



No Child Left Behind (NCLB) Title IVB 21st Century Community Learning Centers Year End Report - Fiscal Year 2008

This report provides information on the fiscal year 2008 (FY08) 21st Century Community Learning Centers (CCLC) grant program that served more than 19,300 students in 41 districts at 182 sites across the state. In particular, it examines program information related to participation, activities, and hours of service. Additionally, it details the results of the Survey of After-School Youth Outcomes (SAYO) evaluation tool. Overall, the data in this report indicates that students who participated in FY08 21st CCLC programs made significant gains in all of the areas measured and, therefore, appear to contribute to the academic achievement and youth development of students served across the state.

November 2009

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**21st Century Community Learning Centers Program
Fiscal Year 2008 (FY08) Year End Report**

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21st Century Community Learning Centers Program Fiscal Year 2008 Year End Report

EXECUTIVE SUMMARY

The following report provides information on the fiscal year 2007-2008 (FY08) 21st Century Community Learning Centers (CCLC) grant program. In particular, it examines program information related to participation, activities, and hours of service. Additionally, it details the results of the Survey of After-School Youth Outcomes (SAYO) evaluation tool, which was developed by the Department of Elementary and Secondary Education and the National Institute of Out-of-School Time (NIOST) to track information on the effect participation in the 21st Century programs has in increasing student achievement, as well as to provide feedback for ongoing program improvement.

Fiscal year 2008 was the seventh year that 21st Century Community Learning Centers grants were distributed through the Massachusetts Department of Elementary and Secondary Education (the Department) and funded through Title IVB of the 2001 No Child Left Behind Act (NCLB). These grants were awarded on a competitive basis with a continuation of funding available for up to four additional years.

Overall, the data collected indicates that students who participated in the FY08 21st Century Community Learning programs made significant gains in all of the areas measured. Moreover, data indicates that 21st CCLC programs may help reduce the achievement gap as well. It can be seen from the data regarding 21st CCLC participating students that members of the subgroups included in the Department's accountability system (students with disabilities, for example) and students who have not yet scored at the Proficient level on the MCAS are among those who made considerable gains; and, in fact, for some outcomes these students made statistically greater gains than their non-subgroup counterparts.

The results described in this report point to the significant contributions that 21st CCLC programs have made to the academic achievement and youth development of the more than 19,000 students served across the state during fiscal year 2008.

Highlights of FY08 21st CCLC Programs and SAYO Results

School Year and Summer (September 2007—August 2008)

- In FY08, the Department awarded \$14,279,617 to 41 entities through **new competitive** and **continuation grants**.
- Approximately **19,300** students in grades K-12 participated in 21st CCLC program services offered in **41** districts at **182** sites across the state.
- 21st CCLC participants included nearly **12,100** students who received free or reduced priced lunch, **3,700** students with disabilities, and **3,000** students considered limited English proficient (LEP).

- As rated by school-day teachers, statewide figures showed positive gains in all **eight** academic and **six** intermediary outcomes that the SAYO tool measures, with the greatest average pre to post increases being in reading, written communication, mathematics problem solving, and analysis.
- As rated by 21st CCLC staff, statewide figures showed positive gains in all **five** intermediary outcomes¹ measured, with the greatest average pre to post program increases in initiative and relationships with adults.
- More than **8,500** SAYO surveys were collected from school-day teachers (school year only) and **13,200** from 21st CCLC program staff members (school year and summer).

School Year (September 2007—June 2008)

- Approximately **15,960** students participated in 21st CCLC program services offered in **41** districts at **173** sites across the state during the school year.
- Students who participated in the 21st CCLC program attended an average of **164** (and median of **118**) hours of programming offered outside of regular school hours during the school year.
- More than **10,000** students who received free or reduced price lunch, including **3,100** students with disabilities and **2,400** considered limited English proficient (LEP), participated in the 21st CCLC program during the school year.
- During the school year, district-wide gains in mathematics and/or English language arts were statistically significant in **65-83 percent** of the districts, depending on the outcome area measured by school-day teachers.
- More than **8,500** SAYO surveys were collected from school-day teachers and **9,300** from after-school staff members.

Summer (July 2008—August 2008)

- Approximately **5,100** students participated in 21st CCLC program services offered in **32** districts at **79** sites across the state during the summer.
- Students who participated in the 21st CCLC program attended an average of **98** (and a median of **76**) hours of programming offered during summer hours.
- More than **3,300** students who received free or reduced price lunch, including **1,000** students with disabilities and **970** considered limited English proficient (LEP), participated in summer 21st CCLC programs.
- During the summer, district-wide gains in mathematics and/or English language arts were statistically significant in **84 to 90 percent** of the districts collecting data, depending on the outcome area measured by summer program staff.
- Nearly **3,900** SAYO surveys were collected from summer program staff members.

For additional information on this report or the 21st CCLC Program in Massachusetts, visit the web site: <http://www.doe.mass.edu/21cclc>, or contact Karyl Resnick, 21st CCLC Program Coordinator, or Allison Ward, Student Support Data Specialist, via 781-338-3010 or ACsupport@doe.mass.edu.

¹ Includes learning skills, which replaces homework in the summer version of the SAYO tool.

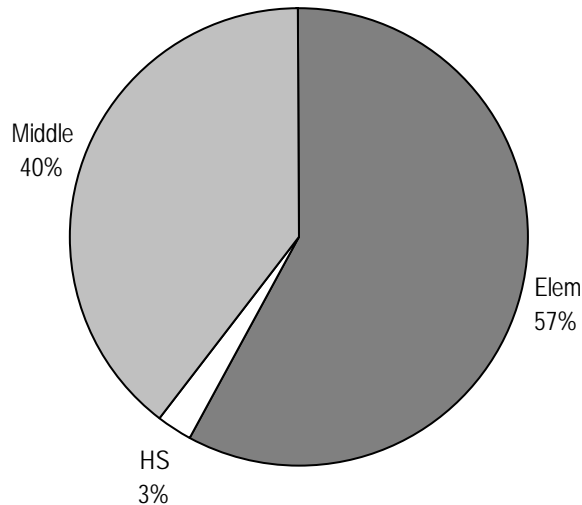
Massachusetts 21st Century Community Learning Centers Programs, FY08

1. Program Information

Participation

As reported by the 41 entities serving students through fiscal year 2008, a total of 15,960 children and youth participated in 21st CCLC school year programs and 5,100 participated in 21st CCLC summer programs (19,319 individual students participated in either or both time frames). **Chart 1.1** below shows that 57 percent of all fiscal year 2008 program participants were children in elementary school (K-5), while children in middle school (grades 6-8) accounted for 40 percent and high school students (grades 9-12) accounted for 3 percent of those served.

Chart 1.1: Percentage of Student Participants by Grade Level during FY08



Source: Student Information Management System and grant recipient reports.

Table 1.2 below compares grade participation by school year and summer and illustrates that the relative proportion of elementary versus middle school students served differs during the school year and the summer. More specifically, during the school year 55 percent served were elementary and 43 percent were middle schools students, while during the summer there was a higher percentage of elementary (72 percent) and a lower percentage of middle school students (24 percent). Also, a slightly higher percentage of participants were high school students during the summer (4 percent) than during the school year (2 percent).

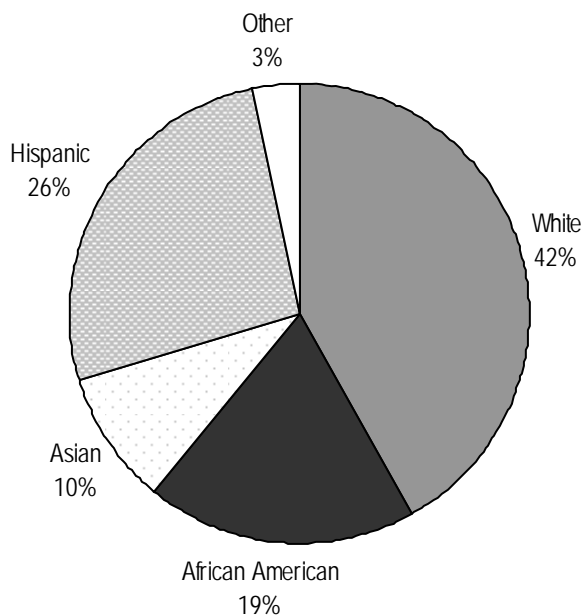
Table 1.2: Percentage of Student Participation by Grade Level during School Year & Summer FY08

Grade Level	School Year		Summer	
	N	%	N	%
Elem. Total	8,708	54.6%	3,688	72.3%
Middle Total	6,913	43.3%	1,224	24.0%
H.S. Total	339	2.1%	188	3.7%

Source: Student Information Management System and grant recipient reports.

