



Massachusetts Department of
ELEMENTARY & SECONDARY
EDUCATION

**No Child Left Behind (NCLB) Title IVB
21st Century Community Learning Centers
(CCLC) Year End Report - Fiscal Year 2009**

July 2010



This document was prepared by the
Massachusetts Department of Elementary and Secondary Education
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Commissioner

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21st Century Community Learning Centers Program Fiscal Year 2009 Year End Report

Introduction

The following report provides information on the fiscal year 2008-2009 (FY09) 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 (the Department) and the National Institute of Out-of-School Time (NIOST) to track information on the effect participation in the 21st CCLC programs has in increasing student achievement, as well as to provide feedback for ongoing program improvement.

Fiscal year 2009 was the eighth year that 21st Century Community Learning Centers grants were distributed through 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 continuation funding available for up to four additional years.

Overall, the data collected indicates that students who participated in the FY09 21st Century Community Learning Center 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 19,500 students served across the state during fiscal year 2009.

Highlights of FY09 21st CCLC Programs and SAYO Results

School Year and Summer (September 2008—August 2009)

- In **FY09**, the Department **awarded \$16,152,081** to **41** entities through **competitive** and **continuation grants**.
- Approximately **19,500** students in grades K-12 participated in 21st CCLC program services offered in **41** districts at **189** sites across the state.
- 21st CCLC participants included nearly **12,700** students who received free or reduced priced lunch, **3,800** students with disabilities, and **3,100** students considered limited English proficient (LEP).

- As rated by school-day teachers, statewide figures for student participants 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 for student participants showed positive gains in all **five** intermediary outcomes measured, with the greatest average pre to post program increases in initiative and relationships with adults.
- More than **9,100** SAYO surveys were collected from school-day teachers (school year only) and **13,000** from 21st CCLC program staff members (school year and summer).

School Year (September 2008—June 2009)

- Approximately **16,400** students participated in 21st CCLC program services offered in **41** districts at **184** sites across the state during the school year.
- Students who participated in the 21st CCLC program attended an average of **167** (and median of **129**) hours of programming offered outside of regular school hours during the school year.
- More than **11,000** students who received free or reduced price lunch, including **3,200** students with disabilities and **2,500** considered limited English proficient (LEP), participated in the 21st CCLC program during the school year.
- More than **9,100** SAYO surveys were collected from school-day teachers and **9,200** from after-school staff members.

Summer (July 2009—August 2009)

- Approximately **5,100** students participated in 21st CCLC program services offered in **33** districts at **94** sites across the state during the summer.
- Students who participated in the 21st CCLC program attended an average of **89** (and a median of **77**) 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 **900** considered limited English proficient (LEP), participated in summer 21st CCLC programs.
- Nearly **3,800** 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 Smith, Data Specialist, via 781-338-3010 or ACsupport@doe.mass.edu.

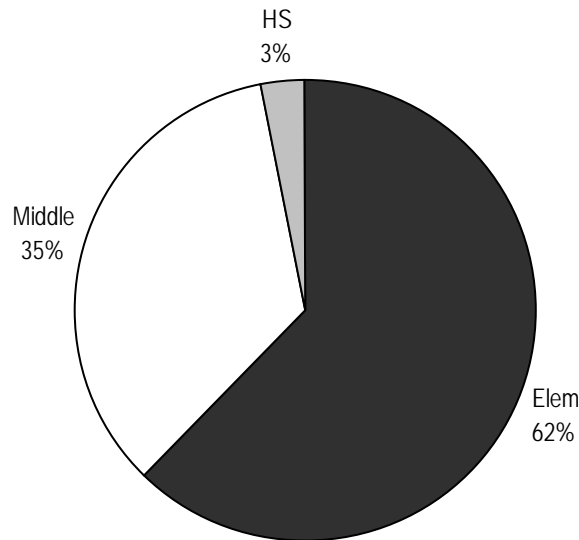
Massachusetts 21st Century Community Learning Centers Programs, FY09

Program Information

Participation

As reported by the 41 entities serving students through fiscal year 2009, a total of 16,420 children and youth participated in 21st CCLC school year programs and 5,115 participated in 21st CCLC summer programs. (A total of 19,514 individual students participated in either or both time frames). **Chart 1** below shows that 62 percent of all fiscal year 2009 program participants were children in elementary school (K-5), while children in middle school (grades 6-8) accounted for 35 percent and high school students (grades 9-12) accounted for 3 percent of those served.

Chart 1: Percentage of Student Participants by Grade Level, FY09



Source: Student Information Management System and grant recipient reports.

Table 1 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 60 percent of students served were elementary school students and 37 percent were middle schools students, while during the summer there was a higher percentage of elementary (73 percent) and a lower percentage of middle school students (23 percent). Also, a slightly higher percentage of participants were high school students during the summer (4 percent) than during the school year (3 percent).

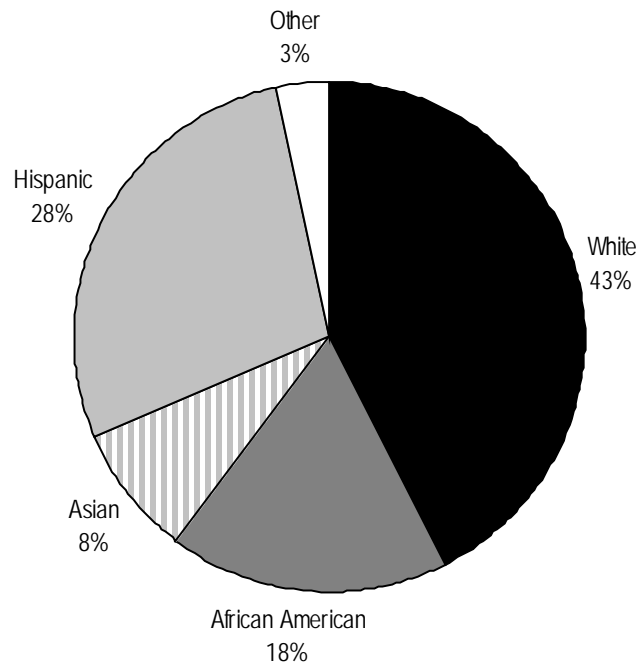
Table 1: Percentage of Student Participation by Grade Level, FY09

Grade Level	School Year		Summer	
	N	%	N	%
Elem. Total	9,885	60%	3,724	73%
Middle Total	6,092	37%	1,188	23%
H.S. Total	443	3%	203	4%

Source: Student Information Management System and grant recipient reports.

The racial breakdown of students served is illustrated in **Chart 2** below. The majority of students served (57 percent) in fiscal year 2009 21st CCLC programs were members of a minority group, while 43 percent of students were white. Hispanic students were the largest minority group (28 percent) followed by African American students (18 percent) and Asian students (8 percent). **Table 2** 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 the summer (59 percent) than during the school year (57 percent); and in both timeframes, percentages of minority students served were substantially higher than their statewide proportion (30 percent).

Chart 2: Percentage of Student Participation by Race/Ethnicity, FY09



Source: Student Information Management System and grant recipient reports.

Table 2: Student Participation by Race/Ethnicity during School Year and Summer Programs, FY09

Race/ Ethnicity	School Year 21 st CCLC		Summer 21 st CCLC		Statewide	
	N	%	N	%	N	%
African American	2,922	18%	1,089	21%	78,631	8%
Asian	1,363	8%	409	8%	48,904	5%
Hispanic	4,581	28%	1,335	26%	137,124	14%
White	6,996	43%	2,071	41%	670,278	70%
Other	558	3%	211	4%	23,973	2%

Source: Student Information Management System and grant recipient reports.

Additionally, during fiscal year 2009 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 65 percent of students served received federal free or reduced lunch, 20 percent received special education services, and 16 percent were LEP. **Table 3** 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 students served during the summer were very similar to those served during the school year (approximately 65 percent were SPED and 20 percent low-income), while 2 percent more LEP were served during the summer than during the school year (17 vs. 15 percent). During both the school year and summer, the percentages of these selected populations served were substantially higher than their statewide proportion, in particular for low-income students (65% vs. 31%) and LEP students (approximately 16% vs. 6%).

