OMNI

EVALUATION OF NCLB TITLE I, PART A: SUPPLEMENTAL EDUCATIONAL SERVICES

EVALUATION YEAR TWO REPORT

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SUBMITTED TO THE COLORADO DEPARTMENT OF EDUCATION
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EXECUTIVE SUMMARY

OMNI Institute (OMNI) was contracted to assist the Colorado Department of Education (CDE) in its evaluation of the Supplemental Educational Services (SES) program. Through its contract with CDE, OMNI maintained a database to track information about students participating in SES in the state of Colorado. All service providers were required to enter information into the database for the 2008-09 academic year. Students' service data was linked to their Colorado Student Assessment Program (CSAP) data or their Colorado Basic Literacy Act (CBLA) data to examine whether participation in the SES program was associated with improvements in student achievement in the domains of math as measured by the CSAP and reading as measured by the CSAP and CBLA. The goal of this report is to provide CDE with information about 1) students who participated in SES in Colorado during the 2008-09 academic year, 2) the number of students who participated in SES in multiple years, 3) the effectiveness of the SES program on students' reading and math achievement statewide, 4) the effectiveness of the SES program by vendor, and 5) recommendations and next steps regarding the evaluation of SES.

Supplemental Educational Services in Colorado (2008-09 Academic Year)

A total of 4,858 students participated in Colorado's SES program (i.e., students who received at least one hour of tutoring funded through Title I, Part A from October 1, 2008 through June 30, 2009). Twenty-eight vendors served students in 15 school districts. More than half (n = 2,872, 59%) of the students received between 20 and 40 hours of tutoring. About 23% (n = 1,125) received less than 20 hours of tutoring and approximately 18% (n = 861) received more than 40 hours of tutoring. Fifteen vendors provided between 20 and 40 hours of services per student on average.

Approximately 76% of all students served were attending schools in Denver County. Over 85% of students received tutoring at school and in groups of 10 or fewer students. The cost/hour of tutoring ranged from approximately $20.00 to $89.00. Elementary school age children were more likely to receive tutoring than middle and high school aged students with first through third grade comprising the majority (57.6%) of the sample. In general younger students also received more hours of tutoring than older students. Seventeen vendors provided tutoring services to SES students for three consecutive years (2007, 2008, and 2009).

The portion of SES students, for whom demographic information was available (91.2%) by linking to CSAP or CBLA data, demonstrated the following characteristics:

- 51.1% (n = 2262) were male.
- 79.8% (n = 3536) were Hispanic; 11.8% (n = 522) were Black.
- 59.6% (n = 2639) were not fully proficient in English (LEP or NEP).
- 15.8% (n = 440) had an IEP.

- 16.0% (n = 709) received an accommodation when taking reading achievement tests.

Statewide Effectiveness of SES on Student Achievement in Reading and Math

In order to assess the statewide effectiveness of SES on student achievement in reading and math, the following were examined: 1) change in students' achievement proficiency categories in reading and math from 2008 to 2009, student median growth percentiles in 2009, z-scores, and grade level targets for SES and Comparison students; 2) whether there were different patterns of change in achievement among subgroups of students; and 3) whether the number of hours of tutoring had an impact on change in achievement.

- ***Improvement in Reading***
  - Three-fourths (75.5%) of older students and 65% of younger students who received SES were in need of reading tutoring defined by scoring Unsatisfactory or Partially Proficient (CSAP), or Below Grade Level Targets (CBLA) in the prior year, 2008. Similarly large percentages of students within each grade appeared in need of reading tutoring. Among younger students, 54.9% (n = 231) met their grade level target while in Kindergarten.
  - There were no significant differences in proficiency category (CSAP) or grade level target (CBLA) change between SES and Comparison students.
  - There were no significant differences between SES students and Comparison students in median growth percentile rankings.
- ***Improvement in Math***
  - Approximately three-fourths of students (73.0%) who received SES in math scored Unsatisfactory or Partially Proficient in 2008.
  - There were no significant differences in proficiency category (CSAP) changes between SES and Comparison students.
  - SES students who scored Unsatisfactory or Partially Proficient in 2008 had significantly higher median growth percentile rankings than Comparison students.
- ***Effects of Amount of Tutoring***
  - Reading
    - Among students who scored Proficient/Advanced in 2008, SES students who received less than 20 hours of tutoring were more likely than Comparisons to decrease proficiency categories.
    - There were no other significant differences in proficiency category changes, grade level target changes or median growth percentile rankings between SES and Comparison students by amount of tutoring received.

- Math
  - Math proficiency category changes did not differ significantly by the amount of tutoring received by SES and Comparison students.
  - SES students who received at least 20 hours of tutoring had higher median growth percentile rankings than Comparison students in all three proficiency categories.

- ***Differences in Reading or Math Achievement by Subgroups***
  - There were no significant differences in median student growth percentile rankings in reading (CSAP), or grade level target changes (CBLA), between SES and Comparison students in any of the English proficiency categories.
  - Among English only speakers, SES students had significantly higher median growth percentile rankings in math than Comparison students. There were no significant differences in math achievement between SES and Comparison students in any of the English proficiency categories.
  - Reading achievement (CSAP) did not differ between SES and Comparison students with an IEP or between SES and Comparison students without an IEP.
  - Among students without an IEP, SES students had higher median growth percentile rankings in math than Comparison students.
- ***Interpretation***
  - Across all analyses, few significant differences were found. It is important to note that conducting multiple statistical tests can increase the chance of finding significant differences by chance.
  - Comparison students were similar to SES students with regard to prior proficiency categories, grade, school, and eligibility for free/reduced lunch. It is important to note that the groups were proportionally matched on prior proficiency categories and there may have been differences within each category. Z-score information provided some context to examine whether there were starting differences between the SES students and the Comparison students in 2008. In addition, groups may have differed on other variables that were not factored into the analyses.
  - When significant differences in achievement between SES and Comparison students were *not* detected in the data, one cannot conclude that participation in SES was not beneficial. SES may still have positive impacts on students. For example, SES may affect other measures of student achievement that are more sensitive to change over time than CSAPs or CBLA, or SES may affect other outcomes (e.g., attitudes towards learning, motivation) that will lead to changes in achievement. It is possible that one year's worth of tutoring (from late fall to before CSAPs were administered) did not provide enough

time for students to show significant gains on state achievement measures.

Vendor Effectiveness on Students' Change in Achievement

A series of tables were presented that provided CDE with information by vendor, including the following: 1) the number and percentage of students evaluated using CSAP and CBLA data; 2) multiple indicators of gains or improvements in student achievement outcomes; and 3) the number and percentage of students by English language proficiency and IEP status that were included in each analysis. This information was also provided for a Comparison group of students who were eligible but did not receive services. The goal was to provide CDE with tools to assess vendor effectiveness. Overall results of the vendor analysis were the following:

- ***Reading Achievement***
  - *CSAP*
    - Vendor improvement rates for students that scored Unsatisfactory or Partially Proficient in the prior year ranged from 10.0% to 33.3%, while the Comparison group had an improvement rate of 17.2%.
    - 11 vendors showed higher percentages of students who improved in reading than Comparison students.
    - Median growth percentiles for all students with growth data served by vendors ranged from 24 to 61.5, while the Comparison group had a median growth percentile of 46.
    - 9 vendors had higher median growth percentiles in reading than Comparison students.
  - *CBLA*
    - Vendor improvement rates ranged from 0.0% to 24.0%, while the Comparison group had an improvement rate of 11.5%.
    - 4 vendors showed higher percentages of students who improved in reading than Comparison students.
- ***Math Achievement***
  - Vendor improvement rates for students who scored Unsatisfactory or Partially Proficient in the prior year ranged from 18.9% to 31.6%, while the Comparison group had an improvement rate of 19.9%.
  - 5 vendors showed higher percentages of SES students who improved in math than Comparison students.
  - Median growth percentiles for all students with growth data by vendors ranged from 36.5 to 66, while the Comparison group had a median growth percentile of 48.

- 8 vendors had higher median growth percentiles in math than Comparison students.

Recommendations and Next Steps

- Additional analyses to explore the impact of multiple years of tutoring on student achievement should be considered. As additional years of data are collected and sample sizes increase, the impact of multiple years of tutoring may be an important next direction for evaluation efforts.
- In order to bolster the statewide evaluation and decrease the number of statistical tests conducted, we would like to explore opportunities to use standardized scores in regression models that assess the relative impact of various predictors on changes in achievement.
- Future evaluation efforts should also explore opportunities to refine analyses of CBLA data to capture more fine-grained gains in performance. This would help to better assess vendor effectiveness for younger students.
- Finally, additional analyses of student achievement for English Language Learners should be considered. It may be that the impact of SES participation on achievement outcomes for English Language Learners may vary as a function of prior proficiency level.

Evaluation of Supplemental Educational Services
2008-2009 ACADEMIC YEAR DATA
Prepared by OMNI Institute
June 2010

Background

OMNI Institute (OMNI) was contracted to assist the Colorado Department of Education (CDE) in its evaluation of the Supplemental Educational Services (SES) program. As part of No Child Left Behind (NCLB), low income students in schools that have not met adequate yearly progress (AYP) for two consecutive years are eligible to participate in the SES program and receive free tutoring. Through its contract with CDE, OMNI developed a database to track information about students participating in SES in the state of Colorado. Beginning in the 2006-2007 academic year, all service providers were required to enter information into the database. State identification numbers were used to link students' service data to their Colorado Student Assessment Program (CSAP) or Colorado Basic Literacy Act (CBLA) data to examine whether participation in the SES program was associated with improvements in student achievement in the domains of math as measured by the CSAP and reading as measured by the CSAP and CBLA. The goal of this report is to provide CDE with information about 1) students who received SES in Colorado during the 2008-2009 academic year, 2) the effectiveness of the SES program on students' reading and math achievement statewide, 3) the effectiveness of the SES program by vendor, and 4) recommendations and considerations regarding the evaluation of SES. In addition, the evaluation this year examined SES service provision over multiple years (2007 to 2009) and program impact for two subgroups of students: 1) English Language Learners, and 2) students with an Individual Education Plan (IEP).

After the 2008-2009 SES service data were downloaded from the database, a series of steps were taken to clean the data. This process is described in detail in Appendix A. In all, 4,858 students were recorded as participating in the SES program (they were recorded as receiving at least one hour of tutoring).

Section 1: Supplemental Educational Services in Colorado

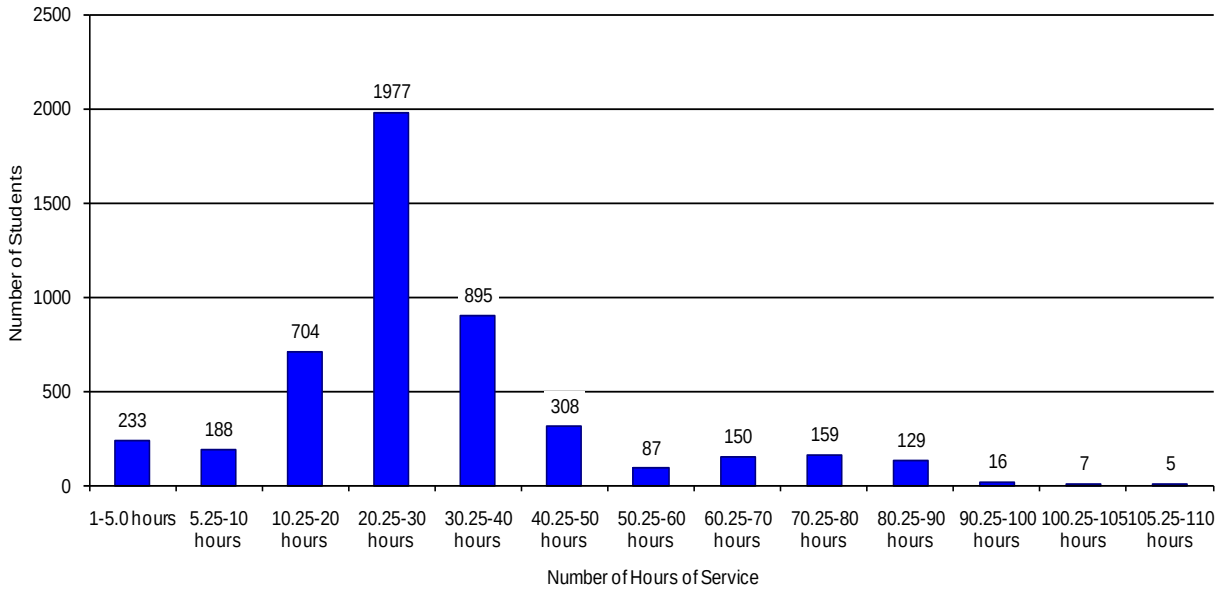
The goal of this first section is to describe SES services and students who participated in the SES program during the 2008-2009 academic year. Information about how much tutoring students received, which vendors provided the tutoring, and the districts in which tutoring was received is presented. Students who received tutoring between October 1, 2008 and June 30, 2009 were included. Data were available on 4,858 students who received at least one hour of tutoring during the 2008-2009 academic year. A total of 28 vendors provided services and services were provided in 15 school districts in Colorado.

Tutoring Services

How Much Tutoring Did Students Receive?

The following bar graph presents the number of hours of tutoring received by students. Each bar represents the number of students who received a specified number of hours of tutoring. For example, 233 students (4.8%) received between one and five hours of tutoring, 188 students (3.9%) received between five and 10 hours of tutoring, and 704 students (14.5%) received between 10 and 20 hours of tutoring. Thus, 1,125 students (23.2%) enrolled in SES during 2008-2009, received 20 or fewer hours of tutoring. The most frequent amount of tutoring was between 20 and 30 hours (n = 1,977 students, 40.7%) and the next most frequent amount was between 30 and 40 hours (n = 895 students, 18.4%). In addition, 861 students (17.7%) received more than 40 hours of tutoring. Less than one percent of students (n = 12) received more than 100 hours of tutoring; these students were served by the Department of Extended Learning.

Figure 1.1: Number of Hours of Tutoring Received by Students



Which Vendors Provided Tutoring Services and How Much Tutoring Did They Provide?

Twelve vendors served 100 or more students with Tutor Train serving the most students with 1,224 (25.2%), Club Z! the second most with 972 (20%), and Learn It Systems and Summer Scholars the third and fourth most with 474 (9.8%) and 338 (7%), respectively. Four vendors served between 50 and 100 students while 12 vendors served fewer than 50 students. Accelerated Schools, Adventures in Learning K-12, Brainfuse One-to-One Instruction, Educate-Online, and Faan Tone Liu all served fewer than 10 students each.

The median number of hours of tutoring per student was calculated. The median is a measure of central tendency that represents the middle of a distribution. This measure was used because it is less influenced by outliers than the mean. For example, if one student received 100 hours of tutoring and the other students received between 20 and 30 hours, the median would better characterize the central tendency of the data than the mean. As can be seen in the table below, Summer Scholars had the highest median number of hours per student (78 hours) whereas Adventures in Learning K-12 had the lowest median number of hours per student (6 hours). Fifteen vendors provided between 20 and 40 hours of services per student on average.

The Piñon Project had the highest median number of sessions per student (44 sessions), whereas Adventures in Learning K-12 had the lowest (5 sessions). The vast majority of vendors had between 15 and 40 sessions per student. The following table shows the number of students served, the median number of hours per student, and the median number of sessions per student for each vendor during the 2008-2009 academic year.

Table 1.1: Average Number of Hours and Sessions of Tutoring Received by Students

Vendor Name	Total Number of Students	Median Number of Hours per Student	Median Number of Sessions per Student
A to Z In-Home Tutoring	103	25.0	16.0
Accelerated Schools	5	29.0	17.0
Advantage Tutoring Services	198	25.0	25.0
Adventures in Learning K-12	7	6.0	5.0
Applied Scholastics International	12	51.4	38.0
Bennie E. Goodwin After School Academic Program	24	54.0	33.0
Brainfuse One-to-One Instruction	4	21.5	22.5
Center for Hearing, Speech and Language	121	67.5	41.0
Chancellor Supplemental Educational Services, LLC	151	33.0	24.0
Club Z!	972	24.0	22.0
Department of Extended Learning	129	47.0	36.0
Dreamcatcher Direct Instruction Centers Loveland	11	22.0	20.0
Educate-Online	6	22.0	19.0
Faan Tone Liu	2	12.0	19.5
GEO Foundation Educational Services	203	28.5	22.0
GOALS, Inc.	39	11.0	9.0
John Corcoran Foundation	256	46.3	38.0
Learn It Systems	474	27.0	27.0
READ, READ, READ LLC	90	17.3	16.0
Results Learning	70	18.5	20.0
Santa Fe Trail BOCES	22	25.5	27.0
Step to Success Community Learning Center	207	40.0	22.0
Summer Scholars	338	78.0	42.5
Sylvan Learning Center	73	30.0	20.0
The Pinon Project	17	74.0	44.0
Tu Tambien Puedes Tutoring	48	27.5	24.0
Tutor Train	1224	28.5	31.0
University of Denver Bridge Project	52	50.0	26.5

In Which Districts did Vendors Provide Services?

The following table presents data on the number of students served by vendor, by district. For example, as seen in the table below, Club Z! served 128 students in Adams-Arapahoe, three students in Adams County, 830 students in Denver County, nine in Northglenn-Thornton, and two students in Weld County, for a total of 972 students. In addition, this table provides information about the vendors providing services in each district. For example, Advantage Tutoring Services, Applied Scholastics International, Bennie E. Goodwin After School Academic Program, Club Z!, Learn It Systems, Read, Read, Read, LLC., Results Learning, Step to Success Community Learning Center, and Tutor Train all served students in Adams-Arapahoe. The final row of the table provides information about the percentage of students served by district. Approximately 76% of all students served were in schools in Denver County.