The racial breakdown of students served is illustrated by **Chart 1.3** below. The majority of students served (58 percent) in fiscal year 2008 21st CCLC programs were members of a minority group, while 42 percent of students were white. Hispanic students were the largest minority group (26 percent) followed by African American students (19 percent) and Asian students (10 percent). **Table 1.4** below compares the racial breakdown by school year and summer. As it shows, a slightly higher percentage of minority students as compared to white students were served during both the school year (57 percent) and the summer (63 percent); and in both school year and summer, percentages served were substantially higher than their statewide proportion (29 percent).

Chart 1.3: Percentage of Student Participation by Race/Ethnicity during, FY08



Source: Student Information Management System and grant recipient reports.

Table 1.4: Student Participation by Race/Ethnicity during School Year and Summer Programs FY08

Race/ Ethnicity	School Year 21 st CCLC		Summer 21 st CCLC		Statewide	
	N	%	N	%	N	%
African American	2,809	17.6%	1,148	22.5%	77,987	8.1%
Asian	1,504	9.4%	574	11.2%	47,177	4.9%
Hispanic	4,279	26.8%	1,267	24.8%	133,830	13.9%
White	6,883	43.1%	1,906	37.4%	681,667	70.8%
Other	485	3.0%	205	4.0%	22,145	2.3%

Source: Student Information Management System and grant recipient reports.

Additionally, during fiscal year 2008 21st CCLC programs, data was collected by districts on the number of students served who were classified as receiving special education services, as free or reduced price lunch participants, and as limited English proficient (LEP). Overall, more than 63 percent of students served received federal free or reduced lunch, 19 percent received special education services, and 16 percent were LEP. **Table 1.5** on the next page examines the percentage of students served in these

classifications during the school year and summer. The proportions of low-income and SPED served during the summer were marginally greater than those served during the school year, while 4 percent more LEP were served during the summer (19 percent) than during the school year (15 percent). Moreover, the percentages of these selected populations served were substantially higher in both the school year and summer than their statewide proportion.

Table 1.5: Student Participation by Free/Reduced Price Lunch, SPED, and LEP during School Year and Summer Programs FY08

Special Population	School Year 21 st CCLC		Summer 21 st CCLC		Statewide	
	N	%	N	%	N	%
Free/Reduced Price Lunch	10,069	63.1%	3,312	64.9%	283,827	29.5%
SPED	3,068	19.2%	1,011	19.8%	164,298	16.9%
LEP	2,372	14.9%	971	19.0%	55,730	5.8%

Source: Student Information Management System and grant recipient reports.

Table 1.6 below examines the 2008 English Language Arts (ELA) MCAS performance levels of students served in 21st CCLC school year and summer programs to the statewide percentages. The 21st CCLC programs served a substantially greater percentage of students in the *Needs Improvement (NI)* and *Warning (W) / Failing (F)* levels. During the school year, 56 percent of students served by 21st CCLC programs were in either the *NI* or *W/F* performance levels, while statewide only 36 percent of students were in these levels. This percentage difference was even higher in the summer, when more than two-thirds of all students served (67 percent) in 21st CCLC programs had scored at the *NI* or *W/F* level in ELA.

Similarly, **Table 1.7** on the next page demonstrates that a higher percentage of students in the *NI* or *W/F* levels on the 2008 mathematics MCAS were also served in 21st CCLC programs compared to statewide figures. During school year 21st CCLC programs, 65 percent of students served were in either of those performance levels compared to 45 percent of students statewide. As with ELA, this percentage was even higher during summer programs where nearly 68 percent of students served in 21st CCLC programs had performed at the *NI* or *W/F* level in mathematics.

Table 1.6: Student Participation by ELA 2008 MCAS Performance Levels during School Year and Summer Programs FY08

MCAS Performance Level	School Year 21 st CCLC		Summer 21 st CCLC		Statewide	
	N	%	N	%	N	%
Advanced	742	5.8%	102	3.3%	71,499	14.2%
Proficient	4,959	38.6%	940	30.2%	253,055	50.3%
Needs Improvement	5,068	39.5%	1,416	45.4%	135,511	26.9%
Warning / Failing	2,067	16.1%	659	21.1%	43,066	8.6%

Table 1.7: Student Participation by Mathematics 2008 MCAS Performance Levels during School Year and Summer Programs FY08

MCAS Performance Level	School Year 21 st CCLC		Summer 21 st CCLC		Statewide	
	N	%	N	%	N	%
Advanced	1,354	10.5%	236	7.5%	120,113	23.8%
Proficient	3,214	25.0%	686	21.9%	157,215	31.2%
Needs Improvement	4,368	34.0%	1,178	37.6%	139,737	27.7%
Warning / Failing	3,918	30.5%	1,034	33.0%	86,742	17.2%

Source: 2008 MCAS mega file (grades 3-10) and grant recipient reports.

Hours of Service

Students were served in 21st CCLC programs from September 2007 through August 2008. During the school year (September through June), students each participated an average of 164 (and a median of 118) hours. During the summer (July through August), students were served an average of 98 (and a median of 76) hours each. **Table 1.8** below shows the percentage of students served by hour ranges. During the school year, more than 55 percent of students received at least 100 hours of programming; and during the summer, nearly 30 percent of students received at least 100 hours of programming.

Table 1.8: Percentage of Students Served in Program Hour Ranges FY08

Program Hour Ranges	School Year (Mean: 164 hrs/ Median: 118 hrs)		Summer (Mean: 98 hrs / Median: 76 hrs)	
	N	%	N	%
1-50 Hours	3,506	22.0%	979	19.2%
51-100 Hours	3,590	22.5%	2,630	51.6%
101-200 Hours	4,343	27.2%	1,107	21.7%
201+ Hours	4,521	28.3%	384	7.5%

Source: Grant recipient reports.

Academic Subjects/Activities Offered

During fiscal year 2008, all 21st CCLC program sites provided comprehensive programming by offering a wide variety of academic and enrichment activities. Almost all districts offered a homework component during the school year (replaced by learning skills during the summer), and many focused on helping students develop specific mathematics and English language arts skills. See below for a sampling of the academic subjects and activities that were offered at the 21st CCLC sites.

SUBJECTS

- ELA/Reading
- ELA/Verbal Communication
- ELA/Written Communication
- Mathematics Communication
- Mathematics Problem Solving
- Mathematics Reasoning
- Science
- Social Studies

ACTIVITIES

- Academic Enrichment Projects
- Adventure Education
- Arts / Drawing / Painting
- Character Development / Drug Resistance Education
- College Preparation
- Community Service
- Competitive / Group Sports
- Computers and Technology
- Culinary Skills
- Drama
- Entrepreneurial
- Film Making
- Homework
- Music Dance
- Non-Competitive / Individual Sports
- Parenting / Adult Education
- Physical Health Education / Nutrition
- Robotics
- Team Building
- Writing/Print Media

2. Survey of After-School Youth Outcomes (SAYO)

The Department worked with the National Institute on Out-of-School-Time (NIOST) over a three-year period to create the *Survey of After-School Youth Outcomes* (SAYO), an evaluation tool for use by Massachusetts' 21st CCLC grantees. Results from two rounds of field-testing with over 5,000 students indicated that the SAYO is a valid and reliable instrument for measuring change in youth.

The *SAYO Evaluation System* uses brief pre-participation and post-participation surveys to collect data from school-day teachers and after-school staff. The *SAYO System* is based on a “menu” approach, meaning that programs collect data on selected outcomes that are aligned with their goals and program practices. Each outcome area is measured by asking school-day teachers and after-school staff to respond to four or five questions related to observable youth behaviors. These items have been extensively tested and found to work as a single scale that effectively captures the outcome being measured. Survey responses from school day teachers (SAYO-T Academic and Intermediary Outcomes) and after-school program staff (SAYO-S) are completed for a sample of youth in each program.

The SAYO evaluation system enables the 21st CCLC programs to capture information reflecting changes that are (a) associated with participation in a high-quality after-school program and (b) likely to occur over a one-year period. Massachusetts requires all 21st CCLC grantees to use the SAYO as a part of their evaluation and reporting efforts. All grantees use SAYO results to indicate the degree to which they have measured positive outcomes among the participants they serve. Grantees select from a list of outcomes and measure what best reflects the focus and goals of their programs.

Academic Outcomes-SAYO Teacher Version (SAYO-T-Academic)

The Academic section contain eight possible content areas: *ELA (Reading, verbal communication, and written communication)*, *mathematics (communication, reasoning, and problem solving)*, *science*, and *social studies*. Grantees select and report on the two areas that best reflect their program goals, and have school-day teachers of students participating in the school year program complete pre-and post-program assessments.

