

Summary of Austin Independent School District Supplemental Educational Services (SES) Provider Impacts

Results of a Multisite Study of the Implementation and Effects of Supplemental Educational Services, funded by the Institute for Educational Sciences, PR/Award number: R305A090301†

The information on SES provider impacts in the Austin Independent School District that we report in the table below is based on econometric analyses that use gains in reading and math test scores as the outcome measures. We employ four alternative approaches to estimating provider effects—value-added models, student fixed effects models, school and student fixed effects models, and propensity score matching models—that adjust for student and school characteristics that may differ across students served by providers. In the table, we report whether a given SES provider had a statistically significant positive impact on students’ reading and/or math achievement in the 2008-09 and/or 2009-10 school years. We report that a SES provider had a “high impact” if it had an impact larger than the average impact on student learning for all providers (as estimated by the value-added models). If no impacts are noted, this implies the results were inconclusive, that is, the range of student test-score improvements spanned both positive and negative numbers or improvements were zero or negative.

Importantly, we did not estimate impacts individually for SES providers that served fewer than 30 students in a given year, as there are statistical limitations to producing accurate estimates for small numbers of students. Thus, we estimated combined “small provider” impacts for the small providers; these results and the providers included in this analysis are shown at the end of the table.

For all of the providers, we also report the average number of hours of SES received by students attending their programs (in the 2008-09 and 2009-10 school years) and the rate per hour charged by the SES provider in 2009-10. Our analysis of data from the five study districts combined (Milwaukee, Minneapolis, Chicago, Dallas and Austin) has shown a strong, positive relationship between the number of hours of SES students attended and their test score gains.

In the table below:

- Providers with statistically significant positive impacts on student achievement (as measured by improvements in test scores) are highlighted in grey.
- Statistically significant student test-score improvements that are above the average impact are identified in the third column.

† Study website: <http://sesiq2.wceruw.org/papers.html>; contributors to this analysis include Carolyn Heinrich, Hiren Nisar, Martina Chura, Huiping Cheng, Hyun Sik Kim, Nate Inglis Steinfeld and Curtis Jones of the Wisconsin Center for Education Research.

**Austin ISD Supplemental Educational Services (SES)
Provider Impacts on Student Achievement,
Hours of SES Provided, and Hourly Rates:
2008-09 and 2009-10 School Years**

Provider name	Positive impacts on student achievement	High impact (greater than average)	Average hours of SES received by students		Hourly rate charged
			(2008-09)	(2009-10)	(2009-10)
100 Scholars (formerly Scholars Learning Center)			29.3	51.7	\$65
Austin ISD (Independent School District)			21.4	32.8	\$34.19
B.R.U. Inc - Youth Academy	math (2008-09)	math (2008-09)	32.6	37.2	\$40
Confidence Music Outreach	math (2008-09)	math (2008-09)	12.3		
The COMEDI (Committee for the Equal Distribution of Information)	math (2008-09)	math (2008-09)	17.3	18.3	\$65
Group Excellence, Ltd.	math (2008-09)	math (2008-09)	17.8	31.3	\$80
Read and Succeed, LLC	math (2008-09)		10.3		
Tutors with Computers, LLC				18.4	\$92
<i>Small Providers (combined assessment)</i>			<i>See individual small provider information below</i>		
1 to 1 Tutor, LLC	<i>Individual provider effects not estimated for small providers serving fewer than 30 students; see combined effects above.</i>		25.5	49.7	\$49
Austin Sylvan, LLC					\$70
Alpha Academic Services, Inc.					\$80
Alternatives Unlimited, Inc.			18.6		
Babbage Net School, Inc.				56.4	\$40
Balser Enterprises, LLC: College Tutors			15.4		\$75
Club Z! In Home Tutoring, Inc			20.1		
Elite Academic Solutions				28.2	\$50
Jet Learning Laboratory, Inc.			35.9		
MTS Tutorial Service, Inc.			13.0		
Motivating Tomorrow's Minds (MTM)			17.1		
One on One Learning			15.5	30.4	\$68
The Association for the People and the Community (A.P.C.)			10.2	21.6	
The Education S.T.R.E.A.M., Inc.			23.9		

**The Effects and Effectiveness of Supplemental Educational Service Providers
in Dallas Independent School District, 2008-09 and 2009-10 School Years**

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Introduction

Under No Child Left Behind (NCLB), local educational agencies are required to identify for school improvement any elementary school or secondary school that, for at least two consecutive years, has not made adequate yearly progress, and to offer parents of children in these schools who meet eligibility criteria the opportunity to receive extra academic assistance, or supplemental educational services (SES). A large number of diverse organizations have entered the market to compete for the opportunity to provide SES to these students, with widely varying hourly rates, service costs, tutor qualifications, tutoring session length, instructional strategies, and curriculums. In addition, NCLB requires states to withdraw approval from providers that fail to increase student academic achievement for 2 years.

The central goal of our multisite study of SES is to improve student learning and achievement by identifying successful approaches (and the variables that will increase success) in the organization and management of SES programs within school districts and the delivery of SES programs by approved SES providers.

The objective of this analysis is to estimate the effects and effectiveness of SES providers who are serving SES-eligible students in the Dallas Independent School District (DISD). In the absence of this information, it is difficult (if not impossible) for state and local educational agencies to comply with the requirement that ineffective providers be withdrawn from the market for SES. One challenge in generating estimates of SES provider effects is that participation in the program is voluntary, and students and their families are able to choose the provider that they think will best meet their educational needs. Therefore, it is essential that any estimation approach adjust for student selection into SES and into particular types of providers, as the composition of students served by any given provider is likely to vary.

We employ four alternative approaches to estimating the effects of different types of SES providers on changes in student test scores (math and reading scaled scores, standardized with respect to district average test scores), while controlling for student selection into SES and into different provider types. We use gains in test scores as our outcome in value-added models, student fixed effects models, school and student fixed effects models, and propensity score matching models. As each of these modeling approaches makes somewhat different assumptions about selection into SES (discussed below), we are looking to see consistency in the results from their estimation, which would increase our confidence that the results are robust to alternative assumptions.

The attributes of SES providers that we examine are: on-line provision, on-site (vs. not on-site), and for-profit (vs. nonprofit or public) provision. In addition, for SES providers serving at least 30 students in a given school year, we estimate their individual, provider-specific effects on changes in student test scores. SES providers serving fewer than 30 students are combined in a small-provider measure, so that we can also estimate the average effect of smaller SES providers relative to larger ones.

We begin by briefly describing each of the four estimation approaches that we employ in the analysis of SES effects. We follow with a summary of the results of the estimation of SES effects for different provider types and specific providers in DISD.