Table 3: Student Participation by Free/Reduced Price Lunch, SPED, and LEP during School Year and Summer Programs, FY09

Special Population	School Year 21 st CCLC		Summer 21 st CCLC		Statewide	
	N	%	N	%	N	%
Free/Reduced Price Lunch	10,722	65%	3,335	65%	294,692	31%
SPED	3,235	20%	993	19%	166,037	17%
LEP	2,529	15%	855	17%	57,002	6%

Source: Student Information Management System and grant recipient reports.

Table 4 below examines the 2009 English Language Arts (ELA) MCAS performance levels of students served in 21st CCLC school year and summer programs and compares them to 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 33 percent of students were in these levels. This percentage difference was even higher in the summer, where nearly two-thirds of all students served (63 percent) in 21st CCLC programs had scored at the *NI* or *W/F* level in ELA.

Similarly, **Table 5** demonstrates that a higher percentage of students in the *NI* or *W/F* levels on the 2009 Mathematics MCAS were served in 21st CCLC programs as compared to statewide figures. During school year 21st CCLC programs, 66 percent of students served were in either of those performance levels, as compared to 44 percent of students statewide. As with ELA, this percentage was even higher during summer programs as 70 percent of students served in 21st CCLC programs had performed at the *NI* or *W/F* level in mathematics.

Table 4: Student Participation by ELA 2009 MCAS Performance Levels during School Year and Summer Programs, FY09

MCAS Performance Level	School Year 21 st CCLC		Summer 21 st CCLC		Statewide	
	N	%	N	%	N	%
Advanced / Above Proficient	725	6%	132	4%	80,575	16%
Proficient	4,848	38%	1,034	32%	255,153	51%
Needs Improvement	5,071	40%	1,448	45%	125,794	25%
Warning / Failing	2,021	16%	584	18%	39,387	8%

Source: 2009 MCAS mega file (grades 3-10) and grant recipient reports.

Table 5: Student Participation by Mathematics 2009 MCAS Performance Levels during School Year and Summer Programs, FY09

MCAS Performance Level	School Year 21 st CCLC		Summer 21 st CCLC		Statewide	
	N	%	N	%	N	%
Advanced / Above Proficient	1,150	9%	235	7%	117,103	23%
Proficient	3,153	25%	730	23%	161,923	32%
Needs Improvement	4,637	37%	1,256	39%	141,689	28%
Warning / Failing	3,715	29%	986	31%	80,929	16%

Source: 2009 MCAS mega file (grades 3-10) and grant recipient reports.

Hours of Service

Students were served in 21st CCLC programs from September 2008 through August 2009. During the school year (September through June), students each participated an average of 167 (and a median of 129) hours. During the summer (July through August), students were served an average of 89 (and a median of 77) hours each. **Table 6** below shows the percentage of students served by hour ranges. During the school year, more than 60 percent of students served participated for at least 100 hours in 21st CCLC programs; and during the summer, approximately 25 percent of students served participated for at least 100 hours.

Table 6: Percentage of Students Served in Program Hour Ranges, FY09

Program Hour Ranges	School Year (Mean: 167 hrs/ Median: 129 hrs)		Summer (Mean: 89 hrs / Median: 77 hrs)	
	N	%	N	%
1-50 Hours	3,095	19%	927	18%
51-100 Hours	3,496	21%	2,920	57%
101-200 Hours	5,122	31%	1,054	21%
201+ Hours	4,734	29%	214	4%

Source: Grant recipient reports.

Academic Subjects/Activities Offered

During fiscal year 2009, 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

- English Language Arts (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 (Includes Drawing, Painting, Theater, Music & Dance)
- Character Education / Drug Resistance Education
- College Preparation
- Community Service Learning
- Competitive / Group Sports
- Computers and Technology
- Culinary Skills
- Drama
- Entrepreneurial
- Homework
- Media Technology (Includes Film Making, Writing, Print Media)
- Non-Competitive / Individual Sports
- Parenting / Adult Education
- Project Based Learning
- Physical Health Education / Nutrition
- Team Building

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 contains 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), behavior in the classroom, initiative, engagement in learning, problem solving skills, communication skills, and relations with adults*. 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: *learning skills (required), behavior in the program, initiative, engagement in learning, problem solving skills, communication skills, relationships with adults, and relationships with peers*.

Youth Version (SAYO-Y)

Between October 2008 and June 2009, grantees were asked to pilot a new, online youth survey at all program sites. The SAYO-Y was designed to collect information from youth in three main areas: *their program experiences, their sense of competence, and their future planning and expectations*.

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.

School Year SAYO Results

All 41 school districts and all 184 sites were included in the SAYO-Teacher (Academic and Intermediary Outcomes) and SAYO-Staff samples from the school year. In total, 9,100 SAYO surveys were collected from school-day teachers and 9,209 from after-school staff members. **Tables 7-9** 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 to post percentage changes by outcome.

SAYO-Teacher Academic Results

Table 7 shows that during the school year the most frequently surveyed academic outcomes by students' school-day teachers were mathematics problem solving and English language arts (ELA) written communication (each by 31 districts). The average percentage increase from pre to post survey ranged from 7 percent in social studies to 17 percent in mathematics problem solving.

Table 7: School Year SAYO-Teacher Academic Results, FY09

	<i>Social Studies</i>	<i>Science</i>	<i>ELA Reading</i>	<i>ELA Verbal Communication</i>	<i>ELA Written Communication</i>	<i>Math Communication</i>	<i>Math Reasoning</i>	<i>Math Problem Solving</i>
Number of Districts	7	15	27	27	31	29	21	31
Number of Students	1,121	2,280	6,646	4,837	6,398	4,265	4,172	6,973
Average Percentage Change (%+/-)	7%	11%	16%	13%	16%	16%	15%	17%

Source: Grant recipient reports.

SAYO-Teacher Intermediary Results

Table 8 below indicates that, during the school year, homework was the most frequently surveyed outcome by school-day teachers, as all but three of the 41 districts operating fiscal year 2009 21st CCLC programs collected data on this outcome. Communication and engagement were the next most commonly measured outcomes, with 37 and 36 districts surveying each of them respectively. The average percentage increase from pre to post survey ranged from 10 percent in behavior to 17 percent in problem solving and communication.

Table 8: School Year SAYO-Teacher Intermediary Results, FY09

	<i>Home-work</i>	<i>Beha- vior</i>	<i>Initia- tive</i>	<i>Engage- ment</i>	<i>Problem Solving</i>	<i>Commu- nication</i>	<i>Relations with Adults</i>
Number of Districts	38	26	25	36	28	37	28
Number of Students	9,100	6,016	5,321	8,555	7,851	7,978	6,781
Average Percentage Change (%+/-)	16%	10%	15%	13%	17%	17%	12%

Source: Grant recipient reports.

SAYO-Staff Results

Table 9 below shows the SAYO survey results reported by the school year after-school staff. Learning skills was the only outcome that districts were required to survey, and thus all 41 districts collected data on that outcome. Relationships with peers was the second most commonly measured outcome by districts, though it had the largest number of responses at the student level. The average percentage increase from pre to post survey ranged from 14 percent in behavior to 21 percent in initiative and communication.

Table 9: School Year SAYO-Staff Results, FY09

	<i>Learning Skills</i>	<i>Behavior</i>	<i>Initiative</i>	<i>Engagement</i>	<i>Prob. Solving</i>	<i>Communication</i>	<i>Rel. with Adults</i>	<i>Rel. with Peers</i>
Number of Districts	41	34	30	31	27	33	36	38
Number of Students	9,132	8,783	6,315	8,096	7,194	7,684	8,790	9,209
Average Percentage Change (%+/-)	18%	14%	21%	17%	19%	21%	18%	16%

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 2009 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 with disabilities. Students in the *Needs Improvement (NI)* and *Warning / Failing (W/F)* MCAS performance levels also made significantly greater gains than those in the *Advanced* and *Proficient (A/P)* levels on all of the measured ELA and mathematics outcomes. Note: Outcomes with an asterisk (*) indicate statistically greater gains.

Charts 3A-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 17 of the 23 outcomes measured.