Intermediary Outcomes-SAYO Teacher Version (SAYO-T-Intermediary Outcomes)

Grantees are required to consider five intermediary outcomes: *homework (if offered)*, *analysis and problem solving*, *behavior in the classroom*, *communication skills*, *engagement in learning*, and *initiative*. They are asked to select and report on the three areas that best match the goals of their 21st CCLC program (in addition to selecting and reporting on homework, if assistance with this is offered through the program). Grantees have school-day teachers of students participating in the school year program report pre-and post-ratings in the three chosen outcomes.

After-School Staff Version (SAYO-S)

Using the SAYO-S, grantees are required to collect and report on pre- and post-ratings of students by after-school staff (which may include school-day teachers if they are working in the after-school or summer programs). Grantees must collect responses from staff working with students served during the school year as well as during the summer, in five outcome areas: *homework (if offered)*, *behavior in the program*, *initiative*, *relationships with adults*, and *relationships with peers*.

Assessing After-School Program Practices Tool (APT)

As a complement to the SAYO, the *Assessing After-School Program Practices Tool (APT)* is an observation instrument developed to assess the extent to which after-school programs are implementing

practices congruent with their desired SAYO outcomes. The APT is intended to be a tool that assists grantees with continuous program improvement and with identifying areas for professional development.²

3. School Year SAYO Results

All 41 school districts and all 173 sites were included in the SAYO-Teacher (Academic and Intermediary Outcomes) and SAYO-Staff samples from the school year. In total, 8,530 SAYO surveys were collected from school-day teachers and 9,343 from after-school staff members.

Tables 3.1-3.3 below and on the next page include the number of districts that surveyed a particular outcome area, the number of students surveyed by school-day teachers and/or staff, and a comparison of average pre score for a district to the average post score to see if they are statistically different for each outcome. The charts also show the average pre/post percentage change by outcome.

SAYO-Teacher- Academic Results

Table 3.1 shows that during the school year the most frequently surveyed academic outcomes by students' school-day teachers were English language arts (ELA) reading followed closely by mathematics problem solving and ELA verbal and then written communication. The percentage of districts with statistically significant gains in a given outcome area ranged from 54 percent in social studies to 83 percent in mathematics problem solving. The average percentage increase from pre to post survey ranged from 8 percent in science to 17 percent in ELA/written communication.

Table 3.1: School Year SAYO-Teacher- Academic Results FY08

	Soc. Stud.	Sci.	ELA/ Read.	ELA/ Verb. Comm.	ELA/ Writt. Comm.	Math Comm.	Math Reas.	Math PS
Number of Districts	13	19	28	31	27	30	24	28
Number of Students	2,045	3,018	6,580	5,872	5,894	4,555	3,889	6,402
% of Districts Showing Significant Increase	54%	68%	82%	65%	74%	77%	75%	83%
Average Percentage Change (%+/-)	8%	11%	15%	13%	17%	13%	14%	15%

Note: Statistical significance based on paired-samples t-test $p \leq .05$.

Source: Grant recipient reports.

² More information on the APT and a version to download is available at: <http://www.doe.mass.edu/21cclc/ta/>.

SAYO-Teacher Intermediary Results

Table 3.2 below indicates that, during the school year, homework was the most frequently surveyed outcome by school-day teachers, as all but one of the 41 districts operating fiscal year 2008 21st CCLC programs collected data on this outcome. Engagement and communication were the other most commonly measured outcomes, with 38 districts surveying each of them.

The percentage of districts with statistically significant gains in a given outcome area ranged from 63 percent in behavior to 81 percent in analysis. The average percentage increase from pre to post survey ranged from 8 percent in behavior and engagement to 15 percent in analysis.

Table 3.2: School Year SAYO-Teacher Intermediary Results FY08

	Homework	Behavior	Initiative	Engagement	Analysis	Communication
Number of Districts	40	32	29	38	31	38
Number of Students	8,530	6,832	6,670	7,666	7,345	7,364
% of Districts Showing Significant Increase	80%	63%	76%	79%	81%	71%
Average Percentage Change (%+/-)	13%	8%	13%	12%	15%	14%

Note: Statistical significance based on paired-samples t-test $p \leq .05$
 Source: Grant recipient reports.

SAYO-Staff Results

Table 3.3 below shows the SAYO survey results reported by the school year after-school staff. Unlike the SAYO-Teacher (Academic and Intermediary), grantees do not choose which outcomes after-school staff will measure, as the SAYO-Staff must be completed in its entirety. The only exception is that homework is not measured if assistance with it is not a structured part of the after-school program. As evident from the table however, all but three districts during did include homework assistance as part of their school year programs.

The percentage of districts with statistically significant gains in a given outcome area ranged from 83 percent in behavior to 93 percent in initiative. The average percentage increase from pre to post survey ranged from 15 percent in behavior to 20 percent in initiative.

Table 3.3: School Year SAYO-Staff Results FY08

	Homework	Behavior	Initiative	Adult Relations	Peer Relations
Number of Districts	38	41	41	41	41
Number of Students	8,382	9,343	9,325	9,333	9,312
% of Districts Showing Significant Increase	92%	83%	93%	88%	85%
Average Percentage Change (%+/-)	18%	15%	20%	19%	16%

Note: Statistical significance based on paired-samples t-test $p \leq .05$
 Source: Grant recipient reports.

Subgroup Analysis

The following charts on the next six pages examine the SAYO school year survey results by comparing the pre to post average percentage changes for particular outcomes by various subgroups. In general, the results indicate that students served in fiscal year 2008 21st CCLC programs within subgroups made comparable or statistically greater gains than those without any subgroup classification, with the greatest difference being seen with students designated as limited English proficient. Students in the *Needs Improvement (NI)* and *Warning / Failing (W/F)* MCAS performance levels also made greater gains than those in the *Advanced* and *Proficient (A/P)* levels on nearly all of the measured ELA and mathematics outcomes. Note: Outcomes with an asterisk (*) indicate statistically greater gains.

Charts 3.4.A-C compare the SAYO results of low-income students (who received federal free or reduced price lunch) to those who were classified as non-low-income. Low-income students made significantly greater gains on 15 of the 19 outcomes measured.

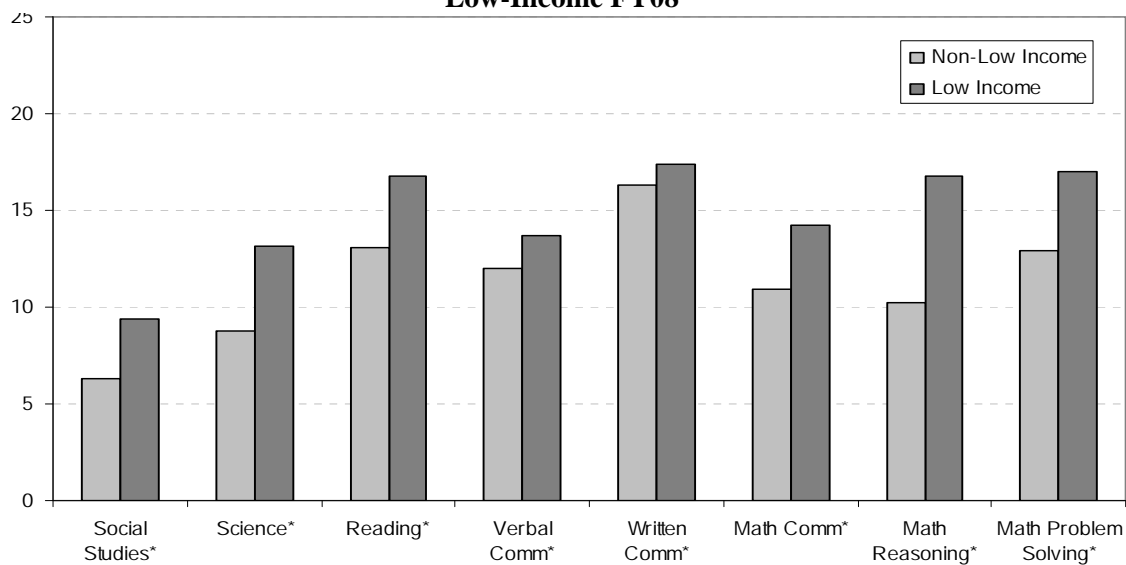
Charts 3.4.D-F display the SAYO results of students who did and did not receive special education services. Students within this subgroup classification made significantly greater gains on 8 of the 19 outcomes measured.

Charts 3.4.G-I compare the SAYO results of students designated as limited English proficient (LEP) to those who were not. LEP students made statistically greater gains on 12 of the 19 outcomes measured. Most importantly, LEP students made significantly greater improvement than non-LEP students in reading and verbal communication.

