Unit of Federal Programs
Office of Data, Program Evaluation and Reporting (DPER)
www.cde.state.co.us

COLORADO
Department of Education
BRIEF REPORT

Supplemental Educational Services (SES)

2013-2014 Evaluation Findings: Impact of Completed Hours of Services

Introduction

Supplemental Educational Services (SES) is a subpart of Title I, Part A of the Elementary and Secondary Education Act (ESEA), which authorizes districts to utilize a portion of the district's Title I funds to provide direct instruction outside of the school day (i.e., tutoring) to students in low performing schools. Under the Colorado ESEA Flexibility Waiver, Colorado opted to maintain the SES program with some modifications based on the State's evaluations of the program across the years[1]. Under the Waiver, any Title I school assigned a Priority Improvement or Turnaround Plan type must offer SES to the students within that school[2]. Districts were given more flexibility to plan and implement an SES program designed to better meet the needs of their students, including providing services to students at/or below grade or proficiency level as defined by the district[3].

In 2013-14, providers offered SES in a variety of locations, formats, and dosages. Although Colorado's updated Title I SES Guidance required that providers offer a minimum of 20 hours to each student receiving services, contracted hours of services for some students were as high as 90 hours, and varied based on provider, district, and format (individual vs. group, online vs. in-person). The number of hours contracted per students averaged around 30. The majority of students (72.3%) completed more than 20 hours of services, and 17.2% completed more than 30 hours. On average, students completed 24.9 hours of services. The highest number of hours completed by any student was 64 hours.

This evaluation report summarizes the impact of the program based on the completed hours of services in each content area.

Evaluation Methods

In order to be included in the effectiveness analyses, a student must have completed at least 75 percent of the 20 hours minimum (as required in the Title I SES Guidance) *and* at least 50 percent of their contracted hours prior to a designated cut-point date. Cut-point dates were determined by using the mid-point of the state assessment window for the assessment used in each segment of the evaluation (for example, the segment pertaining to reading achievement for 3rd through 10th graders relied upon the assessment window for the reading

SES Dosage Highlights

Reading

- Students in grades K-3 who started below grade-level on DRA-2 were more likely to improve to at/or above grade-level if they received at least 25 hours of reading services
- Students in grades 4-10 who completed 25 hours or more of reading services were more likely to improve at least one proficiency level on TCAP and demonstrate higher growth

Math

- Students in grades 4-10 who completed at least 25 hours of math services demonstrated higher growth on math TCAP than students completing fewer hours

Writing

- Students in grades 4-10 who participated in writing services demonstrated higher growth on writing TCAP if they received at least 25 hours of services

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[1] For prior evaluations of the SES program, please visit the DPER website at http://www.cde.state.co.us/fedprograms/dper/evalrpts.asp.

[2] For additional information about the SES program, please visit the SES website at http://www.cde.state.co.us/fedprograms/ti/ses.

[3] Prior to Waiver, SES had to be offered to students of low socioeconomic status regardless of the students' performance.

TCAP). Students must have two years of assessment data, as well as a 2013-2014 student growth percentile, to be included in the evaluation. Students with more than one test score for that assessment in the same year (i.e., students testing twice) were excluded. Students also must have progressed one grade from 2013 to 2014 to be included; students held back or students who skipped a grade were excluded. The same exclusion rules were applied to both SES and comparison groups to create comparable groups and control for any confounding factors that might skew the results for one group or the other.

Based on the average number of hours completed by students included in the evaluation, students were divided into two groups: those completing fewer than 25 hours of services prior to the cut-point, and those completing 25 hours or more.

In each of the evaluation segments, the academic achievement of students the year prior to implementation (2013) was compared to the academic achievement of those students the year after implementation (2014). The percent of students that moved up at least one proficiency level (for analyses involving TCAP or ACCESS) or the percent of students that started below grade-level and moved to at/or above grade-level (for analyses involving DRA-2) were calculated and compared for each group (i.e., the SES served students compared to eligible but not served students). Median growth percentiles for each group were also compared to determine which groups of students had the highest growth in each content area.

Impact of Hours of Tutoring Completed

Students evaluated on reading services completed an average of 26.1 hours (grades K-3) prior to the DRA-2 cut-point date, and 25.3 hours (grades 4-10) prior to the TCAP cut-point date. Students evaluated on math and writing services also completed a similar number of hours (24.7 for math, 23.1 for writing) prior to the TCAP cut-point date.

Reading

Of those students starting below grade-level on DRA-2 (grades K-3), 22.2% of the students who completed at least 25 hours of services improved to at or above grade-level, compared to 15.1% of students who received fewer than 25 hours of services (Table 1). Overall, students who improved completed an average of 26.1 hours of services, compared to 24.8 hours of services by students who did not improve. The regression model which evaluated whether student improvement could be predicted by the number of hours completed was not significant.