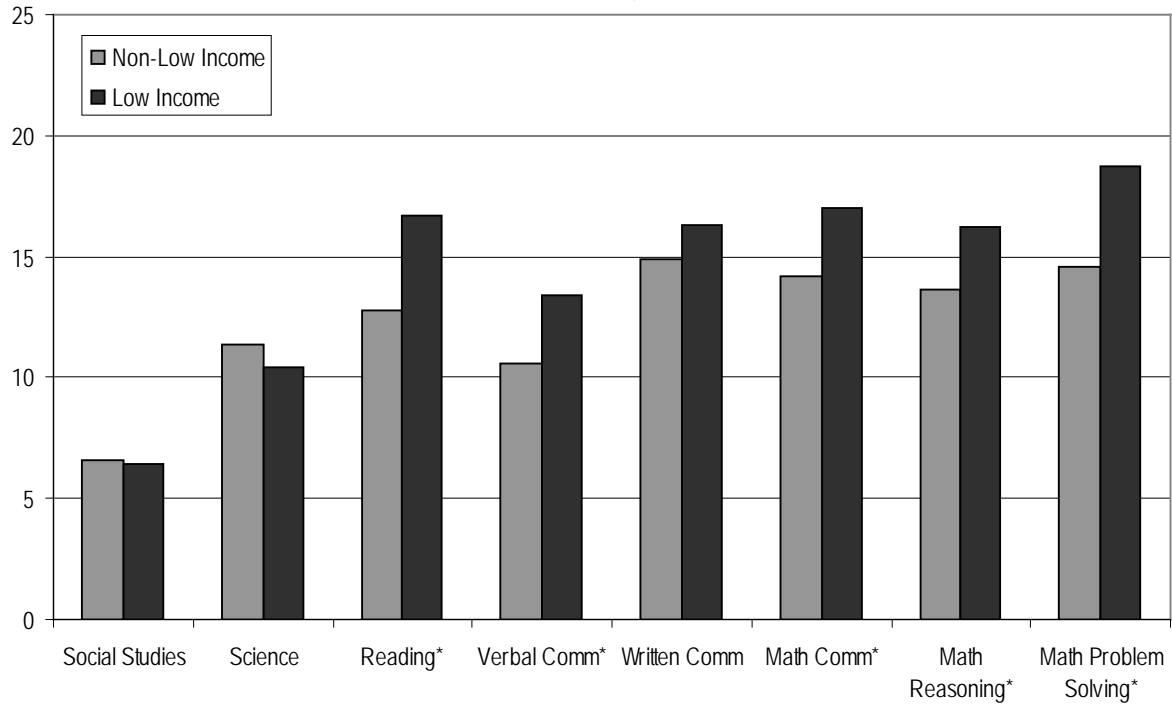
Charts 4A-C display the SAYO results of students who did and did not receive special education services. Students within this subgroup classification made significantly greater gains than those not in this subgroup on all of the 23 outcomes measured.

Charts 5A-C compare the SAYO results of students designated as limited English proficient (LEP) to those who were not. LEP students made statistically greater gains on 20 of the 23 outcomes measured. Most importantly, LEP students made significantly greater improvement than non-LEP students in reading and verbal communication.

Charts 6A & B 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 *Warning / Failing* and *Needs Improvement* levels made significantly greater gains than students in the *Advanced* and *Proficient* categories in all three ELA outcomes. In mathematics, students in the *Needs Improvement* and *Warning / Failing* levels also made significantly greater gains than students in the *Advanced* and *Proficient* categories in all of three of the mathematics areas measured.

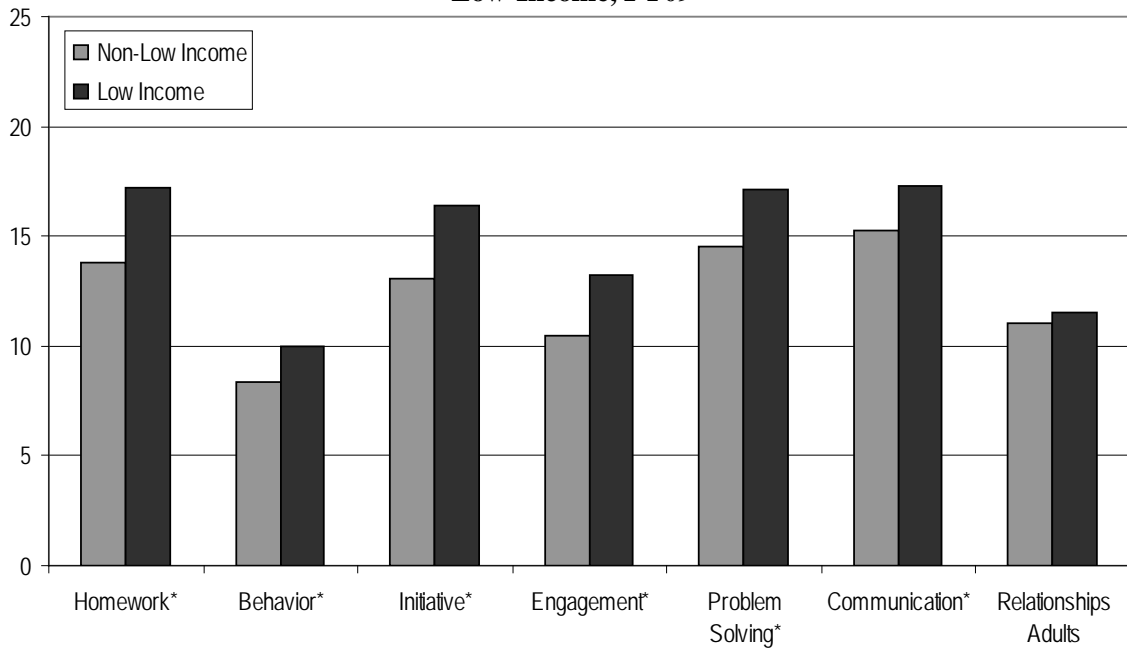
Student Performance Comparisons Based on Free or Reduced Price Lunch Status (Charts 3A-C)

Chart 3A: Average Percentage Improvement on SAYO-Teacher Academic Outcomes – Low-Income, FY09



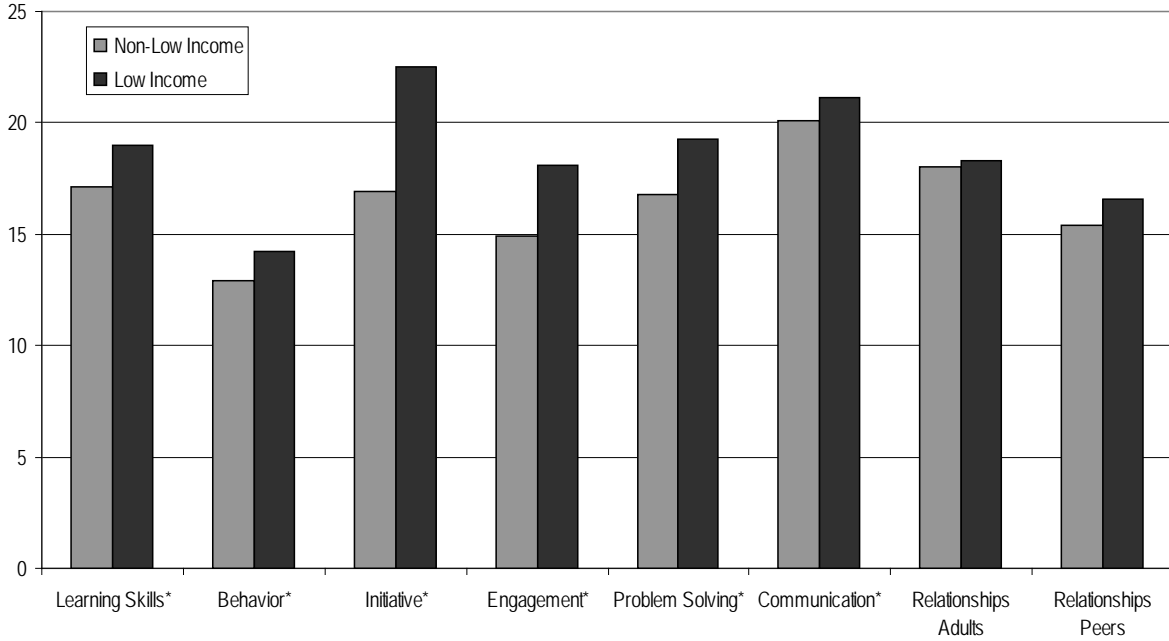
Note: *Statistically significant based on one-way ANOVA $p \leq .05$
Source: Grant recipient reports.