Charts 3.4.J & K compare the SAYO-Teacher Academic results of students in the English language arts and mathematics outcomes by MCAS performance level in those respective areas. In ELA, students in the *Needs Improvement* and *Warning / Failing* levels made significantly greater gains than students in the *Advanced* and *Proficient* categories in two of the three ELA areas measured. In mathematics, students in the *Needs Improvement* and *Warning / Failing* levels made significantly greater gains than students in the *Advanced* and *Proficient* categories in all of three of the mathematics areas measured.

Student Performance Comparisons Based on Free of Reduced Price Lunch Status (Charts 3.4.A-C)

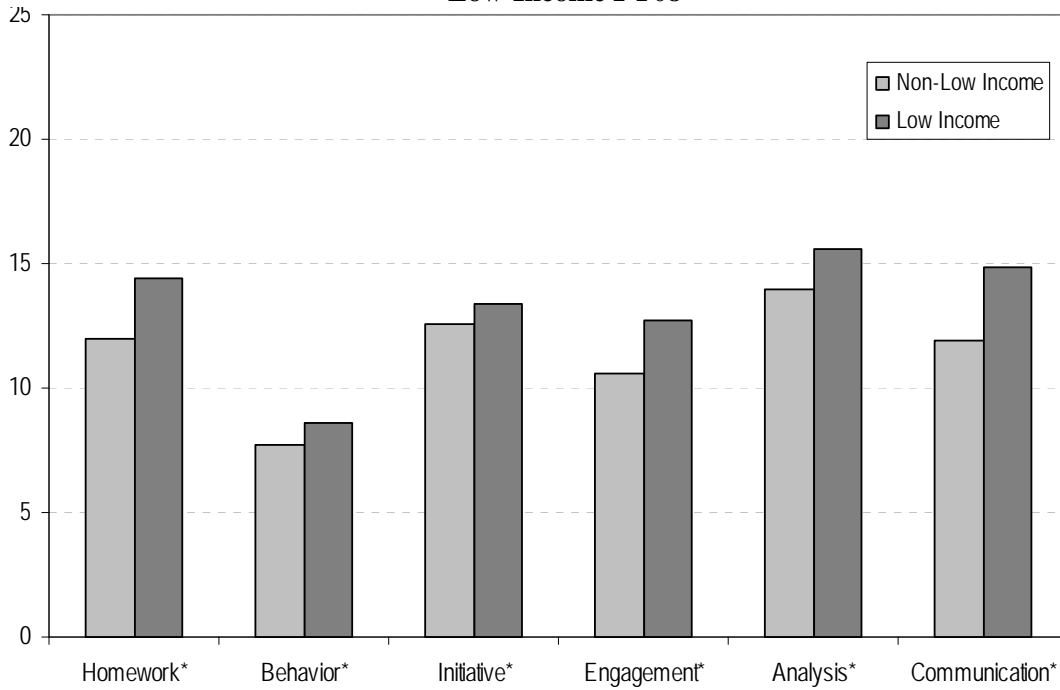
Chart 3.4.A: Average Percentage Improvement on SAYO-Teacher Academic Outcomes – Low-Income FY08



Note: *Statistically significant based on paired-samples t-test $p \leq .05$

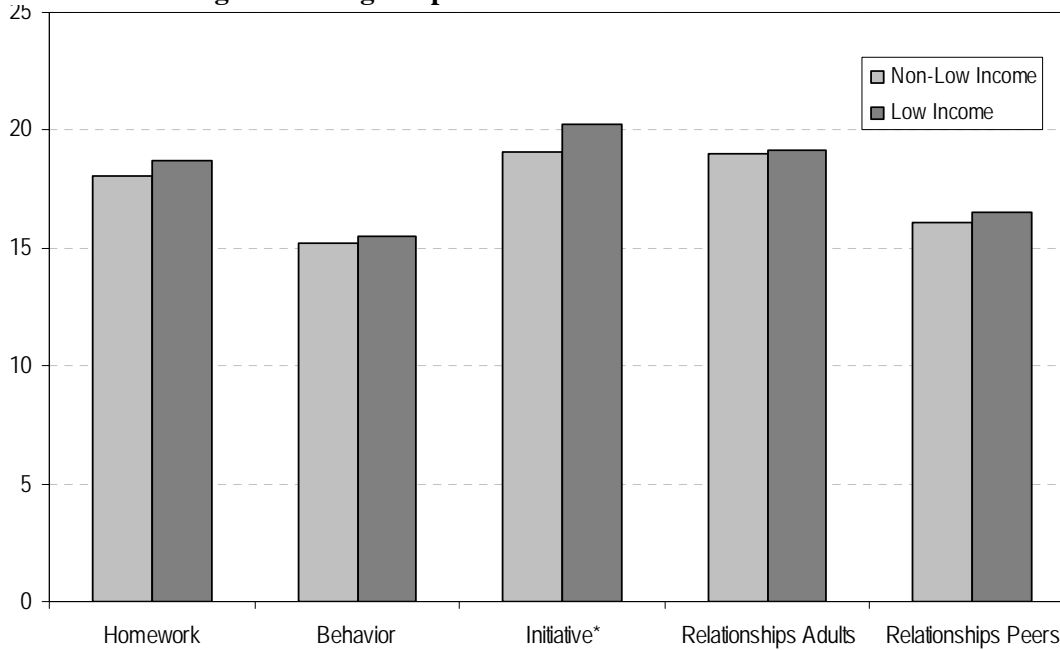
Source: Grant recipient reports.

Chart 3.4.B: Average Percentage Improvement on SAYO-Teacher Intermediary Outcomes—Low-Income FY08



Note: *Statistically significant based on paired-samples t-test $p \leq .05$
 Source: Grant recipient reports.

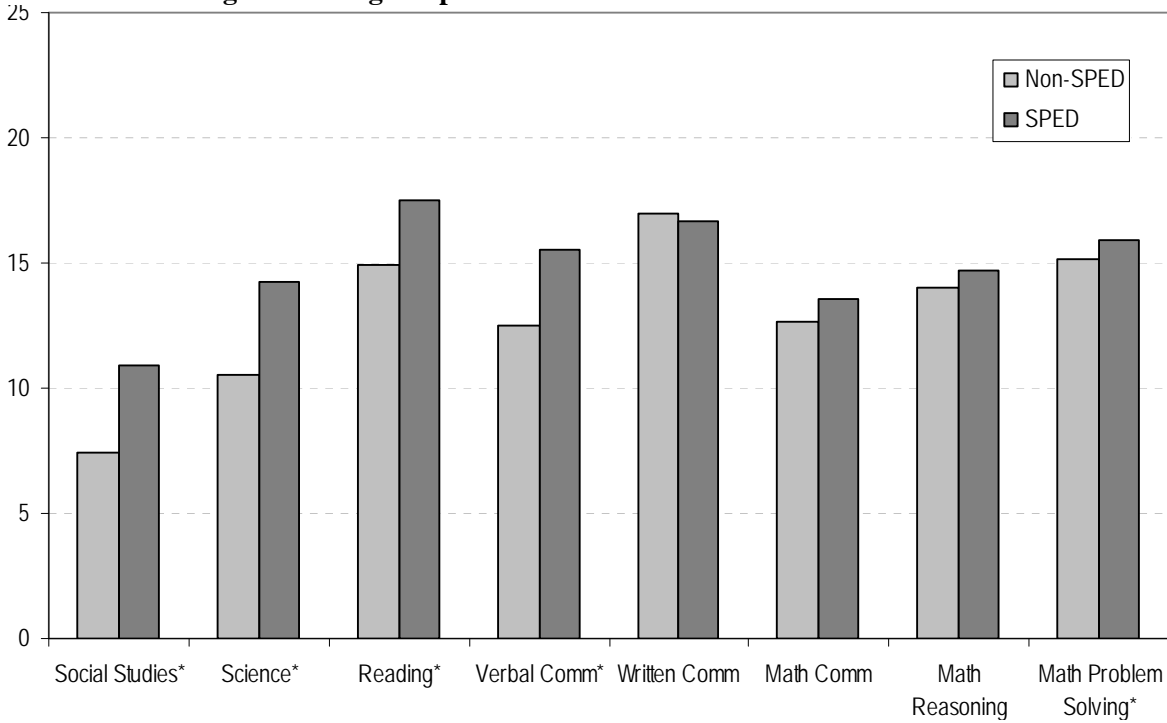
Chart 3.4.C: Average Percentage Improvement on SAYO-Staff Outcomes—Low Income FY08



Note: *Statistically significant based on paired-samples t-test $p \leq .05$
 Source: Grant recipient reports.

