



LOS ANGELES UNIFIED SCHOOL DISTRICT
BEYOND THE BELL TUTORING
SUPPLEMENTAL EDUCATIONAL SERVICES PROGRAM

EXECUTIVE SUMMARY (PART II)

EVALUATION, RESEARCH, & CYBER-SOLUTIONS (ERC)

Introduction

This report describes the measured outcomes of the 2012-2013 LAUSD Beyond the Bell Tutoring program for Supplemental Education Services (SES). Outcomes measured include students' changes in California Standardized Test (CST) performance in English and Mathematics. Relationships between Beyond the Bell Tutoring participation and these key outcomes are examined.

For each outcome, we compared LAUSD Beyond the Bell Language Arts tutoring participants to a group of matched non-participants. The comparison group of matched non-participants was selected using a Stratified Random Sampling¹ method which selected matches based on location, gender, ethnicity, grade level, and baseline CST performance level for each tutoring subject respectively.

Participant demographic information and disaggregation (by number of hours completed) are included in Part I of this evaluation and have been excluded from Part II for brevity.

California Standardized Test (CST) Outcomes

The relationship between Beyond the Bell tutoring participation and academic achievement in English-Language Arts (ELA) and Math was analyzed using California Standards Test (CST) results from May 2013 and May 2012. Because this study's primary focus is on a change in CST performance, each observation (student) must have both a baseline and follow up CST score and performance level. Although the CST is administered to students in grades 2-11, 2nd grade students are not valid observations for this study as they would not have baseline CST data.

When a student takes the CST, he or she receives a raw score (number of items correct) for the test that is transformed into a scale score through an equating process that allows a test (same subject, same grade level, etc.) to represent the same level of difficulty from one year to the next. Scale scores translate into performance levels (Far Below Basic, Below Basic, Basic, Proficient, and Advanced). Performance levels are often referred to as performance bands.

Beyond the Bell Tutoring participants were grouped into three participation categories, based on the number of tutoring hours completed, for the purpose of defining and extracting a set of "high-attenders". Each tutoring academic subject is given its own participation categories for more accurate groupings. Students were grouped into three groups, or tertiles², based on the number of hours completed in Beyond the Bell Tutoring. Tertile groupings were determined by assigning each Beyond the Bell Tutoring participant a percentile rank and dividing them into three equal percentile groups (1st-33rd, 34th-66th, 67th-99th). These tertiles, or "program participation categories", are used in the analysis of measurable outcomes throughout this report.

Section 1 - Language Arts Outcomes

To determine the relationship between Beyond the Bell tutoring participation and academic achievement in CST ELA, students were grouped into three program attendance categories based on tertiles (1 to 21 hours, 21.1 to 27.5 hours, 27.6 to 30.0 hours) which helped to identify high-attenders. The following charts and graphs include only participants who were tutored in Language Arts during the 2012-2013 school year.

Section 1.1 - Increase in scale score over the baseline year (Overall)

Figure 1 compares the mean change in CST ELA scale scores of Beyond the Bell Language Arts tutoring participants with those of matched non-participants within each of the three grade level groupings.