Chart 3B: Average Percentage Improvement on SAYO-Teacher Intermediary Outcomes— Low-Income, FY09



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

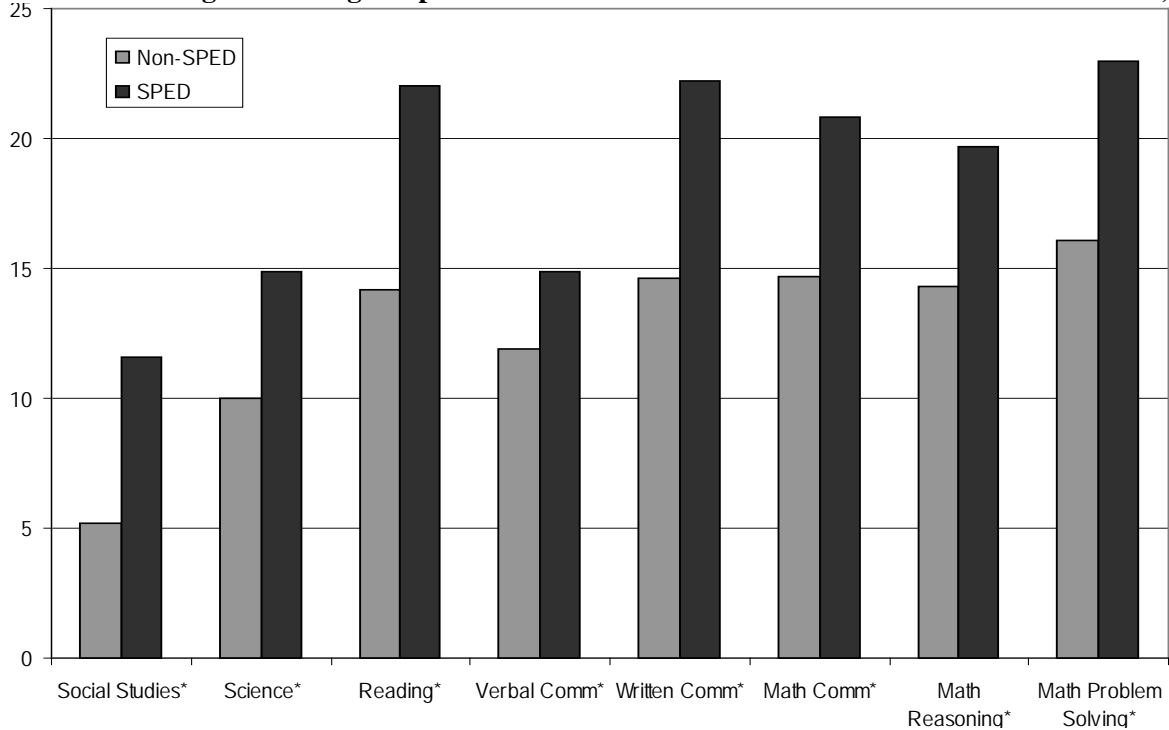
Chart 3C: Average Percentage Improvement on SAYO-Staff Outcomes—Low Income, FY09



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

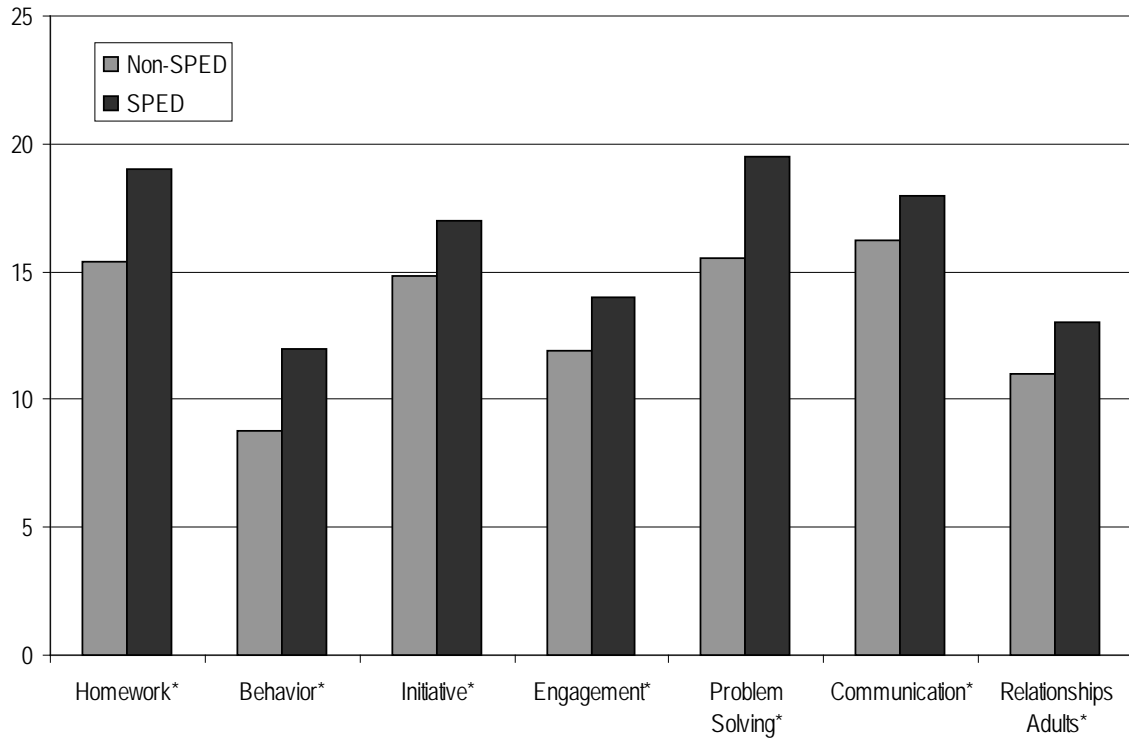
Student Performance Comparisons Based on Special Education (SPED) Status (Charts 4A-C)

Chart 4A: Average Percentage Improvement on SAYO-Teacher Academic Outcomes—SPED, FY09



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

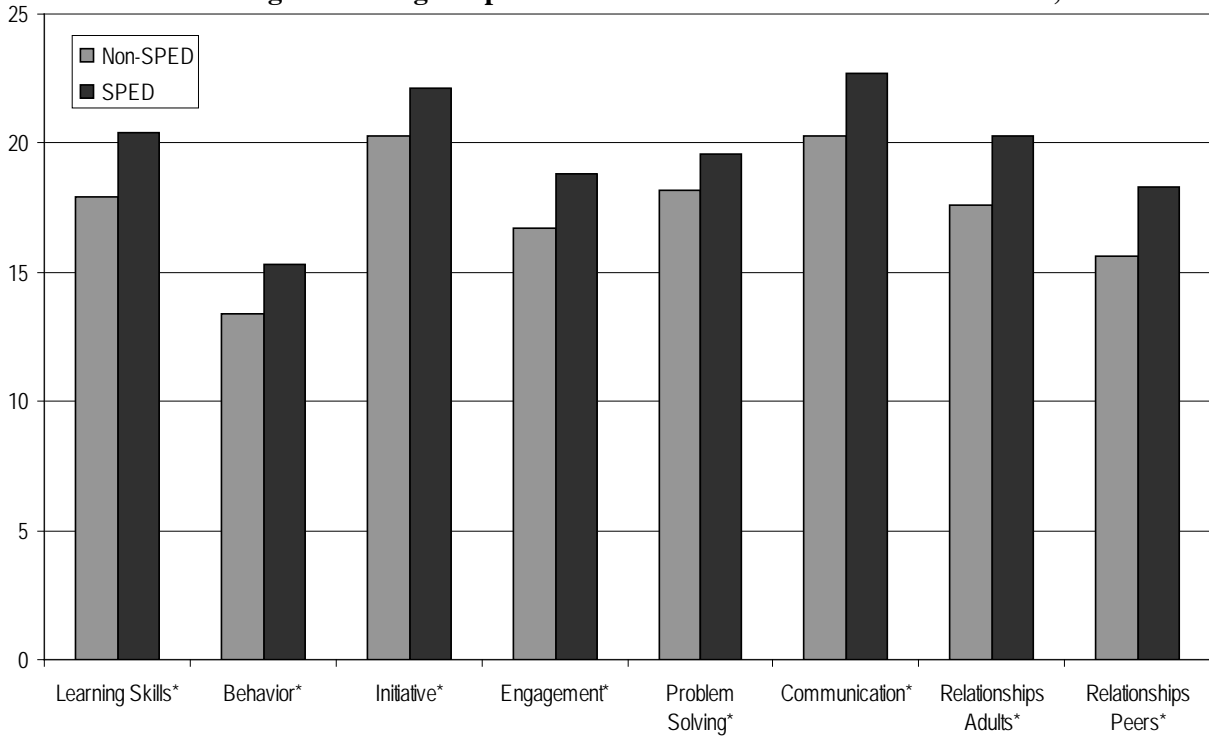
Chart 4B: Average Percentage Improvement on SAYO-Teacher Intermediary Outcomes—SPED, FY09