Student Performance Comparisons Based on Special Education (SPED) Status (Charts 3.4.D-F)

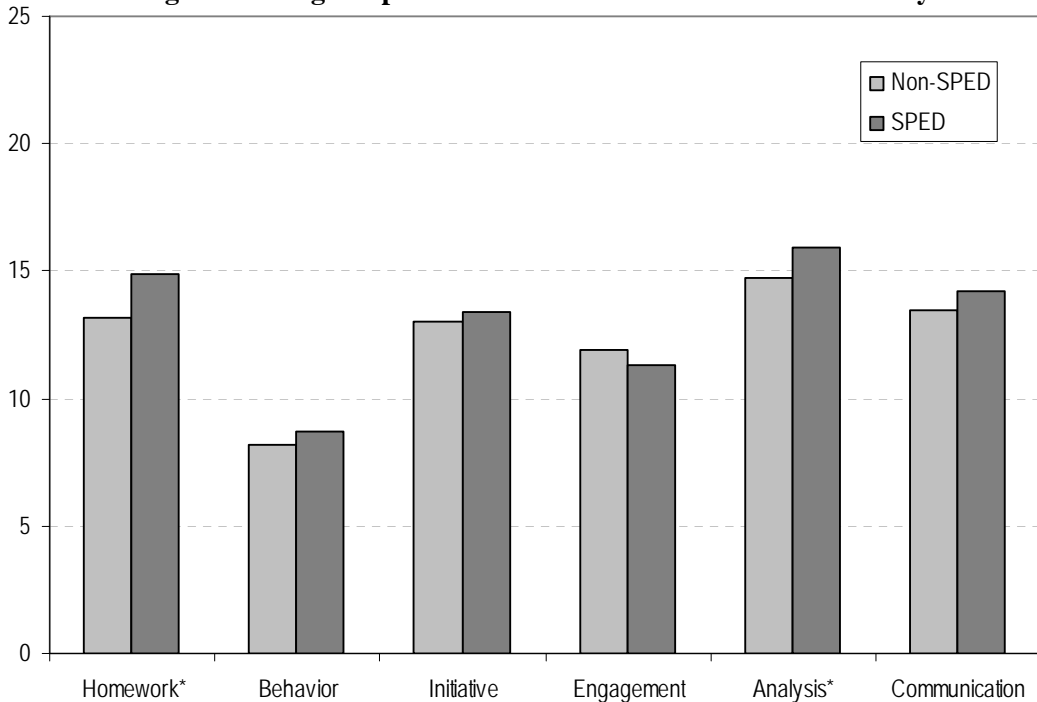
Chart 3.4.D: Average Percentage Improvement on SAYO-Teacher Academic Outcomes—SPED FY08



Note: *Statistically significant based on paired-samples t-test $p \leq .05$

Source: Grant recipient reports.

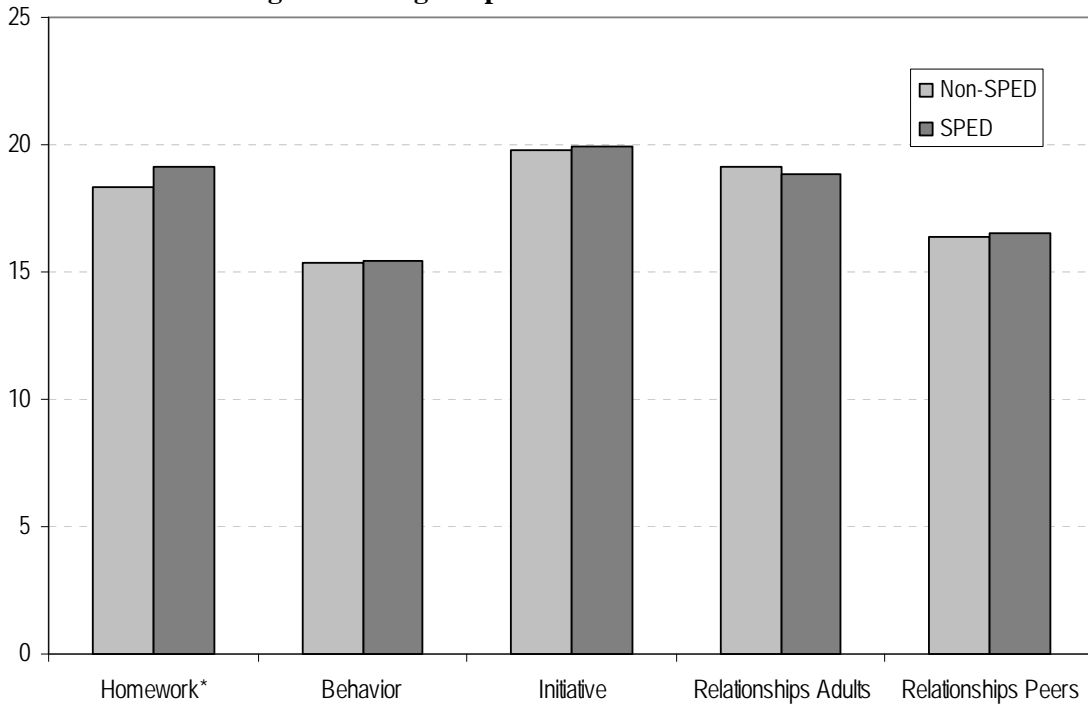
Chart 3.4.E: Average Percentage Improvement on SAYO-Teacher Intermediary Outcomes—SPED FY08



Note: *Statistically significant based on paired-samples t-test $p \leq .05$

Source: Grant recipient reports.

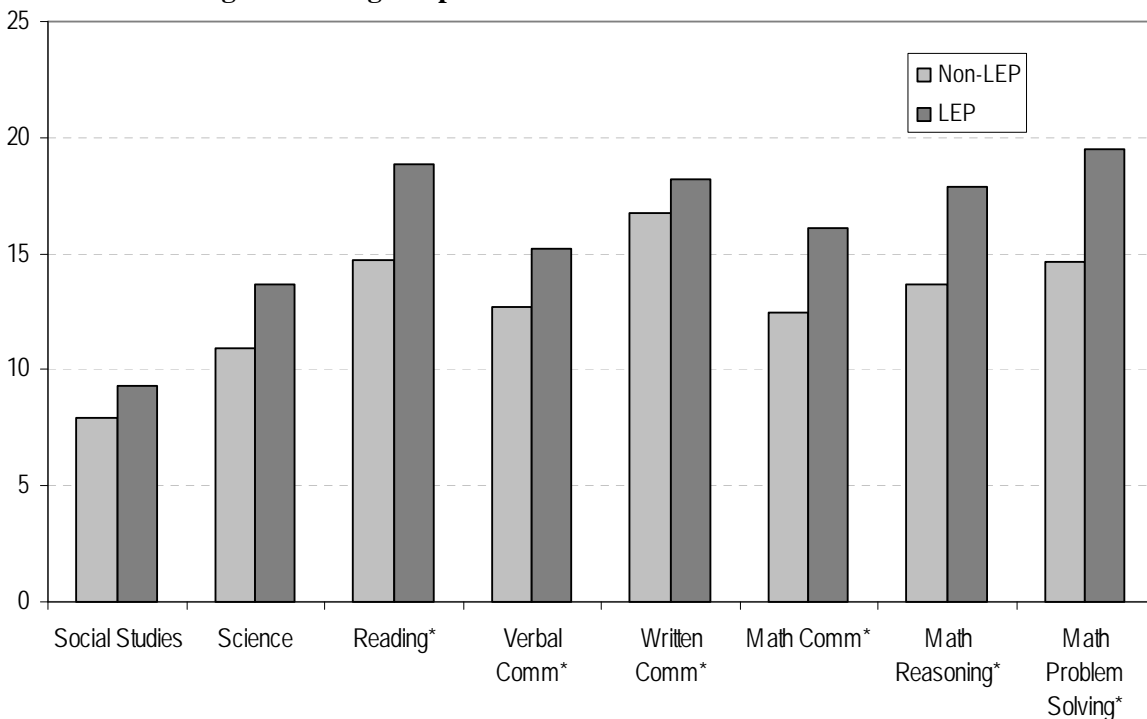
Chart 3.4.F: Average Percentage Improvement on SAYO-Staff Outcomes—SPED FY08



Note: *Statistically significant based on paired-samples t-test $p \leq .05$
 Source: Grant recipient reports.