SES provider effect estimation methods

Value Added Model

The formal value-added model we employ is specified in Equation 1. The outcome, as indicated above, is a gain score, which allows us to account for the possibility that students with similar characteristics might enter SES with different underlying achievement trajectories (as reflected in their prior test scores). We estimate:

$$A_{jst} - A_{jst-1} = \alpha SES_{jt} + \beta X_{jt-1} + \delta S_t + \mu_{gt} + \epsilon_{jst} \quad (1)$$

where,

$A_{jst} - A_{jst-1}$ = achievement gain of student j attending school s in year t

$SES_{jt} = 1$ if the student attended SES¹

X_{jt-1} = student characteristics, including student demographics, percent absent in prior year, retained in prior year, and attended SES in prior year

S_t = school fixed effects

μ_{gt} = grade by year fixed effects

ϵ_{jst} = random error term

This regression specification shows the relationship between student achievement and attending SES after controlling for student characteristics and school and grade year effects.

Student Fixed Effects Model

Fixed-effects methods are frequently preferred because they make it possible to control for all *stable* characteristics of an individual (student) or other unit of analysis (e.g., the school, as above), including those characteristics that are not observed or measured. The following model of an educational production differs from equation (1) in that it includes student fixed effects (δ_j) instead of school fixed effects:

$$A_{jst} = \alpha SES_{jt} + \beta X_{jt-1} + \delta_j + \mu_{gt} + \epsilon_{jst} \quad (2)$$

¹ Depending on the sample used in the estimation, this indicator measures either the effect of attending SES with a particular type of provider relative to other providers, or it measures the effect of attending SES with a particular type of provider (or specific provider) relative to no SES receipt.

When we take the first difference of equation (2), we eliminate the student fixed effect (δ_j), and the model estimates the average difference between the gains made by students attending SES with the gains made by similar students in DISD who were likewise eligible for SES. This formulation imposes some restrictions (or assumptions) that are important to note. First, the effects of students' prior experience does not deteriorate over time. This implies, for example, that the effect of the quality of kindergarten has the same impact on student achievement no matter the grade. The second assumption is that the unobserved effect of attending SES only affects the level but not the rate of growth in student achievement. A concern with this restriction is that if students with lower growth are more likely to choose to attend SES, then this selection may bias the estimates obtained from a gains model. In order to relax this restriction, the following equation is estimated:

$$(A_{jst} - A_{jst-1}) = \alpha SES_{jt} + \beta X_{jt-1} + \delta_j + \mu_{gt} + \epsilon_{jst} \quad (3)$$

This approach to estimating the fixed effects model controls for any unobserved differences between students that are constant across time. The estimation of this model requires a first difference of equation (3) and therefore needs three or more observations for each student.² As students self select into the SES program, we deal with this selection by using the gain scores made by same student in the prior year. Identification of the impact of SES in this model comes from students who transfer from one SES provider to another over the period of observation. If these students differ in systematic ways from all students who attend SES, then the estimator gives a "local" effect (specific to students with these characteristics) instead of an average effect. Therefore, it is important that we check the robustness of the model results using alternate estimation strategies.

School and Student Fixed Effects Model

The base model for this estimation strategy is the same as that in Equation (3), except that we add a school fixed effect (π_s):

$$(A_{jst} - A_{jst-1}) = \alpha SES_{jt} + \beta X_{jt-1} + \pi_s + \delta_j + \mu_{gt} + \epsilon_{jst} \quad (4)$$

Adding a school fixed effect adjusts for unmeasured, time-invariant school characteristics such as average school test scores, neighborhood attributes, parental involvement in the school and peer composition, to the extent that these are unchanging over time. The inclusion of student fixed effects effectively controls for student ability and other time-invariant student characteristics. This model is generally preferred over the value added and the student fixed effects models as it controls for both school and student fixed effects.

² As SES providers frequently serve students at multiple grade levels, it is reasonable to pool information across grade levels.

Propensity Score Matching Model

We use a common application of matching called propensity score matching (PSM). PSM is a two-step process in which the probability of participation in SES (or the probability of participation with a particular type of provider) is first estimated based on student characteristics measured prior to participation, generating predicted probabilities of participation (or propensity scores). The matching process is thus reduced to a one-dimensional problem of comparing students who receive SES (or receive it with a particular type of provider) with students with similar propensity scores who do not participate (or participate with other types of providers), rather than requiring matches on all of the X variables. In other words, if SES participants and comparison group members have the same $P(X)$, the distribution of X across these groups will be the same:

$$Y_0 \perp\!\!\!\perp D \mid X \Rightarrow Y_0 \perp\!\!\!\perp D \mid P(X), \quad (4)$$

and students can be compared on the basis of their propensity scores alone.

In applying matching methods, we are invoking the conditional independence assumption, which implies that after controlling for observable characteristics (X), a student's treatment status is unrelated to what his outcome would have been in the absence of treatment (Rosenbaum and Rubin, 1983). The validity of this assumption depends largely on the set of variables or student characteristics (X) available for the estimation. We expect that there may be some unmeasured factors that influence participation in SES (or participation with particular types of providers); what is important is that participation not be predictive of the outcome that would have occurred without the program (or with a particular provider type). In addition, because our outcome variables are defined as the difference between a pre-program and post-program measure, we use a panel form of the matching estimator ("difference-in-differences" matching) that allows for time-invariant, unobserved differences between SES participants and comparison students without biasing estimates of program impacts. In estimating this model, we make the assumption that conditional independence holds for the periods both before (t) and after (t') treatment:

$$E(Y_{0t'} - Y_{0t} \mid D' = 1, X) = E(Y_{0t'} - Y_{0t} \mid D' = 0, X). \quad (5)$$

This model estimates the average difference between the gains made by students attending SES with the gains made by "matched" students in DISD who were likewise eligible for SES, without putting a functional form on the gain equation (3) as in case of student fixed effects.

The primary PSM matching technique we apply in the second stage model is radius matching, which specifies a "caliper" or maximum propensity score distance (0.01 in our analysis) by which a match can be made. It uses not only the nearest neighbor within each caliper, but all comparison cases within the caliper (based on the specified distance), and the common support condition is imposed to exclude poor matches from the analysis.

Types of SES providers and the students they serve in the Dallas Independent School District

Table 1 shows the characteristics of DISD students who were served by SES providers in the 2008-09 and/or 2009-10 school years. There are only a few notable differences across provider types in the characteristics of students they served. Specifically, nonprofit providers served proportionately more African-American students and proportionately fewer Hispanic students and English Language Learners (ELL) than for-profit providers. It is important to note that in 2008-09, approximately 93% of students received SES from a for-profit provider, a proportion that declined to 84% in 2009-10.

Results on Effects and Effectiveness of SES providers in the Dallas Independent School District

Table 2 presents the results from models estimating provider effects that include all SES eligible students who registered for services in the 2008-09 or 2009-10 school years, with students from all grades combined. The coefficients are in the form of effect sizes; that is, the change—measured in standard deviations from district average reading and math test scores—in an average student's outcome that can be expected if the student participates in SES.³ Effect sizes are reported for providers who had at least 30 students attend SES with them; smaller providers (serving less than 30 students) are grouped into a single “small provider” indicator.⁴ Statistically significant effects are lightly shaded with provider names shown in bold; coefficients that are *not* statistically significant suggest that the results for these providers are inconclusive.