Table 1.2: Number of Students by Vendor and District

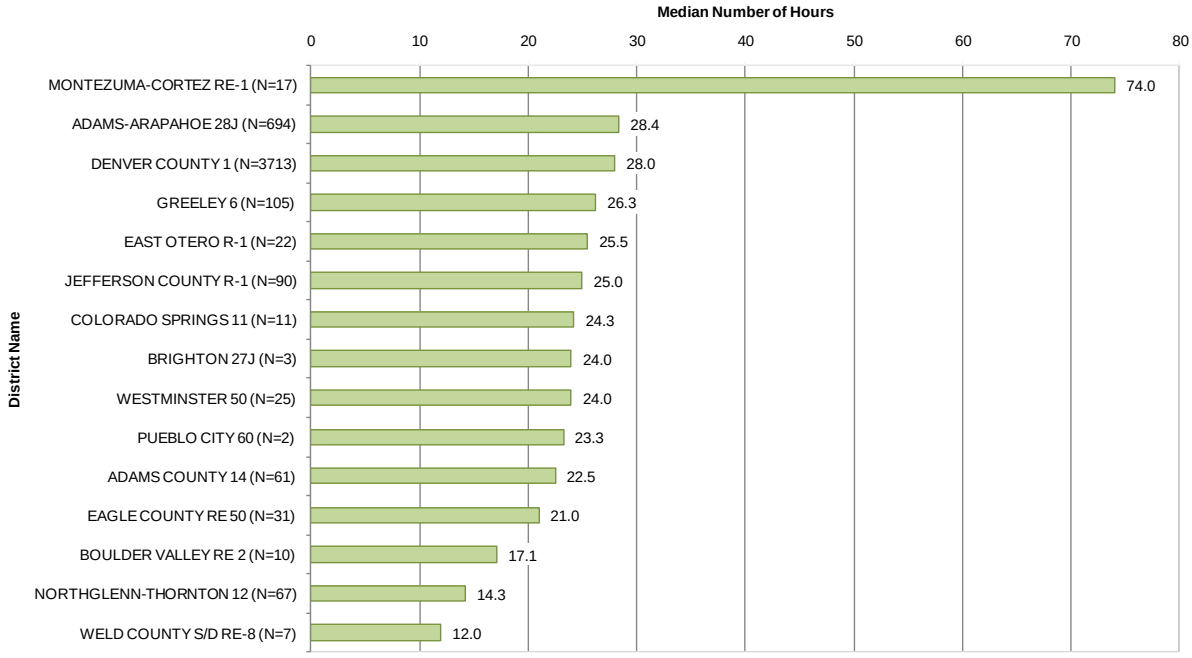
	Adams County 14	Adams-Arapahoe 28J	Boulder Valley RE 2	Brighton 27J	Colorado Springs 11	Denver County 1	Eagle County RE 50	East Otero R-1	Greeley 6	Jefferson County R-1	Montezuma-Cortez RE-1	Northglenn-Thornton 12	Pueblo City 60	Weld County S/D RE-8	Westminster 50	**Total**
A to Z In-Home Tutoring	1	0	2	0	11	65	0	0	8	5	0	9	2	0	0	**103**
Accelerated Schools	0	0	0	0	0	4	0	0	0	0	0	1	0	0	0	**5**
Advantage Tutoring Services	0	18	0	0	0	180	0	0	0	0	0	0	0	0	0	**198**
Adventures in Learning K-12	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	**7**
Applied Scholastics International	0	11	0	0	0	1	0	0	0	0	0	0	0	0	0	**12**
Bennie E. Goodwin After School Academic Program	0	22	0	0	0	2	0	0	0	0	0	0	0	0	0	**24**
Brainfuse One-to-One Instruction	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	**4**
Center for Hearing, Speech and Language	0	0	0	0	0	121	0	0	0	0	0	0	0	0	0	**121**
Chancellor Supplemental Educational Services, LLC	0	0	0	0	0	151	0	0	0	0	0	0	0	0	0	**151**
Club Z!	3	128	0	0	0	830	0	0	0	0	0	9	0	2	0	**972**
Department of Extended Learning	0	0	0	0	0	129	0	0	0	0	0	0	0	0	0	**129**
Dreamcatcher Direct Instruction Centers Loveland	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	**11**
Educate-Online	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	**6**
Faan Tone Liu	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**2**
GEO Foundation Educational Services	49	0	0	0	0	154	0	0	0	0	0	0	0	0	0	**203**
GOALS, Inc.	0	0	0	0	0	0	0	0	0	0	0	39	0	0	0	**39**
John Corcoran Foundation	0	0	0	0	0	256	0	0	0	0	0	0	0	0	0	**256**
Learn It Systems	0	39	0	0	0	435	0	0	0	0	0	0	0	0	0	**474**
READ, READ, READ LLC	0	90	0	0	0	0	0	0	0	0	0	0	0	0	0	**90**
Results Learning	0	28	0	0	0	42	0	0	0	0	0	0	0	0	0	**70**
Santa Fe Trail BOCES	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	**22**
Step to Success Community Learning Center	0	207	0	0	0	0	0	0	0	0	0	0	0	0	0	**207**
Summer Scholars	0	0	0	0	0	338	0	0	0	0	0	0	0	0	0	**338**
Sylvan Learning Center	8	0	1	3	0	40	0	0	12	0	0	9	0	0	0	**73**
The Pinon Project	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	**17**
Tu Tambien Puedes Tutoring	0	0	0	0	0	0	0	0	48	0	0	0	0	0	0	**48**
Tutor Train	0	151	5	0	0	896	31	0	26	85	0	0	0	5	25	**1224**
University of Denver Bridge Project	0	0	0	0	0	52	0	0	0	0	0	0	0	0	0	**52**
Total	61	694	10	3	11	3713	31	22	105	90	17	67	2	7	25	**4858**
% of Total Students Served	1.3%	14.3%	0.2%	0.1%	0.2%	76.4%	0.6%	0.5%	2.2%	1.9%	0.3%	1.4%	0.0%	0.1%	0.5%	100.0%

Tutoring Dose, Location and Format

How Many Hours of Tutoring Did Students Receive in Each District on Average?

The following bar graph provides data on the median number of hours of tutoring per student, by district. Students in Montezuma-Cortez received the most hours of tutoring on average (a median of 74 hours); students in Weld County School District RE-2 received the fewest hours of tutoring on average (a median of 12 hours).

Figure 1.2: Median Number of Hours of Tutoring Received by Students in Each District



Where Did Students Receive Tutoring (home, school, etc.)?

Tables 1.3 and 1.4 present the number of SES students served in different types of locations offered by vendors, by district and vendor, respectively. The majority of students (85.7%) were provided tutoring at school. Denver County had the highest frequency of home tutoring (n = 155) although it only accounted for about 4% of all tutoring within the district. Three vendors, A to Z In-Home Tutoring, Adventures in Learning K-12, and Educate-Online, only tutored students in the home.

Table 1.3: Location of Tutoring Services Provided to SES Students by District

District	School	Home	Community Center	Other	Multiple Sites	Total
ADAMS COUNTY 14	49	4	0	8	0	**61**
ADAMS-ARAPAHOE 28J	381	45	0	40	228	**694**
BOULDER VALLEY RE 2	0	7	0	3	0	**10**
BRIGHTON 27J	0	0	0	3	0	**3**
COLORADO SPRINGS 11	0	11	0	0	0	**11**
DENVER COUNTY 1	3483	155	0	23	52	**3713**
EAGLE COUNTY RE 50	31	0	0	0	0	**31**
EAST OTERO R-1	22	0	0	0	0	**22**
GREELEY 6	26	8	48	23	0	**105**
JEFFERSON COUNTY R-1	85	5	0	0	0	**90**
MONTEZUMA-CORTEZ RE-1	17	0	0	0	0	**17**
NORTHGLENN-THORNTON 12	40	18	0	9	0	**67**
PUEBLO CITY 60	0	2	0	0	0	**2**
WELD COUNTY S/D RE-8	5	2	0	0	0	**7**
WESTMINSTER 50	25	0	0	0	0	**25**
Total	**4164**	**257**	**48**	**109**	**280**	**4858**
Percent	**85.7%**	**5.3%**	**1.0%**	**2.2%**	**5.8%**	**100.0%**

Table 1.4: Location of Tutoring Services Provided to SES Students by Vendor

Vendor Name	School	Home	Community Center	Other	Multiple Sites	Total
A to Z In-Home Tutoring	0	103	0	0	0	**103**
Accelerated Schools	5	0	0	0	0	**5**
Advantage Tutoring Services	198	0	0	0	0	**198**
Adventures in Learning K-12	0	7	0	0	0	**7**
Applied Scholastics International	8	0	0	4	0	**12**
Bennie E. Goodwin After School Academic Program	5	0	0	19	0	**24**
Brainfuse One-to-One Instruction	0	0	0	4	0	**4**
Center for Hearing, Speech and Language	121	0	0	0	0	**121**
Chancellor Supplemental Educational Services, LLC	151	0	0	0	0	**151**
Club Z!	885	87	0	0	0	**972**
Department of Extended Learning	129	0	0	0	0	**129**
Dreamcatcher Direct Instruction Centers Loveland	0	0	0	11	0	**11**
Educate-Online	0	6	0	0	0	**6**
Faan Tone Liu	0	0	0	2	0	**2**
GEO Foundation Educational Services	203	0	0	0	0	**203**
GOALS, Inc.	39	0	0	0	0	**39**
John Corcoran Foundation	256	0	0	0	0	**256**
Learn It Systems	474	0	0	0	0	**474**
READ, READ, READ LLC	37	2	0	20	31	**90**
Results Learning	59	11	0	0	0	**70**
Santa Fe Trail BOCES	22	0	0	0	0	**22**
Step to Success Community Learning Center	10	0	0	0	197	**207**
Summer Scholars	338	0	0	0	0	**338**
Sylvan Learning Center	24	0	0	49	0	**73**
The Pinon Project	17	0	0	0	0	**17**
Tu Tambien Puedes Tutoring	0	0	48	0	0	**48**
Tutor Train	1183	41	0	0	0	**1224**
University of Denver Bridge Project	0	0	0	0	52	**52**
Total	**4164**	**257**	**48**	**109**	**280**	**4858**
Percent	**85.7%**	**5.3%**	**1.0%**	**2.2%**	**5.8%**	**100.0%**

What Were the Tutoring Session Delivery Formats (group, individual, etc.)?

The following tables present the number of SES students provided with tutoring services in different session formats by district and vendor, respectively. About 81% of students received tutoring in groups of less than five or groups sized 5-10. Slightly more students received tutoring in a group of less than 5 (42.5%) compared to groups of 5-10 (38.4%). Only 4 students total were served through online sessions. All four were in the Denver County school district and were served by Brainfuse One-to-One Instruction. Four vendors, A to Z In-Home Tutoring, Adventures in Learning K-12, Faan Tone Liu, and Read, Read, Read, LLC., conducted all or almost all of their tutoring in individual session formats. Five vendors, Bennie E. Goodwin After School Academic Program, Center for Hearing, Speech and Language, Chancellor Supplemental Educational Services, LLC, GEO Foundation Educational Services, and The Piñon Project, conducted all or almost of all their sessions in groups greater than 10.

Table 1.5: Session Delivery Format for Tutoring Services Provided to SES Students by District

District	Individual	Group: Less than 5	Group: 5-10	Group: Greater than 10	Online	Total
ADAMS COUNTY 14	4	8	31	18	0	**61**
ADAMS-ARAPAHOE 28J	132	392	153	17	0	**694**
BOULDER VALLEY RE 2	9	1	0	0	0	**10**
BRIGHTON 27J	0	3	0	0	0	**3**
COLORADO SPRINGS 11	11	0	0	0	0	**11**
DENVER COUNTY 1	219	1410	1622	458	4	**3713**
EAGLE COUNTY RE 50	0	31	0	0	0	**31**
EAST OTERO R-1	1	21	0	0	0	**22**
GREELEY 6	9	42	54	0	0	**105**
JEFFERSON COUNTY R-1	5	85	0	0	0	**90**
MONTEZUMA-CORTEZ RE-1	0	0	0	17	0	**17**
NORTHGLENN-THORNTON 12	18	49	0	0	0	**67**
PUEBLO CITY 60	2	0	0	0	0	**2**
WELD COUNTY S/D RE-8	2	5	0	0	0	**7**
WESTMINSTER 50	0	18	7	0	0	**25**
Total	**412**	**2065**	**1867**	**510**	**4**	**4858**
Percent	**8.5%**	**42.5%**	**38.4%**	**10.5%**	**0.1%**	**100.0%**

Table 1.6: Session Delivery Format for Tutoring Services Provided to SES Students by Vendor

Vendor Name	Individual	Group: Less than 5	Group: 5-10	Group: Greater than 10	Online	Total
A to Z In-Home Tutoring	103	0	0	0	0	**103**
Accelerated Schools	0	5	0	0	0	**5**
Advantage Tutoring Services	0	198	0	0	0	**198**
Adventures in Learning K-12	7	0	0	0	0	**7**
Applied Scholastics International	2	10	0	0	0	**12**
Bennie E. Goodwin After School Academic Program	0	5	0	19	0	**24**
Brainfuse One-to-One Instruction	0	0	0	0	4	**4**
Center for Hearing, Speech and Language	0	0	0	121	0	**121**
Chancellor Supplemental Educational Services, LLC	0	0	1	150	0	**151**
Club Z!	140	5	827	0	0	**972**
Department of Extended Learning	0	0	98	31	0	**129**
Dreamcatcher Direct Instruction Centers Loveland	1	10	0	0	0	**11**
Educate-Online	0	6	0	0	0	**6**
Faan Tone Liu	2	0	0	0	0	**2**
GEO Foundation Educational Services	0	0	31	172	0	**203**
GOALS, Inc.	0	39	0	0	0	**39**
John Corcoran Foundation	0	256	0	0	0	**256**
Learn It Systems	0	0	474	0	0	**474**
READ, READ, READ LLC	88	2	0	0	0	**90**
Results Learning	11	59	0	0	0	**70**
Santa Fe Trail BOCES	1	21	0	0	0	**22**
Step to Success Community Learning Center	0	207	0	0	0	**207**
Summer Scholars	0	0	338	0	0	**338**
Sylvan Learning Center	16	33	24	0	0	**73**
The Pinon Project	0	0	0	17	0	**17**
Tu Tambien Puedes Tutoring	0	0	48	0	0	**48**
Tutor Train	41	1157	26	0	0	**1224**
University of Denver Bridge Project	0	52	0	0	0	**52**
Total	**412**	**2065**	**1867**	**510**	**4**	**4858**
Percent	**8.5%**	**42.5%**	**38.4%**	**10.5%**	**0.1%**	**100.0%**

Did Students Receive Tutoring in Different Session Formats at Different Service Locations?

The following table presents information on whether the session format for provision of tutoring varied depending on the service location. Students who received services in schools were almost equally likely to receive tutoring in groups of less than 5 (n = 1763) or groups of 5-10 (n = 1819) followed by groups larger than 10 (n = 491). Students who received services at home primarily received individual tutoring (n = 251). All students who received services in a community center were in a group of 5-10 students (n = 48).

Table 1.7: Range of Session Formats by Service Location of Tutoring for SES Students

	Session Format					
Service Location	Individual	Group: Less than 5	Group: 5-10	Group: Greater than 10	Online	Total
School	91	1763	1819	491	0	**4164**
Home	251	6	0	0	0	**257**
Community Center	0	0	48	0	0	**48**
Other	40	46	0	19	4	**109**
Multiple Sites	30	250	0	0	0	**280**
Total	**412**	**2065**	**1867**	**510**	**4**	**4858**
Percent	**8.5%**	**42.5%**	**38.4%**	**10.5%**	**0.1%**	**100.0%**

Cost of Tutoring Services

What was the Cost of SES Services per Student and by Vendor?

The following table provides information for each vendor, on the number of students receiving SES, the mean number of hours per student, the cost per hour, the mean cost per student, the total hours provided, and the total cost. When vendors provided more than one cost per hour estimate, the average cost per hour was calculated for that vendor. Total cost was determined by multiplying total hours of tutoring by the average cost per hour. Values in the table were rounded to the tenth decimal place.

Educate-Online had the highest mean cost/student ($1,608), whereas Adventures in Learning K-12 had the lowest mean cost/student ($364). The two vendors who served the most students, Club Z! and Tutor Train, had total costs over $1,000,000. The vendor with the lowest total cost was Faan Tone Liu ($960) serving only 2 students.

Table 1.8: Cost of SES Services per Student and Total Cost by Vendor

Vendor	# of Students Served	Mean Hours/ Student	Cost/ Hour	Mean Cost/ Student	Total Hours of Tutoring	Total Cost
A to Z In-Home Tutoring	103	21.7	55.0	$1,196	2239.0	**$123,145**
Accelerated Schools	5	28.4	50.0	$1,420	142.0	**$7,100**
Advantage Tutoring Services	198	22.2	55.0	$1,223	4404.0	**$242,220**
Adventures in Learning K-12	7	7.3	50.0	$364	51.0	**$2,550**
Applied Scholastics International	12	51.8	25.0	$1,295	621.5	**$15,538**
Bennie E. Goodwin After School Academic Program	24	48.2	19.4	$937	1157.8	**$22,495**
Brainfuse One-to-One Instruction	4	18.7	45.0	$841	74.8	**$3,364**
Center for Hearing, Speech and Language	121	64.3	22.8	$1,467	7783.8	**$177,470**
Chancellor Supplemental Educational Services, LLC	151	30.8	43.0	$1,326	4656.8	**$200,240**
Club Z!	972	21.6	60.0	$1,298	21031.5	**$1,261,890**
Department of Extended Learning	129	55.7	22.0	$1,225	7185.0	**$158,070**
Dreamcatcher Direct Instruction Centers Loveland	11	20.1	41.6	$835	221.0	**$9,189**
Educate-Online	6	18.2	88.5	$1,608	109.0	**$9,647**
Faan Tone Liu	2	12.0	40.0	$480	24.0	**$960**
GEO Foundation Educational Services	203	24.0	44.5	$1,067	4864.5	**$216,616**
GOALS, Inc.	39	10.7	35.0	$375	417.5	**$14,613**
John Corcoran Foundation	256	40.2	32.0	$1,287	10294.8	**$329,432**
Learn It Systems	474	24.5	60.7	$1,491	11636.5	**$706,801**
READ, READ, READ LLC	90	16.4	80.0	$1,309	1472.5	**$117,800**
Results Learning	70	17.5	54.3	$948	1223.0	**$66,384**
Santa Fe Trail BOCES	22	26.1	30.0	$782	573.8	**$17,213**
Step to Success Community Learning Center	207	34.9	31.0	$1,080	7216.0	**$223,480**
Summer Scholars	338	72.4	20.0	$1,448	24473.0	**$489,460**
Sylvan Learning Center	73	25.6	38.4	$981	1866.8	**$71,609**
The Pinon Project	17	64.0	25.0	$1,600	1088.0	**$27,200**
Tu Tambien Puedes Tutoring	48	27.0	41.6	$1,123	1296.3	**$53,898**
Tutor Train	1224	25.8	44.4	$1,147	31597.8	**$1,403,888**
University of Denver Bridge Project	52	42.9	30.0	$1,286	2228.5	**$66,855**
Total	**4858**	**31.2**	**42.3**	**$1,123**	**149949.8**	**$6,039,125**

Tutoring Services by Grade

What was the Grade Distribution of Students Receiving Tutoring Services, and How Much Tutoring Did Students in Each Grade Receive?

The following table provides the number of students who received tutoring services, the median number of hours of tutoring, and the median number of tutoring sessions by grade. Elementary school age children were more likely to receive tutoring than middle and high school aged students with first through third grade comprising the majority (57.6%) of the sample. Elementary students also received the most tutoring. Students in second and fourth grade received the highest number of tutoring hours (median of 29 hours). Second grade students received the most tutoring sessions (median of 27 sessions). The 14 ninth grade students received the least amount of tutoring (median of 12.5 hours and 12.5 sessions). In general, younger students were more likely to receive tutoring and received more tutoring than older students.

Table 1.9: Number of Students Served in Each Grade

Grade	# of Students Served	% of Students Served	Median Number of Hours	Median Number of Sessions
Kindergarten	85	1.7	27.0	24
1st Grade	949	19.5	28.8	25
2nd Grade	959	19.7	29.0	27
3rd Grade	895	18.4	28.0	25
4th Grade	729	15	29.0	25
5th Grade	595	12.2	26.8	23
6th Grade	305	6.3	21.0	21
7th Grade	190	3.9	21.0	20
8th Grade	124	2.6	18.4	18
9th Grade	14	0.3	12.5	12.5
10th Grade	13	0.3	24.0	24

Student Demographics

What Were the Demographic Characteristics of SES Students?

Table 1.10 provides information about the demographic characteristics of students who received SES in 2008-09. Demographic information is not collected in the OMNI hosted SES database but is obtained for SES students by linking them to their demographic information in

CDE's data warehouse. The demographic information reported in Table 1.10 was obtained from the CBLA and CSAP data files provided by CDE to OMNI. Thus, the numbers are based on students who could be matched to the CBLA and/or CSAP data file via students' state identification numbers. In total, demographic information was available for 4,429 of the 4,858 students (91.2% of SES students). The CBLA data did not include data for Individualized Education Plan (IEP) and Accommodations (math); therefore, the sample size presented in the table is different for these two variables.

Table 1.10 demonstrates that SES students were slightly more likely to be male (n = 2,262, 51.1%) than female. Most SES students were Hispanic (n = 3,536, 79.8%) with the next highest percentage identifying as Black (n = 522, 11.8 %). More than half (n = 2,639, 59.6%) of the SES students were not fully proficient in English. Approximately 16% (n = 440) of students had an IEP. Accommodations, when taking reading achievement tests, were obtained by 16% (n = 709) of the students. More than a quarter of students (n = 780, 28%) received an accommodation when taking the math CSAP.

Table 1.10: SES Students' Demographic Characteristics

Demographic Characteristic	SES STUDENTS	
Gender	**N**	**%**
Male	2262	51.1%
Female	2167	48.9%
Total	**4429**	**100.0%**
Ethnicity	**N**	**%**
American Indian or Alaskan Native	50	1.1%
Asian or Pacific Islander	96	2.2%
Black (not Hispanic)	522	11.8%
Hispanic	3536	79.8%
White (not Hispanic)	225	5.1%
Total	**4429**	**100.0%**
Language Proficiency	**N**	**%**
N/A – English only speakers	1421	32.1%
NEP	1076	24.3%
LEP	1563	35.3%
FEP	369	8.3%
Total	**4429**	**100.0%**
IEP	**N**	**%**
No IEP	2342	84.2%
Has an IEP	440	15.8%
Total	**2782***	**100.0%**
Accommodations (Reading)	**N**	**%**
No accommodation	3717	84.0%
Received accommodation	709	16.0%
Total	**4426****	**100.0%**
Accommodations (Math)	**N**	**%**
No accommodation	1998	71.9%
Received accommodation	780	28.1%
Total	**2778*****	**100.0%**

*2076 missing (variable not included in CBLA data)
**3 missing
***2080 missing (variable not included in CBLA data n = 2076, 4 missing)

Vendor Achievement Tests

What Types of Tests Do Vendors use to Measure Change in Student Performance?