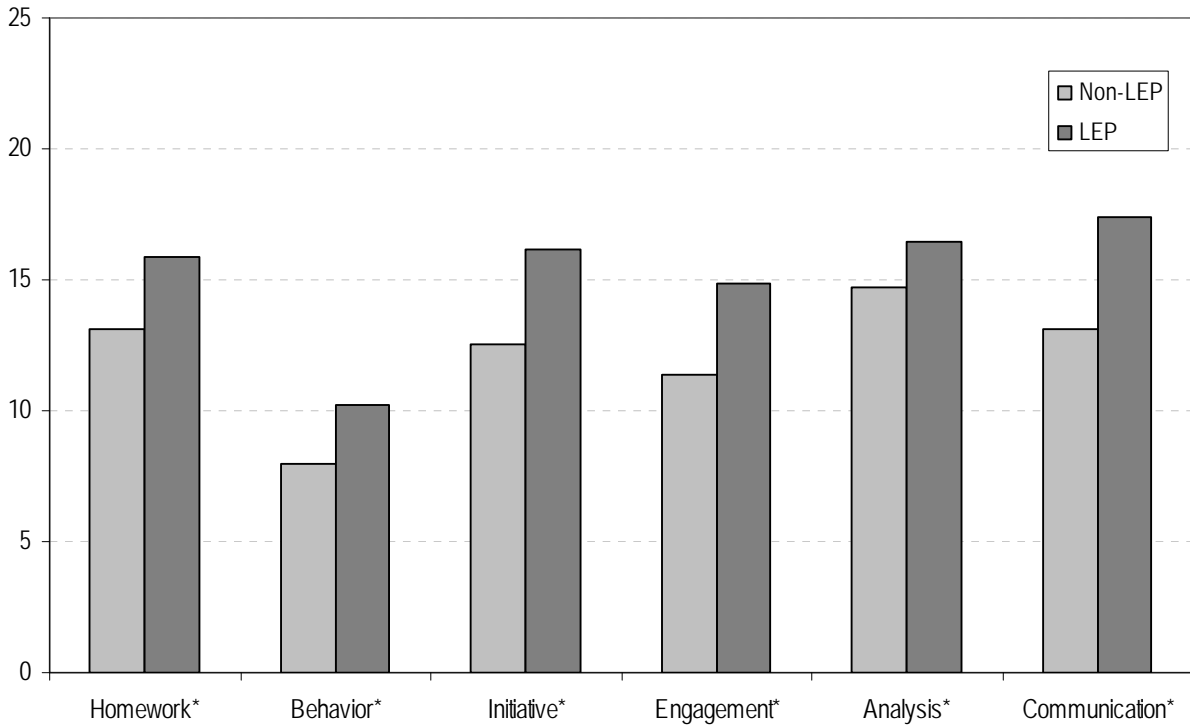
Student Performance Comparisons Based on Limited English Proficiency (LEP) Status (Charts 3.4.G-I)

Chart 3.4.G: Average Percentage Improvement on SAYO-Teacher Academic Outcomes—LEP FY08



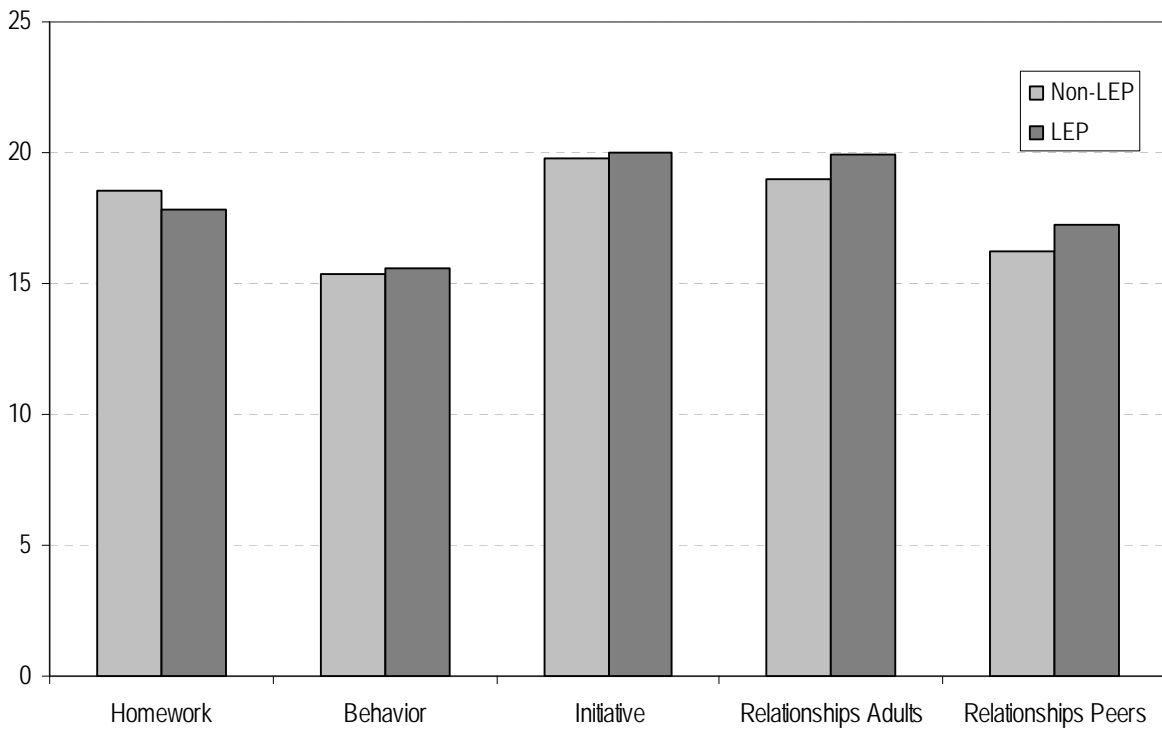
Note: *Statistically significant based on paired-samples t-test $p \leq .05$
 Source: Grant recipient reports.

Chart 3.4.H: Average Percentage Improvement on SAYO-Teacher Intermediary Outcomes—LEP FY08



Note: *Statistically significant based on paired-samples t-test $p \leq .05$
 Source: Grant recipient reports.

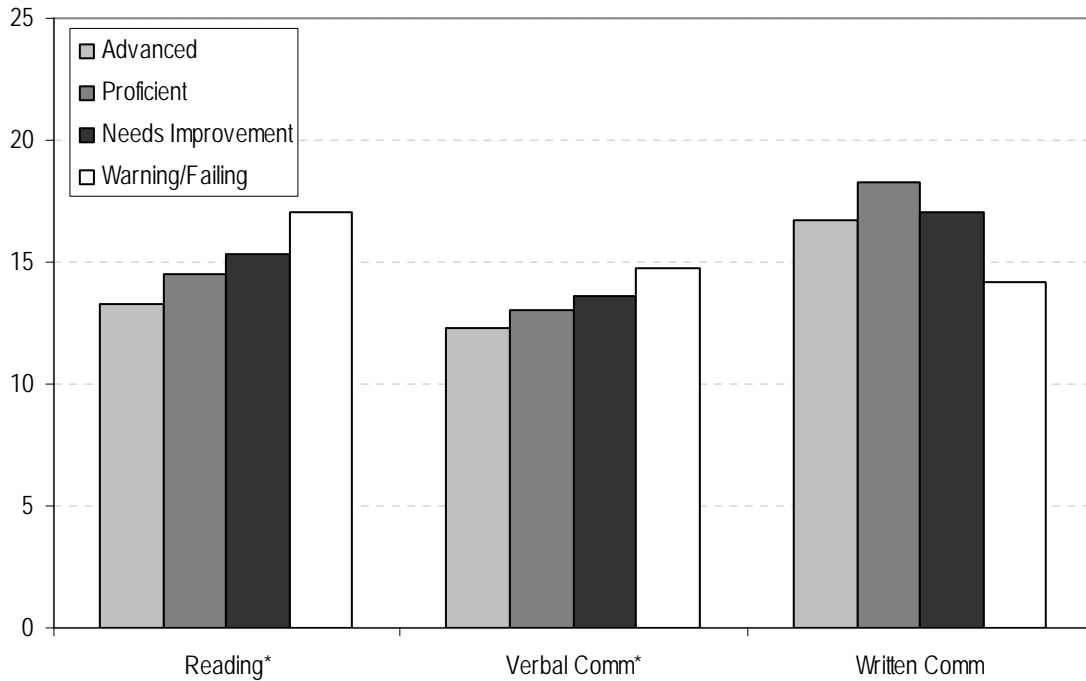
Chart 3.4.I: Average Percentage Improvement on SAYO-Staff Outcomes—LEP FY08



Source: Grant recipient reports.

