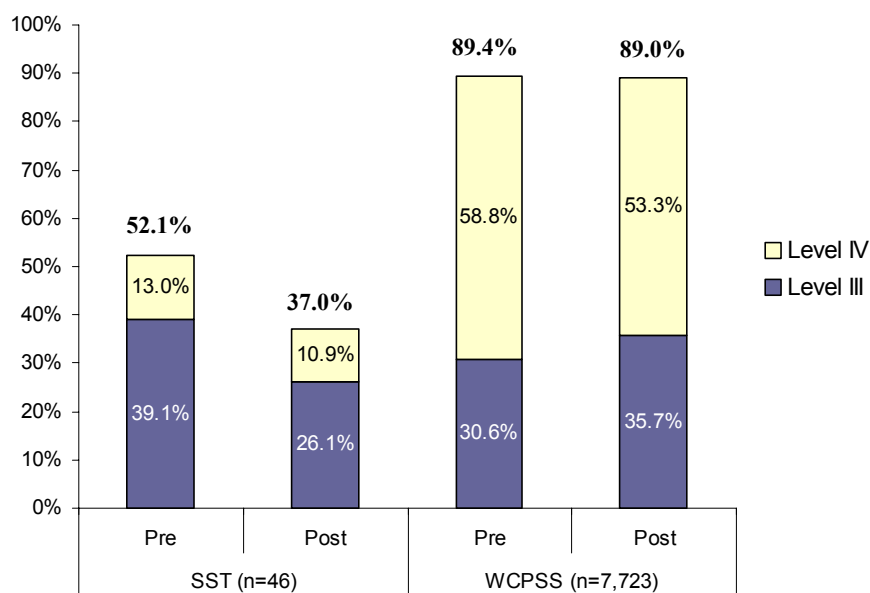


End-of-Course Tests

The number of SST students at the high school level was much smaller than other levels. As a result, only the English I End-of-Course test (EOC) included enough SST students to provide meaningful results. The percent of student that scored level III or IV on the 8th grade reading EOG was used as a pretest, and the percent of those same students that scored level III or IV on the English I EOC was used as a posttest. Only students referred for reading reasons are included in this analysis.

The percent of SST students on grade level decreased over 15 percentage points after participating in SST. WCPSS as a whole had about the same percentage of students on grade level both pre and post. (See Figure 32.)

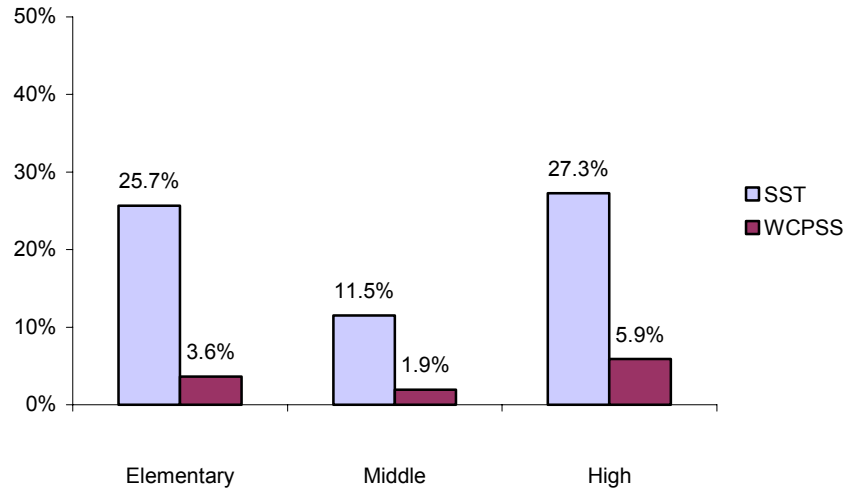
Figure 32
Eighth Grade Reading EOG Pretest vs. English I EOC Posttest
Percentage on Grade Level 2002-03 to 2003-04



Retention

Figure 33 shows the percent of 2003-04 SST students who were retained in the 2004-05 school year. About a quarter of elementary and high school SST students were retained, compared to about 4% and 6% respectively of WCPSS students. At the middle school level, about 12% of SST students were retained compared to 2% of WCPSS overall. The large number of retentions can partially be explained by the use of SST at many schools as a gateway for retention. At these schools all students recommended for retention were required to participate in SST before they could be retained.

Figure 33
Retention Rate of SST Students by Level
2003-04



5. Did SST students' behavior improve?

Suspensions

Students were included in suspension analysis if they were enrolled by September 1, 2002, and were still enrolled in June 2004 so all students would have two full years for an appropriate comparison of pre- to post-SST. In addition, only students served in SST beginning in the first semester of 2003-04 who were referred for behavior reasons are included in the analysis to allow enough time for the intervention.

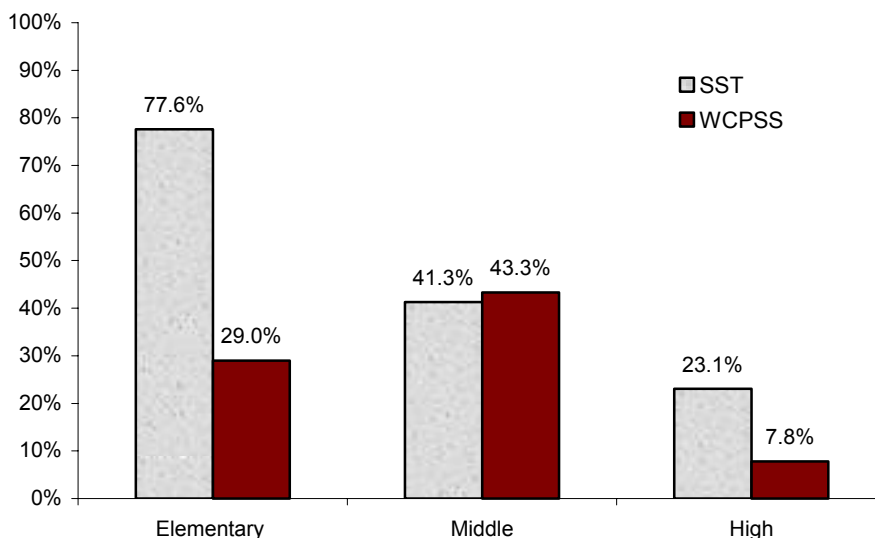
A large percentage of SST students were suspended in both pre-SST and post-SST years. In fact, SST students were about three times as likely to be suspended as WCPSS students in general. The mean number of SST students' suspensions was 3.5 times larger than WCPSS before SST, and 4.8 times higher after SST. (See Figure 34.)