Vendors entered information into the SES database pertaining to in-house pre- and post-achievement tests they conducted with students. A preliminary exploration of this information was conducted to assess the usability of such tests in evaluating effectiveness of the SES program.

A total of 3,222 pretests and 2,410 posttests were recorded as having been administered by vendors. These pre- and post-tests were administered to a total of 2,313 students. However, 1,006 students were dropped from further exploration due to missing either pre- or post-information or having multiple pre- and post-tests recorded. Students with multiple pretest or multiple posttest were dropped due to insufficient information to allow for accurate matching of pre- and post-data (for example, information was recorded indicating that the student took 2 identical pretests or identical posttests, yet had different scores). The 1,307 students retained for further examination were linked with a total of 2,048 tests (with matched pre- and post-information). Examination of this test data revealed several challenges to usability with regards to evaluating effectiveness.

First, due to inconsistencies in the number of pre- and post-tests provided to a student, only a maximum of 27% of SES students would have pre-post vendor data for analysis. Thus, results of analyses with these data are likely to be biased by the ability to accurately match pre- and posttest data.

Second, a variety of different test types were recorded. Table 1.11 below presents the number of matched pre-post tests administered to SES students by test name, test subscale, and score type. These numbers indicate that no two vendors used the same test name/subscale/score type combination. Analyzing data across multiple test and score types would require significant resources to ensure appropriate data cleaning and accurate interpretation. Finally, vendors are not monitored on their pre-post test input.

In order to combat some of these issues for next year's evaluation efforts, the vendor database was revised for the 2009-10 academic year. Specifically, when vendors enter their posttest data, they now link it directly to the pretest score so that the database matches pre-post information for a student. This refinement should help improve vendor test data information. However, vendors are still not monitored on test data entry and are still able to choose their tests and subscales. If the evaluation is to include vendor test analyses in the future, these issues will need to be considered.

Table 1.11: Number of Tests Administered by Vendor

Vendor administered tests 08-09			Vendor Name												Total Number of Tests by Test Name
			Advanced Brain Gym Plus	Applied Scholastics International	Bennie E. Goodwin After School Academic Program	Center for Hearing, Speech and Language	Club Z! In-Home Tutoring Service	GEO Foundation Educational Services	READ, READ, READ LLC	Skinner Middle School	Step to Success Community Learning Center	Sylvan Learning Center Northern Colorado	Tu Tambien Puedes Tutoring	Valverde Elementary School	
Test Name	**Test Subscale**	**Score Type**	**Number of tests administered**												
A+ Anywhere Learning Systems	none	% correct						39							**39**
BASI	Math Total	Grade Equiv			4										**4**
	Reading Total	Grade Equiv			9										**9**
Benchmarks Reading	none	Raw scores								1					**1**
California Achievement Test	Scale s	Standardized										1			**1**
DIBELS	DIBELS Oral Reading Fl	Raw scores											27		**27**
	Nonsense Word Fluency	Raw scores											11		**11**
	Phoneme Segmentation F	Raw scores											9		**9**
DRA	level 1	Normed												1	**1**
	level 2	Normed												2	**2**
	level 3	Normed												1	**1**
	Reading	Raw scores					24								**24**
EDL	level 1	Normed												15	**15**
	level 2	Normed												1	**1**
	level 3	Normed												3	**3**
	Reading	Raw scores					10								**10**
Gates	Reading	Grade Equiv			4										**4**
GMADE	Math	Grade Equiv					1								**1**
GRADE	Math	Grade Equiv					656								**656**
	Reading	Grade Equiv					653								**653**
KTEA Brief I	Reading	Raw scores					1								**1**
KTEA II Brief Form	Math	Grade Equiv					18								**18**
		Raw scores					2								**2**
	Reading	Grade Equiv					62								**62**
		Raw scores					2								**2**
MCLAY	CONCEPT	Raw scores							4						**4**
	WORD	Standardized							1						**1**
QRI-3	Other	Normed							2						**2**
QRI-4	Other	Normed							69						**69**
Reading Progress Indicator	none	Grade Equiv				116									**116**
Star Math Diagnostic	Math	Grade Equiv			1										**1**
Star Reading Diagnostic	Reading	Grade Equiv			2										**2**
Woodcock Reading Mastery	Word attack	Grade Equiv									163				**163**
WRAT4	Math Computation	Grade Equiv		3											**3**
	Sentence Comprehension	Grade Equiv		10											**10**
		Raw scores	21												**21**
		Standardized	1												**1**
	Spelling	Grade Equiv		12											**12**
		Raw scores	36												**36**
		Standardized	1												**1**
	Word Reading	Grade Equiv		12											**12**
		Raw scores	36												**36**
		Standardized	1												**1**

Multiple Years of Tutoring

How Many Students Received Multiple Years of Tutoring?

Data from 2007, 2008, and 2009 were examined to determine how many students received multiple years of tutoring through SES. The following table indicates the number of students who received tutoring in each of the three years the SES program has collected data via the SES tracking database and in various year combinations. For example, of the 4,858 students who received tutoring services in 2009, 3,559 received tutoring in 2009 only, 241 received tutoring in 2007 and 2009, 740 received tutoring in 2008 and 2009, and 318 received tutoring services all three years (2007, 2008, and 2009).

Table 1.12: Number of Students Who Received Multiple Years of Tutoring

Year/Years Student Received Tutoring	Frequency	Percent
2007	2856	27.1%
2008	2218	21.1%
2009	3559	33.8%
2007 2008	593	5.6%
2007 2009	241	2.3%
2008 2009	740	7.0%
2007 2008 2009	318	3.0%
Total	**10525**	**100.0%**

How Many Students Received Multiple Years of Tutoring by Grade?

The following tables show how many students from each grade received multiple years of tutoring. Table 1.13 presents the frequencies by grade in 2008, while Table 1.14 presents the frequencies by grade in 2009. For example, of the 741 2nd grade students who received tutoring services in 2008, 321 received tutoring in 2008 only, 151 received tutoring in 2007 and 2008, 162 received tutoring in 2008 and 2009, and 107 received tutoring services all three years (2007, 2008, and 2009).

Table 1.13: Number of Students Who Received Tutoring in Multiple Years by Grade in 2008

	Years Received Tutoring				
Grade in 2008	2008	2007 2008	2008 2009	2007 2008 2009	Total
kindergarten	56	0	23	0	**79**
1st grade	408	1	266	4	**679**
2nd grade	321	151	162	107	**741**
3rd grade	362	126	117	101	**706**
4th grade	314	124	105	84	**627**
5th grade	299	112	31	15	**457**
6th grade	205	30	24	3	**262**
7th grade	128	23	11	4	**166**
8th grade	103	25	0	0	**128**
9th grade	11	1	1	0	**13**
10th grade	11	0	0	0	**11**
Total	**2218**	**593**	**740**	**318**	**3869**

Table 1.14: Number of Students Who Received Tutoring in Multiple Years by Grade in 2009

	Years Received Tutoring				
Grade in 2009	2009	2007 2009	2008 2009	2007 2008 2009	Total
kindergarten	84	0	1	0	85
1st grade	930	0	28	0	958
2nd grade	683	3	270	3	959
3rd grade	550	71	157	110	888
4th grade	441	71	117	99	728
5th grade	347	59	104	84	594
6th grade	241	20	29	15	305
7th grade	150	10	24	3	187
8th grade	107	6	9	4	126
9th grade	15	1	0	0	16
10th grade	11	0	1	0	12
Total	**3559**	**241**	**740**	**318**	**4858**

What Vendors Provided Multiple Years of Tutoring?

The following table shows the number of students, the median number of sessions, and the median number of hours per student served by each vendor in the three years the SES program has

collected data via the SES tracking database. A total of 17 vendors provided tutoring services to SES students all three years. The Department of Extended Learning had the highest frequency of sessions per student in 2007 and 2008, while The Piñon Project was highest in 2009. The vendor who spent the most time tutoring per student was Summer Scholars in 2007, 2008, and 2009. Other information can be gleaned from the table such as vendors who have increased the number of students served over time (e.g., Tutor Train was serving approximately 4 times as many students in 2009 than 2008).

Table 1.15: Number of Students Served, Median Number of Sessions, and Median Number of Hours by Year by Vendor

	Total Number of Students			Median Number of Sessions per Student			Median Number of Hours per Student		
Vendor	**2007**	**2008**	**2009**	**2007**	**2008**	**2009**	**2007**	**2008**	**2009**
A to Z In-Home Tutoring	16	38	103	14.5	15	16	26.38	24.5	25
A+ Grades Up	171	na	na	25	na	na	32	na	na
Accelerated Schools	8	12	5	5	8.5	17	10	15.25	29
Advantage Tutoring Services	270	381	198	25	23	25	25	23	25
Adventures in Learning K-12	na	16	7	na	16	5	na	20	6
Applied Scholastics International	14	na	12	13	na	38	19.38	na	51.38
Bennie E. Goodwin After School Academic Program	na	na	24	na	na	33	na	na	54
Brainfuse One-to-One Instruction	25	61	4	29	16	22.5	30.25	17	21.5
Center for Hearing, Speech and Language	135	135	121	36	39	41	55.5	66.5	67.5
Chancellor Supplemental Educational Services, LLC	79	141	151	22	23	24	32.75	29.5	33
Club Z!	738	517	972	17	17	22	22	21.25	24
Department of Extended Learning	153	109	129	63	58	36	61	58	47
Dreamcatcher Direct Instruction Centers Loveland	na	na	11	na	na	20	na	na	22
Educate-Online	na	23	6	na	16	19	na	17	22
Education Station	947	944	na	29	27	na	29	27.25	na
Faan Tone Liu	na	na	2	na	na	19.5	na	na	12
GEO Foundation Educational Services	256	126	203	17	22	22	24	27	28.5
GOALS, Inc.	na	47	39	na	9	9	na	8	11
John Corcoran Foundation	361	264	256	36	34	38	48.75	54	46.25
Learn It Systems	na	na	474	na	na	27	na	na	27
Learning Connection LLC	na	6	na	na	21	na	na	30.5	na
Lutheran Family Services of Colorado	na	15	na	na	33	na	na	39	na
Read, Read, Read	35	50	90	13	17	16	20.25	16.5	17.25
Results Learning	na	20	70	na	19	20	na	17.5	18.5
Santa Fe Trail BOCES	16	25	22	13.5	26	27	13.5	26	25.5
Step to Success Community Learning Center	43	129	207	14	23	22	28	40	40
Summer Scholars	432	361	338	36	46	42.5	72	80	78
Sylvan Learning Center	na	na	73	na	na	20	na	na	30
The Pinon Project	5	9	17	11	25	44	20	48	74
Tu Tambien Puedes Tutoring	na	na	48	na	na	24	na	na	27.5
Tutor Train	251	379	1224	29	33	31	29	29	28.5
University of Denver Bridge Project	24	56	52	7	26	26.5	13	49.25	50
Urban League Learning Program (ULLC)	20	na	na	2	na	na	3.5	na	na
Whiz Kids	4	5	na	8.5	13	na	8.5	12	na
Total Students	**4003**	**3869**	**4858**	"na" indicates that no students were contracted by that vendor in that year.					
Number of Vendors	**22**	**25**	**28**						
Median Number of Students per Vendor	**181.955**	**154.76**	**173.5**						

Section 1 Summary

Section 1 presented information on students who participated in SES in the 2008-2009 academic year. Several findings are of note to CDE:

- Hours of Tutoring
  - 23.2% (n = 1,125) of students received 20 or fewer hours of tutoring.
  - 59.1% (n = 2,872) of students received between 20 and 40 hours of tutoring.
  - 17.7% (n = 861) received more than 40 hours of tutoring.
- Vendors
  - 28 vendors provided tutoring services.
  - 12 vendors served 100 or more students.
  - 4 vendors served between 50 and 100 students.
  - 12 vendors served fewer than 50 students.
  - 15 vendors provided between 20 and 40 hours of services per student on average.
  - The majority of vendors provided between 15 and 40 sessions per student on average.
- Districts
  - Students in 15 school districts were served.
  - Denver Public Schools served the most students (n = 3713, 76.4%).
  - Adams-Arapahoe served the second most students (n = 694, 14.3%).
  - Greeley and Jefferson County served the third and fourth most students (n = 105, 2.2% and n = 90, 1.9%, respectively).
  - Boulder, Brighton, Colorado Springs, Montezuma-Cortez, Pueblo, and Weld each served 20 or fewer students.
- Service Information
  - 85.7% (n = 4164) of students received tutoring at school.
  - 89.4% (n = 4344) of students received tutoring in groups of 10 or fewer students.
  - 75.6% (n = 3673) of students received tutoring at school and in groups of 10 or fewer students.
  - Approximate vendor total costs ranged from $960 to $1,403,888. The cost/hour of tutoring ranged from approximately $20 to $89.
- Student Demographics
  - Grade:
    - More students in lower grades received SES than students in higher grades. The grade with the highest number of SES students was 2nd grade (959 students, 19.7%). Approximately 40% (n = 1993) of SES students were in K-2nd grade.

        - In general, students in lower grades received greater numbers of sessions and more hours of tutoring than students in higher grades.
    - 51.1% (n = 2262) were male.
    - 79.8% (n = 3536) were Hispanic; 11.8% (n = 522) were Black.
    - 59.6% (n = 2639) were not fully proficient in English (LEP or NEP).
    - 15.8% (n = 440) had an IEP.
    - 16.0% (n = 709) received an accommodation when taking reading achievement tests.
- Vendor Pre-Post Test Information
    - Up to 27% of students had matched vendor pre-post data.
    - A variety of tests were used by vendors to measure achievement.
    - Challenges exist in using vendor pre-post data for evaluation needs.
- Multiple Years of Tutoring
    - 17 vendors provided tutoring services to SES students all three years (2007, 2008, and 2009).
    - The Department of Extended Learning had the highest frequency of sessions per student in 2007 and 2008, while The Piñon Project was highest in 2009.
    - The vendor who spent the most time tutoring per student was Summer Scholars in 2007, 2008, and 2009.

Section 2: Statewide Effectiveness of SES on Student Achievement

The goal of this section was to examine the impact of SES on student achievement statewide. CSAP and CBLA data were available for students who participated in SES and students who were eligible to participate but did not do so. Thus, it was possible to compare changes in achievement between those two groups to examine whether students who received tutoring were more likely to improve than students who were eligible but did not receive tutoring. Below we describe our method of merging SES and achievement data and our method for selecting Comparison students for analysis. Thereafter, we present findings of program impact on student achievement, including analyses of impact of amount of tutoring and an examination of impact for subgroups of students.

Data Cleaning

Merging SES Students with CSAP Data

SES Students. When examining the effectiveness of SES on math and reading achievement using CSAP data, it was necessary to exclude tutoring sessions that occurred after CSAP tests were administered. After discussion with key CDE staff, March 26, 2009 was used as the cutoff for tutoring sessions to be included in the following analyses. Tutoring sessions that occurred on or before March 26th were included in the analyses; sessions that occurred after March 26th were not included in the analyses. March 26th was chosen as the cutoff as it was the middle of the testing window, for most students. Therefore, it is important to note that for some students a small number of tutoring sessions included in the following analyses may have occurred after CSAP tests were administered and for other students a small number of tutoring sessions that occurred before CSAP tests were administered may not have been included. Twenty-eight students received all of their tutoring after March 26th and were not included in analyses examining the effectiveness of tutoring on change on student CSAP achievement.

The SES student data were then merged with the CSAP data. Five students were found to have incompatible student IDs and could not be merged. Of the SES students merged with CSAP data, 1,859 were successfully merged with the 2008 CSAP data, 2,765 with the 2009 CSAP data, and 1,834 had both 2008 and 2009 data. Students without reading or math growth percentile scores were also excluded from analysis. As a result, 260 students were excluded from the analysis of reading tutoring effectiveness and 47 students were excluded from the analysis of math tutoring effectiveness. Most of these students were likely excluded because they took the test in Spanish, but some students may have been excluded for other reasons such as repeating a grade or missing one year of data. There were 1,543 SES students evaluated for reading achievement and 696 SES students evaluated for math achievement using CSAP data.

Comparison Students. To assess the effectiveness of SES on achievement, it is important

to compare SES students' changes in achievement to students who were eligible to participate in the program but did not do so. To create an appropriate Comparison group, several steps were taken. First, students who were in schools in which SES tutoring was offered in 2008-2009 were selected (i.e., at least one student from that school had been recorded as receiving SES). Second, students who qualified for free or reduced lunch in 2008-2009 were selected to match eligibility requirements for SES services. Finally, students were selected so that their grade and prior proficiency levels proportionally matched SES students for reading (CSAP and CBLA) and math achievement. Before drawing the sample we examined the sizes of the different grade and prior proficiency levels of students in the SES group and students within the pool of potential Comparison students in order to determine the largest proportion of Comparison students that could be included in analyses without biasing findings due to differences in grade or prior proficiency. For example, there were 205 students in the SES group who were in 4th grade in 2009 and scored Unsatisfactory in CSAP reading in 2008, while there were 782 students in the eligible Comparison pool in the same category (3.8 times more students in this category in the Comparison pool than in the SES group). We found the smallest ratio for each group and used this ratio to pull a proportional sample from each grade and 2008 proficiency category from the Comparison pool. The smallest ratio for reading (CSAP) was 3.8 (for 4th grade Unsatisfactory) and this was applied to the other categories for reading achievement (CSAP). For example, there were 58 SES students in 7th grade who scored Unsatisfactory in 2008, so 220 (or about 3.8 times) of the possible 1037 Comparison students were randomly selected from the Comparison pool. The ratios differed by test (CSAP reading, CBLA reading, and CSAP math); therefore, the smallest ratio for each test was used to pull the Comparison group for each test. The smallest ratio for math was 11.2 and the smallest for CBLA reading (discussed below) was 2.1. This process allowed for a large group of Comparison students for each test.

CBLA Data Cleaning

SES Students. CBLA data were used to examine the effectiveness of SES tutoring on reading achievement for students in first through third grade. The window of CBLA administration was much longer than the CSAP administration period. After discussion with key CDE staff, May 15th 2009 was determined as the cutoff for tutoring sessions included in the CBLA analyses. Tutoring sessions that occurred on or before May 15th were included and those after May 15th were not included. Eighteen students who received all of their tutoring after May 15th were not included in effectiveness analysis.

SES vendor data were then merged with the CBLA data provided by CDE. Five students were found to have incompatible student ID's and could not be merged. The assessment portion of CBLA can be satisfied using different assessment tests for students. Three assessment tests were

taken by SES students, the DRA2, DIBELS, and PALS. The DRA2 test was selected for this evaluation as 2,138 (89%) of SES students with matching CBLA data took the DRA2 two years in row. Those students who took other tests or different tests both years, were missing a year of testing, or did not receive reading tutoring were excluded from analysis. There were 1,484 students from 1st – 3rd grade who received reading tutoring and had DRA2 scores for 2008 and 2009. The DRA2 is administered by instructors or teachers at the school. Students within each grade are expected to reach a specific grade-level target score for literacy. For example, 2nd grade students are expected to achieve a score of 28 or higher, and in 3rd grade they are expected to achieve a score of 38 or higher. The appropriate grade level cutoff scores were used to categorize student achievement as falling below or meeting/exceeding grade level benchmarks.

Comparison Students. Several steps were taken to select Comparison students for CBLA analysis. First, students who were in schools in which SES tutoring was offered in 2008-2009 were selected (i.e., at least one student from that school had been recorded as receiving SES). Second, students who qualified for free or reduced lunch in 2008-2009 were selected to match eligibility requirements for SES services. Finally, students were proportionally selected so that their grade and whether they met their grade level target matched SES students. As described in the CSAP section for Comparison students, we compared the size of each grade/proficiency category group for the Comparison pool and SES students and computed a ratio for their sizes. The smallest ratio was used to pull a proportionally stratified sample from the Comparison pool for use in analyses. The smallest ratio for the CBLA data was 2.1. For example, 150 second graders who received SES met their grade level target in 2008; thus, 315 second graders who met their grade level target were randomly selected from the pool of students who did not receive SES, had valid DRA2 scores in 2008 and 2009, attended an eligible school, were eligible for free/reduced lunch, and met their grade level target in 2008. This process was completed for the different categories of students to obtain a sample of Comparison students to be included in CBLA analyses. Table 2.1 includes the Demographic data for the SES and Comparison students included in statewide and vendor effectiveness analyses.