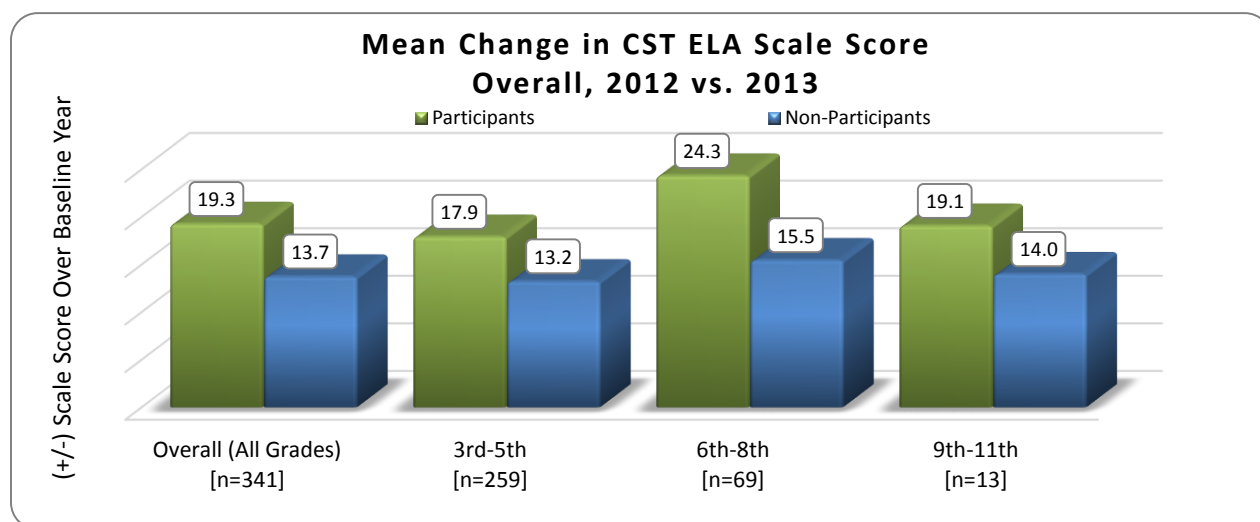


Figure 1

Section 1.2 - Increase in scale score over the baseline year (high-attenders vs. non-participants)

Figure 2 compares the mean change in CST ELA scale scores of high-attending Beyond the Bell Language Arts tutoring participants with those of matched non-participants within each of the three grade level groupings.

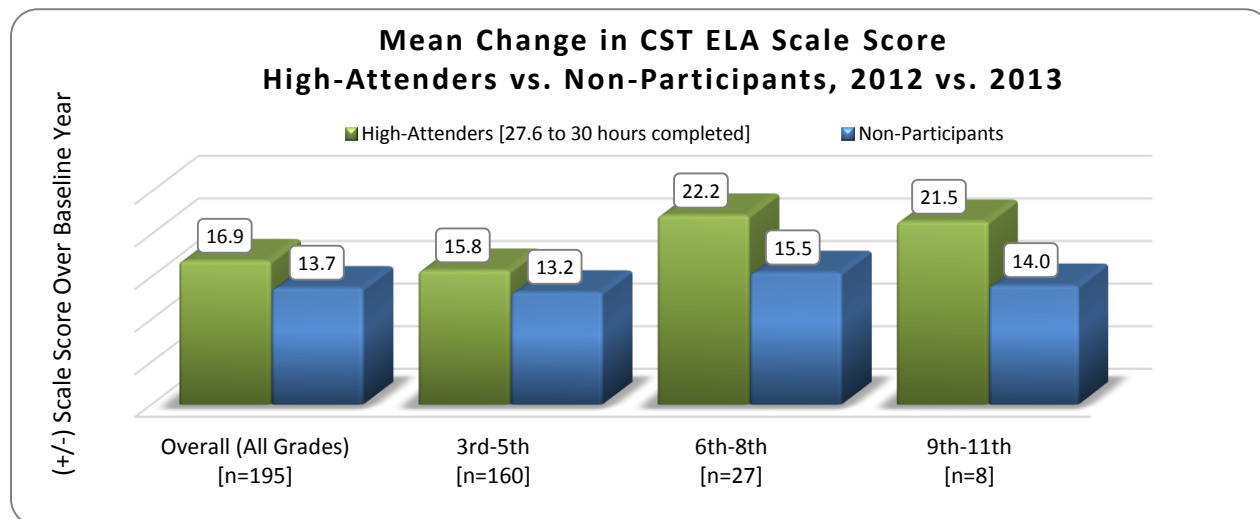


Figure 2

Section 1.3 – % of students who increased performance level over the baseline year (Overall)

Figure 3 compares the percentage of Beyond the Bell Language Arts tutoring participants who increased CST ELA performance level with that of matched non-participants within each of the three grade level groupings.