Figure 34
SST Students Referred for Behavior and WCPSS Students
Pre and Post Percent Suspended and Mean Suspensions 2002-03 to 2003-04

		N	Percent		Mean	
			Pre	Post	Pre	Post
Elementary	SST	524	11.1%	19.7%	0.18	0.35
	WCPSS	39,251	2.8%	3.7%	0.05	0.06
Middle	SST	136	46.3%	65.4%	1.35	2.07
	WCPSS	23,721	10.5%	15.0%	0.21	0.31
High	SST	41	63.4%	78.0%	1.63	3.39
	WCPSS	27,437	11.0%	11.8%	0.21	0.25
Total	SST	701	21.0%	32.0%	0.49	0.86
	WCPSS	91,158	7.3%	9.1%	0.14	0.18

As shown in Figure 35, the percent increase in the rate of students suspended from before SST to after SST shows variation between levels. SST students showed a much larger increase in the rate of suspensions than WCPSS as a whole at the elementary and high school levels. However, at the middle school level the rate of SST students suspended increased slightly less than WCPSS as a whole. Middle school SST participation was correlated with positive behavioral outcomes. This may be a result of a focus on behavior issues at the middle school level; middle school SSTs had a higher percent of students referred for behavior than both elementary and high school SSTs. (See Figure 35.)

Figure 35
SST Students Referred for Behavior and WCPSS Students
Percent Change in Rate of Students Suspended 2002-03 to 2003-04



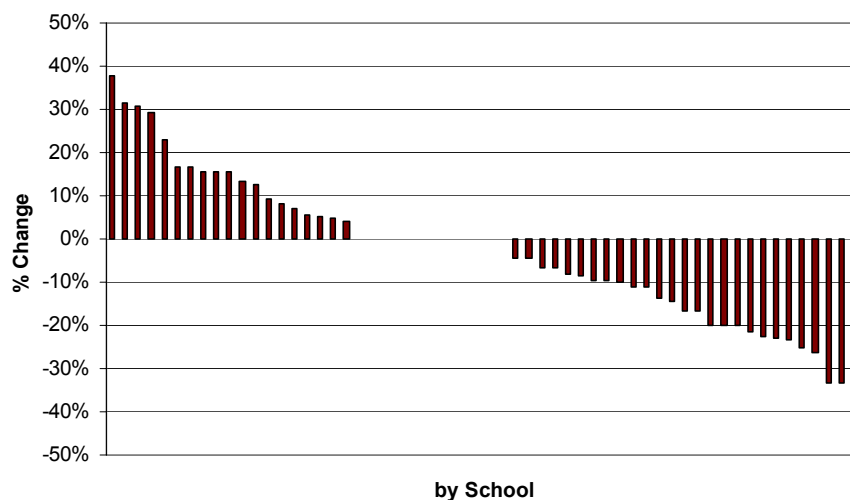
6a. Did student outcomes vary by school?

Achievement by School

The outcomes reported thus far focus on SST students overall. However, these aggregate data mask a wide variation in performance of individual schools. Although the small size of student groups within schools lends itself to variation due to chance, the variation between schools is so large that it warrants further investigation.

Figure 36 illustrates the change in percentage of SST students referred for reading scoring on grade level either on print concepts for kindergarten, or book level for grades 1 and 2. The schools shown have 10 or more students in SST who have both pre- and post-scores. Blank spaces between positive and negative change bars represent schools with zero change. The change in percentage of students scoring on grade level on the K-2 assessment varies from +37.8 percentage points to -36.9 percentage points. Nineteen out of 58 schools, or about one third, showed an improvement in percentage of K-2 students scoring on grade level. An important factor impacting the change in percentage of students on grade level is the percentage of students who began on grade level before participating in SST. Schools with a large percentage already on grade level could only show small gains. While the somewhat subjective nature of the K-2 assessment must be kept in mind, it is interesting to note the wide range in student performance between schools.

Figure 36
Percent Change in SST Students Referred for Reading On Grade Level by School
K-2 Assessment 2002-03 to 2003-04

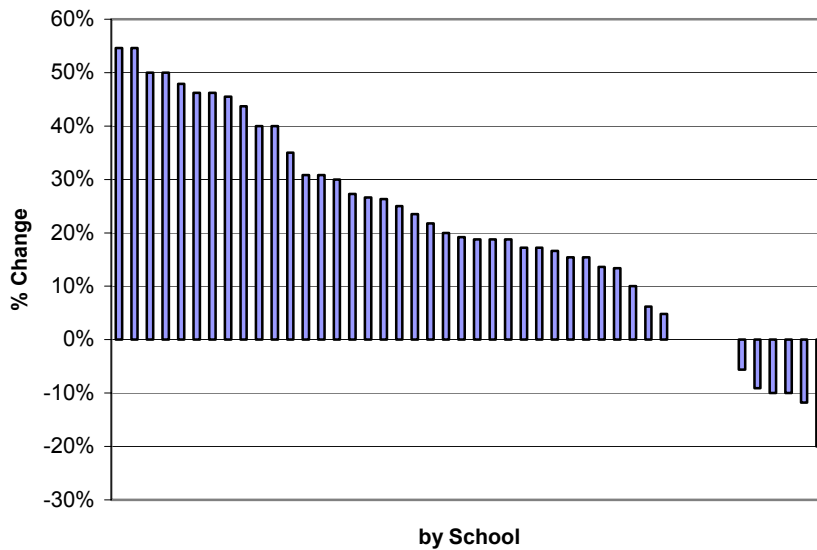


* Blank spaces between positive and negative change bars represent schools with zero change

Figure 37 illustrates the range of student performance on the reading EOG at the elementary level. Again, there is a huge variation in the change in percentage of students scoring on grade level. However, for the reading EOG there was a much higher percentage of schools showing an increase (77%) than the K-2 assessment (33%). This difference could be a byproduct of the fact that the K-2 assessment measures are more subjective than the EOG, or it could reflect the difference in the amount of growth possible on the measures.

Reading EOG changes in percentage on grade level range from an increase of +54.6 percentage points to -20 percentage points. Again, the change in percentage of students on grade level is greatly impacted by the percentage of students who began on grade level before participating in SST.