Table 2.1: Demographic Characteristics of SES and Comparison Students

Demographic Characteristic	CSAP Reading		DRA2		CSAP Math	
	SES	Comparison	SES	Comparison	SES	Comparison
Gender						
Male	779 (50.5%)	3037 (51.9%)	727 (49.0%)	1505 (48.3%)	366 (52.6%)	3935 (50.5%)
Female	764 (49.5%)	2816 (48.1%)	757 (51.0%)	1611 (51.7%)	330 (47.4%)	3854 (49.5%)
Total	**1543 (100.0%)**	**5853 (100.0%)**	**1484 (100.0%)**	**3116 (100.0%)**	**696 (100.0%)**	**7789 (100.0%)**
Ethnicity						
American Indian or Alaskan Native	17 (1.1%)	78 (1.3%)	19 (1.3%)	37 (1.2%)	8 (1.1%)	99 (1.3%)
Asian or Pacific Islander	29 (1.9%)	145 (2.5%)	57 (3.8%)	99 (3.2%)	10 (1.4%)	177 (2.3%)
Black (not Hispanic)	229 (14.8%)	745 (12.7%)	189 (12.7%)	465 (14.9%)	72 (10.3%)	921 (11.8%)
Hispanic	1188 (77.0%)	4316 (73.7%)	1143 (77.0%)	2292 (73.6%)	563 (80.9%)	5850 (75.1%)
White (not Hispanic)	80 (5.2%)	569 (9.7%)	76 (5.1%)	223 (7.2%)	43 (6.2%)	742 (9.5%)
Total	**1543 (100.0%)**	**5853 (100.0%)**	**1484 (100.0%)**	**3116 (100.0%)**	**696 (100.0%)**	**7789 (100.0%)**
Language Proficiency						
N/A – English only speakers	607 (39.3%)	2425 (41.4%)	533 (35.9%)	1327 (42.6%)	230 (33.0%)	3166 (40.6%)
NEP	124 (8.0%)	584 (10.0%)	327 (22.0%)	652 (20.9%)	75 (10.8%)	804 (10.3%)
LEP	529 (34.3%)	1911 (32.6%)	570 (38.4%)	1055 (33.9%)	259 (37.2%)	2520 (32.4%)
FEP	283 (18.3%)	933 (15.9%)	54 (3.6%)	82 (2.6%)	132 (19.0%)	1299 (16.7%)
Total	**1543 (100.0%)**	**5853 (100.0%)**	**1484 (100.0%)**	**3116 (100.0%)**	**696 (100.0%)**	**7789 (100.0%)**
IEP						
No IEP	1269 (82.2%)	4931 (84.2%)	--	--	584 (83.9%)	6598 (84.7%)
Has an IEP	274 (17.8%)	922 (15.8%)	--	--	112 (16.1%)	1191 (15.3%)
Total	**1543 (100.0%)**	**5853 (100.0%)**	**--**	**--**	**696 (100.0%)**	**7789 (100.0%)**
Accommodations						
No accommodation	1137 (73.7%)	4199 (71.7%)	1484 (100.0%)	3105 (99.6%)	524 (75.3%)	5822 (74.7%)
Received accommodation	406 (26.3%)	1654 (28.3%)	0 (0.0%)	11 (0.4%)	172 (24.7%)	1967 (25.3%)
Total	**1543 (100.0%)**	**5853 (100.0%)**	**1484 (100.0%)**	**3116 (100.0%)**	**696 (100.0%)**	**7789 (100.0%)**

Reading Achievement Proficiency and Grade Level Target Descriptions

Fourth through Tenth Grade Student Proficiency Category Description: CSAP Scores

Reading achievement was evaluated for 4th through 10th graders using scores from the CSAP assessment. Table 2.2 provides information about the number and percentage of SES and Comparison students in the sample by prior achievement in reading based upon CSAP scores. Proficient and Advanced classifications were combined into one category representing students who scored Proficient or above. Table 2.3 provides information about the number of SES and Comparison students by prior achievement, by grade.

As can be seen in Table 2.2, three-fourths of students (n = 1165, 75.5%) who received SES in reading scored Unsatisfactory or Partially Proficient in 2008.

Table 2.2: Number of SES and Comparison Students Who Scored in Each Proficiency Category in Reading in 2008

2008 Reading Proficiency Category	SES Students		Comparison Students	
	N	%	N	%
Unsatisfactory	604	39.1%	2292	39.2%
Partially Proficient	561	36.4%	2129	36.4%
Proficient/Advanced	378	24.5%	1432	24.5%
Total	**1543**	**100.0%**	**5853**	**100.0%**

Table 2.3: Reading Achievement: Number and Percentage of SES and Comparison Students in Each 2008 Proficiency Category by Grade in 2009

Grade in 2009	2008 Reading Proficiency Category	SES Students		Comparison Students	
Fourth		**N**	**%**	**N**	**%**
	Unsatisfactory	205	40.0%	779	40.0%
	Partially Proficient	162	31.6%	615	31.6%
	Proficient/Advanced	146	28.5%	554	28.4%
	Total	**513**	**100.0%**	**1948**	**100.0%**
Fifth		**N**	**%**	**N**	**%**
	Unsatisfactory	191	37.4%	725	37.4%
	Partially Proficient	208	40.7%	790	40.7%
	Proficient/Advanced	112	21.9%	425	21.9%
	Total	**511**	**100.0%**	**1940**	**100.0%**
Sixth		**N**	**%**	**N**	**%**
	Unsatisfactory	107	45.0%	406	45.0%
	Partially Proficient	78	32.8%	296	32.8%
	Proficient/Advanced	53	22.3%	201	22.3%
	Total	**238**	**100.0%**	**903**	**100.0%**
Seventh		**N**	**%**	**N**	**%**
	Unsatisfactory	58	37.2%	220	37.2%
	Partially Proficient	55	35.3%	209	35.3%
	Proficient/Advanced	43	27.6%	163	27.5%
	Total	**156**	**100.0%**	**592**	**100.0%**
Eighth		**N**	**%**	**N**	**%**
	Unsatisfactory	36	34.6%	136	34.6%
	Partially Proficient	47	45.2%	178	45.3%
	Proficient/Advanced	21	20.2%	79	20.1%
	Total	**104**	**100.0%**	**393**	**100.0%**
Ninth		**N**	**%**	**N**	**%**
	Unsatisfactory	7	63.6%	26	65.0%
	Partially Proficient	3	27.3%	11	27.5%
	Proficient/Advanced	1	9.1%	3	7.5%
	Total	**11**	**100.0%**	**40**	**100.0%**
Tenth		**N**	**%**	**N**	**%**
	Unsatisfactory	0	0.0%	0	0.0%
	Partially Proficient	8	80.0%	30	81.1%
	Proficient/Advanced	2	20.0%	7	18.9%
	Total	**10**	**100.0%**	**37**	**100.0%**

First through Third Grade Student Grade Level Target Category Description: CBLA Scores

Reading achievement was evaluated for 1st through 3rd graders using scores from the CBLA test (DRA2). Based on CBLA reading scores, students were dichotomized into one of two categories by grade: 1) those who met, or exceeded, their grade level target, and 2) those who did not meet their grade level target. Table 2.4 provides information about the number and percentage of SES and Comparison students in the sample by prior achievement in reading based upon CBLA scores. Table 2.5 provides information about the number of SES and Comparison students by prior achievement, by grade.

As can be seen in Table 2.4, approximately 65% (n = 961) of the students who received SES in reading did not meet their grade level target in 2008. As can be seen in Table 2.5, a higher percentage of second and third graders did not meet their grade level targets in 2008 compared to first graders.

Table 2.4: Number of SES and Comparison Students Who Scored in Each Grade Level Target Category in Reading in 2008

Group	Met Grade Level Target		Did Not Meet Grade Level Target	
	N	%	N	%
SES	523	35.20%	961	64.80%
Comparison	1098	35.20%	2018	64.80%

Table 2.5: Reading Achievement: Number and Percentage of SES and Comparison Students in Each 2008 Grade Level Target Category by Grade in 2009

Grade in 2009	Grade Level Target	SES Students		Comparison Students	
First		**N**	**%**	**N**	**%**
	Met Target	231	54.9%	485	54.9%
	Below Target	190	45.1%	399	45.1%
Second		**N**	**%**	**N**	**%**
	Met Target	150	28.8%	315	28.8%
	Below Target	371	71.2%	779	71.2%
Third		**N**	**%**	**N**	**%**
	Met Target	142	26.2%	298	26.2%
	Below Target	400	73.8%	840	73.8%

Reading Achievement Comparisons Between SES and Comparison Students

Were SES Students More Likely to Improve in Reading Achievement from 2008 to 2009 than Comparison Students?

Fourth through Tenth Grade Students: CSAP Scores

Proficiency Categories. Table 2.6 provides data on stability and change in proficiency categories, based on CSAP scores, for reading from 2008 to 2009 for students who did and did not participate in SES. The first column of Table 2.6 describes the type of student being examined. SES refers to students who received at least one hour of tutoring and Comparison students are the Comparisons (see the discussion above in the section on data cleaning for a description of how SES and Comparison students were selected). The second column displays the number of students who scored in each proficiency category in 2008. For example, 2292 Comparison students scored Unsatisfactory and 604 SES students scored Unsatisfactory in 2008. The 2009 proficiency columns describe where the students scored in 2009. For example, of the 2292 Comparison students who scored Unsatisfactory in 2008, 1766 (77.1%) scored Unsatisfactory in 2009, 501 (21.9%) improved to Partially Proficient in 2009, and 25 (1.1%) improved to Proficient/Advanced in 2009. Of the 604 SES students who started Unsatisfactory, 462 (76.5%) scored Unsatisfactory in 2009, 136 (22.5%) improved to Partially Proficient in 2009, and 6 (1.0%) improved to Proficient/Advanced in 2009.

Chi-square analyses were conducted to determine whether change in proficiency from 2008 to 2009 differed significantly for SES students versus Comparison students for each prior proficiency category (separate analyses were conducted for students who started Unsatisfactory, Partially Proficient, and Proficient/Advanced in 2008). Results indicated no significant differences in reading proficiency category change between SES and Comparison students.

Median Growth Percentiles. Table 2.6 also provides reading CSAP data on median growth percentiles in 2009, by 2008 proficiency levels for students who did and did not participate in SES. For example, the 2009 median growth percentile for the 2292 Comparison students who scored Unsatisfactory in 2008 was 45. The median growth percentile in 2009 for the 604 SES students who scored Unsatisfactory in 2008 was 46.

The Mann-Whitney U test, a non-parametric test, was used to examine whether the distribution of median growth percentiles differed significantly for SES students versus Comparison students for each prior proficiency category (separate analyses were conducted for students who scored Unsatisfactory, Partially Proficient, and Proficient/Advanced in 2008). This test ranks the median growth percentiles of students in both groups and tests the difference between the mean ranks for each group. The difference between these ranks is then examined to determine whether the difference in ranks is likely to be due to chance. Results indicated there were no significant differences between SES and Comparison rankings of median growth percentile scores for any of

proficiency categories.

Z-Scores. CSAP reading scale scores were converted to z-scores to create standardized scores for comparison. Z-scores were calculated by grade for SES and Comparison students using the statewide mean score and standard deviation for each grade, which were provided by CDE. Standardized z-scores have a mean of 0 and a standard deviation of 1. The z-score indicates how many standard deviations above or below the mean a score falls. For example, a z-score of 1.2 is 1.2 standard deviations above the mean.

Table 2.6 includes z-scores for the SES and Comparison group students in 2008 and 2009. In 2008, the mean z-score for SES students in the Unsatisfactory category was -1.99, while the Comparison students in the same proficiency category had a z-score of -2.07. The z-scores for both groups improved in 2009, with difference z-scores for the SES and Comparison groups being 0.19 and 0.26, respectively.

Table 2.6: Reading Achievement: Number and Percentage of SES and Comparison Students Who Scored in Each Proficiency Category in 2008 and 2009

	2008 Reading Proficiency	2009 Reading Proficiency Category						2009 Median Growth	Mean Z-Score		
Group	Category	Unsatisfactory		Part. Proficient		Proficient/Adv.		Percentile	2008	2009	Difference (2009-2008)
	Unsatisfactory	N	%	N	%	N	%	Unsatisfactory			
SES	604	462	76.5%	136	22.5%	6	1.0%	46	-1.99	-1.80	0.19
Comparison	2292	1766	77.1%	501	21.9%	25	1.1%	45	-2.07	-1.81	0.26
	Partially Proficient	N	%	N	%	N	%	Partially Proficient			
SES	561	123	21.9%	325	57.9%	113	20.1%	47	-0.71	-0.73	-0.02
Comparison	2129	385	18.1%	1264	59.4%	480	22.5%	49	-0.68	-0.67	0.01
	Proficient/Advanced	N	%	N	%	N	%	Proficient/Advanced			
SES	378	5	1.3%	104	27.5%	269	71.2%	37	0.10	0.00	-0.11
Comparison	1432	16	1.1%	317	22.1%	1099	76.7%	43	0.17	0.09	-0.08

Achievement by Grade. Differences between SES and Comparison students in change in proficiency categories and median growth percentile differences from CSAP data were also examined within each grade level as it is possible that SES may have an impact on student achievement in certain grades compared to other grades. Appendix B presents information about a) change in reading achievement proficiency categories for SES and Comparison students by grade, b) differences in median growth percentiles and mean ranks for SES and Comparison students by grade, and c) differences in z-scores for SES and Comparison students by grade. Chi-square and Mann-Whitney U tests were conducted as before to test for significant differences. Statistical analyses were only conducted if at least 20 students scored in the category.

Among 5th grade students who scored Partially Proficient on the reading CSAP, SES students were less likely to improve proficiency categories compared to Comparison students. In addition, among 7th grade students who scored Proficient/Advanced on the reading CSAP, SES

students were less likely to maintain their proficiency category standing than Comparison students. Median growth percentiles were not significantly different between SES and Comparison students in any of the grades examined.

First through Third Grade Students: CBLA Scores

Grade Level Targets. Table 2.7 provides data on stability and change in grade level target categories, based on CBLA scores, for reading from 2008 to 2009 for students who did and did not participate in SES. The first column of Table 2.7 describes the type of student being examined. SES refers to students who received at least one hour of tutoring and Comparison students are the Comparisons (see the discussion above in the section on data cleaning for a description of how SES and Comparison students were selected). The second column displays the number of students who scored in each grade level target category in 2008. For example, 2018 Comparison students scored Below Grade Level Target and 961 SES students scored Below Grade Level Target in 2008. The 2009 grade level target columns describe where the students scored in 2009. For example, of the 2018 Comparison students who scored Below Grade Level Target in 2008, 1785 (88.5%) scored Below Target in 2009 and 233 (11.5%) improved to Met Grade Level Target. The 961 SES students who were Below Target in 2008 demonstrated a similar pattern in 2009 as the Comparison students.

Chi-square analyses were conducted to determine whether change in proficiency from 2008 to 2009 differed significantly for SES students versus Comparison students for each prior grade level target category. Results indicated no significant differences between SES and Comparison groups.

Table 2.7: Reading Achievement: Number and Percentage of SES and Comparison Students Who Scored in Each Grade Level Target Category in 2008 and 2009

Group	2008 Grade Level Target	2009 Grade Level Target			
		Met Target		Below Target	
	Met Target	N	%	N	%
SES	523	340	65.0%	183	35.0%
Comparison	1098	763	69.5%	335	30.5%
	Below Target	N	%	N	%
SES	961	112	11.7%	849	88.3%
Comparison	2018	233	11.5%	1785	88.5%

Achievement by Grade. Differences between SES and Comparison students in change in grade level target categories were also examined within each grade level as it is possible that SES may have a larger impact on student achievement in certain grades than in other grades. Appendix C presents information about change in grade level target categories by grade. Chi-square tests were conducted, as before, to test for significant differences in SES and Comparison students. Statistical

analyses were only conducted if at least 20 students started in a proficiency category. There were no significant differences between SES and Comparison students in first or second grade. Third grade SES students who met their grade level target in 2008 were more likely than Comparison students to fall below the grade level target in 2009.

Reading Achievement by Amount of Tutoring Received

Were SES Students More Likely to Improve in Reading Achievement from 2008 to 2009 as a Function of the Amount of Tutoring Received?

Fourth through Tenth Grade Students: CSAP Scores

The goal of this section was to examine whether the amount of tutoring received was associated with gains in achievement. It may be that for every additional hour of tutoring, students receive more benefits. Or, it may be that there is a threshold in the amount of tutoring necessary to improve achievement. For example, a minimum number of hours of tutoring (e.g., 20 hours) may be required for tutoring to influence student achievement. The following section presents data on associations between the amount of tutoring and change in reading achievement.

Two different methods were used to explore whether the amount of tutoring a student received was associated with changes in achievement from 2008 to 2009.

First, Spearman rank-order correlation tests were conducted to examine whether students received more benefits from every additional hour of tutoring. Second, chi-square and Mann-Whitney U tests were conducted to determine whether students who received less than 20 hours of tutoring or students meeting a threshold of 20 or more hours differed from Comparison students in reading achievement. Separate tests were conducted for students that started in each prior proficiency category.

Do SES Students Receive More Benefits from Every Additional Hour of Tutoring?

Results of the Spearman correlation analyses described above indicated a statistically significant association ($r = 0.07$) between the number of hours of tutoring received and SES students' median growth percentiles across prior proficiency categories. Although the correlation is statistically different from zero, the correlation is so small its meaning should be interpreted carefully.

Do SES Students who Received Fewer than 20, or 20 or More Hours of Tutoring Perform Better than Comparison Students?

A series of chi-square analyses compared the improvement percentages of SES students who received less than 20 hours of tutoring and SES students who received 20 or more hours of tutoring

to Comparison students for each prior proficiency group (see Table 2.8.a for the data on which analyses were conducted). Results indicated that among students who scored Proficient/Advanced in 2008, SES students who received less than 20 hours of tutoring were more likely than Comparison students to decrease proficiency categories.

Table 2.8.b presents analyses of median growth percentiles comparing SES students who received less than 20 hours of tutoring and SES students who received 20 or more hours of tutoring to Comparison students. Median growth percentiles did not differ significantly between Comparison students and SES students, regardless of the amount of tutoring received.

Table 2.8.a: Reading Achievement: Number and Percentage of SES (who received <20 or 20+hours of tutoring) and Comparison Students who Scored in Each Proficiency Category in 2008 and 2009.

	2008 Reading	2009 Reading Proficiency Category					
Group	**Proficiency Category**	**Unsatisfactory**		**Partially Proficient**		**Proficient/Advanced**	
	Unsatisfactory	**N**	**%**	**N**	**%**	**N**	**%**
SES (<20)	214	172	80.4%	40	18.7%	2	0.9%
SES (20+)	390	290	74.4%	96	24.6%	4	1.0%
Comparison	2292	1766	77.1%	501	21.9%	25	1.1%
	Partially Proficient	**N**	**%**	**N**	**%**	**N**	**%**
SES (<20)	202	47	23.3%	118	58.4%	37	18.3%
SES (20+)	359	76	21.2%	207	57.7%	76	21.2%
Comparison	2129	385	18.1%	1264	59.4%	480	22.5%
	Proficient/Advanced	**N**	**%**	**N**	**%**	**N**	**%**
SES (<20)	137	2	1.5%	43*	31.4%*	92	67.2%
SES (20+)	241	3	1.2%	61	25.3%	177	73.4%
Comparison	1432	16	1.1%	317	22.1%	1099	76.7%

*significantly different from Comparison students ($p < .05$).

Table 2.8.b: Reading Achievement: 2009 Median Growth Percentiles of SES (who received <20 or 20+ hours of tutoring) and Comparison Students who Scored in Each Proficiency Category in 2008.