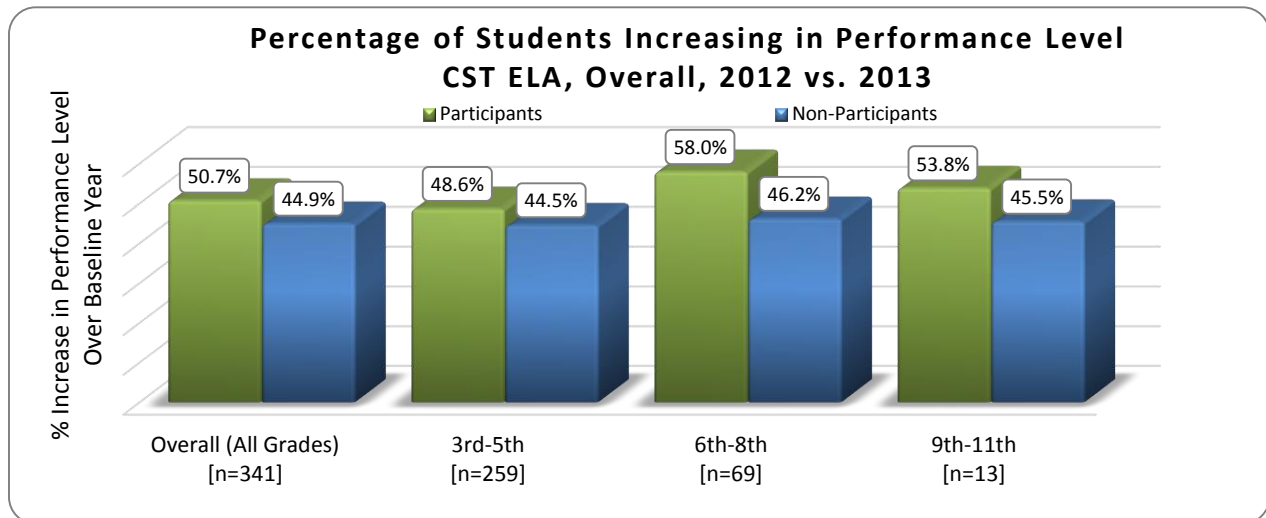


Figure 3

Section 1.4 – % of students who increased performance level over the baseline year (high-attenders vs. non-participants)

Figure 4 compares the percentage of high-attending Beyond the Bell Language Arts tutoring participants who increased performance level in CST ELA with that of matched non-participants within each of the three grade level groupings.