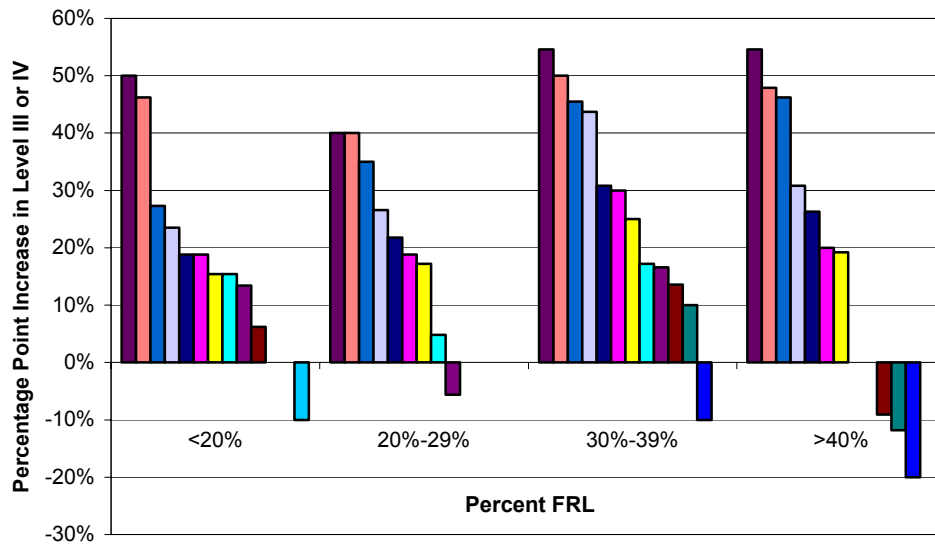
Figure 37
Percent Change in SST Students Referred for Reading On Grade Level by School
Elementary Reading EOG 2002-03 to 2003-04



* Blank spaces between positive and negative change bars represent schools with zero change

Figure 38 indicates that the percent of FRL students in an elementary school does not seem to be related to the increase in percent of SST students scoring level III or IV in reading. Although schools with greater than 40% FRL students included a school with the largest decrease, they also included a school with the largest increase.

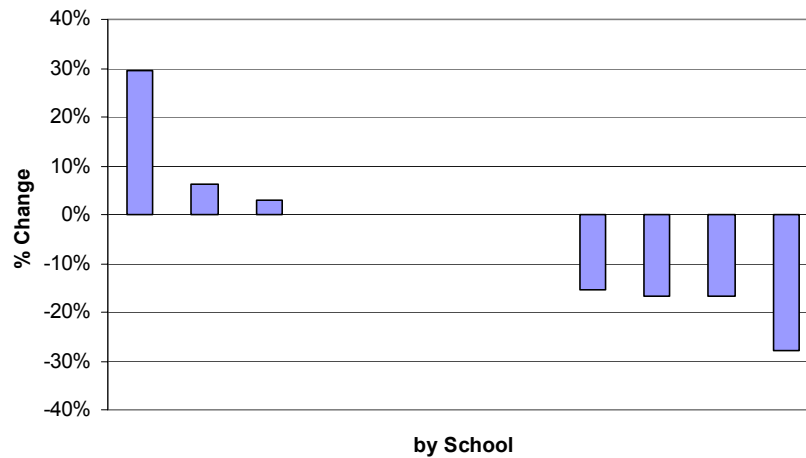
Figure 38
Percent Change in SST Students Scoring Level III or IV by School by Percent FRL
Elementary Reading EOG 2002-03 to 2003-04



* Blank spaces between positive and negative change bars represent schools with zero change

There are fewer middle schools than elementary schools, and as a result fewer schools with 10 or more SST students with pre- and post- EOG scores. However, there was still a range of performance between schools. The increase in percentage scoring on grade level on the reading EOG in middle schools was 29.4 percentage points to -27.8 percentage points. There was a smaller percentage of middle schools showing an increase in percentage of students on grade level on the reading EOG (27%) than elementary level (77%). (See Figure 39.)

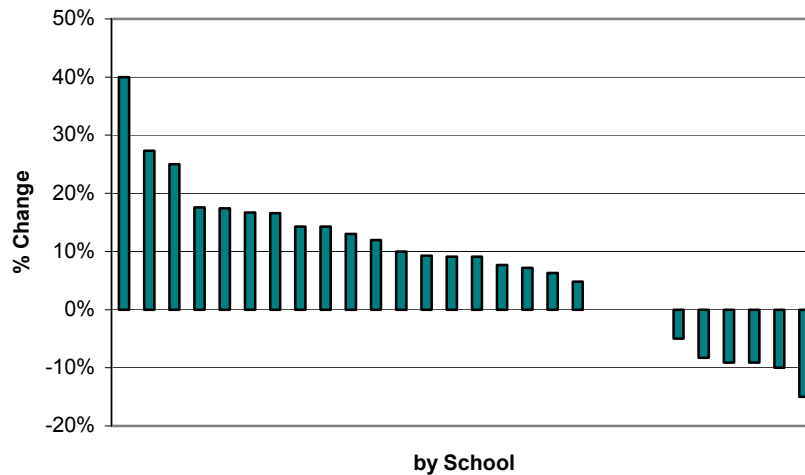
Figure 39
Percent Change in SST Students Referred for Reading On Grade Level by School
Middle School Reading EOG 2002-03 to 2003-04



* Blank spaces between positive and negative change bars represent schools with zero change

Elementary schools' SST students varied in success on the math EOG, although not quite as widely as reading. Schools with 10 or more students referred for math who have both pre- and post-EOG scores in math were included. The change in the percentage of SST students scoring on grade level ranged from +40 percentage points to -15 percentage points. Eighteen out of 27 schools, or 67%, showed an increase in percentage of students scoring on grade level. (See Figure 40.)

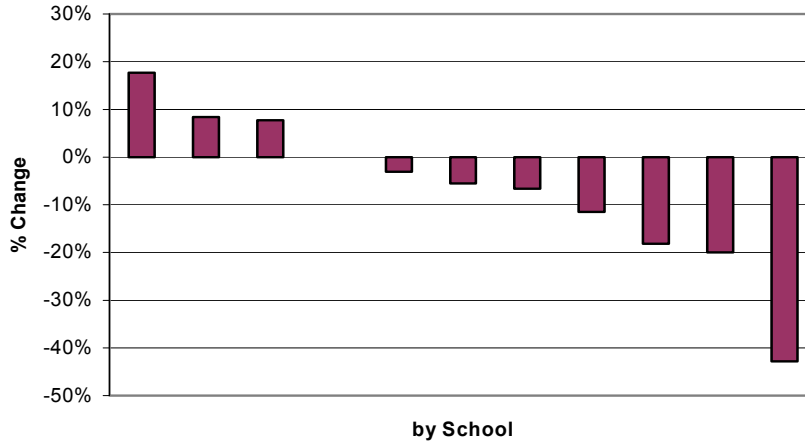
Figure 40
Percent Change in SST Students Referred for Math On Grade Level by School
Elementary Math EOG 2002-03 to 2003-04



* Blank spaces between positive and negative change bars represent schools with zero change

The change in percentage of SST students on grade level in middle school on the math EOG ranged from +17.7 percentage points to -42.9 percentage points. This range is somewhat below the range for reading EOG in the middle schools. Of the 11 schools with 10 or more students referred for math with pre- and post-EOG scores, three showed an improvement in percent of students on grade level. (See Figure 41.)