Group	2008 Reading Proficiency Category	2009 Median Growth Percentile	Mean Z-Score 2008	Mean Z-Score 2009	Difference (2009-2008)
	Unsatisfactory				
SES (<20)	214	42	-2.15	-1.96	0.19
SES (20+)	390	48	-1.91	-1.72	0.19
Comparison	2292	45	-2.07	-1.81	0.26
	Partially Proficient				
SES (<20)	202	44	-0.72	-0.78	-0.05
SES (20+)	359	48	-0.71	-0.71	0.00
Comparison	2129	49	-0.68	-0.67	0.01
	Proficient/Advanced				
SES (<20)	137	38	0.06	-0.06	-0.12
SES (20+)	241	36	0.13	0.03	-0.10
Comparison	1432	43	0.17	0.09	-0.08

First through Third Grade Students: CBLA Scores

The goal of this section was to examine whether the amount of tutoring received was associated with gains in achievement for 1st through 3rd grade students. Chi-square tests were conducted to determine whether students receiving less than 20 hours of tutoring or students meeting a threshold of 20 or more hours differed from Comparison students in reading achievement. Separate tests were conducted for students that started in each prior grade level target category.

Do SES Students who Received Fewer than 20, or 20 or More Hours of Tutoring Perform Better than Comparison Students?

A series of chi-square analyses compared the improvement percentages of SES students who received less than 20 hours of tutoring and SES students who received 20 or more hours of tutoring to Comparison students for each prior grade level target group (see Table 2.9). Results indicated no significant differences in Grade Level Target changes between SES and Comparison students.

Table 2.9: Reading Achievement: Number and Percentage of SES (who received <20 or 20+hours of tutoring) and Comparison Students who Scored in Each Grade Level Target Category in 2008 and 2009.

Group	2008 Grade Level Target	2009 Grade Level Target			
		Met Target		Below Target	
	Met Target	N	%	N	%
SES (<20)	70	41	58.6%	29	41.4%
SES (20+)	453	299	66.0%	154	34.0%
Comparison	1098	763	69.5%	335	30.5%
	Below Target	N	%	N	%
SES (<20)	156	13	8.3%	143	91.7%
SES (20+)	805	99	12.3%	706	87.7%
Comparison	2018	233	11.5%	1785	88.5%

Reading Achievement by Subgroups of Students

Were There Differences in Improvements in Reading Achievement from 2008 to 2009 for Subgroups of SES and Comparison Students?

Fourth through Tenth Grade Students: CSAP Scores

Do Reading Achievement Scores Differ by English Language Proficiency Among SES and Comparison Students?

The proportion of SES and Comparison students were relatively similar with regards to English proficiency categories (Table 2.10). Reading achievement scores were compared between SES and Comparison students within English language proficiency levels. Analyses were conducted combining prior proficiency categories. There were no significant differences in median student growth percentile rankings in reading between SES and Comparison students in any of the English proficiency categories (Table 2.11).

Table 2.10: Number and Percentage of SES and Comparison Students in Each English Language Proficiency Category in 2009

ELL	SES Students		Comparison	
	N	%	N	%
NA (English only speaker)	607	39.3%	2425	41.4%
NEP (Non English Proficient)	124	8.0%	584	10.0%
LEP (Limited English Proficient)	529	34.3%	1911	32.6%
FEP (Full English Proficient)	283	18.3%	933	15.9%
Total	**1543**	**100.0%**	**5853**	**99.9%**

Table 2.11: Reading Achievement: SES and Comparison Students' Median Growth Percentiles and Z-Scores by English Language Proficiency Category in 2008 and 2009

Group	ELL	2009 Median Growth Percentile	Mean Z-Score 2008	Mean Z-Score 2009	Mean Z-Score Difference (2009-2008)
	NA				
SES	607	40	-1.01	-1.00	0.00
Comparison	2425	42	-0.86	-0.81	0.04
	NEP				
SES	124	34	-2.26	-2.27	-0.01
Comparison	584	36	-2.44	-2.27	0.16
	LEP				
SES	529	50	-1.11	-1.01	0.10
Comparison	1911	53	-1.11	-0.97	0.13
	FEP				
SES	283	49	-0.31	-0.28	0.03
Comparison	933	53	-0.34	-0.29	0.05

Do Reading Achievement Scores Differ by Individual Education Program (IEP) Status Among SES and Comparison Students?

The proportion of SES and Comparison students were similar with regards to IEP status (Table 2.12). Median student growth percentiles in reading were compared between SES and Comparison students with and without an IEP. Median student growth percentile rankings did not significantly differ between SES and Comparison students for students with and without an IEP (Table 2.13).

Table 2.12: Number of SES and Comparison Students in by IEP Status in2009

IEP	SES Students N	SES Students %	Comparison N	Comparison %
Yes	274	17.8%	922	15.8%
No	1269	82.2%	4931	84.2%
Total	**1543**	**100.0%**	**5853**	**100.0%**

Table 2.13: Reading Achievement: SES and Comparison Students' Median Growth Percentiles and Z-Scores by IEP Status in 2008 and 2009

Group	IEP	2009 Median Growth Percentile	Mean Z-Score 2008	Mean Z-Score 2009	Mean Z-Score Difference (2009-2008)
	Yes				
SES	274	38	-1.93	-1.97	-0.04
Comparison	922	34	-2.10	-2.00	0.10
	No				
SES	1269	46	-0.82	-0.76	0.06
Comparison	4931	48	-0.81	-0.73	0.08

First through Third Grade Students: CBLA Scores

Do Reading Achievement Scores Differ by English Language Proficiency Among SES and Comparison Students?

The proportion of SES and Comparison students were fairly similar with regards to English proficiency categories, although a higher percentage of Comparison students were English only speakers than SES students (Table 2.14). Reading achievement scores were compared between SES and Comparison students within English language proficiency levels for students that scored below grade level targets in 2008. There were no significant differences in reading achievement scores between SES and Comparison students in any of the English proficiency categories (Table 2.15).

Table 2.14: Number of SES and Comparison Students in Each English Language Proficiency Category in 2009

	SES		Comparison	
ELL	N	%	N	%
NA (English Only Speaker)	533	35.9%	1327	42.6%
NEP (Non English Proficient)	327	22.0%	652	20.9%
LEP (Limited English Proficient)	570	38.4%	1055	33.9%
FEP (Full English Proficient)	54	3.6%	82	2.6%
Total	**1484**	**100.0%**	**3116**	**100.0%**

Table 2.15: Reading Achievement: SES and Comparison Students' Grade Level Target Categories by English Language Proficiency Category in 2008 and 2009

Below Grade Level Target 2008		**2009 Grade Level Target**			
Group	**ELL**	**Met Target**		**Below Target**	
	NA	N	%	N	%
SES	318	35	11.0%	283	89.0%
Comparison	742	102	13.7%	640	86.3%
	NEP	N	%	N	%
SES	294	11	3.7%	283	96.3%
Comparison	582	17	2.9%	565	97.1%
	LEP	N	%	N	%
SES	332	60	18.1%	272	81.9%
Comparison	671	105	15.6%	566	84.4%
	FEP	N	%	N	%
SES	17	6	35.3%	11	64.7%
Comparison	23	9	39.1%	14	60.9%

Math Achievement Proficiency and Grade Level Target Descriptions

All math achievement scores were obtained from CSAP. Table 2.16 provides information about the number and percentage of SES and Comparison students in the sample by prior achievement in math. Proficient and Advanced classifications were combined into one category representing students who scored Proficient or above. Table 2.17 provides information about the number of SES and Comparison students by prior achievement, by grade.

As can be seen in Table 2.16, almost three-fourths of students (73.0%) who received SES in math scored Unsatisfactory or Partially Proficient in 2008. There was some fluctuation across grades, but no consistent pattern emerged (Table 2.17).

Table 2.16: Number of SES and Comparison Students Who Scored in Each Proficiency Category in Math in 2008

2008 Math Proficiency Category	SES Students		Comparison Students	
	N	%	N	%
Unsatisfactory	217	31.2%	2428	31.2%
Partially Proficient	291	41.8%	3258	41.8%
Proficient/Advanced	188	27.0%	2103	27.0%
Total	**696**	**100.0%**	**7789**	**100.0%**

Table 2.17: Math Achievement: Number and Percentage of SES and Comparison Students in Each 2008 Proficiency Category by Grade in 2009

Grade in 2009	2008 Math Proficiency Category	SES Students		Comparison Students	
Fourth		**N**	**%**	**N**	**%**
	Unsatisfactory	65	32.2%	728	32.2%
	Partially Proficient	76	37.6%	851	37.6%
	Proficient/Advanced	61	30.2%	683	30.2%
	Total	**202**	**100.0%**	**2262**	**100.0%**
Fifth		**N**	**%**	**N**	**%**
	Unsatisfactory	45	23.6%	503	23.5%
	Partially Proficient	77	40.3%	862	40.3%
	Proficient/Advanced	69	36.1%	772	36.1%
	Total	**191**	**100.0%**	**2137**	**100.0%**
Sixth		**N**	**%**	**N**	**%**
	Unsatisfactory	52	34.0%	582	34.0%
	Partially Proficient	75	49.0%	840	49.0%
	Proficient/Advanced	26	17.0%	291	17.0%
	Total	**153**	**100.0%**	**1713**	**100.0%**
Seventh		**N**	**%**	**N**	**%**
	Unsatisfactory	25	26.9%	280	26.9%
	Partially Proficient	40	43.0%	448	43.0%
	Proficient/Advanced	28	30.1%	313	30.1%
	Total	**93**	**100.0%**	**1041**	**100.0%**
Eighth		**N**	**%**	**N**	**%**
	Unsatisfactory	29	53.7%	324	53.7%
	Partially Proficient	22	40.7%	246	40.8%
	Proficient/Advanced	3	5.6%	33	5.5%
	Total	**54**	**100.0%**	**603**	**100.0%**
Ninth		**N**	**%**	**N**	**%**
	Unsatisfactory	1	33.3%	11	33.3%
	Partially Proficient	1	33.3%	11	33.3%
	Proficient/Advanced	1	33.3%	11	33.3%
	Total	**3**	**100.0%**	**33**	**100.0%**
Tenth		**N**	**%**	**N**	**%**
	Unsatisfactory	0	0.0%	0	0.0%
	Partially Proficient	0	0.0%	0	0.0%
	Proficient/Advanced	0	0.0%	0	0.0%
	Total	**0**	**0.0%**	**0**	**0.0%**

Math Achievement Comparisons between SES and Comparison Students

Were SES Students More Likely to Improve in Math Achievement from 2008 to 2009 than Comparison Students?

Proficiency Categories. Table 2.18 provides data on stability and change in proficiency categories for math CSAP from 2008 to 2009 for students who did and did not participate in SES.

The 2009 proficiency columns describe where the students scored in 2009. Thus, of the 2428 Comparison students who scored Unsatisfactory in 2008, 1886 (77.7%) scored Unsatisfactory in 2009, 516 (21.3%) improved to Partially Proficient in 2009, and 26 (1.1%) improved to Proficient/Advanced in 2009. Similarly, of the 217 SES students who started Unsatisfactory, 162 (74.7%) scored Unsatisfactory in 2009, 53 (24.4%) improved to Partially Proficient in 2009, and 2 (0.9%) improved to Proficient/Advanced in 2009.

Chi-square analyses were conducted to determine whether change in proficiency from 2008 to 2009 differed significantly for SES versus Comparison students for each prior proficiency category (separate analyses were conducted for students who started Unsatisfactory, Partially Proficient, and Proficient/Advanced in 2008). Results indicated no significant differences in the number of SES students that improved or declined in performance compared to the number of Comparison students that improved or declined in performance in any of the prior proficiency categories.

Median Growth Percentiles. Table 2.18 provides data on median growth percentiles in 2009, by 2008 proficiency levels for students who did and did not participate in SES. The 2009 median growth percentile columns describe how the two groups of students scored in 2009. Thus, the 2009 median growth percentile for the 2428 Comparison students who scored Unsatisfactory in 2008 was 49. Similarly, the median growth percentile in 2009 for the 217 SES students who started Unsatisfactory was 56.

The Mann-Whitney U test, a non-parametric test, was used to examine whether the distribution of median growth percentiles differed significantly for SES students versus Comparison students for each prior proficiency category (separate analyses were conducted for students who started Unsatisfactory, Partially Proficient, and Proficient/Advanced in 2008). This test ranks the median growth percentiles of students in both groups and tests the difference between the mean ranks for each group. Results indicated SES students who scored Unsatisfactory or Partially Proficient in 2008 had higher median growth percentile ranks in 2009 than Comparison students.

Z-Scores. CSAP math scale scores were converted to z-scores to create standardized scores for comparison. Z-scores were calculated by grade for SES and Comparison students using the statewide mean score and standard deviation for each grade, which were provided by CDE.

Standardized z-scores have a mean of 0 and a standard deviation of 1. The z-score indicates how many standard deviations above or below the mean a score falls. For example, a z-score of 1.2 is 1.2 standard deviations above the mean.

Table 2.18 includes z-scores for SES and Comparison groups in 2008 and 2009. In 2008, the mean z-score for SES students in the Unsatisfactory category was -1.85, while the Comparison students in the same proficiency category had a z-score of -1.88. The z-scores for both groups improved in 2009, with difference z-scores for the SES and Comparison groups being 0.21 and 0.14 respectively.

Table 2.18: Number and Percentage of SES and Comparison Students who Scored in Each Proficiency Category in Math in 2008 and 2009

	2008 Math Proficiency	2009 Math Proficiency Category						2009 Median Growth	Mean Z-Score		
Group	Category	Unsatisfactory		Part. Proficient		Proficient/Adv.		Percentile	2008	2009	Difference (2009-2008)
	Unsatisfactory	N	%	N	%	N	%	Unsatisfactory			
SES	217	162	74.7%	53	24.4%	2	0.9%	56*	-1.85	-1.64	0.21
Comparison	2428	1886	77.7%	516	21.3%	26	1.1%	49	-1.88	-1.74	0.14
	Partially Proficient	N	%	N	%	N	%	Partially Proficient			
SES	291	61	21.0%	180	61.9%	50	17.2%	52*	-0.85	-0.73	0.12
Comparison	3258	660	20.3%	2009	61.7%	589	18.1%	49	-0.81	-0.74	0.07
	Proficient/Advanced	N	%	N	%	N	%	Proficient/Advanced			
SES	188	1	0.5%	45	23.9%	142	75.5%	49	0.13	0.09	-0.04
Comparison	2103	33	1.6%	457	21.7%	1613	76.7%	46	0.22	0.14	-0.08

*significantly different from Comparison students ($p < .05$).

Achievement by Grade. Differences between SES and Comparison students in change in proficiency categories and median growth percentile differences were also examined within each grade level as it is possible that SES may have a larger impact on student achievement in certain grades compared to other grades. Appendix D presents information about a) change in math achievement proficiency categories for SES and Comparison students by grade, b) differences in median growth percentiles and mean ranks for SES and Comparison students by grade, and c) differences in z-scores for SES and Comparison students by grade. Chi-square and Mann-Whitney U tests were conducted as before to test for significant differences. Statistical analyses were only conducted if at least 20 students started in the category. Among those students who scored Unsatisfactory in 2008, 6th grade SES students were more likely than Comparison students to improve proficiency categories and 7th grade SES students were less likely than Comparison students to improve categories. In addition, 5th grade SES students who started Partially Proficient or Proficient/Advanced had higher median growth percentile rankings than Comparisons and 6th grade SES students who started in the Unsatisfactory category had higher median growth percentile rankings than Comparison students.

Math Achievement by Amount of Tutoring Received

Were SES Students More Likely to Improve in Math Achievement from 2008 to 2009 as a Function of the Amount of Tutoring Received?

The goal of this section was to examine whether the amount of tutoring received was associated with gains in achievement. The same process that was described for reading analyses was employed for math analyses.

Do SES Students Receive More Benefits from Every Additional Hour of Tutoring?

Results of the Spearman correlation analyses indicated a statistically significant association (r = .16) between the number of hours of tutoring received and SES students' median growth percentiles across prior proficiency categories. Although the correlation is statistically different from zero, the correlation is relatively small and does not reflect a strong association.

Do SES Students who Received Fewer than 20, or 20 or More Hours of Tutoring Perform Better than Comparison Students?

A series of chi-square analyses compared the improvement percentages of SES students who received less than 20 hours of tutoring and SES students who received 20 or more hours of tutoring to Comparisons students for each prior proficiency group (see Table 2.19.a for the data on which analyses were conducted). There were no significant differences in proficiency category changes among SES and Comparison students.

Table 2.19.b presents analyses of median growth percentiles for students who received less than 20, or 20+ hours of tutoring. In all three prior proficiency categories, SES students who received 20+ hours of tutoring had significantly higher median growth percentile rankings in math than Comparison students.

Table 2.19.a: Math Achievement: Number and Percentage of SES (who received <20 or 20+ hours of tutoring) and Comparison Students who Scored in Each Proficiency Category in 2008 and 2009

Group	2008 Math Proficiency Category	2009 Math Proficiency Category					
		Unsatisfactory		Partially Proficient		Proficient/Advanced	
	Unsatisfactory	N	%	N	%	N	%
SES (<20)	100	79	79.0%	21	21.0%	0	0.0%
SES (20+)	117	83	70.9%	32	27.4%	2	1.7%
Comparison	2428	1886	77.7%	516	21.3%	26	1.1%
	Partially Proficient						
SES (<20)	121	29	24.0%	79	65.3%	13	10.7%
SES (20+)	170	32	18.8%	101	59.4%	37	21.8%
Comparison	3258	660	20.3%	2009	61.7%	589	18.1%
	Proficient/Advanced						
SES (<20)	61	1	1.6%	18	29.5%	42	68.9%
SES (20+)	127	0	0.0%	27	21.3%	100	78.7%
Comparison	2103	33	1.6%	457	21.7%	1613	76.7%

Table 2.19.b: Math Achievement: 2009 Median Growth Percentiles and Mean Ranks of SES (who received <20 or 20+ hours of tutoring) and Comparison Students who Scored in Each Proficiency Category in 2008

` Group	2008 Math Proficiency Category	2009 Median Growth Percentile	Mean Z-Score		Difference (2009-2008)
			2008	2009	
	Unsatisfactory				
SES (<20)	100	55	-1.88	-1.70	0.18
SES (20+) *	117	57	-1.83	-1.59	0.24
Comparison	2428	49	-1.88	-1.74	0.14
	Partially Proficient				
SES (<20)	121	43	-0.82	-0.82	0.00
SES (20+) *	170	62	-0.88	-0.67	0.21
Comparison	3258	49	-0.81	-0.74	0.07
	Proficient/Advanced				
SES (<20)	61	40	0.15	0.02	-0.13
SES (20+) *	127	56	0.11	0.12	0.01
Comparison	2103	46	0.22	0.14	-0.08

*significantly different from Comparison students ($p < .05$).

Math Achievement by Subgroups of Students

Were There Differences in Improvements in Math Achievement from 2008 to 2009 for Subgroups of SES and Comparison Students: CSAP?

Do Math Achievement Scores Differ by English Language Proficiency Among SES and Comparison Students?

The proportion of SES and Comparison students were fairly similar with regards to English proficiency categories, although SES students had a slightly higher proportion of LEP students (Table 2.20). Math achievement scores were compared between SES and Comparison students within English language proficiency levels. Among English only speakers, SES students had significantly higher median growth percentile rankings. There were no significant differences in median growth percentiles between SES and Comparison students in any other category (Table 2.21).

Table 2.20: Number of SES and Comparison Students in Each English Language Proficiency Category in 2009

	SES Students		Comparison	
ELL	**N**	**%**	**N**	**%**
NA (English only speaker)	230	33.0%	3166	40.6%
NEP (Non English Proficient)	75	10.8%	804	10.3%
LEP (Limited English Proficient)	259	37.2%	2520	32.4%
FEP (Full English Proficient)	132	19.0%	1299	16.7%
Total	**696**	**100.0%**	**7789**	**100.0%**

Table 2.21: Math Achievement: SES and Comparison Students' Median Growth Percentiles and Z-Scores by English Language Proficiency Category in 2008 and 2009

Group	ELL	2009 Median Growth Percentile	Mean Z-Score 2008	Mean Z-Score 2009	Mean Z-Score Difference (2009-2008)
	NA				
SES *	230	47	-0.93	-0.87	0.06
Comparison	3166	45	-0.85	-0.83	0.02
	NEP				
SES	75	39	-1.77	-1.72	0.05
Comparison	804	38	-1.71	-1.74	-0.02
	LEP				
SES	259	57	-0.93	-0.78	0.15
Comparison	2520	53	-0.93	-0.82	0.11
	FEP				
SES	132	59	-0.31	-0.17	0.14
Comparison	1299	54	-0.24	-0.16	0.08

*significantly different from Comparison students ($p < .05$).

Do Math Achievement Scores Differ by Individual Education Program (IEP) Status Among SES and Comparison Students?