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

Source: Grant recipient reports.

Chart 4C: Average Percentage Improvement on SAYO-Staff Outcomes—SPED, FY09

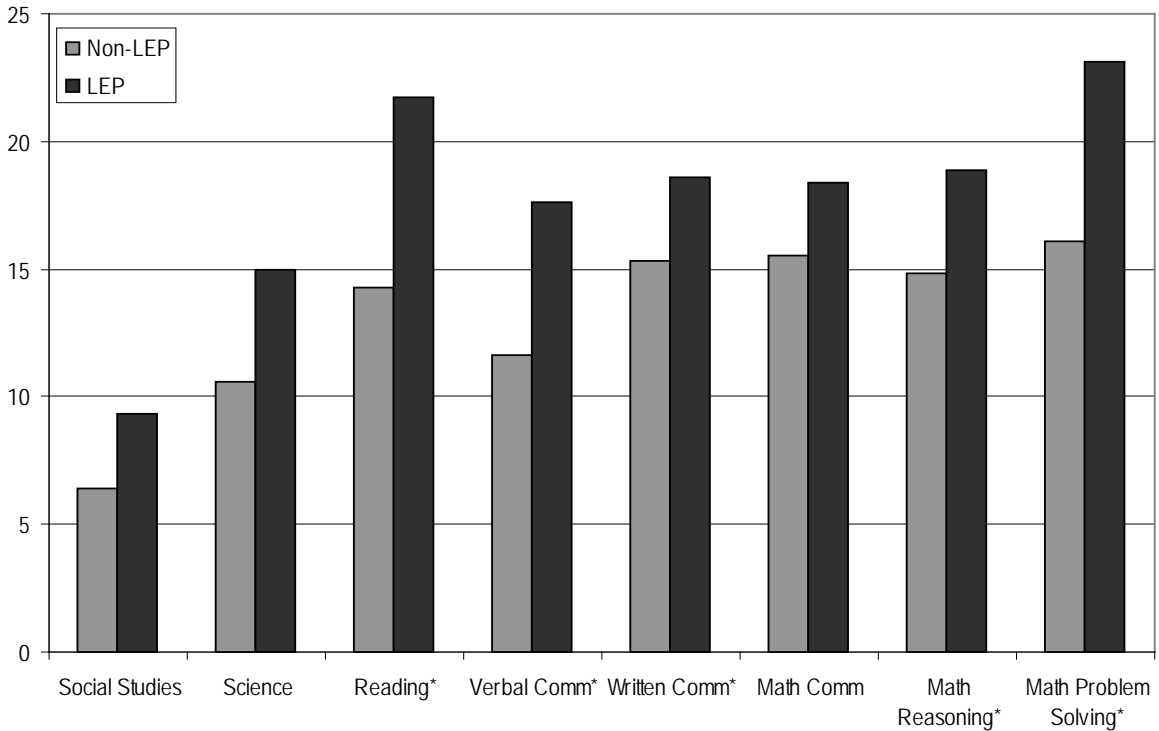


Note: *Statistically significant based on one-way ANOVA $p \leq .05$

Source: Grant recipient reports.

Student Performance Comparisons Based on Limited English Proficiency (LEP) Status (Charts 5A-C)

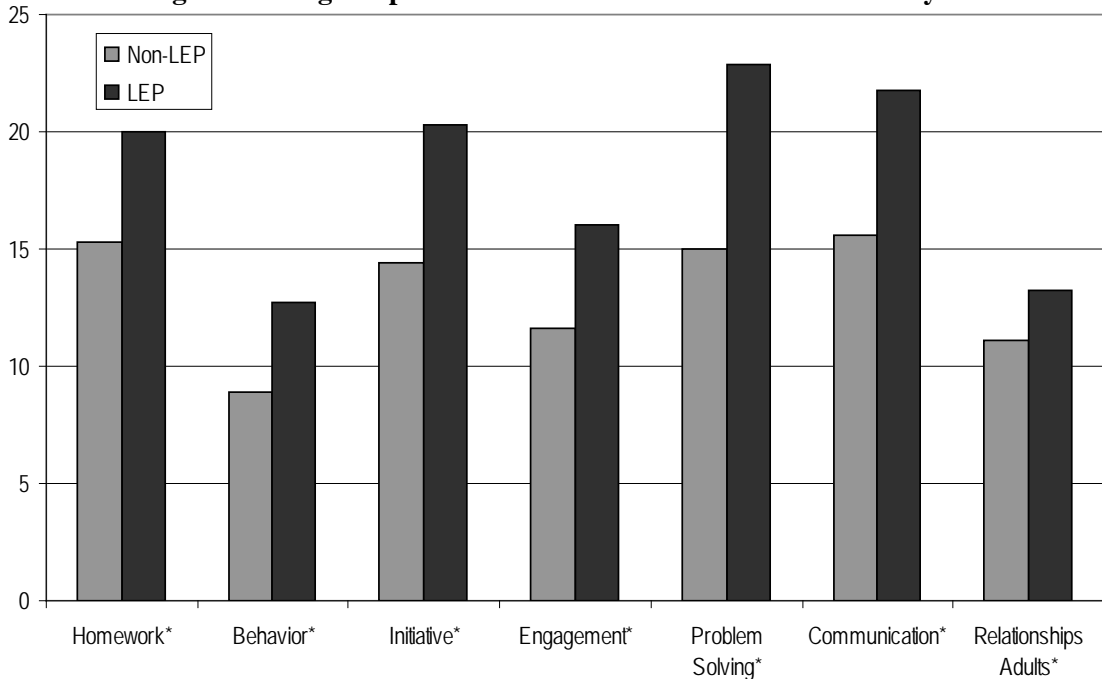
Chart 5A: Average Percentage Improvement on SAYO-Teacher Academic Outcomes—LEP, FY09



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

Source: Grant recipient reports.