Figure 41
Percent Change in SST Students Referred for Math On Grade Level by School
Middle School Math EOG 2002-03 to 2003-04



* Blank spaces between positive and negative change bars represent schools with zero change

Three schools scored in the top 20% in increase of students scoring on grade level in both the K-2 assessment and either math or reading EOGs: Aversboro Elementary, Creech Road Elementary, and Partnership Elementary. Zebulon Middle was the only middle school to show positive gains in both reading and math. Because of the success in these schools and the range of outcomes between schools, it may be worthwhile to take a closer look at each individual school’s SST programs to elicit specific best practices.

Behavior by School

Very few schools had ten or more SST students referred for behavior in the first semester (16 elementary and 3 middle). However, of those that did, the change in suspensions ranged from an increase of five students suspended from 2002-03 to 2003-04 to a decrease of two students suspended. Like the academic outcomes, the behavioral outcomes vary by school.

6b. Did SST student outcomes vary by strategy?

Achievement by Strategy Type

SST staff reported their perception of the effectiveness of each strategy for each student. (See Attachment D.)

Strategies included in SST implementation are grouped into four categories: classroom-based, school-based, family-based, and community-based. Specific strategies and their rates of implementation as well as perceived effectiveness are reported in Attachment D.

Different categories of SST strategies had different relationships to student EOG scale scores performance as measured by linear regression. To tease out correlation between the two years' EOG scores, students' previous spring EOG scale score (reading to predict reading, and math to predict math) was included as an independent variable in all models. Pre EOG score is significant in all models, meaning pretest scores are a significant predictor of posttest scores. (See Attachment E.)

Within the linear regression models, B , or the parameter estimate, is the slope of each variable that creates the line that best fits the model. The parameter estimate indicates the rate of change of the independent variable based on the change in the dependent variable. If B is positive, the dependent variable increases as the independent variable increases. Conversely, if B is negative, the dependent variable decreases as the independent variable increases.

Two models were used to measure the impact of different types of strategies on EOG outcomes. One model used the number of strategies used in each category as continuous independent variables. However, there were varying numbers of strategies in each category (between 9 and 28), which might have caused some bias. As a result, a second model was used where each category was coded as a dummy variable, indicating the presence of one or more strategies in each category, but not how many.

Results showed a significant negative correlation between school-based strategies and reading (both number of strategies and dummy variable) and math EOG scores (number of strategies only) in grades 3-5. The correlation is negative at middle school as well, but it is not significant. It is unclear what caused this unexpected result. It might be that school-based strategies take away from class time, or that more at-risk students are given school-based strategies.

Family-based strategies were significantly correlated with better EOG reading and math scores in grades 3-5, and middle school reading when the group of family-based strategies was coded as a dummy variable. As the only *group* of strategies to be significantly correlated with improved EOG scores, family-based strategies may be an area of increased attention. Neither classroom-based nor community-based strategies showed any significant correlation with EOG scores. It may be that classroom strategies are redundant with strategies teachers have already used, leading to a lack of correlation with increased EOG scores.

Suspensions were also considered as an outcome in linear regression models using the categories of strategies. (See Attachment E.) In this case, the number of suspensions in 2002-03 is considered as a control in the group of independent variables, and the number of suspensions in 2003-04 was the dependent variable.

In grades 6-8, classroom-based strategies are negatively correlated with the number of suspensions, indicating a positive effect on behavior. These results indicate that working with teachers and students together regarding student behavior may help decrease suspensions. In

addition, in grades 6-8 there is a significant positive correlation between community-based strategies and number of suspensions. This is another unexpected result with unclear origins.

To more specifically pinpoint the effectiveness of strategies, the question may be asked, “To what extent did the student improve in ___ as a result of his or her goals.” Using the goal of the strategy to measure outcomes would provide effectiveness of the strategies more appropriately.

6c. Did SST student outcomes vary by other implementation differences?

Like the previous models, 2002-03 EOG scale scores were used as a control in the model as one of the independent variables, while 2003-04 EOG scale scores are the dependent variable. In these models, the number of meetings of the SST, the number of hours that SST met, and the month of the student’s first SST meeting are the independent measures. (See Attachment E.)

In grades 3-5, the number of hours SST met is negatively correlated with elementary math EOG. In addition, there is a negative correlation between the first month of SST meeting and elementary math EOG, meaning that the later the SST met, the lower the EOG score. This same correlation is found in middle school reading and math. It seems that the earlier an SST meets, the more positive are students’ academic outcomes. Earlier meetings allow more time to implement changes during the school year.

The only significant correlation between implementation variables and suspensions is a negative correlation between the first month of an SST meeting and the number of suspensions for high school students. This means that the later the first SST meeting, the *fewer* suspensions a student has. While this result seems counterintuitive, it may reflect the fact that a student with more severe behavioral issues would more likely be referred earlier in the year. (See Attachment E.)

TESTING FOR SPECIAL EDUCATION

7. How many SST students were tested for special education, and of those how many were placed?

Of the 4,959 SST students served in 2003-04, almost 19% were tested for special education services. Of those 929 tested, almost 64% were subsequently placed in special education. The breakdown of students tested by grade is shown in Figure 42. The highest percentages of students tested were in grades four and five. Interestingly, the lowest percentage of students tested who were then placed in special education was grade five.

Figure 42
Percent of SST Students Tested for Special Education Services and
Percent of Those Students Placed in Special Education
2003-04

Grade	N	Percent Tested	Percent of Tested Placed
KI	631	16.5%	80.8%
1	961	17.4%	71.3%
2	743	20.9%	62.6%
3	820	19.4%	60.4%
4	459	22.4%	64.1%
5	308	25.0%	44.2%
6	276	20.7%	70.2%
7	269	13.4%	58.3%
8	173	19.7%	47.1%
9	158	10.1%	56.3%
10	87	12.6%	54.5%
11	60	13.3%	50.0%
12	12	16.7%	0.0%
Total	929	18.7%	63.7%

The percentage of SST students tested for special education services ranged from 0% to 39% in schools with 10 or more SST students. Of the SST students tested, between 14% and 100% were placed in special education. There was low correlation between the percent of SST students tested with the percent placed ($r=0.11$). Other factors were influencing the decisions made by schools regarding referral of students to be tested.