The proportion of SES and Comparison students were similar with regards to IEP status (Table 2.22). Math achievement scores were compared between SES and Comparison students with and without an IEP. For students without an IEP, SES students had higher rankings of median growth percentiles than Comparison students (Table 2.23).

Table 2.22: Number of SES and Comparison Students in by IEP Status in 2009

IEP	SES Students N	SES Students %	Comparison N	Comparison %
Yes	112	16.1%	1191	15.3%
No	584	83.9%	6598	84.7%
Total	**696**	**100.0%**	**7789**	**100.0%**

Table 2.23: Math Achievement: SES and Comparison Students' Median Growth Percentiles and Z-Scores by IEP Status in 2009.

Group	IEP	2009 Median Growth Percentile	Mean Z-Score 2008	Mean Z-Score 2009	Mean Z-Score Difference (2009-2008)
	Yes				
SES	112	49	-1.48	-1.51	-0.03
Comparison	1191	41	-1.64	-1.67	-0.04
	No				
SES *	584	54	-0.79	-0.66	0.13
Comparison	6598	50	-0.73	-0.66	0.07

*significantly different from Comparison students ($p < .05$).

Cautions when Interpreting Effectiveness Results

There are several factors to keep in mind when interpreting the results presented in Section 2 regarding the statewide effectiveness of SES on student achievement. Some very important considerations are presented below.

First, in addition to receiving after school tutoring, ***many factors affect students' achievement***. Because of ethical and practical reasons, it was not possible to use a randomized comparison design (i.e., randomly assigning, in advance, certain students to participate or not in SES). Thus, we cannot determine that any differences between SES students and Comparison students were *caused by* participation in SES. We selected the Comparison students to be as similar as possible to SES students with regard to grade, prior proficiency categories, participating schools, and eligibility. Nonetheless, there are other factors that may have differed between the groups that were not considered in this report.

Second, it is also important to consider that even though significant differences in achievement were *not* detected for some analyses, participation in SES may still have a positive effect on students. For example, SES may affect other measures of student achievement or other outcomes (e.g., academic motivation). In addition, it is possible that one year's worth of tutoring does not provide enough time for students to show significant gains on state achievement measures.

Finally, multiple statistical tests were conducted in this evaluation. The more significance tests conducted, the greater the likelihood of finding a significant difference between groups that was due to chance. Thus, when there were only few and inconsistent patterns, significant differences between SES and Comparison students should be interpreted with caution.

Section 2 Summary

The goal of Section 2 was to examine whether participation in SES had an impact on student achievement in reading and in math using data from CSAP and CBLA. In brief, we examined: 1) change in students' achievement for SES and Comparison students using proficiency categories, median growth percentiles, z-scores, and grade level targets, 2) whether there were different patterns of change in achievement for subgroups of students, and 3) whether the number of hours of tutoring had an impact on change in achievement. In sum, despite the limitations discussed above, the data suggested the following:

- Improvement in Reading
  - Three-fourths (75.5%) of older students and 65% of younger students who received SES were in need of reading tutoring defined by scoring Unsatisfactory or Partially Proficient (CSAP), or Below Grade Level Targets (CBLA) in the prior year, 2008. Similarly large percentages of students within each grade appeared in need of reading tutoring, except a higher percentage of students receiving tutoring met their grade-level target in Kindergarten than in the other grades.
  - There were no significant differences in proficiency category or grade level target change between SES and Comparison students.
  - There were no significant differences between SES students and Comparison students in median growth percentile rankings.
- Improvement in Math
  - Approximately three-fourths of students (73.0%) who received SES in math scored Unsatisfactory or Partially Proficient in 2008.
  - There were no significant differences in proficiency category changes between SES and Comparison students.
  - SES students who scored Unsatisfactory or Partially Proficient in 2008 had significantly higher median growth percentile rankings than Comparison students.
- Effects of Amount of Tutoring
  - Reading
    - Among students who scored Proficient/Advanced in 2008, SES students who received less than 20 hours of tutoring were more likely than Comparisons to decrease proficiency categories.
    - There were no other significant differences in proficiency category changes, grade level target changes or median growth percentile rankings between SES and Comparison students by amount of tutoring received.

- Math
    - Math proficiency category changes did not differ significantly by the amount of tutoring received by SES and Comparison students.
    - SES students who received at least 20 hours of tutoring had higher median growth percentile rankings than Comparison students in all three proficiency categories.

- Differences in Reading or Math Achievement by Subgroups
    - There were no significant differences in median student growth percentile rankings in reading (CSAP), or grade level target changes (CBLA), between SES and Comparison students in any of the English proficiency categories.
    - Among English only speakers, SES students had significantly higher median growth percentile rankings in math than Comparison students. There were no significant differences in math achievement between SES and Comparison students in any of the English proficiency categories.
    - Reading achievement (CSAP) did not differ between SES and Comparison students with an IEP or between SES and Comparison students without an IEP.
    - Among students without an IEP, SES students had higher median growth percentile rankings in math than Comparison students.

Section 3: Vendor Effectiveness on Students' Change in Achievement

The goal of this section was to examine the effectiveness of SES on student achievement by individual vendors providing services. The following achievement indicators were examined to assess vendor effectiveness: 1) percentage of students who scored Unsatisfactory or Partially Proficient in 2008 and improved to a higher proficiency category in 2009 (CSAP – reading and math); 2) percentage of students who did not achieve grade-level benchmarks in 2008 and then achieved grade-level benchmarks in 2009 (CBLA – reading only); 3) median student growth percentiles in 2009 (CSAP – reading and math); and 4) change in z-scores from 2008 to 2009 (CSAP-reading and math). Because of sample size limitations, this section reports on changes in achievement by vendor but does not attempt to provide statistical evidence as to the relative effectiveness of the vendors. The goal is to provide CDE with multiple avenues to examine vendor effectiveness within the constraints of the data.

Results for the Comparison group of students are included in the tables in bold. Improvement information is not reported for vendors that had fewer than 16 students with valid CSAP or CBLA data for confidentiality reasons and limited sample size. Similarly, median growth percentile information is not reported for vendors that had fewer than 16 students per CDE guidelines. It is important to note that sample sizes differed across vendors depending on the analysis conducted. When examining the percentage of students that improved in proficiency categories, only students scoring below Proficient in the prior year were included. When examining student median growth percentiles and z-scores, students in each prior proficiency category were combined and included in analyses. Separate tables were provided to CDE that included results of analyses with fewer than 16 students.

Using the Information Presented in this Section to Assess Vendor Effectiveness

We recommend the following strategy to help CDE evaluate the effectiveness of individual vendors. First, the number of students served by a vendor should be considered, along with the number of students for whom achievement data were available. For reading achievement, this information is provided in Table 3.1. Also from this table, one can determine if a vendor was serving younger or older students based upon the achievement data that were used in the evaluation (i.e., CBLA – 1st – 3rd graders; CSAP – 4th – 10th graders). Because CSAP data were examined using three indicators (improvement in proficiency category, median growth percentiles, and z-scores) and CBLA data were examined only on change in meeting grade-level targets, the robustness of the evidence of effectiveness would be stronger for older than younger students. Thus, CDE should consider not only the number of students evaluated overall, but the number of older and younger students evaluated.

Second, we recommend that CDE examine each indicator of student achievement by vendor. Change in reading proficiency category by vendor for the older students who scored Unsatisfactory or Partially Proficient from the CSAP is located in Table 3.2. This information allows one to compare the proportion of students who improved across vendors and to the Comparison group. Reading achievement median growth percentiles and z-scores are presented in Table 3.3. Standardized z-scores can be compared across vendors and to the Comparison group before and after the SES tutoring sessions. Examining z-scores before tutoring occurred would be useful to understand the degree to which vendors were serving students with very low achievement. Comparison students were scoring approximately 1.0 standard deviation below the mean in reading in 2008 on average (see Table 3.3). If a vendor was serving students that scored 1.5 or 2.0 standard deviations below the mean in 2008 on average, it should be noted that the vendor was serving students who were scoring well below the Comparison group. When interpreting the difference z-score there are two things to consider: a) the sign (+/-) and b) the magnitude of the number. The sign of the difference z-score signifies if the students improved their achievement scores (a positive difference) or if their scores decreased (a negative difference). The magnitude of the z-score indicates how much change actually occurred. For example, a difference z-score of +0.30 means that students improved their scores from 2008 to 2009 approximately one-third of a standard deviation. In addition, median growth percentiles can be compared among vendors and the Comparison group. It is important to recall that students' median growth percentiles are calculated based on students' academic peers and thus should account for differences in prior achievement. Reading achievement scores for the younger students are presented in Table 3.5. The proportion of students who improved to Met Grade Level Target after receiving tutoring services can be compared across vendors and to the Comparison group. As mentioned, these analyses were limited in scope because of the inability to capture smaller gains in achievement.

Third, after assessing multiple achievement indicators by vendor, we recommend examining the tables that present data on English language proficiency and IEP status. If a vendor's students were not gaining on achievement indicators compared to the Comparison students or students served by other vendors, CDE can assess whether the vendor was serving a higher percentage of English language learners or students with disabilities compared to the other groups. Tables 3.4 and 3.6 provide data on the number and percentages of students in each English language proficiency category and by IEP that were included in each set of analyses (recall that IEP status is not included in the CBLA dataset). The Comparison group data are presented as the last row in the table.

Finally, CDE can examine data from Section 1 to assess how much tutoring vendors were providing on average. It may be useful for CDE to consider how much tutoring vendors were providing when evaluating their effectiveness.

The above steps can also be used to evaluate math achievement by vendor. Math achievement data by vendor are presented in Tables 3.7 to 3.10. Please note that math achievement

data were only available for older students who had two years of CSAP data.

Reading Achievement: Number of Students Served and Included in Vendor Analyses

Table 3.1 presents the sample sizes used in the reading achievement evaluation by vendor. For example, A to Z In-Home Tutoring served a total of 103 students. CSAP reading achievement data were available for 46 of the students served and DRA2 data were available for 12 of the students. Therefore, 58 of the 103 students served by A to Z In-Home Tutoring were included in the vendor reading achievement analyses.

Table 3.1: Reading Achievement: Number of Students Served and Included in Analyses in 2009

Vendor	# Served Overall	# Served for Reading	CSAP Reading N	CSAP Reading %	DRA2 N	DRA2 %	Overall Evaluated N	Overall Evaluated %
A to Z In-Home Tutoring	103	103	46	44.7%	12	11.7%	58	56.3%
Accelerated Schools	5	5	3	60.0%	2	40.0%	5	100.0%
Advantage Tutoring Services	198	198	102	51.5%	39	19.7%	141	71.2%
Adventures in Learning K-12	7	7	2	28.6%	3	42.9%	5	71.4%
Applied Scholastics International	12	12	4	33.3%	7	58.3%	11	91.7%
Bennie E. Goodwin After School Academic Program	24	15	10	66.7%	4	26.7%	14	93.3%
Brainfuse One-to-One Instruction	4	4	3	75.0%	0	0.0%	3	75.0%
Center for Hearing, Speech and Language	121	121	17	14.0%	40	33.1%	57	47.1%
Chancellor Supplemental Educational Services, LLC	151	151	41	27.2%	59	39.1%	100	66.2%
Club Z!	972	847	355	41.9%	262	30.9%	617	72.8%
Department of Extended Learning	129	117	26	22.2%	33	28.2%	59	50.4%
Dreamcatcher Direct Instruction Centers Loveland	11	11	1	9.1%	0	0.0%	1	9.1%
Educate-Online	6	3	3	100.0%	0	0.0%	3	100.0%
Faan Tone Liu	2	0	0	--	0	--	0	--
GEO Foundation Educational Services	203	203	87	42.9%	32	15.8%	119	58.6%
GOALS, Inc.	39	39	19	48.7%	0	0.0%	19	48.7%
John Corcoran Foundation	256	256	62	24.2%	88	34.4%	150	58.6%
Learn It Systems	474	442	117	26.5%	183	41.4%	300	67.9%
READ, READ, READ LLC	90	90	51	56.7%	25	27.8%	76	84.4%
Results Learning	70	70	16	22.9%	28	40.0%	44	62.9%
Santa Fe Trail BOCES	22	22	18	81.8%	0	0.0%	18	81.8%
Step to Success Community Learning Center	207	207	72	34.8%	79	38.2%	151	72.9%
Summer Scholars	338	338	92	27.2%	123	36.4%	215	63.6%
Sylvan Learning Center	73	47	27	57.4%	3	6.4%	30	63.8%
The Pinon Project	17	17	2	11.8%	0	0.0%	2	11.8%
Tu Tambien Puedes Tutoring	48	48	12	25.0%	0	0.0%	12	25.0%
Tutor Train	1224	1217	333	27.4%	435	35.7%	768	63.1%
University of Denver Bridge Project	52	52	22	42.3%	27	51.9%	49	94.2%
Total	**4858**	**4642**	**1543**	**33.2%**	**1484**	**32.0%**	**3027**	**65.2%**

Reading Achievement: CSAP

Table 3.2 demonstrates that all vendors had reading improvement rates lower than 35%. Eleven vendors had improvement rates higher than that of the Comparison group and three vendors had improvement rates lower than that of the Comparison group. Twelve vendors could not be evaluated because of small sample sizes. The three vendors with the highest improvement rates were GEO Foundation Educational Services, GOALS, Inc., and Sylvan Learning Center with 33.3%, 29.4% and 28.0% improvement, respectively. It is important to consider the small sample sizes of some of the vendors when making comparisons.

Table 3.2: Reading Achievement: Number and Percentage of Students who Improved from 2008 to 2009 in Proficiency Categories by Vendor

Vendor	# served	# with valid CSAP data	# started unsatisfactory OR partially proficient	# improved	% improved
GEO Foundation Educational Services	203	87	60	20	33.3%
GOALS, Inc.	39	19	17	5	29.4%
Sylvan Learning Center	47	27	25	7	28.0%
Step to Success Community Learning Center	207	72	58	15	25.9%
Summer Scholars	338	92	60	15	25.0%
Tutor Train	1217	333	246	57	23.2%
Chancellor Supplemental Educational Services, LLC	151	41	35	8	22.9%
Learn It Systems	442	117	99	21	21.2%
John Corcoran Foundation	256	62	52	11	21.2%
Club Z!	847	355	277	55	19.9%
Advantage Tutoring Services	198	102	72	13	18.1%
Comparison Group	***N/A***	***5853***	***4421***	***1006***	***17.2%***
READ, READ, READ LLC	90	51	35	6	17.1%
A to Z In-Home Tutoring	103	46	32	4	12.5%
University of Denver Bridge Project	52	22	18	2	11.1%
Department of Extended Learning	117	26	20	2	10.0%
Improvement is not reported for these vendors because fewer than 16 students were Unsatisfactory or Partially Proficient					
Accelerated Schools	5	3	2	--	--
Adventures in Learning K-12	7	2	2	--	--
Applied Scholastics International	12	4	4	--	--
Bennie E. Goodwin After School Academic Program	15	10	8	--	--
Brainfuse One-to-One Instruction	4	3	2	--	--
Center for Hearing, Speech and Language	121	17	9	--	--
Dreamcatcher Direct Instruction Centers Loveland	11	1	1	--	--
Educate-Online	3	3	1	--	--
Results Learning	70	16	15	--	--
Santa Fe Trail BOCES	22	18	9	--	--
The Pinon Project	17	2	1	--	--
Tu Tambien Puedes Tutoring	48	12	5	--	--

Table 3.3 demonstrates that nine vendors had reading median growth percentiles higher than that of the Comparison group and nine vendors had median growth percentiles lower than that of the Comparison group. Five vendors had median growth percentiles greater than 50 (Steps to Success Community Learning Center; Center for Hearing Speech and Language; READ, READ READ; GEO Foundation Educational Services; and John Corcoran Foundation). Students served

by two vendors had z-score differences of -0.30 or greater (University of Denver Bridge Project and A to Z In-Home Tutoring). This indicates that a portion of the students they served regressed from 2008 to 2009. It is important to consider the small sample sizes of some of the vendors when making comparisons.

Table 3.3: Reading Achievement: Z-Scores and 2009 Median Growth Percentiles by Vendor

Vendor	# served	# with valid CSAP data	Z-Scores 2008	Z-Scores 2009	Z-Scores Difference	Median Growth
Step to Success Community Learning Center	207	72	-1.00	-0.89	0.10	61.5
Center for Hearing, Speech and Language	121	17	-0.70	-0.50	0.20	60.0
READ, READ, READ LLC	90	51	-1.09	-0.89	0.21	56.0
GEO Foundation Educational Services	203	87	-0.84	-0.72	0.11	54.0
John Corcoran Foundation	256	62	-1.39	-1.19	0.19	52.5
GOALS, Inc.	39	19	-1.35	-1.07	0.28	50.0
Tutor Train	1217	333	-1.02	-0.90	0.13	47.0
Results Learning	70	16	-1.75	-1.57	0.19	47.0
Department of Extended Learning	117	26	-1.02	-0.81	0.20	46.5
Comparison group	***N/A***	***5853***	***-1.01***	***-0.93***	***0.09***	***46.0***
Chancellor Supplemental Educational Services, LLC	151	41	-1.28	-1.18	0.10	46.0
Learn It Systems	442	117	-1.06	-0.94	0.12	43.0
Advantage Tutoring Services	198	102	-0.83	-0.84	-0.02	42.5
Club Z!	847	355	-1.03	-1.09	-0.05	42.0
Summer Scholars	338	92	-0.68	-0.80	-0.12	36.5
Santa Fe Trail BOCES	22	18	-0.60	-0.75	-0.15	36.0
Sylvan Learning Center	47	27	-1.44	-1.43	0.01	32.0
University of Denver Bridge Project	52	22	-1.43	-1.72	-0.30	30.0
A to Z In-Home Tutoring	103	46	-0.97	-1.27	-0.31	24.0
Improvement is not reported for these vendors because fewer than 16 students had valid CSAP data.						
Accelerated Schools	5	3	--	--	--	--
Adventures in Learning K-12	7	2	--	--	--	--
Applied Scholastics International	12	4	--	--	--	--
Bennie E. Goodwin After School Academic Program	15	10	--	--	--	--
Brainfuse One-to-One Instruction	4	3	--	--	--	--
Dreamcatcher Direct Instruction Centers Loveland	11	1	--	--	--	--
Educate-Online	3	3	--	--	--	--
The Pinon Project	17	2	--	--	--	--
Tu Tambien Puedes Tutoring	48	12	--	--	--	--

English Language Proficiency and IEP Status

Table 3.4 includes the demographic information regarding English language proficiency and IEP status by vendor for students who were included in analyses presented in Tables 3.2 and 3.3. The demographic characteristics of the Comparison group are presented as the final row of the table. This information may help contextualize any of the aforementioned findings of vendor effectiveness.