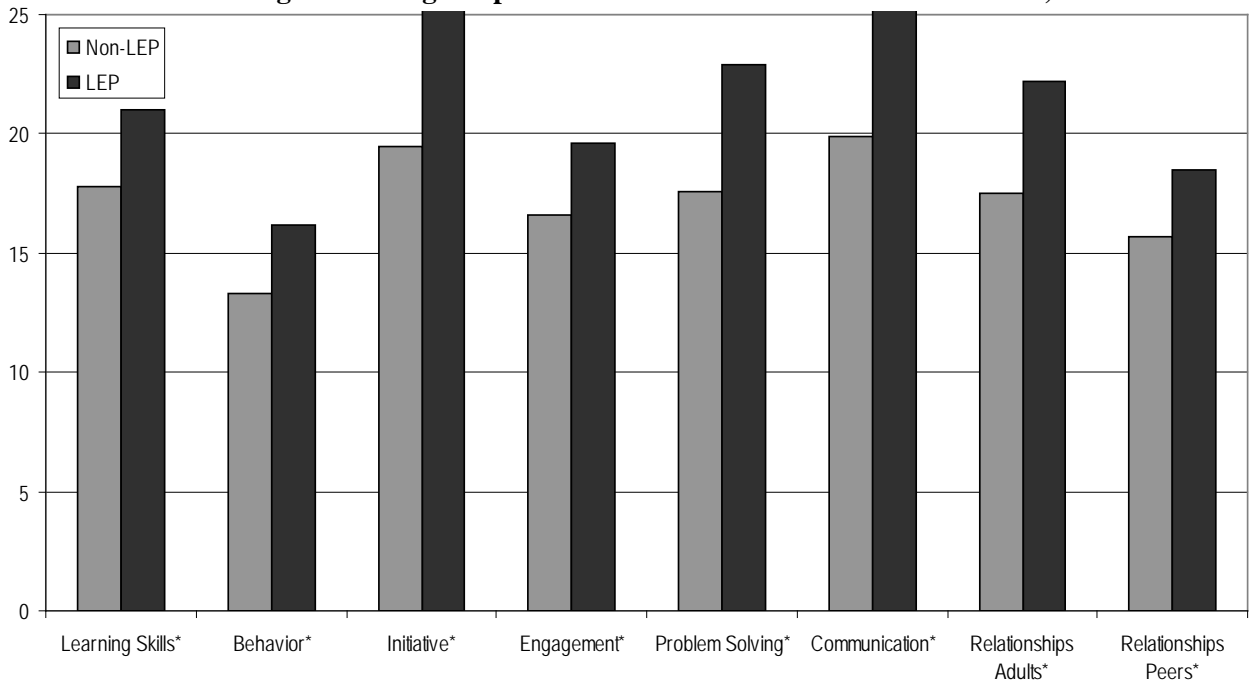
Chart 5B: Average Percentage Improvement on SAYO-Teacher Intermediary Outcomes—LEP, FY09



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

Source: Grant recipient reports.

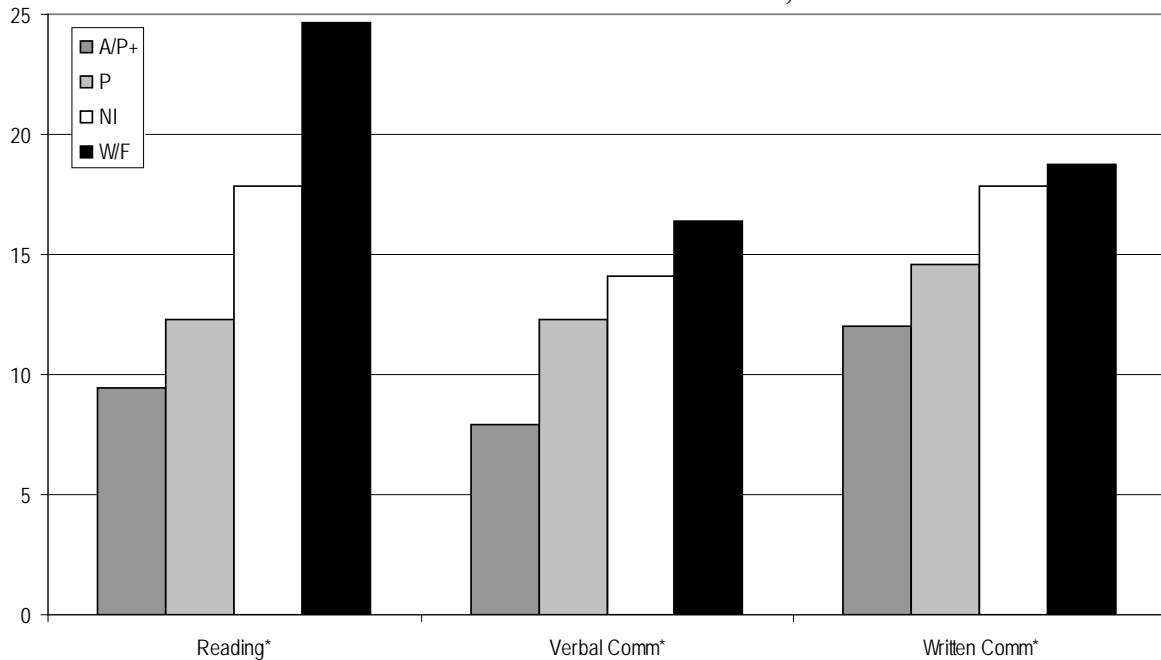
Chart 5C: Average Percentage Improvement on SAYO-Staff Outcomes—LEP, FY09



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

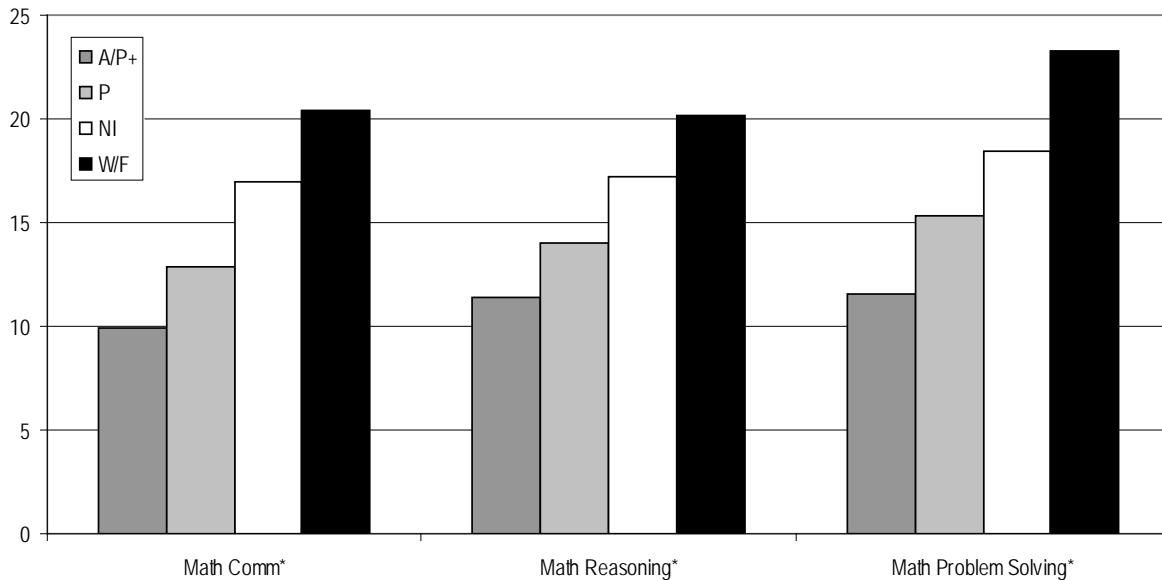
Student Performance Comparisons Based on MCAS Performance Levels (Charts 6A&B)

Chart 6A: Average Percentage Improvement on ELA SAYO-Teacher Outcomes based on ELA MCAS 2009 Performance Level, FY09



Note: *Statistically significant based on one-way ANOVA $p \leq .05$ for both A/P+ and NI/W&F levels.
 Source: 2009 MCAS mega file (grades 3-10) and grant recipient reports.

Chart 6B: Average Percentage Improvement on Mathematics SAYO-Teacher Outcomes based on Mathematics MCAS 2009 Performance Level, FY09



Note: *Statistically significant based on one-way ANOVA $p \leq .05$ for both A/P+ and NI/W&F levels.
Source: 2009 MCAS mega file (grades 3-10) and grant recipient reports.