RECOMMENDATIONS

1. *Emphasize the need for SST to meet earlier in the school year.* There was a significant correlation between the month that the SST first met and many academic outcomes. In addition, it is the recommendation of SST administration that all students have two SST meetings, yet 40% are only getting one. This is almost certainly related to the fact that many students are not being served until late in the year. It might be helpful to examine the barriers to serving students early in the school year to try and address those within the SST process.
2. *Reconsider the implementation of SST at the middle and high school levels.* SST serves far fewer students at the middle school level than the elementary school level, and fewer still at the high school level. By the high school level, very few students served by SST are referred by school staff, whereas almost all of elementary school students are referred by a teacher. At the high school level, most requests for SST involvement were made by parents, which indicates a much lower teacher participation in SST. Finally, there are no positive academic outcomes seen at the secondary levels, while there are some positive outcomes at the elementary level. However, there are positive behavioral outcomes at the middle school level. With the dearth of both participation and academic outcomes, it might be advisable to look at the structure and interventions at the secondary level to decide what would be most effective given the population and the needs of the population at each level. The structure used for SST at the elementary schools may not be the most effective for the middle and high schools.
3. *Consider the target population.* SST is available to provide services to any student whose teacher or parent feels that they might need the services. The result is that students are served regardless of their previous year's test scores. However, about half of students referred for reading scored on grade level on their previous reading EOG, and over 70% of students in grades 3-5 referred for having issues with math scored on grade level on their previous math EOG. In addition, over 70% of students in grades 6-8 were on grade level in reading when referred for reading, and on grade level in math when referred for math. Depending on the goal of SST, these numbers may be satisfactory. However, if the goal is to serve the most low-achieving students, perhaps looking at the referral process might increase services to a more at-risk population. More clearly defined goals in terms of appropriate achievement referrals may be warranted.
4. *Discuss ways to involve hard-to-reach parents.* Family-based strategies have been proven to be significantly correlated with positive academic outcomes. However, it is impossible to implement these essential strategies with families who are uninvolved or absent. It is challenging to involve some parents. Therefore it might be helpful to brainstorm some strategies that some schools may have had success within including parents or guardians in the SST process. Perhaps using Partnership for Educational Success (PES) in schools where it is available would aid in this process.
5. *Share strategies from effective schools.* There is a wide range of outcomes between schools. It would be beneficial to all SST programs to hear what the most effective schools are doing with their SST students.

6. *Evaluate new programs or processes using an experimental design.* This evaluation is limited by questions concerning the appropriateness of the comparison group. Although students were matched on many characteristics, the fact that SST is in all schools means that there is a difference between students who are selected for SST and those that are not. If a change is made in the SST program, it would be helpful to randomly select either students or schools to implement the new strategy, so that an actual control group could be used to measure the difference in effectiveness between the existing SST program and the new program or process.

7. *Evaluate staff perception of student improvement.* Staff may want to consider asking about the degree of improvement seen for students across the year based on the specific goals set for them, rather than simply the effectiveness of various interventions. This would allow for calculation of the percentage of students who had improved to varying degrees across the year.

ATTACHMENT A
Participating Schools and Number of Students
2001-02 to 2003-04

School	2001 2002	2002 2003	2003 2004	School	2001 2002	2002 2003	2003 2004
Adams Elementary	50	44	40	Enloe High	25	17	21
Apex Elementary	50	54	54	Farmington Woods Elementary	26	37	44
Apex High	10	38	20	Fox Road Elementary	23	65	80
Apex Middle	12	25	27	Fuller Elementary	29	18	33
Athens Drive High	20	20	16	Fuquay-Varina Elementary	49	35	49
Aversboro Elementary	34	54	80	Fuquay-Varina High	30	18	22
Baileywick Elementary	59	43	35	Fuquay-Varina Middle	14	12	21
Ballentine Elementary	57	38	45	Garner High	9	19	28
Baucom Elementary	27	67	84	Green Elementary	42	74	61
Brassfield Elementary	41	33	54	Green Hope High	21	16	18
Brentwood Elementary	34	46	38	Green Hope Elementary	23	28	24
Briarcliff Elementary	34	30	26	Heritage Elementary	NA	NA	48
Brooks Elementary	54	32	25	Heritage Middle	NA	NA	1
Broughton High	23	26	37	Hillburn Drive Elementary	40	24	59
Bugg Elementary	45	26	42	Hodge Road Elementary	68	38	49
Carnage Middle	26	43	46	Holly Ridge Elementary	NA	NA	37
Carroll Middle	23	19	8	Holly Ridge Middle	NA	NA	17
Carver Elementary	51	31	54	Holly Springs Elementary	44	108	92
Cary Elementary	56	59	46	Hunter Elementary	44	55	39
Cary High	18	22	23	Jeffreys Grove Elementary	40	53	45
Centennial Middle	17	20	21	Jones Dairy Elementary	53	85	NA
Combs Elementary	34	23	66	Joyner Elementary	43	39	31
Conn Elementary	77	74	27	Kingswood Elementary	23	29	27
Creech Road Elementary	34	66	64	Knightdale Elementary	60	46	57
Daniels Middle	19	35	26	Lacy Elementary	36	30	26
Davis Drive Elementary	32	31	42	Lead Mine Elementary	35	35	35
Davis Drive Middle	37	50	36	Leesville Rd. High	19	23	27
Dillard Dr. Elementary	55	60	65	Leesville Road Elementary	35	44	48
Dillard Middle	45	42	48	Leesville Road Middle	20	32	17
Douglas Elementary	27	33	27	Ligon Middle	21	26	38
Durant Road Elementary	88	87	64	Lincoln Heights Elementary	54	86	84
Durant Road Middle	33	32	32	Lockhart Elementary	64	53	59
East Cary Middle	26	33	NA	Lufkin Rd. Middle	21	23	14
East Garner Middle	31	24	14	Lynn Road Elementary	36	44	45
East Millbrook Middle	23	30	33	Martin Middle	32	29	28
East Wake High	20	3	6	Mary E. Phillips High	30	1	0
East Wake Middle	22	25	23	Middle Creek Elementary	54	60	77