The value-added models (with school fixed effects) and the student fixed effects models show few statistically significant, positive effects of SES on DISD students' math and reading achievement in 2008-09, relative to students who do not receive SES. In 2008-09, only students attending SES with the small providers (combined) see improvements in their math scores. Alternatively, in 2009-10, there are 7 SES providers that the value-added models suggest have positive effects on students' math achievement (as measured by changes in their standardized math test scores): A+ Learning Academy Inc., ABC Educate Me, LLC, Babbage Net School, Inc., Cranium Maximus, Diverse Learning, Inc., Group Excellence, Ltd. and SES Texas Tutors, Inc.. The value-added models also show only one provider (Train Up a Child) with effects on students' reading achievement in 2009-10, although the fixed effect models also suggest that Diverse Learning, Inc. increases students' reading achievement (for those attending in 2008-09 and 2009-10). (The student fixed effect results are based on three years of student data, including 2007-08 as required for the estimation).

³ A standard deviation tells you how different (or far away) a value is from a given average (for a given sample); thus, a larger standard deviation implies a bigger effect.

⁴ Small providers in DISD include: 4.0 Home Tutors, Inc., Academic Realities, Inc., A Better Grade Tutoring, LLC, ACE Tutoring Services, Inc., B.R.U., Inc., Youth Academy, Beacon Hill Preparatory Institute, Capitol Educational Support Inc., Choices Learning Center, Club Z! In Home Tutoring Services, Inc., The Community College Foundation, Fostering Stars Learning & Resource Center, JSUD Mental Arithmetic, Kaleo Enterprises, Inc., KnowledgeExperts LLC, Learn It System, Learning Solutions, MTM, Mathnasium of SW Fort Worth, Mema, Inc: Sylvan Learning Center, Milton and Liniado Educational Services, Mindful Learning, LLC, Next Level Educational Programs LLC, One on One Learning, Stacey Simmons: Promise Tutorial, and Wonder-Space Mobile.

We present all of these results graphically in Appendix A. The bars represent effect sizes (above or below 0), and the black lines running through the bars (with caps at each end) show the 90% confidence intervals, or the probable range of the effects. For many of the estimated effects, the confidence interval spans above and below zero, suggesting there are no effects or inconclusive results. Appendix A also shows graphically the share of students served by the SES providers just below the graphs of SES effects (for each year, 2008-09 and 2009-10). Looking at these two sets of graphs for the two school years, we do not see any strong correspondence between provider effectiveness and provider shares of students. The small SES providers combined only serve 4% of students receiving SES in 2008-09, and they were the only providers that had positive effects on student achievement (math) in that year. In 2009-10, there are more SES providers producing effects on student achievement, although there does not appear to be any relationship between effect size and their student market share. This makes it difficult to conclude that this is an effectively functioning market for SES.

At the same time, we do think that there may be a logical reason that we are seeing more effects of SES in 2009-10 than in the prior school year. In 2009-10, federal stimulus funds were directed toward increasing the number of hours of SES that eligible DISD students would receive, and this was apparent in the average number of hours that students received from particular providers. More than 85% of the SES providers that offered services in both of these years increased the number of hours they provided (on average) to students, with a few more than doubling the number of hours students received. Our work, along with prior studies (Lauer et al., 2006), generally shows that effect sizes are larger (and statistically detectable) for programs that deliver at least 40 hours of tutoring.

The next analysis that we performed considers some basic attributes of SES providers—on-site vs. not on-site, on-line vs. not on-line, and for-profit vs. not-for-profit—and compares the outcomes of students who attend with these different types of providers. Looking to Table 3, we see two statistically significant relationships between provider attributes and their effectiveness in improving student learning (as estimated by changes in their reading and math scores) in DISD. Specifically, on-line providers were significantly *less* likely to increase student achievement in math (compared to those providers that were not on-line) in 2008-09, and on-site providers were significantly *more* likely to increase student achievement in math in 2009-10. Importantly, approximately 68% of participating DISD students received SES from an on-line provider in 2008-09, a proportion that declined (it seems for the better) to 49% in 2009-10. We also show these findings from the combined-site analysis (Austin, Dallas, Chicago, Milwaukee and Minneapolis) in Table 4. These results generally show that on-line providers (and for-profit providers) have smaller impacts on students' math and reading test score gains, although these relationships appear more definitive in the 2008-09 school year. In addition, on-site providers overall appear more successful in increasing student math achievement in 2009-10 (consistent with the DISD-specific effect).

Summary and Concluding Discussion

The findings of our empirical analyses of the effects of SES and SES providers who served SES-eligible DISD students in the 2008-09 and 2009-10 school years suggest the following:

- Only small SES providers in DISD generated statistically significant, positive effects on student achievement as measured by changes in student test scores (standardized relative to district average test scores) in 2008-09.
- More SES providers produced positive, statistically significant effects on students' math achievement in 2009-10. These included: A+ Learning Academy Inc., ABC Educate Me, LLC, Babbage Net School, Inc., Cranium Maximus, Diverse Learning, Inc., Group Excellence, Ltd. and SES Texas Tutors, Inc. In addition, Train Up a Child increased students' reading achievement in 2009-10, and Diverse Learning, Inc. had positive effects on reading achievement for students attending in 2008-09 and 2009-10.
- We speculate that federal stimulus funds, which were directed toward increasing the number of hours of SES that eligible DISD students received in 2009-10, may have contributed to the greater number of positive effects of SES in 2009-10 than in 2008-09.
- There find little correspondence between SES providers' shares of students attending SES in DISD and their estimated effectiveness.
- On-line providers in DISD were significantly *less* likely to increase student achievement in math (compared to those providers that were not on-line) in 2008-09, and on-site providers were significantly *more* likely to increase student achievement in math in 2009-10. These results are consistent with those from the analysis of our five study sites combined and suggest that it is likely beneficial that the proportion of participating DISD students receiving SES from an on-line provider declined from 68% in 2008-09 to 49% in 2009-10.

Given that unmeasured differences in students who attend SES or attend with particular types of providers could still introduce bias in these results, we urge caution in the use of these findings. Although we are encouraged by the fact that the findings are fairly consistent across four different rigorous estimation methods, there are a number of statistically insignificant findings (with large standard errors) that should be interpreted as inconclusive.

Finally, we would like to reiterate that we are in the second year of a four-year, multisite study of SES, and we will be conducting these same analyses for two additional school years. We will also continue to explore the relationships that we observe in the quantitative study in our linked qualitative study of SES, which we expect will generate richer insights about the patterns of relationships that are described in this report.