Table 3.4: English Language Proficiency and IEP Status by Vendor

	ELL Status								IEP			
	NA		NEP		LEP		FEP		Yes		No	
Vendor	NA	%	N	%	N	%	N	%	N	%	N	%
A to Z In-Home Tutoring	20	43.5%	5	10.9%	12	26.1%	9	19.6%	11	23.9%	35	76.1%
Accelerated Schools	1	33.3%	0	0.0%	1	33.3%	1	33.3%	0	0.0%	3	100.0%
Advantage Tutoring Services	27	26.5%	9	8.8%	39	38.2%	27	26.5%	8	7.8%	94	92.2%
Adventures in Learning K-12	1	50.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%	2	100.0%
Applied Scholastics International	1	25.0%	1	25.0%	1	25.0%	1	25.0%	1	25.0%	3	75.0%
Bennie E. Goodwin After School Academic Program	2	20.0%	4	40.0%	4	40.0%	0	0.0%	4	40.0%	6	60.0%
Brainfuse One-to-One Instruction	3	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	100.0%
Center for Hearing, Speech and Language	6	35.3%	1	5.9%	6	35.3%	4	23.5%	2	11.8%	15	88.2%
Chancellor Supplemental Educational Services, LLC	10	24.4%	2	4.9%	15	36.6%	14	34.1%	9	22.0%	32	78.0%
Club Z!	120	33.8%	25	7.0%	136	38.3%	74	20.8%	65	18.3%	290	81.7%
Department of Extended Learning	9	34.6%	1	3.8%	8	30.8%	8	30.8%	4	15.4%	22	84.6%
Dreamcatcher Direct Instruction Centers Loveland	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
Educate-Online	1	33.3%	0	0.0%	2	66.7%	0	0.0%	1	33.3%	2	66.7%
GEO Foundation Educational Services	35	40.2%	6	6.9%	37	42.5%	9	10.3%	18	20.7%	69	79.3%
GOALS, Inc.	6	31.6%	1	5.3%	8	42.1%	4	21.1%	4	21.1%	15	78.9%
John Corcoran Foundation	24	38.7%	5	8.1%	26	41.9%	7	11.3%	13	21.0%	49	79.0%
Learn It Systems	49	41.9%	9	7.7%	38	32.5%	21	17.9%	20	17.1%	97	82.9%
READ, READ, READ LLC	9	17.6%	8	15.7%	27	52.9%	7	13.7%	2	3.9%	49	96.1%
Results Learning	6	37.5%	3	18.8%	6	37.5%	1	6.3%	6	37.5%	10	62.5%
Santa Fe Trail BOCES	17	94.4%	0	0.0%	0	0.0%	1	5.6%	5	27.8%	13	72.2%
Step to Success Community Learning Center	22	30.6%	16	22.2%	21	29.2%	13	18.1%	11	15.3%	61	84.7%
Summer Scholars	47	51.1%	3	3.3%	26	28.3%	16	17.4%	13	14.1%	79	85.9%
Sylvan Learning Center	21	77.8%	1	3.7%	3	11.1%	2	7.4%	8	29.6%	19	70.4%
The Pinon Project	1	50.0%	0	0.0%	1	50.0%	0	0.0%	1	50.0%	1	50.0%
Tu Tambien Puedes Tutoring	1	8.3%	0	0.0%	6	50.0%	5	41.7%	2	16.7%	10	83.3%
Tutor Train	153	45.9%	20	6.0%	104	31.2%	56	16.8%	58	17.4%	275	82.6%
University of Denver Bridge Project	14	63.6%	4	18.2%	2	9.1%	2	9.1%	8	36.4%	14	63.6%
Comparison Group	**2425**	**41.4%**	**584**	**10.0%**	**1911**	**32.6%**	**933**	**15.9%**	**922**	**15.8%**	**4931**	**84.2%**

Reading Achievement: CBLA

Table 3.5 demonstrates that all vendors had reading improvement rates lower than 25%. Four vendors had improvement rates higher than that of the Comparison group and 10 vendors had improvement rates lower than that of the Comparison group. Vendors with the highest

improvement rates were Advantage Tutoring Services and Chancellor Supplemental Educational Services, LLC with 24.0% and 22.5% improvement, respectively. It is important to consider the small sample sizes of some of the vendors when making comparisons.

Table 3.5: Reading Achievement: Number and Percentage of Students who Improved from 2008 to 2009 in Grade Level Target by Vendor

Vendor	# Served for Reading	# with Valid DRA2 data	Below Grade-Level Target	# Improved	% Improved
Advantage Tutoring Services	198	39	25	6	24.0%
Chancellor Supplemental Educational Services, LLC	151	59	40	9	22.5%
Learn It Systems	442	183	113	22	19.5%
Tutor Train	1217	435	274	32	11.7%
Comparison Group	***N/A***	***3116***	***2018***	***233***	***11.5%***
John Corcoran Foundation	256	88	63	7	11.1%
Summer Scholars	338	123	76	8	10.5%
READ, READ, READ LLC	90	25	20	2	10.0%
Club Z!	847	262	167	16	9.6%
Step to Success Community Learning Center	207	79	45	4	8.9%
Center for Hearing, Speech and Language	121	40	28	2	7.1%
GEO Foundation Educational Services	203	32	22	1	4.5%
Results Learning	70	28	22	1	4.5%
Department of Extended Learning	117	33	30	1	3.3%
University of Denver Bridge Project	52	27	18	0	0.0%
Improvement is not reported for these vendors because fewer than 16 students were below the grade-level target					
A to Z In-Home Tutoring	103	12	--	--	--
Accelerated Schools	5	2	--	--	--
Adventures in Learning K-12	7	3	--	--	--
Applied Scholastics International	12	7	--	--	--
Bennie E. Goodwin After School Academic Program	15	4	--	--	--
Brainfuse One-to-One Instruction	4	0	--	--	--
Dreamcatcher Direct Instruction Centers Loveland	11	0	--	--	--
Educate-Online	3	0	--	--	--
GOALS, Inc.	39	0	--	--	--
Santa Fe Trail BOCES	22	0	--	--	--
Sylvan Learning Center	47	3	--	--	--
The Pinon Project	17	0	--	--	--
Tu Tambien Puedes Tutoring	48	0	--	--	--

English Language Proficiency

Table 3.6 includes the demographic information regarding English language proficiency by vendor for the CBLA students. The demographic characteristics of the Comparison group are presented as the final row of the table.

Table 3.6: English Language Proficiency by Vendor

	ELL Status							
	NA		NEP		LEP		FEP	
Vendor	NA	%	N	%	N	%	N	%
A to Z In-Home Tutoring	6	50.0%	1	8.3%	5	41.7%	0	0.0%
Accelerated Schools	2	100.0%	0	0.0%	0	0.0%	0	0.0%
Advantage Tutoring Services	14	35.9%	6	15.4%	15	38.5%	4	10.3%
Adventures in Learning K-12	3	100.0%	0	0.0%	0	0.0%	0	0.0%
Applied Scholastics International	0	0.0%	0	0.0%	7	100.0%	0	0.0%
Bennie E. Goodwin After School Academi	2	50.0%	1	25.0%	1	25.0%	0	0.0%
Center for Hearing, Speech and Language	12	30.0%	8	20.0%	19	47.5%	1	2.5%
Chancellor Supplemental Educational Serv	23	39.0%	11	18.6%	22	37.3%	3	5.1%
Club Z!	87	33.2%	59	22.5%	109	41.6%	7	2.7%
Department of Extended Learning	0	0.0%	23	69.7%	10	30.3%	0	0.0%
GEO Foundation Educational Services	10	31.3%	7	21.9%	15	46.9%	0	0.0%
John Corcoran Foundation	34	38.6%	25	28.4%	26	29.5%	3	3.4%
Learn It Systems	87	47.5%	24	13.1%	66	36.1%	6	3.3%
READ, READ, READ LLC	1	4.0%	11	44.0%	12	48.0%	1	4.0%
Results Learning	10	35.7%	6	21.4%	12	42.9%	0	0.0%
Step to Success Community Learning Cent	14	17.7%	22	27.8%	42	53.2%	1	1.3%
Summer Scholars	62	50.4%	18	14.6%	40	32.5%	3	2.4%
Sylvan Learning Center	2	66.7%	0	0.0%	1	33.3%	0	0.0%
Tutor Train	154	35.4%	99	22.8%	157	36.1%	25	5.7%
University of Denver Bridge Project	10	37.0%	6	22.2%	11	40.7%	0	0.0%
Comparison group	**1327**	**42.6%**	**652**	**20.9%**	**1055**	**33.9%**	**82**	**2.6%**

Math Achievement: Number of Students Served and Included in Vendor Analyses

Table 3.7 presents the sample sizes used in the math achievement evaluation by vendor. For example, A to Z In-Home Tutoring served a total of 103 students. CSAP math achievement data were available for 48 of the students served. Therefore, 48 of the 103 students served by A to Z In-Home Tutoring were included in the vendor math achievement analyses.

Table 3.7: Math Achievement: Number of Students Served and Included in Analyses in 2009

Vendor	# Served Overall	# Served for Math	CSAP Math N	CSAP Math %
A to Z In-Home Tutoring	103	103	46	44.7%
Accelerated Schools	5	5	3	60.0%
Advantage Tutoring Services	198	198	121	61.1%
Adventures in Learning K-12	7	7	2	28.6%
Applied Scholastics International	12	3	1	33.3%
Bennie E. Goodwin After School Academic Program	24	9	4	44.4%
Brainfuse One-to-One Instruction	4	4	1	25.0%
Center for Hearing, Speech and Language	121	0	0	--
Chancellor Supplemental Educational Services, LLC	151	1	0	0.0%
Club Z!	972	610	256	42.0%
Department of Extended Learning	129	31	24	77.4%
Dreamcatcher Direct Instruction Centers Loveland	11	0	0	--
Educate-Online	6	3	3	100.0%
Faan Tone Liu	2	2	2	100.0%
GEO Foundation Educational Services	203	101	71	70.3%
GOALS, Inc.	39	39	19	48.7%
John Corcoran Foundation	256	0	0	--
Learn It Systems	474	60	19	31.7%
READ, READ, READ LLC	90	0	0	--
Results Learning	70	0	0	--
Santa Fe Trail BOCES	22	22	18	81.8%
Step to Success Community Learning Center	207	0	0	--
Summer Scholars	338	0	0	--
Sylvan Learning Center	73	26	20	76.9%
The Pinon Project	17	0	0	--
Tu Tambien Puedes Tutoring	48	0	0	--
Tutor Train	1224	318	86	27.0%
University of Denver Bridge Project	52	0	0	--
Total	**4858**	**1542**	**696**	**45.1%**

Math Achievement

Table 3.8 demonstrates that all vendors had math improvement rates lower than 32%. Five vendors had improvement rates higher than that of the Comparison group and three vendors had improvement rates lower than that of the Comparison group. Sylvan Learning Center had the highest math improvement rate (31.6%). It is important to consider the small sample size of some of the vendors when making comparisons.

Table 3.8: Math Achievement: Number and Percentage of Students who Improved from 2008 to 2009 in Proficiency Categories by Vendor

Vendor	# served	# with valid CSAP data	# started unsatisfactory OR partially proficient	# improved	% improved
Sylvan Learning Center	26	20	19	6	31.6%
Advantage Tutoring Services	198	121	83	19	22.9%
A to Z In-Home Tutoring	103	46	35	8	22.9%
GOALS, Inc.	39	19	18	4	22.2%
GEO Foundation Educational Services	101	71	50	11	22.0%
Comparison group	***N/A***	***7789***	***5686***	***1131***	***19.9%***
Club Z!	610	256	187	36	19.3%
Department of Extended Learning	31	24	21	4	19.0%
Tutor Train	318	86	53	10	18.9%
Improvement is not reported for these vendors because fewer than 16 students were Unsatisfactory or Partially Proficient					
Accelerated Schools	5	3	2	--	--
Adventures in Learning K-12	7	2	2	--	--
Applied Scholastics International	3	1	1	--	--
Bennie E. Goodwin After School Academic Program	9	4	4	--	--
Brainfuse One-to-One Instruction	4	1	1	--	--
Chancellor Supplemental Educational Services, LLC	1	0	0	--	--
Educate-Online	3	3	3	--	--
Faan Tone Liu	2	2	1	--	--
Learn It Systems	60	19	13	--	--
Santa Fe Trail BOCES	22	18	15	--	--

Table 3.9 demonstrates that eight vendors had math median growth percentiles higher than that of the Comparison group and two vendors had median growth percentiles lower than that of the Comparison group. Six vendors had median growth percentiles greater than 50. It is important to consider the small sample sizes of some of the vendors when making comparisons.

Table 3.9: Math Achievement: 2008 Median Growth Percentiles in Math by Vendor

Vendor	# served	# with valid CSAP data	Z-Scores 2008	Z-Scores 2009	Z-Scores Difference	Median Growth Percentile
GEO Foundation Educational Services	101	71	-0.81	-0.60	0.21	66.0
Department of Extended Learning	31	24	-1.07	-0.87	0.20	61.0
Sylvan Learning Center	26	20	-0.92	-0.72	0.20	57.5
Club Z!	610	256	-0.88	-0.77	0.11	56.0
A to Z In-Home Tutoring	103	46	-1.12	-1.07	0.05	54.0
Tutor Train	318	86	-0.82	-0.72	0.10	51.0
Learn It Systems	60	19	-1.08	-0.99	0.09	50.0
Advantage Tutoring Services	198	121	-0.90	-0.84	0.06	49.0
Comparison group	***N/A***	***7789***	***-0.86***	***-0.81***	***0.05***	***48.0***
GOALS, Inc.	39	19	-1.10	-1.09	0.01	38.0
Santa Fe Trail BOCES	22	18	-0.80	-0.82	-0.02	36.5
Improvement is not reported for these vendors because fewer than 16 students had valid CSAP data.						
Accelerated Schools	5	3	--	--	--	--
Adventures in Learning K-12	7	2	--	--	--	--
Applied Scholastics International	3	1	--	--	--	--
Bennie E. Goodwin After School Academic Program	9	4	--	--	--	--
Brainfuse One-to-One Instruction	4	1	--	--	--	--
Chancellor Supplemental Educational Services, LLC	1	0	--	--	--	--
Educate-Online	3	3	--	--	--	--
Faan Tone Liu	2	2	--	--	--	--

English Language Proficiency and IEP Status

Table 3.10 includes the demographic information regarding English language proficiency and IEP status by vendor for those with math CSAP data. The demographic characteristics of the Comparison group are presented as the final row of the table.

Table 3.10: English Language Proficiency and IEP Status by Vendor in 2009

	ELL Status								IEP			
	NA		NEP		LEP		FEP		Yes		No	
Vendor	NA	%	N	%	N	%	N	%	N	%	N	%
A to Z In-Home Tutoring	19	41.3%	5	10.9%	13	28.3%	9	19.6%	11	23.9%	35	76.1%
Accelerated Schools	1	33.3%	0	0.0%	1	33.3%	1	33.3%	0	0.0%	3	100.0%
Advantage Tutoring Services	27	22.3%	19	15.7%	48	39.7%	27	22.3%	9	7.4%	112	92.6%
Adventures in Learning K-12	1	50.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%	2	100.0%
Applied Scholastics International	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1	100.0%
Bennie E. Goodwin After School Academic Program	1	25.0%	0	0.0%	3	75.0%	0	0.0%	0	0.0%	4	100.0%
Brainfuse One-to-One Instruction	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
Club Z!	70	27.3%	25	9.8%	107	41.8%	54	21.1%	48	18.8%	208	81.3%
Department of Extended Learning	12	50.0%	1	4.2%	4	16.7%	7	29.2%	5	20.8%	19	79.2%
Educate-Online	3	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	100.0%
Faan Tone Liu	1	50.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%
GEO Foundation Educational Services	26	36.6%	7	9.9%	32	45.1%	6	8.5%	14	19.7%	57	80.3%
GOALS, Inc.	6	31.6%	1	5.3%	8	42.1%	4	21.1%	4	21.1%	15	78.9%
Learn It Systems	9	47.4%	3	15.8%	5	26.3%	2	10.5%	2	10.5%	17	89.5%
Santa Fe Trail BOCES	17	94.4%	0	0.0%	0	0.0%	1	5.6%	5	27.8%	13	72.2%
Sylvan Learning Center	16	80.0%	0	0.0%	1	5.0%	3	15.0%	2	10.0%	18	90.0%
Tutor Train	20	23.3%	13	15.1%	37	43.0%	16	18.6%	12	14.0%	74	86.0%
Comparison Group	**3166**	**40.6%**	**804**	**10.3%**	**2520**	**32.4%**	**1299**	**16.7%**	**1191**	**84.7%**	**6598**	**15.3%**

Section 3 Summary

- Reading Achievement: CSAP
  - Improvement in Proficiency Level
    - Vendor improvement rates ranged from 10.0% to 33.3%.
    - The Comparison group had an improvement rate of 17.2%.
    - 11 vendors showed higher percentages of students who improved in reading than Comparison students.
  - Difference in Median Growth Percentiles
    - Median growth percentiles for vendors ranged from 24 to 61.5.
    - The Comparison group had a median growth percentile of 46.
    - 9 vendors had higher median growth percentiles in reading than Comparison students.
- Reading Achievement: CBLA
  - Improvement in Grade Level Target
    - Vendor improvement rates ranged from 0.0% to 24.0%.
    - The Comparison group had an improvement rate of 11.5%.
    - 4 vendors showed higher percentages of students who improved in reading than Comparison students.

- Math Achievement
  - Improvement in Proficiency Level
    - Vendor improvement rates ranged from 18.9% to 31.6%.
    - The Comparison group had an improvement rate of 19.9%.
    - 5 vendors showed higher percentages of students who improved in math than Comparison students.
  - Difference in Median Growth Percentiles
    - Median growth percentiles for vendors ranged from 36.5 to 66.
    - The Comparison group had a median growth percentile of 48.
    - 8 vendors had higher median growth percentiles in math than Comparison students.

Section 4: Conclusions, Next Steps and Recommendations

Evaluation Enhancements

The evaluation of the SES program was enhanced this year in multiple ways. First, the effectiveness analyses included 1st through 10th grade students who received at least one hour of tutoring services. In prior years, effectiveness analyses were conducted only for students in 4th through 10th grade because CSAP was the sole data source for academic achievement. This year CDE provided OMNI with CBLA data (administered to students in K – 3rd grade) so that more SES students were included in the effectiveness analyses. Although there were limitations to the CBLA analyses (discussed below), the inclusion of achievement data on younger students enhanced the SES evaluation and provided CDE with the opportunity to examine some form of program impact for the majority of students served.

Second, the evaluation this year also included an examination of English Language Learners and students with disabilities (i.e., students with an IEP). Evaluation efforts indicated that more than half of the students served by SES providers were English Language Learners and approximately 18% were students with IEP's. These percentages are higher than state averages and suggest that the program is reaching students that may benefit from tutoring outside the school day. Thus, it was important to examine program effectiveness for these subgroups of students. In addition, when examining vendor effectiveness, it was important to note differences in populations of high-need students across vendors than may impact student achievement outcomes. As such, the evaluation this year presented information on the percentages of ELL and IEP students served by vendors for each effectiveness analysis. The goal was to provide CDE with additional information to help assess vendor performance.

Third, the evaluation this year provided an additional and more refined analysis of CSAP data to help assess vendor effectiveness. In addition to examining the percentage of students who improved in a proficiency category and median student growth percentiles by vendor, the evaluation also examined students' CSAP achievement using standardized scale scores. This allowed the evaluation to examine student achievement by vendor in relation to state performance in the year prior to receiving SES and in the year after receiving SES. There were several advantages of this method: 1) all students with valid CSAP data were included in analyses (students were examined across grade and prior proficiency), which increased sample sizes for vendor effectiveness analyses; 2) it provided information about gains in achievement using scale scores rather than proficiency categories; and 3) it provided a way to compare the performance of students by vendor compared to state averages. This analytic approach, in conjunction with student growth percentile data, provided a means to examine gains in achievement for vendors that might be serving students with very low baseline levels of achievement.

Finally, the evaluation this year examined descriptive data on students receiving SES services across multiple years. Results indicated that approximately 17% of students received tutoring in multiple years. In future years, there may be opportunities to examine the impact of multiple years of tutoring on student achievement. However, at this point, sample sizes are too small to examine achievement of students receiving services across academic years. As additional years of data are collected and sample sizes increase, the impact of multiple years of tutoring may be an important next direction for evaluation efforts.

Statewide Effectiveness Analyses

Students are eligible for SES services when they qualify for free or reduced lunch and when they attend a school that is in its second year of being on School Improvement. Eligibility is not connected to academic achievement. Analysis of 2007-2008 CSAP and CBLA data indicated that approximately one quarter of students receiving SES services were meeting grade-level academic performance standards before enrolling in services (i.e., scoring Proficient or higher on CSAP or meeting grade level targets on CBLA). The pattern was relatively consistent across grades (except for first grade in which more than half of SES first graders had met their grade level targets in Kindergarten). These findings suggest that overall the SES program is reaching mostly students with low achievement. Nonetheless, some students were benefitting from services who were meeting achievement targets in the prior year.

To examine statewide impact of the SES program on student achievement, a series of analyses were conducted comparing changes in achievement using multiple indicators for students who participated in the SES program to a Comparison group of students who were eligible to participate but did not do so (proportionally matched on grade and prior proficiency). There were no significant differences in reading or math proficiency category (CSAP) or grade level target change (CBLA) between SES and Comparison students. While the amount of tutoring received appeared to have little impact on reading achievement between SES and Comparison students, SES students who received at least 20 hours of tutoring had higher growth percentile rankings in math than Comparison students. It may be useful for future evaluation efforts to provide a more fine-grained look at the impact of hours of tutoring on student achievement.

Differences in reading achievement outcomes for SES and Comparison students were not evident when examining younger students using the CBLA data. This was the first year the evaluation examined CBLA data as an achievement indicator. Our approach was to use the DRA2 because the majority of younger students were assessed using the DRA2, and this first look used at or below grade level as the cutoffs. Because so many students served are younger than 4th grade, future evaluation efforts should explore opportunities to refine analyses of CBLA data to capture more fine-grained gains in performance.