School	2001 2002	2002 2003	2003 2004
Middle Creek High	NA	1	12
Millbrook Elementary	53	51	67
Millbrook High	4	7	20
Morrisville Elementary	27	56	48
Moore Square Middle	MD	8	19
Mt. Vernon Redirection	31	62	54
North Garner Middle	35	18	8
North Ridge Elementary	41	42	31
Northwoods Elementary	71	99	82
Oak Grove Elementary	37	53	30
Olds Elementary	20	29	28
Olive Chapel Elementary	85	77	77
Partnership Primary	24	48	44
Penny Road Elementary	20	30	16
Pleasant Union Elementary	22	35	46
Poe Elementary	23	22	43
Powell Elementary	32	18	34
Rand Road Elementary	28	40	44
Reedy Creek Elementary	34	69	70
Reedy Creek Middle	NA	NA	24
Rolesville Elementary	37	46	61
Root Elementary	20	14	27
Salem Elementary	33	44	55
Sanderson High	21	2	14
Smith Elementary	59	33	48
Southeast Raleigh High	18	15	37
Stough Elementary	36	50	64

School	2001 2002	2002 2003	2003 2004
Swift Creek Elementary	23	23	32
Timber Drive Elementary	56	51	38
Underwood Elementary	33	42	37
Vance Elementary	103	67	80
Vandora Springs Elementary	23	26	27
Wake Forest Elementary	76	57	63
Wake Forest-Rolesville High	9	2	0
Wake Forest-Rolesville Middle	22	30	30
Wakefield Elementary	79	53	52
Wakefield Middle	27	13	18
Wakefield High	14	14	15
Washington Elementary	48	50	38
Weatherstone Elementary	55	59	77
Wendell Elementary	48	66	65
West Cary Middle	27	28	24
West Lake Elementary	26	46	67
West Lake Middle	54	59	23
West Millbrook Middle	28	31	33
Wilburn Elementary	82	66	57
Wildwood Forest Elementary	34	56	35
Wiley Elementary	58	26	20
Willow Springs Elementary	90	45	48
Yates Mill Pond Elementary	24	31	33
York Elementary	49	41	49
Zebulon Elementary	54	78	62
Zebulon Middle	39	42	38

ATTACHMENT B**SST Student Referral Source (n=4,959)**

Referral Source	Percentage
Counselor	4.4%
IRT	0.1%
Nurse	0.3%
Outside Agency	0.7%
Parent	26.9%
Psychologist	0.7%
Regular Ed Teacher	83.5%
SAP	0.4%
Self	0.1%
Social Worker	0.7%
Special Ed Teacher	0.8%
Title I	3.7%

ATTACHMENT C
Number of Student Support Team Members by School

	Administrators	Counselors	Regular Education Teachers	Special Education Teachers	ALP II Teachers	Instructional Resource Teachers	Social Workers	School Psychologists	Other	Total
Adams E	0	0	0	1	0	0	0	1	1	3
Apex E	0	0	2	0	0	0	0	1	0	3
Apex M	0	0	1	1	0	0	0	1	1	4
Apex H	1	0	4	0	0	0	0	1	1	7
Athens H	1	0	3	0	0	0	0	1	2	7
Aversboro E	1	1	3	1	0	0	0	1	0	7
Baileywick E	1	0	6	0	0	0	0	1	0	8
Ballentine E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Baucom E	0	0	6	0	0	0	0	1	0	7
Brassfield E	1	0	4	0	1	0	0	1	0	7
Brentwood E	1	1	1	0	1	0	0	1	0	5
Briarcliff E	1	1	2	0	1	0	0	1	0	6
Brooks E	1	0	0	1	1	0	0	1	2	6
Broughton H	0	0	1	0	0	0	0	1	1	3
Bugg E	1	1	2	0	0	1	0	1	0	6
Carnage M	0	0	4	1	0	0	0	1	0	6
Carroll M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Carver E	1	1	1	1	1	0	0	1	1	7
Cary E	1	1	3	0	0	0	0	1	0	6
Cary H	1	0	2	1	0	0	0	1	1	6
Centennial M	0	0	1	1	0	0	0	1	0	3
Combs E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conn E	1	0	5	0	0	0	0	1	0	7
Creech Rd E	1	1	1	2	2	0	0	1	1	9
Daniels M	1	0	3	0	0	0	0	1	1	6
Davis Dr E	2	1	1	0	1	0	0	1	0	6

	Administrators	Counselors	Regular Education Teachers	Special Education Teachers	ALP II Teachers	Instructional Resource Teachers	Social Workers	School Psychologists	Other	Total
Davis Dr M	3	0	3	1	0	0	1	1	0	9
Dillard E	1	0	2	0	1	0	0	1	0	5
Dillard M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Douglas E	1	1	0	2	1	0	0	1	1	7
Durant E – Track 1	0	1	2	2	0	0	0	1	1	7
Durant E – Track 2	0	1	3	1	0	0	0	1	1	7
Durant E – Track 3	0	1	4	0	0	0	0	1	1	7
Durant E – Track 4	0	1	2	1	0	0	0	1	1	6
Durant Rd M	1	4	1	0	0	0	0	1	0	7
E Garner M	1	1	3	0	0	0	0	1	0	6
E Millbrook M	1	0	0	1	0	0	1	1	2	6
E Wake M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
E Wake H	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Enloe H	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Farmington Wds E	0	1	3	2	0	0	0	1	0	7
Fox Rd E	0	2	0	0	0	0	0	1	0	3
Fuller E – K-2	1	0	1	1	0	0	0	1	2	6
Fuller E – 3-5	0	0	2	0	1	0	0	1	1	5
Fuquay-Varina E	0	1	5	1	0	0	0	1	1	9
Fuquay-Varina M	1	0	3	1	0	0	0	1	1	7
Fuquay-Varina H	1	0	2	1	0	0	0	1	2	7
Garner H	1	1	1	0	0	0	0	1	3	7
Green E	1	1	5	1	1	0	0	1	1	11
Green Hope E	1	1	2	1	0	0	0	1	1	7
Green Hope H	1	1	3	1	0	0	0	1	0	7
Heritage E	1	1	7	1	0	0	0	1	0	11
Heritage M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hilburn Dr E	1	0	5	0	0	0	0	1	0	7