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Table 1: Characteristics of Dallas Independent School District Students Receiving SES by Type of Provider

		2008-09 School Year					2009-10 School Year				
Student Characteristics by Provider Type		Online Providers	Onsite Providers	Offsite Providers	For Profit Providers	Non Profit Providers	Online Providers	Onsite Providers	Offsite Providers	For Profit Providers	Non Profit Providers
	Number of students	1676	1373	922	2270	179	6869	10431	9821	11677	2283
	Asian	1%	1%	0%	1%	1%	1%	1%	1%	1%	1%
	Black	41%	43%	51%	41%	60%	33%	33%	38%	34%	50%
	Hispanic	57%	55%	47%	57%	35%	64%	64%	59%	63%	47%
	White	1%	1%	1%	1%	4%	2%	2%	2%	2%	2%
	Other race	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	% Female	53%	52%	52%	53%	49%	50%	49%	50%	50%	52%
	% ELL	20%	20%	18%	21%	17%	20%	21%	19%	21%	15%
	% FRL	61%	59%	57%	60%	51%	91%	90%	90%	91%	87%
% with disability	11%	12%	13%	11%	23%	12%	12%	12%	11%	15%	
Attended SES last year											
% Absent last year											
Retained this year		1%	1%	0%	1%	0%	6%	5%	6%	5%	7%
							7%	7%	6%	7%	6%
							5%	5%	5%	5%	6%

Table 2: Estimates of SES Provider Effects in the Dallas Independent School District, School Years 2008-09 and 2009-10

SES PROVIDERS	2008-09 VA model				2009-10 VA model				Student Fixed Effects				School and Student Fixed Effects			
	Reading		Math		Reading		Math		Reading	SE	Coeff	SE	Reading	SE	Coeff	SE
	Coeff	SE	Coeff	SE	Coeff	SE	Coeff	SE								
Small Provider	0.026	0.124	0.203	0.039	-0.125	0.143	0.184	0.143	0.339	0.589	0.094	0.549	0.312	0.582	0.084	0.576
1 to 1 Tutoring-TutorOwl.com	-0.118	0.192	-0.179	0.119	-0.217	0.120	-0.137	0.190	-0.188	0.519	-0.342	0.614	-0.234	0.520	-0.312	0.624
A+ Grades Up	-0.012	0.125	-0.135	0.153					0.555	0.988	-0.287	0.745	0.487	1.008	-0.310	0.759
A+ Learning Academy, Inc.					0.091	0.080	0.183	0.085	-0.129	0.360	-0.065	0.427	-0.119	0.378	-0.049	0.428
ABC Educate Me, LLC	0.038	0.162	-0.053	0.145	0.149	0.141	0.224	0.089	-0.228	0.652	0.219	0.500	-0.227	0.661	0.223	0.513
Academic Excellence Program	-0.051	0.158	-0.067	0.111					0.089	0.925	-0.220	0.374	-0.030	0.935	-0.232	0.383
Alternatives Unlimited	0.029	0.158	0.168	0.124	0.005	0.087	0.119	0.103	-0.314	1.003	0.001	0.515	-0.366	0.977	0.029	0.522
Babbage Net School, Inc.	0.243	0.158	0.126	0.081	0.238	0.163	0.322	0.104	0.473	0.540	0.098	0.468	0.440	0.527	0.088	0.408
Confidence Music Outreach	0.005	0.177	0.169	0.172	0.045	0.109	0.073	0.059	0.084	0.385	0.201	0.268	0.039	0.379	0.231	0.266
Cool Kids Learn, Inc.					-0.085	0.265	0.129	0.177	1.525	1.010	0.519	0.810	1.382	1.151	0.363	0.737
Cranium Maximus					-0.062	0.025	0.423	0.021	0.439	0.389	0.211	0.195	0.455	0.424	0.306	0.216
Diverse Learning, Inc.					0.037	0.101	0.291	0.043	1.591	0.499	0.080	0.212	1.588	0.523	0.134	0.221
Educate Online (formerly Cal	-0.190	0.100	-0.031	0.070	0.098	0.124	0.112	0.080	-0.099	0.488	0.334	0.309	-0.111	0.488	0.379	0.313
Educational Enterprises					-0.214	0.162	0.001	0.221	-1.083	0.991	0.352	0.802	-1.033	0.995	0.403	0.794
Grade Results, Inc.					-0.562	0.260	-0.953	0.480	-0.706	3.185	-0.566	1.912	-0.689	3.177	-0.520	1.934
Group Excellence	-0.177	0.081	-0.037	0.053	0.053	0.082	0.137	0.043	-0.007	0.336	0.035	0.195	-0.017	0.369	0.012	0.214
Jet Learning Laboratory, Inc.	-0.034	0.140	0.010	0.140					0.048	0.786	-0.120	0.699	-0.173	0.628	-0.076	0.673
Learning4Today: Academic Excellence Pr					-0.136	0.061	0.176	0.294	-0.243	0.928	0.194	0.913	-0.089	0.841	0.104	0.941
Promise Tutorial	-0.178	0.231	0.136	0.167					-0.525	1.751	0.480	0.769	-0.639	1.760	0.682	0.685
Read and Succeed, LLC	-0.347	0.153	-0.145	0.103					-0.121	0.591	0.340	0.578	-0.174	0.569	0.298	0.581
SES Texas Tutors, Inc.	-0.119	0.161	0.026	0.161	0.120	0.108	0.365	0.150	-0.273	0.533	0.071	0.313	-0.273	0.429	0.055	0.355
Train Up A Child/ The Homework Mastery					0.684	0.202	-0.026	0.099	0.248	1.441	0.728	0.943	0.076	1.410	1.021	0.778
Tutors with Computers, LLC					0.084	0.092	0.061	0.102	0.616	0.595	0.262	0.419	0.661	0.599	0.245	0.437