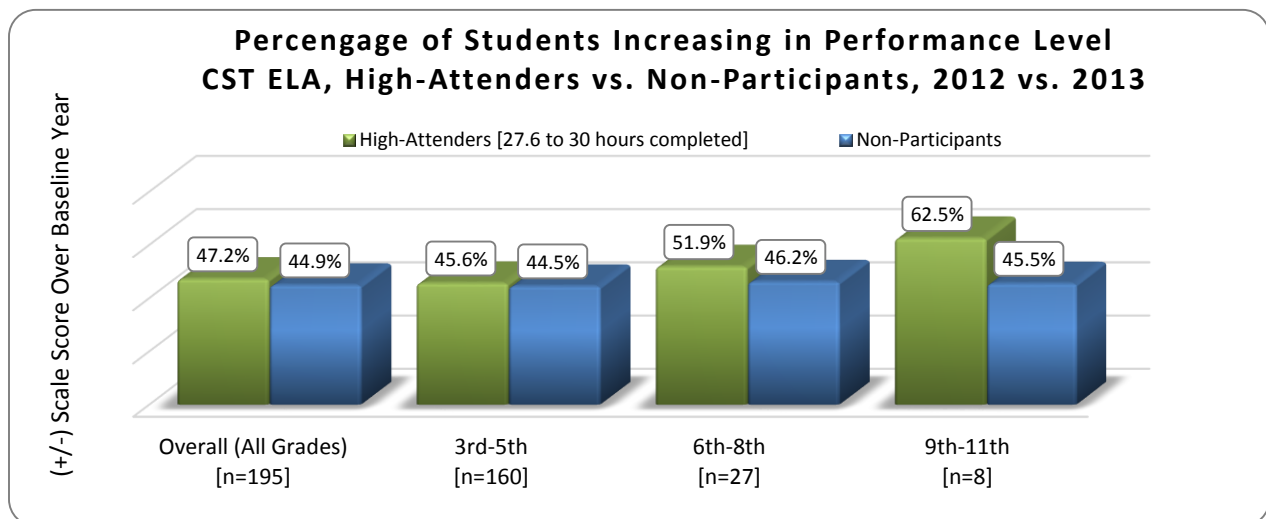


Figure 4

To determine the relationship between Beyond the Bell tutoring participation and academic achievement in CST Math, students were grouped into three program attendance categories based on tertiles (1 to 17.4 hours, 17.5 to 28.4 hours, 28.5 to 30.0 hours) which helped to identify high-attenders. The following charts and graphs include only participants who were tutored in Math during the 2012-2013 school year.

Section 2.1 - Increase in scale score over the baseline year (Overall)

Figure 5 compares the mean change in CST Math scale scores of Beyond the Bell Math tutoring participants with those of matched non-participants within each of the three grade level groupings.

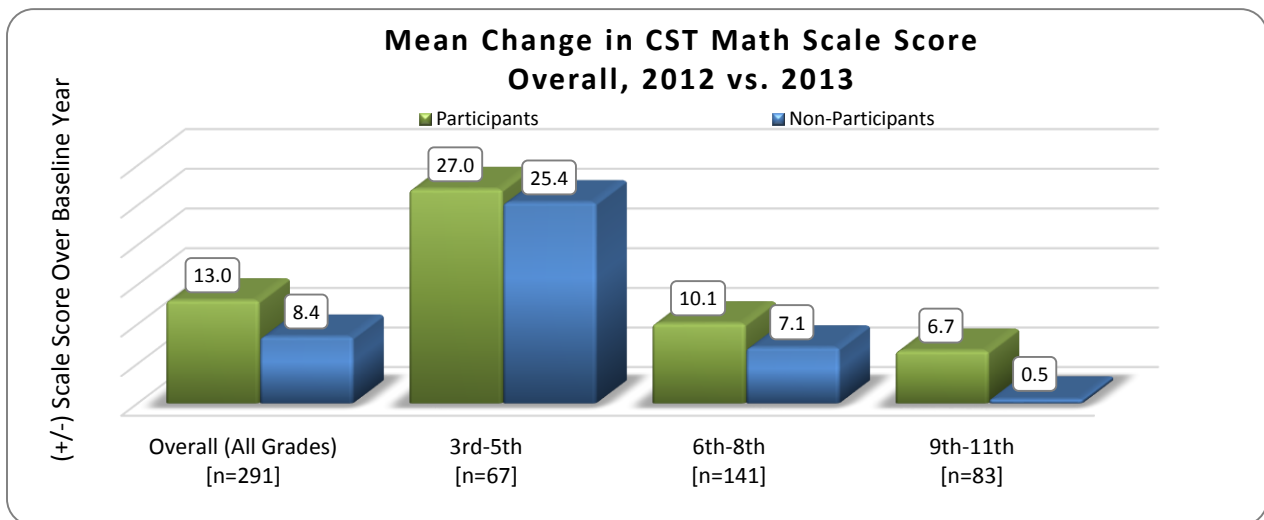


Figure 5

Section 2.2 - Increase in scale score over the baseline year (high-attenders vs. non-participants)

Figure 6 compares the mean change in CST Math scale scores of high-attending Beyond the Bell Math tutoring participants with those of matched non-participants within each of the three grade level groupings.