	Administrators	Counselors	Regular Education Teachers	Special Education Teachers	ALP II Teachers	Instructional Resource Teachers	Social Workers	School Psychologists	Other	Total
Hodge Rd E	1	1	2	3	0	0	0	1	1	9
Holly Ridge M	0	1	4	0	0	0	0	1	0	6
Holly Springs E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hunter E	1	0	5	0	0	0	0	1	1	8
Jeffrey's Grove E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Joyner E	1	1	1	1	0	0	0	1	0	5
Kingswood E	0	1	0	0	0	0	0	1	0	2
Knightdale E	1	1	1	1	1	0	0	1	3	9
Lacy E	1	1	2	0	0	0	0	1	2	7
Lead Mine E	1	1	2	1	0	0	0	1	0	6
Leesville Rd. E	1	0	3	1	0	1	0	1	0	7
Leesville Rd. M	1	0	4	1	0	0	0	1	0	7
Leesville Rd. H	1	1	6	1	0	0	0	1	0	10
Ligon M	1	0	1	0	0	0	0	1	0	3
Lincoln Heights E	2	1	0	0	0	1	0	1	3	8
Lockhart E	1	0	1	0	0	0	0	1	0	3
Longview School	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lufkin Rd M	0	0	5	0	0	0	0	1	0	6
Lynn Rd. E – K-2	1	0	5	0	0	0	0	1	0	7
Lynn Rd. E – 3-5	1	1	2	0	1	0	0	1	0	6
Martin M	1	0	4	1	0	0	0	1	0	7
Middle Creek E	0	0	2	0	0	0	0	1	0	3
Middle Creek H	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Millbrook E	1	0	4	0	0	0	0	1	1	7
Millbrook H	1	0	3	1	0	0	0	1	1	7
Moore Square M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Morrisville E	1	1	4	3	0	0	0	1	2	12
Mt. Vernon M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	Administrators	Counselors	Regular Education Teachers	Special Education Teachers	ALP II Teachers	Instructional Resource Teachers	Social Workers	School Psychologists	Other	Total
N Garner M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N Ridge E	1	0	1	0	0	0	1	1	4	8
Northwoods E	2	0	5	0	0	0	0	1	1	9
Oak Grove E	1	1	1	4	0	0	0	1	0	8
Olds E	1	1	2	2	0	0	0	1	0	7
Olive Chapel E	1	1	4	0	0	0	0	1	0	7
Partnership E	1	1	0	1	0	0	0	1	0	4
Penny Rd E	1	1	5	1	0	0	1	1	1	11
Phillips H	0	0	4	0	0	0	1	1	0	6
Pleasant Union E	1	0	4	1	0	0	0	1	0	7
Poe E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Powell E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rand Rd E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Reedy Creek E	1	1	6	2	0	0	0	1	0	11
Reedy Creek M	2	0	5	0	0	0	0	1	0	8
Rolesville E	1	1	5	0	0	0	0	1	1	9
Root E	1	1	3	0	0	0	0	1	1	7
Salem E	1	1	3	1	0	0	0	1	0	7
Salem M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sanderson H	1	0	1	1	0	0	0	1	3	7
Smith E	1	0	3	1	0	1	0	1	0	7
S.E. Raleigh H	1	0	0	1	0	0	0	1	3	6
Stough E	1	0	3	0	1	0	0	1	1	7
Swift Creek E	2	1	2	1	0	0	0	1	0	7
Timber Drive E	1	0	4	0	0	0	0	1	0	6
Underwood E	1	1	2	1	0	0	0	1	1	7
Vance E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vandora Springs E	2	1	2	1	1	0	0	1	0	8

	Administrators	Counselors	Regular Education Teachers	Special Education Teachers	ALP II Teachers	Instructional Resource Teachers	Social Workers	School Psychologists	Other	Total
Wake Forest E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wake Forest H	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wake Forest M	0	0	2	1	0	0	1	1	1	6
Wakefield E	1	1	5	0	0	0	0	1	0	8
Wakefield M	1	1	3	0	0	0	0	1	0	6
Wakefield H	1	1	0	1	0	0	0	1	0	4
Washington E	1	0	3	1	1	0	0	1	1	8
Weatherstone E	0	0	1	0	0	0	0	1	0	2
Wendell E	1	0	3	1	0	1	0	1	0	7
W Cary M	1	0	2	2	0	0	0	1	0	6
W Lake E	1	0	9	0	0	0	0	1	0	11
W Lake M	1	1	2	0	0	0	0	1	0	5
W Millbrook M	1	0	4	0	0	0	0	1	1	7
Wilburn E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wildwood For E	0	0	1	0	0	0	0	1	0	2
Wiley E	1	0	3	1	0	0	0	1	0	6
Willow Springs E	1	0	2	1	0	1	0	1	1	7
Yates Mill E	1	1	2	1	1	0	0	1	0	7
York E	1	1	4	0	0	0	0	1	0	7
Zebulon E	2	1	2	1	0	0	0	1	0	7
Zebulon M	1	1	2	1	0	0	0	1	0	6
All	94	58	291	71	18	6	6	108	65	717

ATTACHMENT D

Mark all SST strategies, time used and their effectiveness. Only mark/bubble strategies used.

Classroom Strategies (n=4,959) Number and Percent of SST Staff Reporting Strategies as Effective

Strategy	Number of Students	Percent of Students	Number Effective	Percent Effective
Differentiated Instruction	2,045	41.2%	897	45.3%
Parental Communication/Involvement	1,963	39.6%	807	43.0%
Flexible Grouping	1,556	31.4%	664	44.3%
Behavioral Interventions	1,486	30.0%	413	28.8%
Feedback	1,230	24.8%	489	41.5%
Modified Environment	1,179	23.8%	429	38.2%
Teaching/Learning Style Matching	874	17.6%	353	42.8%
Coaching	831	16.8%	343	43.3%
Computer (Tape Recording, Headphones)	607	12.2%	243	45.3%
Study Skills Instruction	597	12.0%	226	40.9%
Student Assessment Variations	579	11.7%	213	39.2%
Duplicated Total	12,947	23.7%	5,077	41.2%

School Strategies (n=4,959)
Number and Percent of SST Staff Reporting Strategies as Effective