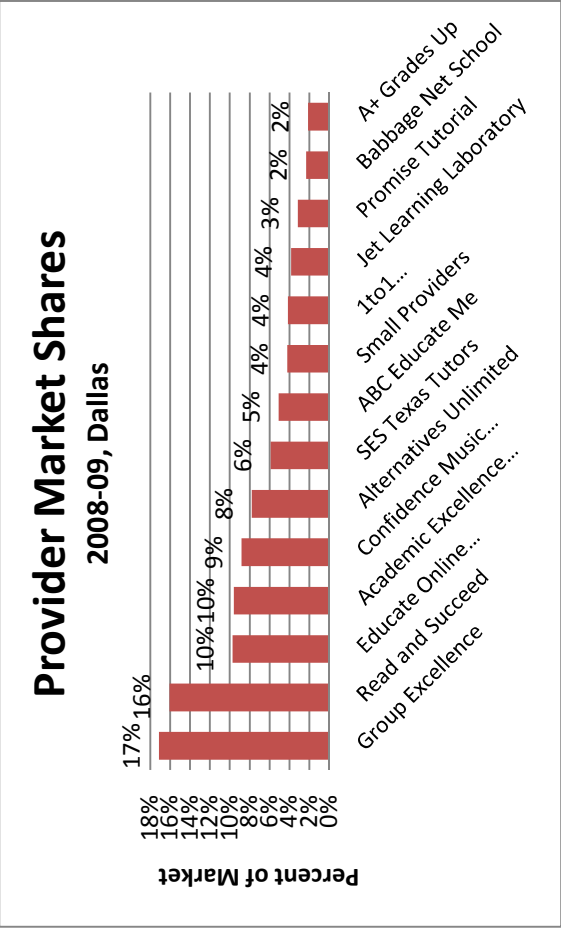
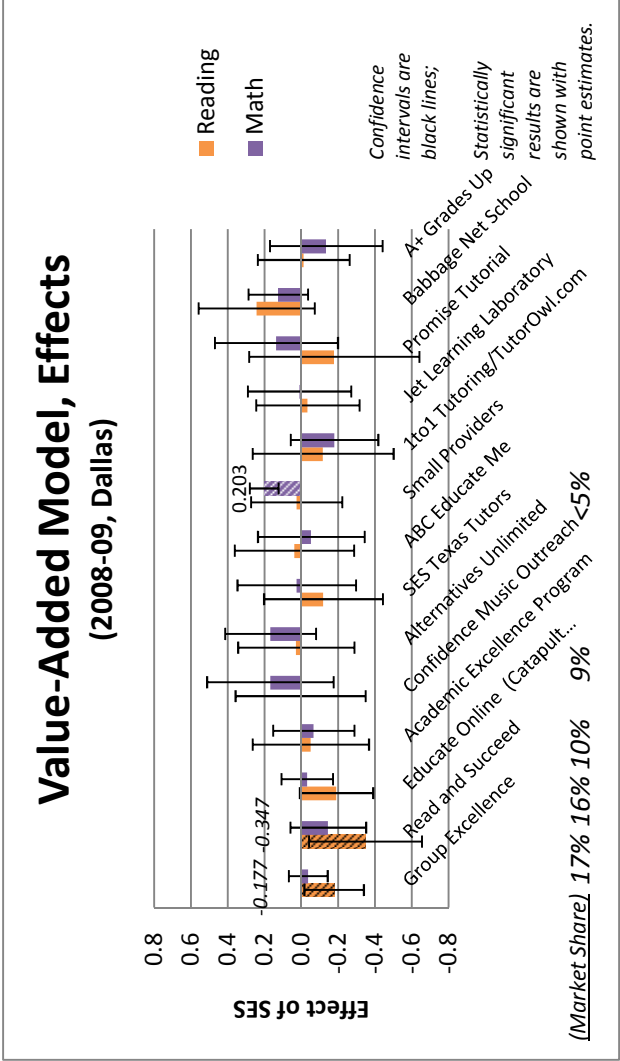
Table 3: Summary of Differences in SES Effects by Provider Types (for DISD students who attended SES)

Provider Attribute and Method of Analysis	School Year 2008-09				School Year 2009-10			
	Reading		Math		Reading		Math	
	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE
<i>On-site vs. not on-site</i>								
Value-added	0.154	0.143	0.048	0.102	-0.059	0.109	0.108	0.052
Student fixed effects (F.E.)	(results are for 2008-09 and 2009-10)				0.125	0.597	-0.158	0.491
Student + school F.E.					0.122	0.596	-0.207	0.543
Propensity score matching	0.104	0.107	0.112	0.071	-0.355	0.152	0.066	0.123
<i>On-line vs. not on-line</i>								
Value-added	-0.196	0.117	-0.208	0.063	0.010	0.078	-0.007	0.070
Student fixed effects (F.E.)	(results are for 2008-09 and 2009-10)				0.019	0.610	0.211	0.422
Student + school F.E.					0.062	0.693	0.261	0.463
Propensity score matching	-0.370	0.105	-0.094	0.081	-0.103	0.120	0.031	0.096
<i>For-profit vs. not-for-profit</i>								
Value-added	0.139	0.162	-0.164	0.096	0.041	0.103	0.119	0.077
Student fixed effects (F.E.)	(results are for 2008-09 and 2009-10)				-0.258	0.740	-0.160	0.636
Student + school F.E.					-0.306	0.857	-0.194	0.731
Propensity score matching	-0.048	0.215	-0.079	0.146	-0.302	0.184	0.034	0.134
N for value-added (08-09)=175 (09-10)=417								
N for fixed effects=593								
N for PSM (08-09)=1441 (09-10)=1181								

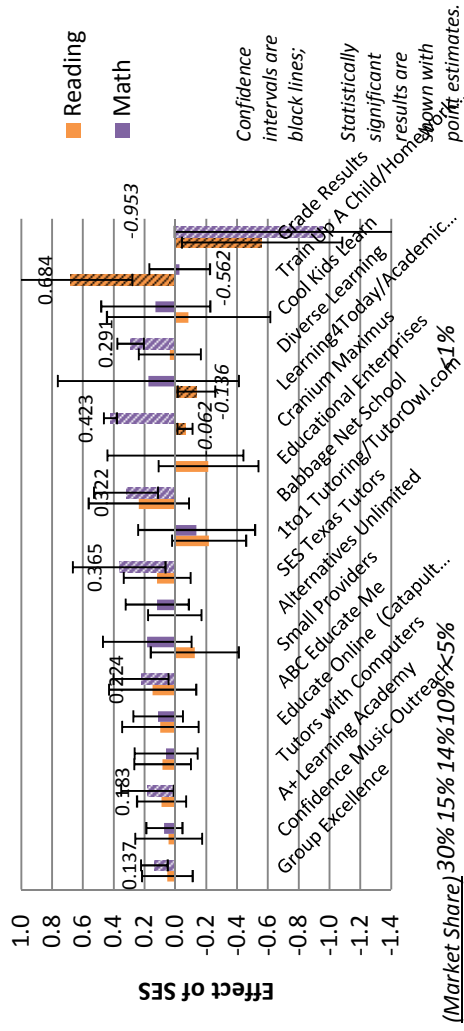
Table 4: Summary of Differences in SES Effects by Provider Types (combined sites analysis for students who attended SES)

<i>Provider Attribute and Method of Analysis</i>	School Year 2008-09				School Year 2009-10			
	Reading		Math		Reading		Math	
	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE
<i>On-site vs. not on-site</i>								
Value-added	0.021	0.019	-0.009	0.016	-0.067	0.046	0.052	0.027
Student fixed effects (F.E.)	(results are for 2008-09 and 2009-10)				-0.032	0.133	-0.014	0.125
Student + school F.E.					0.005	0.142	-0.009	0.137
Propensity score matching	0.023	0.015	0.013	0.012	-0.037	0.028	-0.010	0.026
<i>On-line vs. not on-line</i>								
Value-added	-0.049	0.017	-0.059	0.013	0.016	0.039	0.002	0.037
Student fixed effects (F.E.)	(results are for 2008-09 and 2009-10)				-0.094	0.130	-0.046	0.125
Student + school F.E.					-0.085	0.139	-0.047	0.134
Propensity score matching	-0.105	0.019	-0.072	0.016	0.010	0.026	0.025	0.023
<i>For-profit vs. not-for-profit</i>								
Value-added	-0.013	0.017	-0.039	0.017	0.010	0.039	0.066	0.033
Student fixed effects (F.E.)	(results are for 2008-09 and 2009-10)				-0.038	0.163	-0.039	0.138
Student + school F.E.					-0.003	0.174	-0.029	0.144
Propensity score matching	-0.041	0.012	-0.043	0.011	-0.029	0.030	0.012	0.024
N for value-added (08-09)=26,243 reading; 26,212 math; (09-10)=18,273 reading; 17,769 math								
N for fixed effects=38,047 reading; 38,234 math								
N for PSM (08-09)=26,165 (reading) 26,134 (math); (09-10)=18,273 (reading) 17,769 (math)								