Table 1. DRA-2 Performance of Students Receiving SES Services, By Hours Completed

Hours Completed	Valid DRA2 Data (N)	Below Grade-Level Target (N)	Improved	
			N	%
Less than 25 hours	294	186	28	15.1
25 hours or more	355	248	55	22.2
Total	649	434	83	19.1

Green highlight represents a higher score than the other group.

For students starting unsatisfactory or partially proficient on TCAP (grades 4-10), there was no statistically significant difference in the percent of students improving at least one proficiency level, with 24.3% of students completing 25 hours or more of services demonstrating improvement compared to 23.8% of students completing fewer than 25 hours (Table 2). Students who improved completed an average of 25.2 hours, which did not differ from students who did not improve (average of 25.1 hours). The regression model, evaluating whether the number of hours completed contributed to predicting if the student improved proficiency, was not significant. Hours of reading services completed, therefore, were not associated with students increasing their odds of improving proficiency. The growth of students who

completed at least 25 hours of services (*MGP* = 51) was higher than the growth of students who completed fewer than 25 hours of services (*MGP* = 47), but this difference was not statistically significant.

Table 2. Reading TCAP Performance and Growth of Students Receiving SES Services, By Hours Completed

Hours Completed	Valid TCAP Data (N)	Started Unsatisfactory OR Partially Proficient (N)	Improved		Median Growth Percentile
			N	%	
Less than 25 hours	392	324	77	23.8	47.0
25 or more hours	446	358	87	24.3	51.0
Total	**838**	**682**	**164**	**24.0**	**49.0**

Green highlight represents a higher score than the other group.

Students who started unsatisfactory and completed at least 25 hours of services were less likely to improve at least one proficiency level (23.1%) than students who completed fewer hours (27.4%). However, these students demonstrated higher growth (*MGP* = 53) and were more likely to meet step-up targets[4] (42.2%) than students completing fewer hours (*MGP* = 46 and 39.1%, respectively) (See Table 3). Similarly, for those starting partially proficient, students completing 25 hours or more of services demonstrated higher growth (*MGP* = 57) than students completing less than 25 hours (*MGP* = 50). These students were also more likely to improve at least one proficiency level (25.4%) and were more likely to meet catch-up targets (44.9%) than students completing fewer hours (19.3% and 41.4%, respectively).

Table 3. Reading TCAP Performance and Growth of Students Receiving SES Services, By Hours Completed and Starting Proficiency Level

Hours Completed	2013 Reading Proficiency Category	2014 Reading Proficiency Category						Median Growth Percentile	Adequate Growth Targets					
		Unsatisfactory		Partially Proficient		Proficient / Advanced			Step Up Target Met		Catch Up Target Met		Keep Up Target Met	
		N	%	N	%	N	%		N	%	N	%	N	%
Unsatisfactory														
Less than 25 hours	179	130	72.6	N<50	---	N<16	---	46.0	70	39.1	31	17.3		
25 or more hours	173	133	76.9	N<40	---	N<16	---	53.0	73	42.2	24	13.9		
Partially Proficient														
Less than 25 hours	145	24	16.6	93	64.1	28	19.3	50.0			60	41.4		
25 or more hours	185	22	11.9	116	62.7	47	25.4	57.0			83	44.9		
Proficient / Advanced														
Less than 25 hours	68	N<16	---	N<30	---	47	69.1	42.0					36	52.9
25 or more hours	88	N<16	---	N<30	---	57	64.8	36.0					45	51.1

Green highlight represents a higher score than the other group.
Due to data privacy concerns, smaller N sizes are suppressed. In some instances it was necessary to also suppress complementary cells to protect privacy.

Math

For students starting unsatisfactory or partially proficient on the 2013 math TCAP, there was no significant difference in the percent of students improving at least one proficiency level, with 22.2% of students completing at least 25 hours of services demonstrating improvement compared to 23.1% of students completing fewer hours (Table 4). Students who improved at least one proficiency level completed an average of 25.1 hours, which only slightly differed from students who did not improve (average of 24.5 hours). Similar to reading, the regression model which evaluated whether student improvement could be predicted by the number of hours completed was not significant. The growth of students who completed 25 hours or more of services (*MGP* = 57) was higher than the growth of students who completed fewer than 25 hours of services (*MGP* = 52.5), but this was not a statistically significant difference.

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[4] For explanations of the Colorado Growth Model, including definition of keep-up and catch-up, please visit http://www.cde.state.co.us/schoolview/generalgrowthmodelfaq.