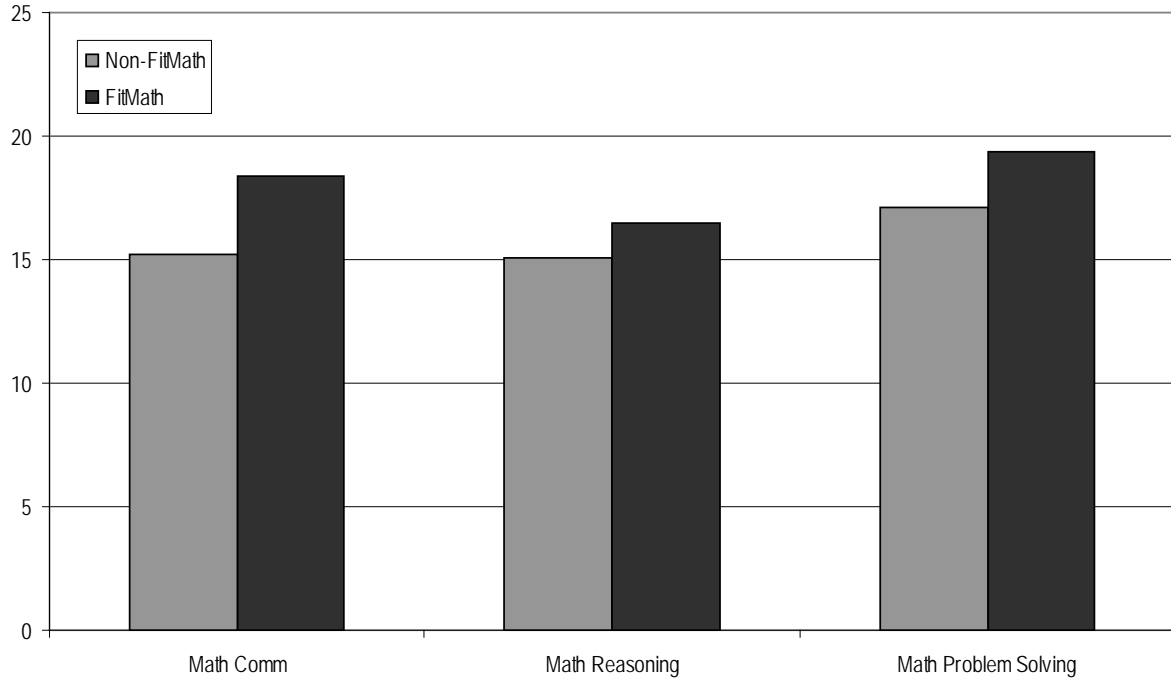
FitMath

During fiscal year 2009, 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 21st CCLC school year programs indicated that 1,038 students participated in FitMath in 16 districts. Students served in FitMath were in grades 1-8, with the majority (68 percent) being in grades K-5. Nearly 21 percent of FitMath students were designated as special education students, 74 percent of FitMath students received free or reduced price lunch, and approximately 20 percent were LEP. FitMath students who were measured by the SAYO (Survey of After-School Youth Outcomes) tool increased on average at least 16 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 three percentage points higher than their non-FitMath peers in mathematics communication, two percentage points higher in mathematics problem solving, and one percentage point higher in mathematics reasoning. FitMath participants also made statistically greater gains on all eight SAYO-Staff outcomes, with the greatest percentage point difference (10 points) being on problem solving skills.

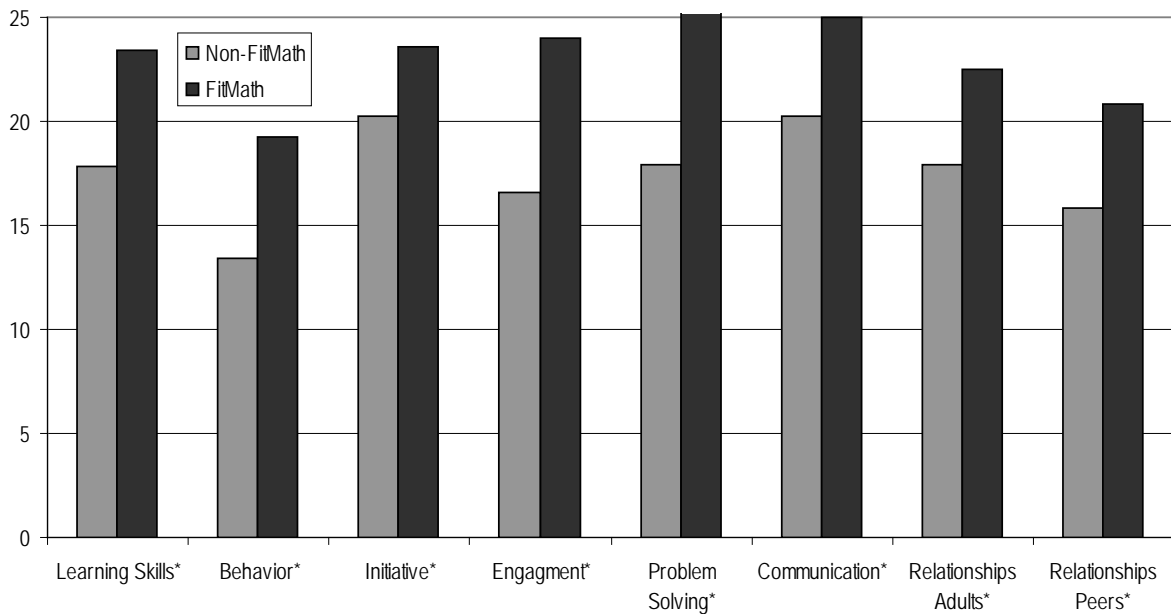
The following **Chart 7A** compares the percentage improvement on the SAYO-Academic mathematics outcomes among 21st CCLC students who did and did not participate in FitMath programs. **Chart 7B** compares the percentage improvement on SAYO-Staff outcomes.

Chart 7A: Percentage Improvement for 21st CCLC Participants on SAYO-Teacher Academic Mathematics Outcomes – FitMath, FY09



Source: Grant recipient reports.

Chart 7B: Percentage Improvement for 21st CCLC Participants on Selected SAYO-Teacher and Staff Outcomes – FitMath, FY09



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

Summer SAYO Results

Thirty-three (33) grantees ran summer programs at 94 sites. Their associated Survey of After-School Youth Outcomes (SAYO) results are described below. A total of 3,750 surveys were collected from summer program staff.

Tables 10 and **11** include the number of districts that surveyed a particular outcome area, the number of students surveyed by summer after-school staff, and the average percentage pre to post change in that outcome.

Summer SAYO-Academic Results

Table 10 below shows 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; as a result, only 26 of the 33 summer grantees chose to report SAYO-Academic results.

ELA verbal communication was the most commonly surveyed outcome by summer program staff followed closely by math problem solving and ELA reading. The average percentage increase from pre to post survey ranged from 14 percent in science to 19 percent in mathematics problem solving.

Table 10: Summer SAYO-Academic Results, FY09

	<i>Social Studies</i>	<i>Science</i>	<i>ELA Reading</i>	<i>ELA Verbal Communication</i>	<i>ELA Written Communication</i>	<i>Math Communication</i>	<i>Math Reasoning</i>	<i>Math Problem Solving</i>
Number of Districts	4	9	20	21	22	19	16	19
Number of Students	458	958	2,576	2,129	2,775	1,844	2,344	2,605
Average Percentage Change (%+/-)	17%	14%	16%	16%	18%	16%	17%	19%

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 11** below, the average percentage increase from pre to post survey ranged from 17 percent in behavior to 23 percent in initiative and relationships with adults.

Table 11: Summer SAYO-Staff Results, FY09

	<i>Learning Skills</i>	<i>Behavior</i>	<i>Initiative</i>	<i>Relations with Adults</i>	<i>Relations with Peers</i>
Number of Districts	33	33	33	33	33
Number of Students	3,748	3,750	3,712	3,715	3,710
Average Percentage Change (%+/-)	22%	17%	23%	23%	18%

Source: Grant recipient reports.

SAYO-Youth Pilot Results

Strength of SAYO-Y Measurement Scales

The results of psychometric testing show that all SAYO-Y scales (in all three surveys) contain items that work together to measure underlying constructs well, showing internal reliability scores of .70 or better. The internal reliability was highest for the sense of competence scales.

Distribution of Youth Responses

Surveys were completed by 5,341 youth in grades 4-12 during the spring of 2009. Pronounced ceiling effects (whereby many youth are rating at or towards the top of a scale) were present for two program experiences (PE) scales (enjoyment/engagement and supportive adults). A positive skew in youth's responses was present for all PE scales, except choice & autonomy. Pronounced to severe ceiling effects were present for all three future planning and expectations scales. *Overall, the ceiling effects observed were similar to findings from prior SAYO-Y data collection periods.*

Connections between SAYO-Y Scales

The results of testing reveals that SAYO-Y scales are associated with each other. In fact, all associations tested were statistically significant. Some associations between SAYO-Y scales were far stronger than others.