Appendix A: SES Provider Effects and Provider Student Shares (2008-09 and 2009-10)

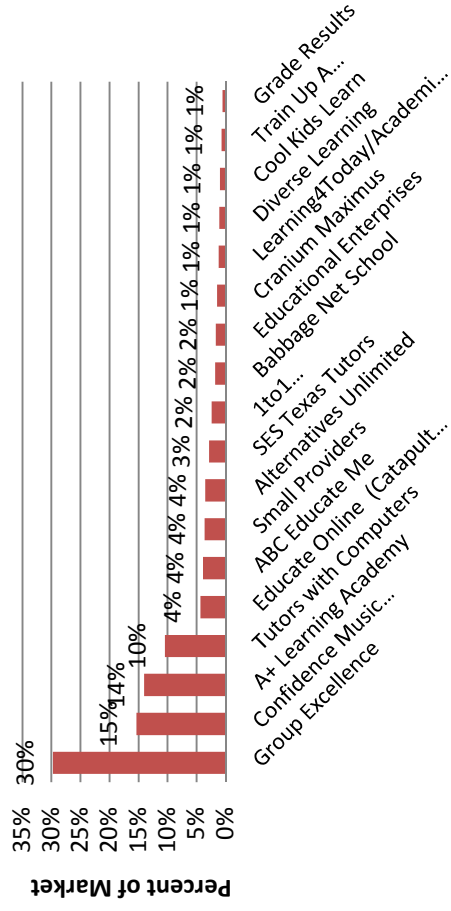


Value-Added Model, Effects (2009-10, Dallas)

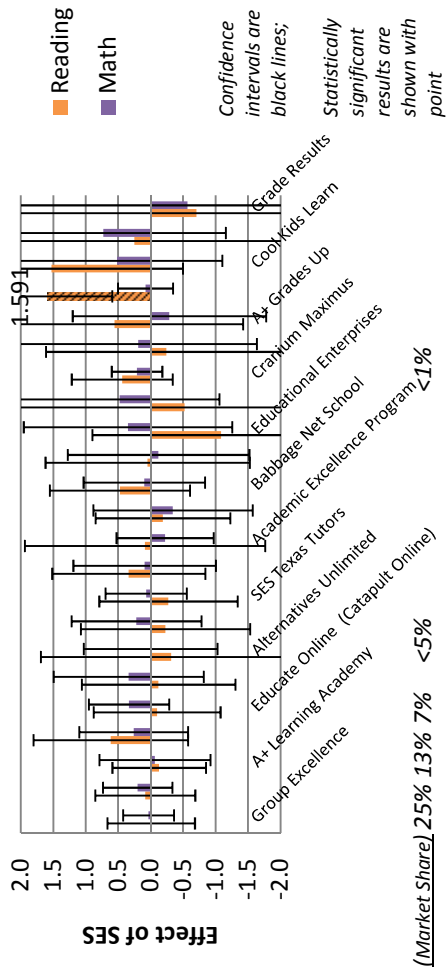


Provider Market Shares

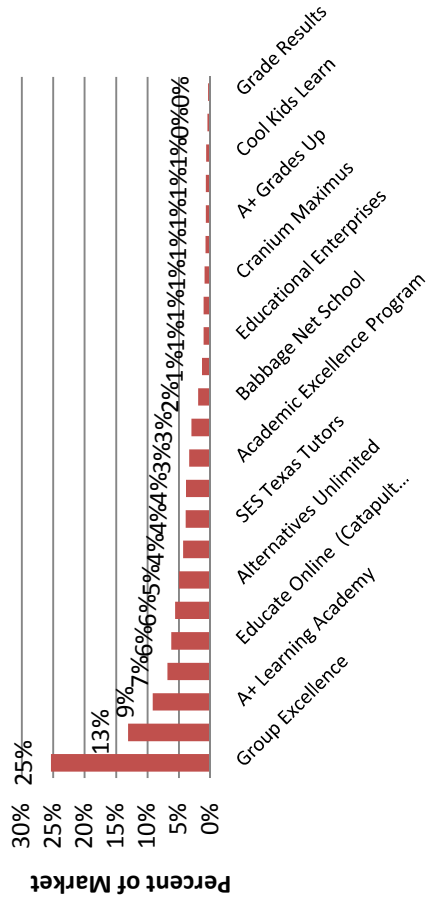
2009-10, Dallas



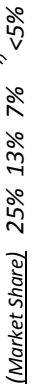
Student Fixed Effects Model (2008-09 and 2009-10)



Provider Market Shares (2008-09 and 2009-10)



(2008-09 and 2009-10)



(2008-09 and 2009-10)



Summary of Milwaukee Public Schools Supplemental Educational Services (SES) Provider Impacts

Results of a Multisite Study of the Implementation and Effects of Supplemental Educational Services, funded by the Institute for Educational Sciences, PR/Award number: R305A090301†

The information on SES provider impacts in Milwaukee Public Schools that we report in the table below is based on econometric analyses that use gains in reading and math test scores as the outcome measures. We employ four alternative approaches to estimating provider effects—value-added models, student fixed effects models, school and student fixed effects models, and propensity score matching models— that adjust for student and school characteristics that may differ across providers. In the table, we report whether a given SES provider had a statistically significant positive impact on students’ reading and/or math achievement in the 2008-09 and/or 2009-10 school years. We report that a SES provider had a “high impact” if it had an impact larger than the average impact on student learning for all providers (as estimated by the value-added models). If no impacts are noted, this implies the results were inconclusive, that is, the range of student test-score improvements spanned both positive and negative numbers or improvements were zero or negative.

Importantly, we did not estimate impacts individually for SES providers that served fewer than 30 students in a given year, as there are statistical limitations to producing accurate estimates for small numbers of students. Thus, we estimated overall “small provider” impacts for all of the small providers together; these results and the providers included in this analysis are shown at the end of the table.

For all of the providers, we also report the average number of hours of SES received by students attending their programs (in the 2008-09 and 2009-10 school years) and the rate per hour charged by the SES provider in 2009-10. Our analysis of data from the five study districts combined (Milwaukee, Minneapolis, Chicago, Dallas and Austin) has shown a strong, positive relationship between the number of hours of SES students attended and their test score gains. Average hours of SES received in Milwaukee are below the combined-site averages.

In the table below:

- Providers with statistically significant positive impacts on student achievement (as measured by improvements in test scores) are highlighted in grey.
- Statistically significant student test-score improvements that are above the average impact are identified in the third column.

† Study website: <http://sesiq2.wceruw.org/papers.html>; contributors to this analysis include Carolyn Heinrich, Hiren Nisar, Martina Chura, Huiping Cheng, Hyun Sik Kim, Nate Inglis Steinfeld and Curtis Jones of the Wisconsin Center for Education Research.