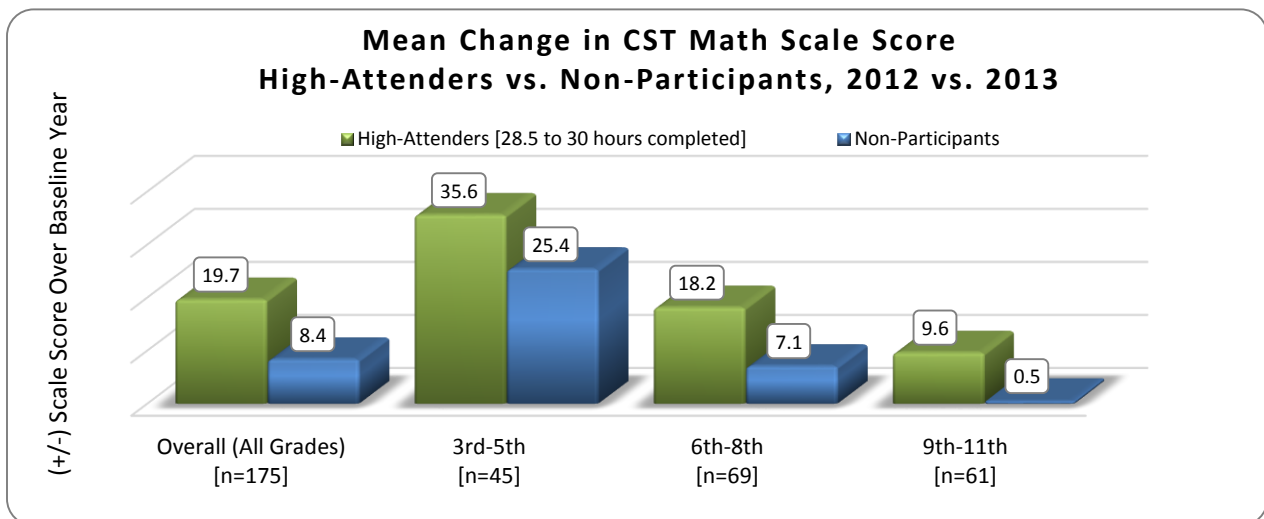


Figure 6

Section 2.3 – % of students who increased performance level over the baseline year (Overall)

Figure 7 compares the percentage of Beyond the Bell Math tutoring participants who increased performance level in CST Math with that of matched non-participants within each of the three grade level groupings.

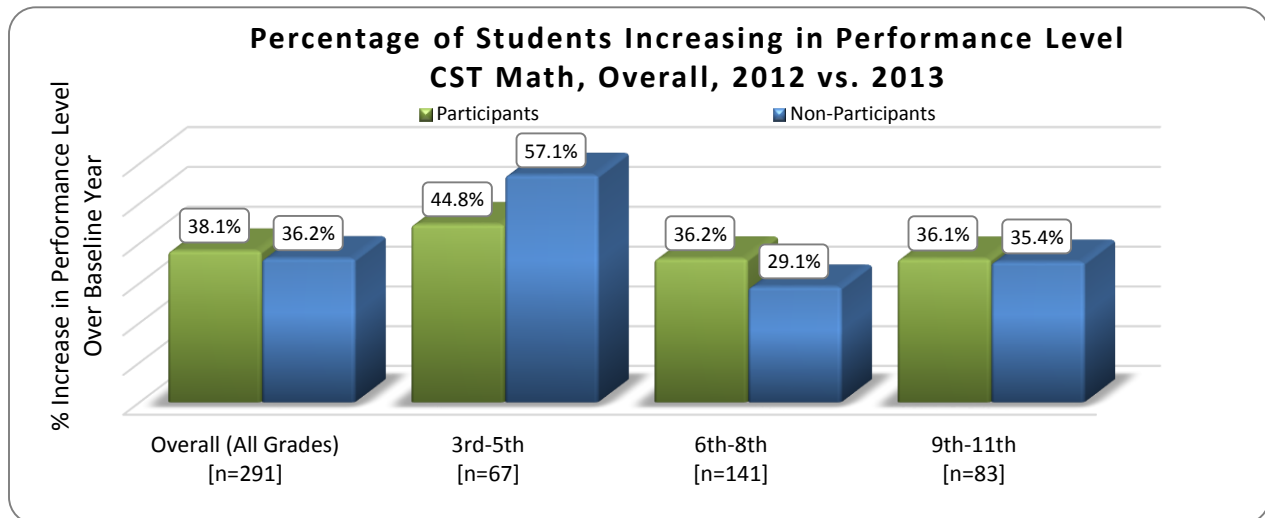


Figure 7

Section 2.4 – % of students who increased performance level over the baseline year (high-attenders vs. non-participants)

Figure 8 compares the percentage of high-attending Beyond the Bell Math tutoring participants who increased performance level in CST Math with that of matched non-participants within each of the three grade level groupings.