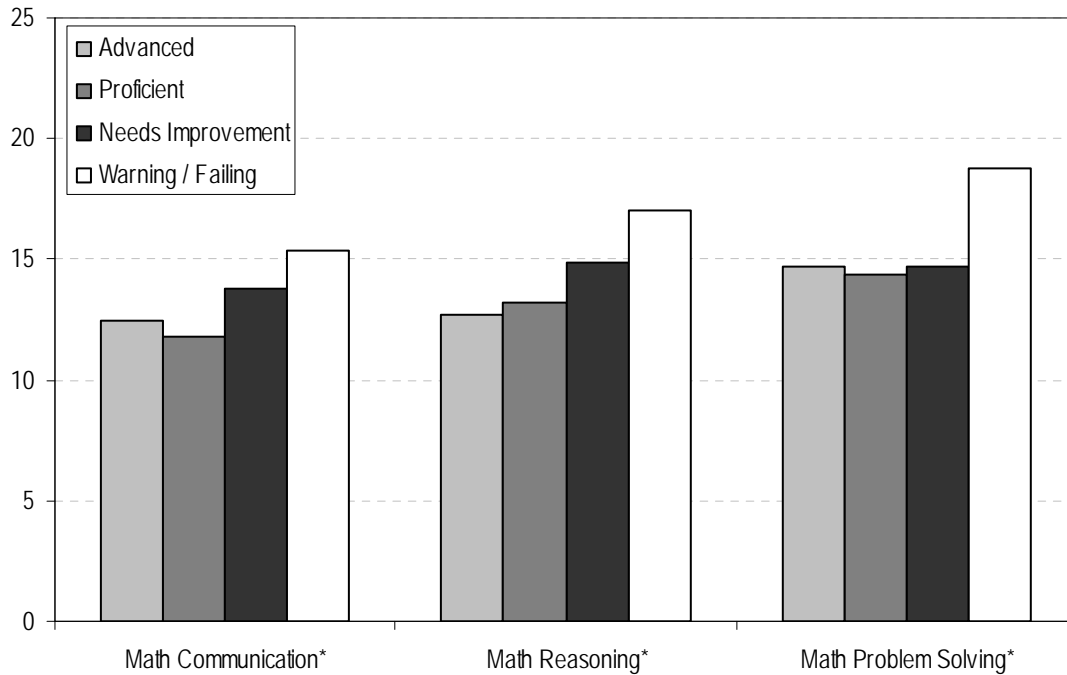
Student Performance Comparisons Based on MCAS Performance Levels (Charts 3.4.J&K)

Chart 3.4.J: Average Percentage Improvement on ELA SAYO-Teacher Outcomes based on ELAMCAS 2008 Performance Level FY08



Note: *Statistically significant based on paired-samples t-test $p \leq .05$ for both A/P and NI/W&F levels.
 Source: 2008 MCAS mega file (grades 3-10) and grant recipient reports.

Chart 3.4.K: Average Percentage Improvement on Mathematics SAYO-Teacher Outcomes based on Mathematics MCAS 2008 Performance Level FY08



Note: *Statistically significant based on paired-samples t-test $p \leq .05$ for both A/P and NI/W&F levels.
 Source: 2008 MCAS mega file (grades 3-10) and grant recipient reports.

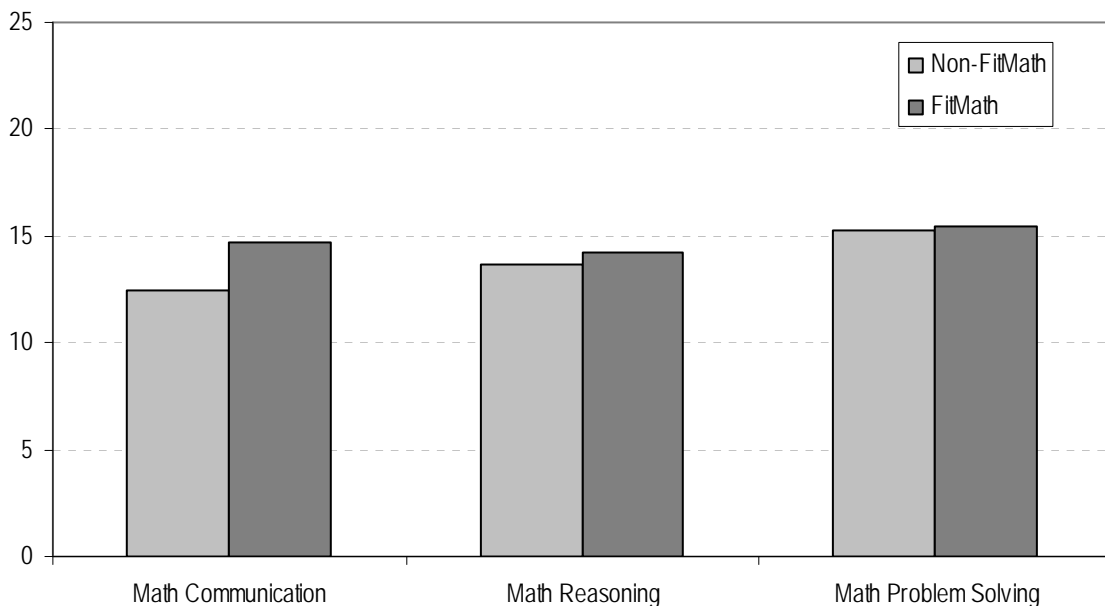
FitMath

During fiscal year 2008, the Department provided funding for sixteen 21st CCLC grantees to implement the FitMath program. The goal of FitMath is to blend the guiding principles in the Department's Mathematics and Comprehensive Health Curriculum Frameworks, by using aerobics and fitness as a means to support a better understanding of mathematical vocabulary and concepts. The integration of the mathematics content with physical activities can help students actualize the mathematics and at the same time promote health and fitness. The goal is for participants in the FitMath program to gain confidence in their physical abilities as well as increase their familiarity with terminology in the fields of mathematics, anatomy, and physiology.

Data collected on school year 21st CCLC school year programs indicated that 1,001 students (a 40 percent increase from the previous year) participated in FitMath in 16 districts. Students served in FitMath were in grades K-9, with the majority (57 percent) being in grades K-5. Nearly 22 percent of FitMath students were designated as special education students, 65 percent of FitMath students received free or reduced price lunch, and approximately 13 percent were LEP. FitMath students who were measured by the SAYO (Survey of After-School Youth Outcomes) tool increased on average at least 14 percent from pre to post scores on all mathematics outcomes. As measured by 21st CCLC program participants' school day teachers, FitMath students compared to those that did not participate had a pre to post percentage increase that was 3 percentage points higher than their non-FitMath peers in math communication and 2 percentage points higher in initiative and analysis. As measured by after-school staff, FitMath students showed a percentage point difference of between 3 and 4 percentage points higher in initiative and relationships with staff than students who did not participate.

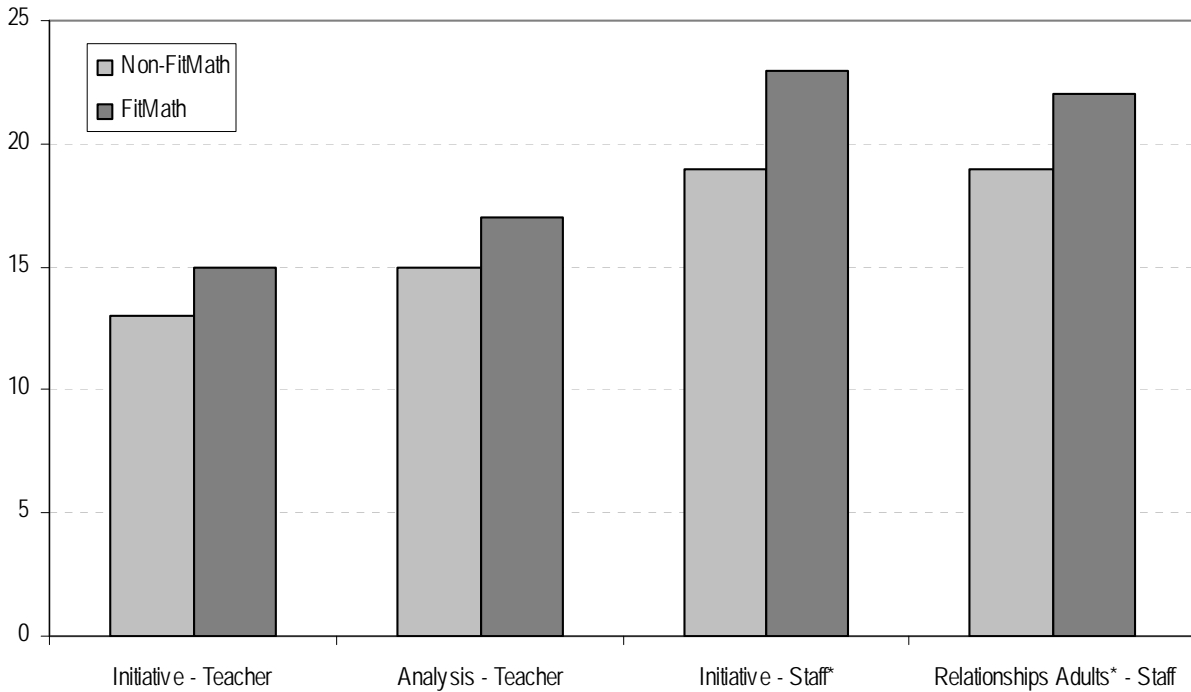
The following **Chart 3.5** compares the percentage improvement on the SAYO-Academic mathematics outcomes among 21st CCLC students who did and did not participate in FitMath programs. **Chart 3.6** compares the percentage improvement on selected SAYO-Teacher and Staff outcomes. (See **Appendix B** for a list of FitMath districts.)