Program effectiveness was also examined as a function of students' English language proficiency. Exploratory analyses were conducted to assess whether the program was working differently for different levels of English Language Learners. Analyses were conducted comparing achievement outcomes for SES and Comparison students in each language proficiency category (i.e., English-only; English proficient; limited English proficiency; non English proficient). Results indicated SES students had significantly higher growth percentile rankings in math than Comparison students in the English-only category. There were no other significant differences in median student growth percentile rankings in reading or math between SES and Comparison students in the other English proficiency categories. All analyses were conducted at a broad level; that is, comparing subgroups of students across prior proficiency levels. It is possible that program impact might differ for subgroups of students when examining the data further. For example, students with limited English proficiency who scored Unsatisfactory may benefit more than students with limited English proficiency that scored Partially Proficient or Proficient/Advanced in the prior year. It may be worthwhile to consider future evaluation efforts to refine analyses conducted on these groups of students.

Vendor Effectiveness

A wide variety of vendors provided SES services. There were very large service providers, such as Tutor Train and Club Z!, who provided services across multiple school districts and for a large number of students. There were also smaller vendors who served very few students in rural areas. Some vendors provided reading and math tutoring, some reading only, and some math only. In addition, some vendors served high percentages of English Language Learners and students with disabilities. Vendors varied substantially in the cost they charged per hour ($20 to $89) and in the average number of hours (6 to 78) and sessions (5 to 44) provided to students. All of these components presented challenges to evaluating vendor effectiveness.

The approach used in this evaluation was to provide CDE with information on students' achievement by vendors on multiple outcomes. Because sample sizes were often unequal between vendors and small for certain vendors, we did not use statistical tests to assess differences in the achievement of students across vendors. Rather, vendors' student achievement gains were examined across different indicators and tabled in relation to each other and to the achievement gains for the Comparison group of students. Additional tables were provided that showed the percentage of students in each analysis by language proficiency and IEP status to help CDE assess whether limited achievement gains may be due to serving a high percentage of students with special needs.

Five vendors who provided reading services to older students and had student scores that were consistently above those of the Comparison group were GEO Foundation Educational Services, GOALS, Inc., Step to Success Community Learning Center, Tutor Train, and John

Corcoran Foundation. Tutor Train also had younger student reading scores above those of the Comparison students. Four vendors who provided math tutoring had student scores that were consistently above those of the Comparison students. Those vendors were Sylvan Learning Center, Advantage Tutoring Services, A to Z In-Home Tutoring, and GEO Foundation Educational Services.

Appendix A: Data Cleaning Procedures

A database developed by OMNI Institute (OMNI) was used to track information about students receiving SES. At the end of the 2008-2009 academic year, the data were downloaded and cleaned. Additional data were collected through a mirrored database to allow vendors additional time to enter any data they had missed. This appendix describes in detail the processes that were conducted to clean the service data.

First, service data were checked to ensure that a session type entry had a valid session time entry and that only scheduled sessions were included. Many students had contracts in the data but no scheduled sessions. Additionally all recorded session types equal to 'session' had to have a corresponding session time greater than zero hours; all recorded session types equal to 'absent' and to 'parent only contact' had to have corresponding session times equal to zero. Despite database constraints to limit these types of errors, an examination of the data found that there were 7 service entries with incongruent session type/session time information (e.g., a session coded as lasting 0 hours). The seven discrepant entries were deleted from the data. Deleting these entries did not result in the loss of any students. Session data were also checked to ensure that session times were entered correctly. All individual session lengths recorded as over 4 hours were excluded from analyses (37 sessions had values of 20-185 hours each; exclusion of these sessions did not result in the loss of any students).

Second, service data were checked to ensure that for each service date, only one service entry was recorded. During the 2008-2009 academic year, some vendors input their data directly into the database and other vendors sent their data to OMNI for data uploads. Despite efforts to require vendors to enter data into the database in a timely manner, some vendors provided OMNI service data months after the services had been provided. An additional window as also opened to allow vendors to enter any missing data. As a result, a few students had multiple service records recorded as occurring on the same day. This was not a problem for the majority of students; 99.8% had valid entries. There were 272 students that had multiple records on the same date. In cases where the two entries were exact duplicates one was kept and the others dropped. When it was not possible to determine which entries were valid the records was deleted from the file. Deleting these service records did not result in the loss of any students.

Third, students' service data were checked against their contract data (in the database, each student had to have a contract with a vendor before service data could be entered). Due to data entry error, 9 students who received services had no contract data. These students were eliminated from the data. Additionally, 273 students had contracts with vendors but were never recorded as receiving any services.

Fourth, service data were checked to determine whether students received tutoring from

multiple vendors. Fourteen students were served by multiple vendors. For these 14 students, the vendor that provided the most amount of tutoring was assigned to the student. This method was undertaken to simplify the analyses so that each student was assigned to one vendor.

Fifth, the data were checked to ensure that students received at least some tutoring. There were 47 students who were recorded as being absent for every session and 2 students who were recorded as receiving more than 15 minutes but less than 1 hour of tutoring. Thus, these 49 students were eliminated from the data.

Finally, two vendors initially entered incorrect cost per hour. The John Corcoran Foundation incorrectly entered cost per hour of $3,200/hour which was revised to $32/hour and the Department of Extended Learning incorrectly entered cost per hour of $1/hour which was revised to $22/hour. Both vendors were contacted to confirm the changes.

The data cleaning procedures described above resulted in a dataset with service information on 4,858 students. Descriptive information for these students is provided in Section 1 of this report.

Appendix B: Reading Achievement by Grade: CSAP

a) Reading Achievement: Change in Proficiency Categories from 2008 to 2009 for SES and Comparison Students by Grade.

Grade 2009	Group	2008 Reading Proficiency Category	2009 Reading Proficiency Category					
			Unsatisfactory		Partially Proficient		Proficient/Advanced	
4th		Unsatisfactory	N	%	N	%	N	%
	Comparison	779	617	79.0%	156	20.0%	6	1.0%
	SES	205	156	76.0%	47	23.0%	2	1.0%
		Partially Proficient	N	%	N	%	N	%
	Comparison	615	149	24.0%	371	60.0%	95	15.0%
	SES	162	43	27.0%	92	57.0%	27	17.0%
		Proficient/Advanced	N	%	N	%	N	%
	Comparison	554	11	2.0%	159	29.0%	384	69.0%
	SES	146	2	1.0%	38	26.0%	106	73.0%
5th		Unsatisfactory	N	%	N	%	N	%
	Comparison	725	562	78.0%	153	21.0%	10	1.0%
	SES	191	147	77.0%	41	21.0%	3	2.0%
		Partially Proficient	N	%	N	%	N	%
	Comparison	790	113	14.0%	436	55.0%	241	31.0%
	SES *	208	46	22.0%	107	51.0%	55	26.0%
		Proficient/Advanced	N	%	N	%	N	%
	Comparison	425	2	0.0%	51	12.0%	372	88.0%
	SES	112	2	2.0%	19	17.0%	91	81.0%
6th		Unsatisfactory	N	%	N	%	N	%
	Comparison	406	277	68.0%	122	30.0%	7	2.0%
	SES	107	75	70.0%	31	29.0%	1	1.0%
		Partially Proficient	N	%	N	%	N	%
	Comparison	296	39	13.0%	190	64.0%	67	23.0%
	SES	78	12	15.0%	55	71.0%	11	14.0%
		Proficient/Advanced	N	%	N	%	N	%
	Comparison	201	2	1.0%	47	23.0%	152	76.0%
	SES	53	1	2.0%	20	38.0%	32	60.0%
7th		Unsatisfactory	N	%	N	%	N	%
	Comparison	220	183	83.0%	37	17.0%	0	0.0%
	SES	58	49	84.0%	9	16.0%	0	0.0%
		Partially Proficient	N	%	N	%	N	%
	Comparison	209	50	24.0%	124	59.0%	35	17.0%
	SES	55	13	24.0%	36	65.0%	6	11.0%
		Proficient/Advanced	N	%	N	%	N	%
	Comparison	163	1	1.0%	32	20.0%	130	80.0%
	SES *	43	0	0.0%	16	37.0%	27	63.0%
8th		Unsatisfactory	N	%	N	%	N	%
	Comparison	136	106	78.0%	29	21.0%	1	1.0%
	SES	36	33	92.0%	3	8.0%	0	0.0%
		Partially Proficient	N	%	N	%	N	%
	Comparison	178	28	16.0%	118	66.0%	32	18.0%
	SES	47	9	19.0%	25	53.0%	13	28.0%
		Proficient/Advanced	N	%	N	%	N	%
	Comparison	79	0	0.0%	26	33.0%	53	67.0%
	SES	21	0	0.0%	11	52.0%	10	48.0%
9th		Unsatisfactory	N	%	N	%	N	%
	Comparison	26	--	--	--	--	--	--
	SES	7	--	--	--	--	--	--
		Partially Proficient	N	%	N	%	N	%
	Comparison	11	--	--	--	--	--	--
	SES	3	--	--	--	--	--	--
		Proficient/Advanced	N	%	N	%	N	%
	Comparison	3	--	--	--	--	--	--
	SES	1	--	--	--	--	--	--
10th		Unsatisfactory	N	%	N	%	N	%
	Comparison	0	--	--	--	--	--	--
	SES	0	--	--	--	--	--	--
		Partially Proficient	N	%	N	%	N	%
	Comparison	30	--	--	--	--	--	--
	SES	8	--	--	--	--	--	--
		Proficient/Advanced	N	%	N	%	N	%
	Comparison	7	--	--	--	--	--	--
	SES	2	--	--	--	--	--	--

*significantly different from Comparison students ($p < .05$)

b) Reading Achievement: 2009 Median Growth Percentiles, Mean Ranks and Z-Scores of SES and Comparison Students who Scored in Each Proficiency Category in 2008 by Grade

Grade 2009	Group	2008 Reading Proficiency Category	2009 Median Growth Percentile	Mean Z-Score 2008	Mean Z-Score 2009	Mean Z-Score Difference (2009-2008)
4th		Unsatisfactory				
	Comparison	779	43	-2.18	-1.83	0.35
	SES	205	47	-1.98	-1.68	0.3
		Partially Proficient				
	Comparison	615	44	-0.67	-0.7	-0.03
	SES	162	43	-0.7	-0.75	-0.04
		Proficient/Advanced				
	Comparison	554	36	0.14	0.05	-0.09
	SES	146	36	0.13	0.04	-0.09
5th		Unsatisfactory				
	Comparison	725	50	-2.04	-1.7	0.33
	SES	191	48	-2.04	-1.88	0.16
		Partially Proficient				
	Comparison	790	54	-0.64	-0.59	0.05
	SES	208	51	-0.68	-0.66	0.02
		Proficient/Advanced				
	Comparison	425	51	0.25	0.21	-0.04
	SES	112	43.5	0.14	0.08	-0.07
6th		Unsatisfactory				
	Comparison	406	42	-1.94	-1.89	0.05
	SES	107	47	-1.87	-1.77	0.1
		Partially Proficient				
	Comparison	296	47	-0.69	-0.72	-0.03
	SES	78	40.5	-0.73	-0.85	-0.12
		Proficient/Advanced				
	Comparison	201	38	0.16	-0.01	-0.17
	SES	53	20	0.05	-0.19	-0.24
7th		Unsatisfactory				
	Comparison	220	47.5	-2.08	-1.91	0.17
	SES	58	50.5	-2.1	-1.92	0.18
		Partially Proficient				
	Comparison	209	52	-0.84	-0.72	0.11
	SES	55	44	-0.85	-0.82	0.03
		Proficient/Advanced				
	Comparison	163	52	0.14	0.13	-0.01
	SES	43	41	-0.02	-0.08	-0.06
8th		Unsatisfactory				
	Comparison	136	46	-1.95	-1.83	0.11
	SES	36	41.5	-2.02	-2.06	-0.04
		Partially Proficient				
	Comparison	178	45	-0.67	-0.68	-0.01
	SES	47	54	-0.68	-0.7	-0.02
		Proficient/Advanced				
	Comparison	79	46	0.15	0.02	-0.14
	SES	21	35	0.09	-0.12	-0.21
9th		Unsatisfactory				
	Comparison	26	--	--	--	--
	SES	7	--	--	--	--
		Partially Proficient				
	Comparison	11	--	--	--	--
	SES	3	--	--	--	--
		Proficient/Advanced				
	Comparison	3	--	--	--	--
	SES	1	--	--	--	--
10th		Unsatisfactory				
	Comparison	--	--	--	--	--
	SES	--	--	--	--	--
		Partially Proficient				
	Comparison	30	--	--	--	--
	SES	8	--	--	--	--
		Proficient/Advanced				
	Comparison	7	--	--	--	--
	SES	2	--	--	--	--

*significantly different from Comparison students ($p < .05$).

Appendix C: Reading Achievement by Grade: CBLA

a) Reading Achievement: Change in Grade Level Target Categories from 2008 to 2009 for SES and Comparison Students by Grade

Grade 2009	Group	2008 Grade Level Target	2009 Grade Level Target			
			Met Target		Below Target	
1st		Below Target	N	%	N	%
	Comparison	399	42	11.0%	357	89.0%
	SES	190	29	15.0%	161	85.0%
		Met Target	N	%	N	%
	Comparison	485	283	58.0%	202	42.0%
	SES	231	121	52.0%	110	48.0%
2nd		Below Target	N	%	N	%
	Comparison	779	84	11.0%	695	89.0%
	SES	371	35	9.0%	336	91.0%
		Met Target	N	%	N	%
	Comparison	315	239	76.0%	76	24.0%
	SES	150	117	78.0%	33	22.0%
3rd		Below Target	N	%	N	%
	Comparison	840	107	13.0%	733	87.0%
	SES	400	48	12.0%	352	88.0%
		Met Target	N	%	N	%
	Comparison	298	241	81.0%	57	19.0%
	SES *	142	102	72.0%	40	28.0%

*significantly different from Comparison students ($p < .05$).

Appendix D: Math Achievement by Grade

a) Math Achievement: Change in Proficiency Categories from 2008 to 2009 for SES and Comparison Students by Grade

Grade 2009	Group	2008 Math Proficiency Category	2009 Math Proficiency Category					
			Unsatisfactory		Partially Proficient		Proficient/Advanced	
4th		Unsatisfactory	N	%	N	%	N	%
	Comparison	728	513	70.0%	201	28.0%	14	2.0%
	SES	65	46	71.0%	17	26.0%	2	3.0%
		Partially Proficient	N	%	N	%	N	%
	Comparison	851	161	19.0%	465	55.0%	225	26.0%
	SES	76	19	25.0%	38	50.0%	19	25.0%
		Proficient/Advanced	N	%	N	%	N	%
	Comparison	683	16	2.0%	125	18.0%	542	79.0%
	SES	61	0	0.0%	10	16.0%	51	84.0%
5th		Unsatisfactory	N	%	N	%	N	%
	Comparison	503	396	79.0%	100	20.0%	7	1.0%
	SES	45	35	78.0%	10	22.0%	0	0.0%
		Partially Proficient	N	%	N	%	N	%
	Comparison	862	198	23.0%	521	60.0%	143	17.0%
	SES	77	13	17.0%	51	66.0%	13	17.0%
		Proficient/Advanced	N	%	N	%	N	%
	Comparison	772	8	1.0%	176	23.0%	588	76.0%
	SES	69	0	0.0%	14	20.0%	55	80.0%
6th		Unsatisfactory	N	%	N	%	N	%
	Comparison	582	500	86.0%	78	13.0%	4	1.0%
	SES *	52	35	67.0%	17	33.0%	0	0.0%
		Partially Proficient	N	%	N	%	N	%
	Comparison	840	200	24.0%	506	60.0%	134	16.0%
	SES	75	15	20.0%	47	63.0%	13	17.0%
		Proficient/Advanced	N	%	N	%	N	%
	Comparison	291	4	1.0%	61	21.0%	226	78.0%
	SES	26	1	4.0%	6	23.0%	19	73.0%
7th		Unsatisfactory	N	%	N	%	N	%
	Comparison	280	204	73.0%	76	27.0%	0	0.0%
	SES *	25	23	92.0%	2	8.0%	0	0.0%
		Partially Proficient	N	%	N	%	N	%
	Comparison	448	66	15.0%	335	75.0%	47	10.0%
	SES	40	8	20.0%	28	70.0%	4	10.0%
		Proficient/Advanced	N	%	N	%	N	%
	Comparison	313	4	1.0%	87	28.0%	222	71.0%
	SES	28	0	0.0%	13	46.0%	15	54.0%
8th		Unsatisfactory	N	%	N	%	N	%
	Comparison	324	263	81.0%	60	19.0%	1	0.0%
	SES	29	22	76.0%	7	24.0%	0	0.0%
		Partially Proficient	N	%	N	%	N	%
	Comparison	246	29	12.0%	177	72.0%	40	16.0%
	SES	22	6	27.0%	15	68.0%	1	5.0%
		Proficient/Advanced	N	%	N	%	N	%
	Comparison	33	--	--	--	--	--	--
	SES	3	--	--	--	--	--	--
9th		Unsatisfactory	N	%	N	%	N	%
	Comparison	11	--	--	--	--	--	--
	SES	1	--	--	--	--	--	--
		Partially Proficient	N	%	N	%	N	%
	Comparison	11	--	--	--	--	--	--
	SES	1	--	--	--	--	--	--
		Proficient/Advanced	N	%	N	%	N	%
	Comparison	11	--	--	--	--	--	--
	SES	1	--	--	--	--	--	--

*significantly different from Comparison students ($p < .05$).

b) Math Achievement: 2009 Median Growth Percentiles and Mean Ranks of SES and Comparison Students who Scored in Each Proficiency Category in 2008 by Grade

Grade 2009	Group	2008 Math Proficiency Category	2009 Median Growth Percentile	Mean Z-Score 2008	Mean Z-Score 2009	Mean Z-Score Difference (2009-2008)
4th		Unsatisfactory				
	Comparison	728	48	-1.95	-1.79	0.16
	SES	65	45	-1.98	-1.81	0.18
		Partially Proficient				
	Comparison	851	46	-0.92	-0.85	0.08
	SES	76	46.5	-0.98	-0.86	0.12
		Proficient/Advanced				
	Comparison	683	43	0.1	0.02	-0.08
	SES	61	41	0.09	0.03	-0.07
5th		Unsatisfactory				
	Comparison	503	49	-1.92	-1.73	0.18
	SES	45	56	-1.94	-1.65	0.29
		Partially Proficient				
	Comparison	862	52	-0.87	-0.79	0.09
	SES *	77	68	-0.93	-0.72	0.21
		Proficient/Advanced				
	Comparison	772	48	0.22	0.16	-0.05
	SES *	69	58	0.11	0.15	0.04
6th		Unsatisfactory				
	Comparison	582	47	-1.92	-1.89	0.03
	SES *	52	62.5	-1.85	-1.6	0.24
		Partially Proficient				
	Comparison	840	49	-0.84	-0.77	0.07
	SES	75	63	-0.87	-0.71	0.16
		Proficient/Advanced				
	Comparison	291	50	0.27	0.19	-0.08
	SES	26	65	0.06	0.02	-0.03
7th		Unsatisfactory				
	Comparison	280	56	-1.81	-1.59	0.22
	SES	25	57	-1.83	-1.77	0.05
		Partially Proficient				
	Comparison	448	52	-0.65	-0.58	0.08
	SES	40	44.5	-0.65	-0.64	0.01
		Proficient/Advanced				
	Comparison	313	40	0.37	0.25	-0.12
	SES	28	40.5	0.24	0.1	-0.14
8th		Unsatisfactory				
	Comparison	324	50	-1.62	-1.5	0.12
	SES	29	66	-1.49	-1.2	0.29
		Partially Proficient				
	Comparison	246	52	-0.38	-0.37	0.01
	SES	22	45	-0.5	-0.57	-0.07
		Proficient/Advanced				
	Comparison	33	--	--	--	--
	SES	3	--	--	--	--
9th		Unsatisfactory				
	Comparison	11	--	--	--	--
	SES	1	--	--	--	--
		Partially Proficient				
	Comparison	11	--	--	--	--
	SES	1	--	--	--	--
		Proficient/Advanced				
	Comparison	11	--	--	--	--
	SES	1	--	--	--	--

*significantly different from Comparison students ($p < .05$).