Strategy	Number of Students	Percent of Students	Number Effective	Percent Effective
Parent/School Conference	1,364	27.5%	583	44.7%
Accelerated Learning Program (ALP)	867	17.5%	449	55.4%
Tutoring	778	15.7%	333	47.3%
Counseling	717	14.5%	266	39.9%
Title I	571	11.5%	349	63.7%
Classroom Visit/Observation	460	9.3%	83	20.9%
Student Conference	386	7.8%	114	31.0%
Change in Teacher/Schedule/Elective	330	6.7%	159	52.5%
Volunteer Mentor	305	6.2%	122	44.7%
School Staff Conference	295	5.9%	126	46.0%
Educational Planning	243	4.9%	124	55.1%
School Social Work Services	243	4.9%	95	42.8%
Magnet School	238	4.8%	63	28.0%
ESL/Migrant Education	159	3.2%	89	59.3%
Home Visit	117	2.4%	40	38.5%
School Nursing Services	114	2.3%	57	62.0%
Communities in Schools (CIS)	113	2.3%	58	55.8%
Peer Mediation/Conflict Management	109	2.2%	45	43.3%
School-based Mental Health Team	86	1.7%	19	32.8%
WCPSS Alternative School	74	1.5%	45	76.3%
Auxiliary School Program	72	1.5%	31	55.4%
Extra-curricular Activities	69	1.4%	29	50.0%
ParentScope/Parent Liaison	65	1.3%	21	35.6%
Project Enlightenment	64	1.3%	19	35.8%
Partnership for Ed Success	58	1.2%	18	37.5%
Student Assistance Program (SAP)	55	1.1%	17	34.7%
Early Arrival/Late Departure	41	0.8%	11	29.7%
Helping Hands	25	0.5%	10	45.5%
Duplicated Total	8,018	5.8%	3,375	45.8%

Family Strategies (n=4,959)
Number and Percent of SST Staff Reporting Strategies as Effective

Strategy	Number of Students	Percent of Students	Number Effective	Percent Effective
Homework Help	802	16.2%	371	49.7%
Positive Home Habits/Routine/Schedule	640	12.9%	257	43.1%
Educational/Tutoring	338	6.8%	179	58.5%
Healthy Diet and Rest	186	3.8%	85	49.7%
Family Initiated Conference	143	2.9%	67	51.5%
Family/Community Assessment	76	1.5%	35	57.4%
Enrichment/Leisure	71	1.4%	38	60.3%
Duplicated Total	2,256	6.5%	1,032	49.8%

Community Strategies (n=4,959)
Number and Percent of SST Staff Reporting Strategies as Effective

Strategy	Number of Students	Percent of Students	Number Effective	Percent Effective
Medical Services	299	6.0%	146	60.3%
Mental Health Services	191	3.9%	65	43.0%
Parent Education/Support	136	2.7%	60	50.4%
Human Services	70	1.4%	30	50.0%
Social/Spiritual/Recreational	57	1.1%	20	47.6%
Vocational/Educational Services	21	0.4%	7	41.2%
Legal Services	18	0.4%	6	37.5%
Community Alternative School	13	0.3%	4	66.7%
Empowerment/Human Development	9	0.2%	5	71.4%
Duplicated Total	814	1.8%	343	52.0%

ATTACHMENT E

Figure E1
Summary of Regression Analysis of SST Strategies
Predicting Students' EOG Scale Scores
2003-04

	Grades 3-5				Grades 6-8			
	Reading n=899		Math n=699		Reading n=292		Math n=263	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<i>Number of Strategies:</i>								
EOG Pre Scale Score	0.55**	0.02	0.43**	0.02	0.81**	0.04	0.81**	0.04
Classroom Based	0.07	0.09	-0.02	0.07	0.07	0.13	0.18	0.15
School Based	-0.49**	0.14	-0.22*	0.11	-0.21	0.15	-0.31	0.17
Family Based	0.55*	0.24	0.49**	0.18	0.51	0.36	0.45	0.42
Community Based	0.89	0.59	-0.22	0.53	-0.56	0.53	0.09	0.58
<i>Any Strategy:</i>								
EOG Pre Scale Score	0.55**	0.02	0.43**	0.02	0.81**	0.04	0.81**	0.04
Classroom Based	0.29	0.53	-0.39	0.42	0.26	0.68	0.99	0.77
School Based	-1.32**	0.51	-0.15	0.41	-1.05	0.80	-1.02	0.89
Family Based	0.62	0.47	0.83*	0.38	1.79*	0.78	1.44	0.91
Community Based	0.65	0.72	-0.45	0.62	-0.57	0.82	-0.51	0.90

* p<.05, **p<.01

Figure E2
Summary of Regression Analysis of Strategies
Predicting SST Students' Number of Suspensions
2003-04

	Grades 3-5 n=239		Grades 6-8 n=132		Grades 9-12 n=40	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<i>Number of Strategies:</i>						
Number of Suspensions Pre	0.20*	0.08	0.42**	0.09	0.81**	0.22
Classroom Based	-0.05	0.02	-0.20**	0.08	-0.27	0.37
School Based	0.05	0.03	0.11	0.09	0.33	0.25
Family Based	0.00	0.07	0.03	0.28	0.29	0.93
Community Based	0.17	0.14	0.78*	0.32	0.31	0.51
<i>Any Strategy:</i>						
Number of Suspensions Pre	0.23**	0.08	0.38**	0.09	0.84**	0.22
Classroom Based	-0.26	0.15	-0.88	0.46	-0.42	1.35
School Based	0.14	0.14	0.20	0.55	-0.10	1.37
Family Based	0.16	0.13	0.62	0.51	1.33	0.99
Community Based	0.14	0.17	0.97*	0.46	0.80	0.95

* p<.05, **p<.01

Figure E3
Summary of Regression Analysis of Implementation
Predicting SST Students' EOG Scale Scores
2003-04

	Grades 3-5				Grades 6-8			
	Reading n=899		Math n=699		Reading n=292		Math n=263	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
EOG Pre Scale Score	0.56**	0.02	0.43**	0.02	0.83**	0.04	0.81**	0.04
Number of Meetings	-0.02	0.31	0.22	0.26	0.15	0.43	-0.35	0.50
Number of Hours Met	-0.08	0.15	-0.31*	0.13	0.10	0.18	-0.03	0.21
First Month of Meeting	-0.16	0.10	-0.18*	0.08	-0.47**	0.14	-0.55**	0.17

* p<.05, **p<.01

Figure E4
Summary of Regression Analysis of Implementation
Predicting SST Students' Number of Suspensions
2003-04

	Grades 3-5 n=239		Grades 6-8 n=132		Grades 9-12 n=40	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Number of Suspensions Pre	0.21**	0.08	0.45**	0.09	0.60**	0.21
Number of Meetings	0.07	0.08	0.34	0.27	-0.09	0.31
Number of Hours Met	0.01	0.04	-0.17	0.11	0.02	0.54
First Month of Meeting	0.02	0.05	0.29	0.15	-0.72*	0.35

* p<.05, **p<.01

STUDENT SUPPORT TEAM EVALUATION

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