Chart 3.5: Percentage Improvement on SAYO-Teacher Academic Mathematics Outcomes - FitMath FY08



Source: Grant recipient reports.

Chart 3.6: Percentage Improvement on Selected SAYO-Teacher and Staff Outcomes – FitMath FY08



Note: *Statistically significant based on one-way ANOVA $p \leq .05$
 Source: Grant recipient reports.

4. Summer SAYO Results

Thirty-two (32) grantees ran summer programs at 79 sites. Their associated Survey of After-School Youth Outcomes (SAYO) results are described below. A total of 3,907 surveys were collected from summer program staff.

Tables 4.1 and 4.2 include the number of districts that surveyed a particular outcome area, the number of students surveyed by summer after-school staff, and the percentage of districts that showed a statistically significant increase³ in that outcome. It also shows the average pre/post score by outcomes and the calculated percentage change.

Summer SAYO-Academic Results

Tables 4.1 and 4.2 on the next page show the results of summer SAYO-Academic surveys reported by summer program staff. Unlike during the school year, 21st CCLC summer programs are not required to survey an academic component, and only 28 of the 32 summer grantees chose to report SAYO-Academic results.

³ Statistical significance is determined by using paired-samples t-test for each district ($p \leq .05$).

The percentage of districts with statistically significant gains in a given outcome area ranged from 84 percent in ELA reading to 100 percent in both social studies and science. The average percentage increase from pre to post survey ranged from 16 percent in ELA reading to 25 percent in social studies.

Table 4.1: Summer SAYO-Academic Results FY08

	Soc. Stud.	Sci.	ELA/ Read.	ELA/ Verb. Comm.	ELA/ Writt. Comm.	Math Comm.	Math Reas.	Math PS
Number of Districts	4	8	25	20	22	17	15	21
Number of Students	265	633	2,562	1,957	2,275	1,370	1,424	2,322
% of Districts Showing Significant* Increase	100%	100%	84%	90%	86%	88%	87%	90%
Average Percentage Change (% +/-)	25%	21%	16%	17%	19%	19%	19%	22%

Note: Statistical significance based on paired-samples t-test $p \leq .05$
 Source: Grant recipient reports.

Summer SAYO-Staff Results

All summer 21st CCLC grantees were required to have summer program staff complete the SAYO-Staff outcomes on a sample of at least 30 students per site. According to the information collected that is summarized in **Table 4.2** below, the percentage of districts that made statistically significant gains in a given outcome area ranged from 91 percent in peer relations to 97 percent in all of the other outcomes. The average percentage increase from pre to post survey ranged from 16 percent in behavior to 22 percent in initiative and relationships with adults.

Table 4.2: Summer SAYO-Staff Results FY08

	Learning Skills	Behavior	Initiative	Adult Relations	Peer Relations
Number of Districts	32	32	32	32	32
Number of Students	3,879	3,907	3,883	3,900	3,899
% of Districts Showing Significant* Increase	97%	97%	97%	97%	91%
Average Percentage Change (% +/-)	20%	16%	22%	22%	18%

Note: Statistical significance based on paired-samples t-test $p \leq .05$
 Source: Grant recipient reports.

APPENDIX A: Program Goals

The purpose of the 21st Century Community Learning Centers Program is to establish or expand community learning centers that operate during out-of-school hours and provide students with academic enrichment opportunities along with other activities designed to complement the students' regular academic program. Community learning centers may also offer literacy and related educational development to these students' families.

Primary Goals for 21st Century Community Learning Centers Programs:

- Provide creative and innovative out-of-school time programs that support and contribute to academic achievement and youth development for all students.
- Integrate school day and out-of-school time programs so as to promote shared learning goals, teaching and support strategies, and staff recruitment and training activities.
- Provide programs that explicitly address appropriate grade-level state and local learning standards and support students' academic performance.
- Contribute to student performance goals outlined in school improvement plans.
- Support efforts to strengthen the coordination between the instruction that occurs during the school day and the enrichments and supports that take place during the out-of-school hours.
- Create and maintain a school and community-based infrastructure that establishes procedures to improve outcomes for children and youth through successful program implementation and oversight.
- Establish procedures to evaluate program effectiveness through the collection and analysis of data.
- Promote efficient use of public resources and facilities through effective partnerships between schools, community-based agencies, and other public and private entities.
- Address the multiple needs of all children, youth, and their families through increased supervision, safety, and access to support services.

APPENDIX B: FY08 21st Century Community Learning Centers Grantees

GRANT RECIPIENT	GRANT COHORT YR(S)* <i>B1= New Sites / B2= Exemplary</i>	FITMATH	Total received in FY08
Adams-Cheshire Regional Schools	FY08(B2)		55,000
Athol-Royalston Regional Schools	FY08(B1)		100,000
Barnstable Public Schools	FY04,08(B1)		210,500
Boston Public Schools	FY04(B1),05(B1),08(B1)		1,416,250
Brockton Public Schools	FY04,05,08(B1)	Y	884,500
Brookline Public Schools	FY05(B1)		84,842
Cambridge Public Schools	FY04(B1),08(B2)		120,000
Fall River Public Schools	FY08(B1)		75,000
Fitchburg Public Schools	FY04,05,08(B1)	Y	491,000
Framingham Public Schools	FY04(B1),05(B1)		340,000
Frontier Regional Schools	FY05(B1)	Y	85,000
Gill-Montague Regional Schools	FY04,05,08(B1)		95,000
Hampshire Ed. Collab. (HEC)	FY04(B1),05(B1),08(B2)		468,750
Haverhill Public Schools	FY04,05,08(B1)		535,485
Holyoke Public Schools	FY04(B1),05(B1),08(B2)	Y	937,250
Lowell Public Schools	FY04(B1),05(B1),08(B2)		887,500
Malden Public Schools	FY05(B1),08(B2)		481,186
Martha's Vineyard Public Schools	FY04(B1),05(B1)	Y	159,000
Methuen Public Schools	FY04(B1)	Y	254,150
Mohawk Trail Regional Schools	FY04(B1)		80,000
New Bedford Public Schools	FY04(B1),05(B1),08(B1)		710,500
North Adams Public Schools	FY05,08(B1)		258,908
North Brookfield Public Schools	FY04,08(B1)	Y	165,000
Orange Public Schools	FY08(B1)		80,000
Pittsfield Public Schools	FY08(B2)	Y	75,000
Quaboag Regional Schools	FY05(B1)		133,603
Quincy Public Schools	FY04(B1),05(B1),08(B2)	Y	696,175
Revere Public Schools	FY08(B1)		108,000
Salem Public Schools	FY05(B1)		237,150
Somerville Public Schools	FY04,05,08(B1)		497,050
South Shore Daycare (Randolph)	FY04(B1),05(B1),08(B1)		390,500
Springfield Public Schools	FY05(B1),08(B2)		737,500
Taunton Public Schools	FY05(B1)	Y	254,150
Triton Regional Schools	FY05(B1),08(B2)	Y	165,250
Waltham Public Schools	FY05(B1)	Y	105,400
Wareham Public Schools	FY05(B1),08(B2)	Y	146,000
Watertown Public Schools	FY04(B1)		106,250
Webster Public Schools	FY05(B1)	Y	126,268
Winchendon Public Schools	FY05(B1)		170,000
Winthrop Public Schools	FY04(B1)	Y	161,500
Worcester Public Schools	FY05(B1),08(B2)	Y	1,195,000
TOTAL	<i>*(FY04B1=inYr5of5 / FY05B1=inYr4of5 / FY08B1 =inYr1of5 / FY08B2 =inYr1of3)</i>		\$ 14,279,617