Program Experiences Scales

Each of the program experiences scales is highly associated with other PE scales. This suggests that the various PE scales work well together to measure a youth's experience of the program. PE scales were also found to be associated with many of the sense of competence and to a lesser extent, with some future planning & expectations scales. For instance, youth's experience of engagement & challenge, and having a supportive adult, were very strongly associated with their sense of competence with peers, and moderately associated with all other sense of competence areas. Youth's experience of the program's social environment was very strongly associated with their sense of competence with peers.

Youth's program experiences were also associated with youth's future planning and expectations, although to a lesser extent than with youth's sense of competence. All PE scales, but in particular youth engagement/challenge and supportive relationships, were strongly associated with the future planning/my actions scale. Far weaker associations were found with future planning/talk to an adult, and the weakest association was with future expectations. It is important to note that fairly strong associations between supportive adults and future planning and future expectations were observed in the fall 2008, but were not observed in the spring data. Small, but statistically significant correlations were found between youth's rating of supportive adults and engagement with youth's pre-post difference scores in future planning/talk to an adult and future planning/my actions scales. No associations were found between PE scales and differences in youth's future expectations scale.

Youth's program experiences were found to be extremely highly associated with youth's perception of the amount of gains they had made in personal and social and academic areas (two retrospective scales). Youth's experience of engagement and challenge showed the highest association with youth's perception of gains in personal/social areas. Youth's perception of having a supportive adult was also strongly associated with youth's perceptions of gains in personal/social and academic areas.

Youth's Sense of Competence

Youth's sense of competence as a learner and youth's sense of competence with peers were found to be highly associated with other sense of competence areas. The highest associations were between sense of competence as a learner, and youth's sense of competence in reading and writing. In addition, the extent of pre-post gains in youth's sense of competence in all areas, was found to be strongly associated with their retrospective ratings of whether the program had helped them make gains in that area. For instance, the degree of change pre to post in youth's sense of competence in science was associated at .28 level with their retrospective ratings of the program helping them in science.

SAYO-Y Site Differences

Two types of analyses related to differences in youth's responses by site were conducted. First, analyses were done to see if youth's spring 2009 responses to each of the SAYO-Y scale differed by site. Statistically significant differences by site were found for all SAYO-Y scales, except Future Expectations. Analyses for the College Planning scale could not be run due to an insufficient number of sites. The SAYO-Y scales with the most significant site differences were: Retrospective perceptions of gains made in academic and personal/social areas; engagement/challenge; choice & autonomy; and sense of competence in math, writing, and to a lesser extent in reading and science.

The second set of analyses explored the extent to which youth's gains/losses in SAYO-Y ratings from fall to spring, differed by site. Given that only very modest gains or losses were observed for any youth, it was far more difficult to find statistically significant differences by site. Yet, the extent of gains/losses was found to be statistically significant for the following scales: perceptions of the social environment; choice and autonomy; engagement and challenge; sense of competence as a learner, and sense of competence in writing.

SAYO-Y: Change Over Time

Pre-post difference scores were calculated for all SAYO-Y items and scales. Most scales showed little to no change from pre to post for the full sample, with the majority of scales showing a slight drop in average scale scores from fall to spring. An examination of youth's baseline scores shows that all scales had a disproportionate number of youth rating at the high end of the scale at baseline making positive gains impossible for this large segment of the sample. The only scales showing positive gains (albeit extremely small gains) for the full sample were: Sense of competence in math, future expectations, sense of competence as a learner; supportive adults, sense of competence in reading, and college planning. Only Supportive Adults showed a statistically significant gain over time for all youth (from 3.37 to 3.46).

The greatest differences in youth's gains/losses over time appear to be highly associated with their SAYO-Y baseline rating—i.e., those who rated themselves at the moderate or lower end of the scale made greater gains. In fact, for most scales, youth whose baseline rating was even just below the ceiling (e.g., 3.50) were shown to make statistically significant gains from pre to post. Those who had rated at the lower end of the scale made the most gains. This suggests that youth with room for improvement, are showing improvement. Given that many of the PE scales were associated at a modest, yet statistically significant level with youth's positive change in with their sense of competence ratings, it is likely that how youth are experiencing the program is playing some part in youth's gains over time.

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: FY09 21ST Century Community Learning Centers Grantees & Sites

GRANTEE	PROGRAM SITE
Barnstable	Barnstable Middle
Boston	Frederick (formerly New Boston Pilot) Gardner Haley School Hamilton Irving Kennedy School Lee The Literacy Center Mason Murphy O'Hearn Elementary Quincy Sacred Heart St. Columbkille (formerly St. Anthony) Stone Elementary Sumner Young Achievers
Brockton	Angelo Arnone Baker School BB Russell Belmont Davis East High School Kennedy North Plouffe Raymond South West
Brookline	Devotion School William H Lincoln
Cambridge	Afterworks Boys & Girls Club Cambridge Community Center Community Art Center Frisoli Youth Center Kennedy Longfellow King AS King Open Peabody School
Everett	Kevarian
Fall River	Doran School Greene School

Fitchburg	Academy Memorial McKay Reingold Elementary School South Street Elementary
Framingham	Cameron Fuller Walsh
Haverhill	Consentino Golden Hill Nettle Middle Pentucket Lake Silver Hill Tilton Whittier
Holyoke	Donahue El Arco Iris EN White Holyoke High School Kelly Peck School Sullivan
Leominster	Samoset Middle School Sky View Middle School
Lowell	Daley Greenhalge Lowell - Sullivan McAuliffe McAvinnue Murkland Rogers Shaughnessy
Malden	Beebe Forestdale Linden Salemwood
Methuen	Central Building Tenney Timony
New Bedford	Carlos Pacheco Carney Charles Ashley DeValles Dunbar Elementary Hathaway Holy Family/Holy Name Lincoln Elementary Thomas Rodman

North Adams	Brayton Conte Community Drury High School Greylock Sullivan
North Brookfield	NB School Youth Center
Orange	Dexter Park
Pittsfield	Conte Crosby
Prospect Hill Academy Charter School	Lower School Upper School
Quincy	Atlantic Middle Broad Meadows Middle Central Middle Lincoln-Hancock Marshall Montclair Elementary School Parker Elementary School Point Webster Snug Harbor Sterling Middle
Randolph	Donovan High School JFK Lyons Elem Martin Young Randolph Community Middle
Revere	Garfield Elementary School Garfield Middle School
Salem	Bentley Bowditch Collins MS Salem YMCA
Somerville	Argenziano East Somerville Community Kennedy West Somerville Neighborhood
Springfield	Bowles Duggan Forest Park Homer Kennedy Liberty Lincoln Pottenger White Zanetti Montessori
Taunton	Chamberlain Parker
Waltham	McDevitt

Wareham	Middle Minot
Webster	AJ Sitkowski
Winchendon	Clark Community Center Murdock Middle/High Toy Town Elementary
Winthrop	Cummings Middle School
Worcester	Burncoat Middle Canterbury Chandler Magnet Grafton Quinsigamond
Worcester	Belmont Community Claremont Academy (formerly A.L.L. School) Columbis Park School Elm Park Forest Grove Middle School Goddard Lincoln Street School Norrback Avenue School Rice Square School Roosevelt School Sullivan Union Hill Vernon Hill School Woodland Academy Worcester East Middle
Hampshire Educational Collaborative	Federal Street Gateway Great Falls Greenfield Middle Palmer (Converse Middle) Newton School (Greenfield) Philip Coburn W. Springfield White Brook Middle School Easthampton
Adams-Cheshire	CT Plunkett
Athol-Royalston	Middle School
Frontier	Sunderland Elementary Whately Elementary
Gill-Montague	Sheffield Elementary School
Marthas Vineyard	West Tisbury
Triton	Salisbury Elementary Triton Middle
Quaboag Regional	Warren Community Elementary