**Milwaukee Public Schools Supplemental Educational Services (SES)
Provider Impacts on Student Achievement,
Hours of SES Provided, and Hourly Rates:
2008-09 and 2009-10 School Years**

Provider name	Positive impacts on student achievement	High impact (greater than average)	Average hours of SES received by students		Hourly rate charged
			(2008-09)	(2009-10)	(2009-10)
A Better Grade				21.1	\$80
Brain Hurricane				31.6	\$49
Educate Online			15.7	23.4	\$75
Learning Exchange	math (2009-10)	math (2009-10)		17.4	\$70
Mainstream Development			27.5	28.3	\$65
Motivating Minds LLC			24.0	26.8	\$75
PMG Education	math (2008-09)	math (2008-09)	23.8	22.4	\$90
Sparkplug Education			28.5	30.9	\$88
Step Ahead Tutors, Inc.			21.6	18.1	\$99
Tools of Empowerment			35.5	34.5	\$65
<i>Small Providers (combined assessment)</i>	<i>reading (2008-09), math (2008-09)</i>	<i>reading (2008-09), math (2008-09)</i>	<i>See individual small provider information below</i>		
A Better Grade (2008-09)	<i>Individual provider effects not estimated for small providers serving fewer than 30 students; see combined effects above.</i>		23.0		\$80
Academic Solutions of Milwaukee			20.9	23.4	\$90
Cardinal Stritch University			18.9	30.7	\$50
Motivating Minds (2008-09)			24.0		\$75
Paulette Y Copeland Crossroads Center			6.5		

Summary of Minneapolis Public Schools Supplemental Educational Services (SES) Provider Impacts

Results of a Multisite Study of the Implementation and Effects of Supplemental Educational Services, funded by the Institute for Educational Sciences, PR/Award number: R305A090301†

The information on SES provider impacts in Minneapolis Public Schools that we report in the table below is based on econometric analyses that use gains in reading and math test scores as the outcome measures. We employ four alternative approaches to estimating provider effects—value-added models, student fixed effects models, school and student fixed effects models, and propensity score matching models— that adjust for student and school characteristics that may differ across providers. In the table, we report whether a given SES provider had a statistically significant positive impact on students' reading and/or math achievement in the 2008-09 and/or 2009-10 school years. We report that a SES provider had a “high impact” if it had an impact larger than the average impact on student learning for all providers (as estimated by the value-added models). If no impacts are noted, this implies the results were inconclusive, that is, the range of student test-score improvements spanned both positive and negative numbers or improvements were zero or negative.

Importantly, we did not estimate impacts individually for SES providers that served fewer than 30 students in a given year, as there are statistical limitations to producing accurate estimates for small numbers of students. Thus, we estimated overall “small provider” impacts for all of the small providers together; these results and the providers included in this analysis are shown at the end of the table.

For all of the providers, we also report the average number of hours of SES received by students attending their programs (in the 2008-09 and 2009-10 school years) and the rate per hour charged by the SES provider in 2009-10. Our analysis of data from the five study districts combined (Milwaukee, Minneapolis, Chicago, Dallas and Austin) has shown a strong, positive relationship between the number of hours of SES students attended and their test score gains. Average hours of SES received in Minneapolis are below the combined-site averages.

In the table below:

- Providers with statistically significant positive impacts on student achievement (as measured by improvements in test scores) are highlighted in grey.
- Statistically significant student test-score improvements that are above the average impact are identified in the third column.

† Study website: <http://sesiq2.wceruw.org/papers.html>; contributors to this analysis include Carolyn Heinrich, Hiren Nisar, Martina Chura, Huiping Cheng, Hyun Sik Kim, Nate Inglis Steinfeld and Curtis Jones of the Wisconsin Center for Education Research.

**Minneapolis Public Schools Supplemental Educational Services (SES)
Provider Impacts on Student Achievement,
Hours of SES Provided, and Hourly Rates:
2008-09 and 2009-10 School Years**

Provider name	Positive impacts on student achievement	High impact (greater than average)	Average hours of SES received by students		Hourly rate charged
			(2008-09)	(2009-10)	(2009-10)
A+ Tutoring Service, Ltd.			20.0	25.5	\$75
ATS Educational Consulting Services	math (2009-10)	math (2009-10)	30.7	39.1	\$60
Club Z! Tutoring Inc.	reading (2008-09)	reading (2008-09)	21.5	26.8	\$65
College Nannies & Tutors – Edina			12.7	22.4	\$75
Educate Online Learning LLC				33.1	\$90
Friendship Community Service, Inc. (2008-09)			27.2		\$45
Launch Lives, Inc.			24.5		
Native Academy, MIGIZI Communications			37.1	51.2	\$35
Salem Inc., Educational Initiative			45.5	62.0	\$30
TutorCo	reading (2008-09)	reading (2008-09)	25.5	25.0	\$75
<i>Small Providers (combined assessment)</i>	math	math	<i>See individual small provider information below</i>		
Discover Learning Centers	<i>Individual provider effects not estimated for small providers serving fewer than 30 students; see combined effects above.</i>		29.2	33.1	\$30
Friendship Community Service, Inc. (2009-10)				33.9	\$45
Hospitality House Youth Directors			39.5	61.0	\$40
Kids Reading for Success			22.0		
La Escuelita			30		
Network for the Development of Children			25.4	31.5	\$50
Salem, Inc., Educational Initiative (2009-10)				54.8	\$30
Somali Education Center			42.1		
Sylvan Learning – Metro Centers					\$50
Tutorial Services				30.1	\$60

Summary of Chicago Public Schools Supplemental Educational Services (SES) Provider Impacts

Results of a Multisite Study of the Implementation and Effects of Supplemental Educational Services, funded by the Institute for Educational Sciences, PR/Award number: R305A090301[†]

The information on SES provider impacts in Chicago Public Schools that we report in the table below is based on econometric analyses that use gains in reading and math test scores as the outcome measures. We employ four alternative approaches to estimating provider effects—value-added models, student fixed effects models, school and student fixed effects models, and propensity score matching models—that adjust for student and school characteristics that may differ across providers. In the table, we report whether a given SES provider had a statistically significant positive impact on students’ reading and/or math achievement in the 2008-09 and/or 2009-10 school years. We report that a SES provider had a “high impact” if it had an impact larger than the average impact on student learning for all providers (as estimated by the value-added models). If no impacts are noted, this implies the results were inconclusive, that is, the range of student test-score improvements spanned both positive and negative numbers or improvements were zero or negative.

Importantly, we did not estimate impacts individually for SES providers that served fewer than 30 students in a given year, as there are statistical limitations to producing accurate estimates for small numbers of students. Thus, we estimated overall “small provider” impacts for all of the small providers together; these results and the providers included in this analysis are shown at the end of the table.

For all of the providers, we also report the average number of hours of SES received by students attending their programs (in the 2008-09 and 2009-10 school years) and the rate per hour charged by the SES provider in 2009-10. **The analysis found a strong, *positive* relationship between the number of hours of SES students attended and their test score gains.** We also found a negative relationship between on-line service provision and test score gains.