Table 4. Math TCAP Performance and Growth of Students Receiving SES Services, By Hours Completed

Hours Completed	Valid TCAP Data (N)	Started Unsatisfactory OR Partially Proficient (N)	Improved		Median Growth Percentile
			N	%	
Less than 25 hours	352	255	59	23.1	52.5
25 or more hours	322	261	58	22.2	57.0
Total	**674**	**516**	**117**	**22.7**	**54.0**

Green highlight represents a higher score than the other group.

Of the students starting partially proficient, 18.3% of those completing at least 25 hours of services improved at least one proficiency level, compared to only 13.9% of those who completed fewer hours (See Table 5). These students also demonstrated higher growth (*MGP* = 57) and were more likely to meet catch-up targets (26.6%) than students completing fewer than 25 hours (*MGP* = 49 and 21.1%, respectively).

Table 5. Math TCAP Performance and Growth of Students Receiving SES Services, By Hours Completed and Starting Proficiency Level

Hours Completed	2013 Math Proficiency Category	2014 Math Proficiency Category						Median Growth Percentile	Adequate Growth Targets					
		Unsatisfactory		Partially Proficient		Proficient / Advanced			Step Up Target Met		Catch Up Target Met		Keep Up Target Met	
		N	%	N	%	N	%		N	%	N	%	N	%
Unsatisfactory														
Less than 25 hours	89	53	59.6	N<40	---	N<16	---	64.0	40	44.9	N<16	---		
25 or more hours	92	65	70.7	N<30	---	N<16	---	59.5	30	32.6	N<16	---		
Partially Proficient														
Less than 25 hours	166	35	21.1	108	65.1	23	13.9	49.0			35	21.1		
25 or more hours	169	36	21.3	102	60.4	31	18.3	57.0			45	26.6		
Proficient / Advanced														
Less than 25 hours	97	N<10	---	N<20	---	81	83.5	54.0					50	51.5
25 or more hours	61	N<16	---	N<16	---	46	75.4	52.0					30	49.2

Green highlight represents a score higher than the other group on that metric.
Due to data privacy concerns, smaller N sizes are suppressed. In some instances it was necessary to also suppress complementary cells to protect privacy.

Writing

Similar to reading and math trends, there was no significant difference in the percent of students improving at least one proficiency level as a result of the hours of services completed. For students completing at least 25 hours of services, fewer (data suppressed due to small N sizes) demonstrated improvement than the students completing fewer hours (See Table 6). Students who improved completed an average of 22.6 hours, which was the same for students who did not improve. The regression model, evaluating whether the number of hours completed predicts if the student improved proficiency, was not significant. The growth of students who completed 25 hours or more of services (*MGP* = 56) was higher than the growth of students who completed fewer than 25 hours of services (*MGP* = 53), but this was not a statistically significant difference.

Table 6. Writing TCAP Performance and Growth of Students Receiving SES Services, By Hours Completed

Hours Completed	Valid TCAP Data (N)	Started Unsatisfactory OR Partially Proficient (N)	Improved		Median Growth Percentile
			N	%	
Less than 25 hours	191	168	N>30	%>20.2	53.0
25 or more hours	83	65	N<16	%<20.2	56.0
Total	**274**	**233**	**47**	**20.2**	**53.5**

Green highlight represents a higher score than the other group.
Due to data privacy concerns, smaller N sizes are suppressed. In some instances it was necessary to also suppress complementary cells to protect privacy.

Due to the smaller number of students completing at least 25 hours of services in writing, the breakdown of writing TCAP performance and growth by starting proficiency level resulted in small counts ($n < 20$) which are inappropriate to interpret.

Conclusions Based on Hours of Services

The evaluation of the 2013-2014 Supplemental Educational Services did not find substantial evidence to indicate a direct correlation between the number of hours completed and academic achievement, though there were a few noteworthy trends. Students who received a minimum of 25 hours of reading services prior to the assessment cut-point date were more likely to improve proficiency on DRA-2 (grades K-3) and TCAP (grades 4-10). Although the trend in improved proficiency was not consistent for students who received math or writing services, analyses did reveal that providing a minimum of 25 hours of services resulted in higher student growth for all content areas (reading, math, and writing).

As a result of Colorado's updated Title I SES Guidance which increased the minimum hours of services offered, students in the "Less than 25 hours" group still completed an average of 19.3 to 20.5 hours within each content area. Students in the "25 hours or more" group, on the other hand, averaged 28.4 to 31.9 hours based on content area. Based on the mixed results of the impact of hours completed, it is recommended to maintain the minimum hours of service at 20 hours until the relationship between hours of services and performance can be further investigated.

Report Authors
- Tina Negley
- Nazanin Mohajeri-Nelson

Where can I learn more?

For additional information regarding the evaluation of the Supplemental Educational Services program, including analyses from prior years, visit the Program Evaluations webpage of the Office of Data, Program Evaluation and Reporting: http://www.cde.state.co.us/fedprograms/dper/evalrpts#tiases