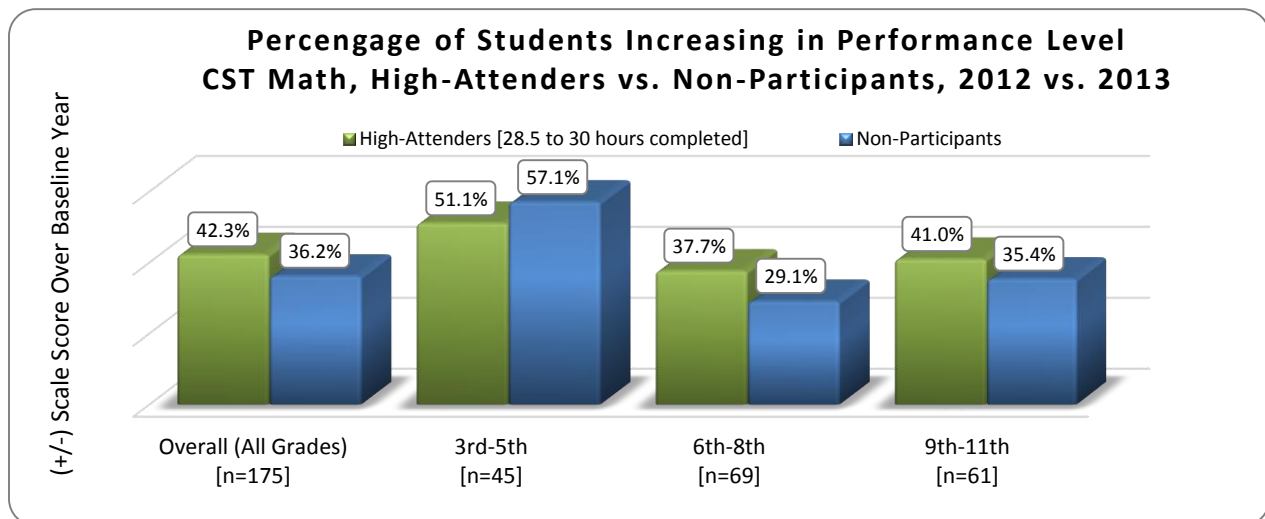


Figure 8

Section 3 – End Notes

¹ To select a stratified random sample, we first divide the population into groups of similar individuals, called strata. Then we choose a separate SRS in each stratum and combine these SRSs to form the full sample. When more than one match is available, and because we are looking for a one-to-one matched set, we select one of the possible matches at random using the Microsoft SQL Server 'RAND()' function. The RAND() function is a pseudorandom number generator that operates in a manner similar to the C run-time library rand() function. While the source code for Microsoft's implementation of this function is proprietary, it is believed that the algorithm resembles a Linear Congruential Generator or a Mersenne twister.

² A quantile is defined as class of values of a variate that divides the total frequency of a sample or population into a given number of equal proportions. Specialized quantiles, those that split the sample or population into a specific number of groups, are given special names such as tertiles (3 groups), quartiles (4 groups), and deciles (10 groups). This report utilizes tertiles (3 groups).

Tertile ranges were determined by assigning each Beyond the Bell tutoring participant a percentile rank based on the number of hours they participated the program and dividing them into three equal percentile groups (1st-33rd, 34th-66th, 67th-99th). For this reason, the number of students in each tertile group may not be equal. In other words, if you have a very large number of students with 3 hours of attendance in the first tertile and a very small number of students with 4 hours of attendance in the second tertile you cannot randomly choose some 3-hour students to send over to the second tertile to make the groups equally sized.