In the table below:

- Providers with statistically significant positive impacts on student achievement (as measured by improvements in test scores) are highlighted in grey.
- Statistically significant student test-score improvements that are above the average impact are identified in the third column.

[†]Study website: <http://sesig2.wceruw.org/papers.html>; contributors to this analysis include Carolyn Heinrich, Hiren Nisar, Martina Chura, Huiping Cheng, Hyun Sik Kim, Nate Inglis-Steinfeld and Curtis Jones of the Wisconsin Center for Education Research.

**Chicago Public Schools Supplemental Educational Services (SES)
Provider Impacts on Student Achievement,
Hours of SES Provided, and Hourly Rates:
2008-09 and 2009-10 School Years**

Provider name		Positive impacts on student achievement	High impact (greater than average)	Average hours of SES received by students		Hourly rate charged
				(2008-09)	(2009-10)	(2009-10)
A+ Tutoring Service, LTD		reading (2008-09)	reading (2008-09)	46.1	32.6	\$36.50
A.I.M. High		reading (2008-09) reading (2009-10) math (2008-09) math (2009-10)	reading (2008-09) reading (2009-10) math (2008-09) math (2009-10)	51.0	45.8	\$28.48
ASPIRA				31.8	19.6	\$36.83
Babbage Net School	(ONSITE)	math (2008-09)	math (2008-09)	39.5	47.1	\$39.01
	(OFFSITE & ONLINE)				25.4	\$37.97
Black Star Project	(ONSITE)			38.5	24.4	\$46.93
	(OFFSITE)				46.0	\$48.31
Brain Hurricane		reading (2008-09) reading (2009-10) math (2008-09) math (2009-10)	reading (2008-09) math (2008-09) math (2009-10)	32.4	35.1	\$50.62
Brainfuse	One-to-One			22.7	27.5	\$51.42
	Online			24.4	24.8	\$52.90
Brilliance Academy				24.7	31.3	\$37.97
Cambridge Educational Services		reading (2008-09) reading (2009-10) math (2008-09)	reading (2008-09) math (2008-09)	27.0	24.4	\$55.47
Chess Academy		math (2008-09) math (2009-10)	math (2008-09) math (2009-10)	48.4	43.5	\$36.88
Children's Home + Aid Society, Inc.		math (2008-09) math (2009-10)	math (2008-09) math (2009-10)	36.8	31.7	\$45.57
ClubZ! Tutoring Service, Inc.				32.9	33.6	\$37.97
CSC Julex Learning				50.3		-
Educate Online (formerly Catapult)		reading (2009-10)	reading (2009-10)	18.6	23.1	\$69.43
Educational Specialties (ONSITE)					47.9	\$37.97
Failure Free Reading	(OFFSITE)			27.0		\$55.09
	(ONSITE)			31.9		-
Huntington	Lincoln Park	reading (2008-09)	reading (2008-09)	34.5	40.0	\$58.51
	ONSITE			30.7	32.4	\$56.95
	Oak Lawn			29.8		-
IEP (ONSITE)		reading (2008-09)	reading (2008-09)	46.3	46.4	\$35.65

Provider name		Positive impacts on student achievement	High impact (greater than average)	Average hours of SES received by students		Hourly rate charged
				(2008-09)	(2009-10)	(2009-10)
		reading (2009-10)				
Literacy for All		reading (2009-10) math (2009-10)	math (2009-10)	42.9	46.1	\$34.85
Mainstream Development Educational Group				36.6	21.7	\$74.00
NESI (combined with small providers in 2009-10)		math (2008-09)		47.9	45.1	\$36.98
Newton Learning		reading (2008-09) reading (2009-10) math (2008-09) math (2009-10)	reading (2008-09) reading (2009-10) math (2008-09)	45.0	38.9	\$36.00
One-to-One Learning Center		reading (2008-09) math (2008-09)	reading (2008-09) math (2008-09)	54.6		-
Orion's Mind		reading (2008-09) reading (2009-10) math (2008-09) math (2009-10)	math (2008-09)	33.6	38.5	\$45.56
Platform Learning				28.5		-
Poder Ser (ONSITE)		reading (2008-09)	reading (2008-09)	36.0	39.0	\$32.38
Princeton Review		reading (2008-09) math (2008-09)	math (2008-09)	42.9		-
Progressive Learning		reading (2008-09) reading (2009-10) math (2009-10)	reading (2008-09)	29.2	29.3	\$55.45
Rocket Learning Partners, LLC	(OFFSITE)	reading (2009-10)			32.4	\$55.54
	(ONSITE)			30.3	29.6	\$53.99
SES of Illinois		reading (2008-09) reading (2009-10) math (2008-09) math (2009-10)	reading (2009-10) math (2008-09) math (2009-10)	34.4	30.5	\$50.63
School Service Systems		reading (2008-09) reading (2009-10) math (2009-10)	reading (2008-09) reading (2009-10) math (2009-10)	57.4	54.7	\$29.25
Tutorial Services				36.4	51.3	\$62.81
Unparalleled Solutions		reading (2009-10) math (2008-09)	math (2008-09)	53.3	44.8	\$25.78
Small Providers (combined assessment)		reading (2009-10)	reading (2009-10)	See individual small provider information below		
A+ Education Centers (OFFSITE)		Individual provider effects not estimated for small providers serving fewer than 30 students; see combined effects above		47.8	52.3	\$37.03
ATS Project Success				27.6	27.2	\$60.00
Academic Advantage	(OFFSITE)				18.2	\$69.43

Provider name		Positive impacts on student achievement	High impact (greater than average)	Average hours of SES received by students		Hourly rate charged
				(2008-09)	(2009-10)	(2009-10)
	(ONSITE)				7.0	\$36.00
Academic Solutions, Inc. (OFFSITE)		Individual provider effects not estimated for small providers serving fewer than 30 students; see combined effects above			13.0	\$78.01
African American Images Talent Center			34.0		-	
Ahead of the Class Services (formerly Spectra)				18.6	\$65.08	
All Children Can Learn (OFFSITE)				48.6	\$36.17	
Association House of Chicago				46.2	\$27.77	
BSG Training & Consulting, Inc.			37.2		-	
Breakthrough Urban Ministries			63.1	60.9	\$28.50	
C&T After School Programs (ONSITE)			18.0		-	
Carter, Reddy & Associates, Inc.			25.5	14.7	\$49.31	
Center of Higher Development (OFFSITE)			21.0		\$37.97	
Grade Results				11.9	\$59.99	
Hope Haven Christian Academy			44.1		-	
KnowledgePoints	(ONSITE)		33.5	38.3	\$33.47	
Learning Center	(OFFSITE)		51.1	52.5	\$34.50	
Reach for Tomorrow			23.8	25.2	\$50.63	
Smart Kids, Inc. (OFFSITE)			53.9	54.9	\$36.00	
Spanish Learning Center, Inc.			52.2	52.8	\$29.02	
Train Up A Child (ONSITE)			40.8	42.4	\$35.99	
iLEARNED Online				10.3	\$56.67	