National Institute on Out-of-School Time at the Wellesley Centers for Women (NIOST)

Research Brief

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Summer Enhancement Grant Programs 2014

*Prepared for:*

The Massachusetts Department

of Elementary and Secondary Education

# Introduction

During the summer of 2014, the Massachusetts Department of Elementary and Secondary Education 21st Century Community Learning Centers (ESE 21st CCLC) Summer Enhancement Grant Program funded 10 summer learning programs with a special emphasis on utilization of project-based learning approaches, outreach to diverse learners, and a blended academic and enrichment learning approach. Each of the selected sites had existing summer programs in place, and three of the sites (North Adams, Triton Regional, and Wareham school districts) had previously participated in the Summer Enhancement Grant Pilot. One of the key purposes of the Summer Enhancement Grant Program was to expand the best practices identified through the pilot phase with an emphasis on implementing high-quality, academically enriching summer learning experiences that can help to mitigate summer learning loss. Program sites were selected through a rigorous request-for-proposal process. Eight programs served elementary age youth and two programs served high school age youth.

The 10 selected program sites served high proportions of low-performing students from low-income families, coalesced around a variety of curricular themes, and engaged in multiple partnerships with local community educational and cultural organizations. Program content, presented in the context of a blended academic and enrichment learning experience, generally focused on reinforcing the academic skills learned during the school year and helping prepare students to succeed in the upcoming school year. A profile of participating program sites is in Table 1. This Brief presents findings from research activities conducted by the National Institute on Out-of-School Time (NIOST) at Wellesley Centers for Women at Wellesley College.

The Wellesley Centers for Women, of which NIOST is a part, is one of the largest research-and-action organizations in the world. For over 35 years, NIOST has successfully brought national attention to the importance of children and youth during the out-of-school time hours. NIOST provides leadership in many areas of out-of-school time system building, policy development, program research and evaluation, increased standards, professional development, and program quality improvement.

**Table 1. Profile of Summer Enhancement Program Sites**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Program Site** | **Boston**  **English High School** | **Fitchburg**  **High School** | **Lowell**  **Shaughnessy Elem. School** | **New Bedford**  **Lincoln Elem. School** | **North Adams**  **Brayton K–7 School** | **Pittsfield**  **Reid Middle School** | **Triton**  **Salisbury Elem. School** | **Wareham**  **Middle School** | **West Springfield**  **Coburn Elem. School** | **Whitman**  **Hanson Reg. High School** |
| Youth Served | 50 | 95 | 100 | 60 | 281 | 50 | 60 | 225 | 70 | 45 |
| Grades Served | 9 | 6–8 | K–4 | 1–5 | 3–6 | 8–9 | K–2 | 8–9 | K–5 | 9 |
| Program Weeks | 6 | 4 | 6 | 4 | 5 | 5 | 6 | 5 | 5 | 4.5 |
| Hours Offered | 213 | 96 | 120 | 100 | 140 | 130 | 144 | 120 | 90 | 152 |
| Academic Emphasis | ELA,  Math | STEAM | ELA, Science | Science | Reading, Math, Science | STEM | Reading, Math | STEAM | ELA,  Math | Math, Science |

# *Note*. Fitchburg High School was location for program serving grade 6-8.

# Participants

There were generally an equal proportion of boys and girls attending the summer enhancement programs, except for Boston English, which was 70 percent male, and Pittsfield, which was almost 70 percent female. Sixty-three percent of all youth were white, 15 percent Hispanic, 8 percent black, and 8 percent Asian. A small proportion of children (6 percent) were reported by school districts as multi-racial. Sixty-eight percent of the children served in programs qualified for free- or reduced-priced lunch in their districts. Nineteen percent of the total youth population served had limited English proficiency (LEP) status, which was largely driven by the high proportion (87 percent) of LEP students in the West Springfield program. The mean number of hours that youth attended across programs was 114 hours (see Table 2).

**Table 2. Mean Number of Hours Youth Attended by Program Site**

|  |  |  |
| --- | --- | --- |
| **Program Site** | ***N*** | **Mean Attendance Hours** |
| Boston English High School | 64 | 194 |
| Fitchburg High School | 82 | 84 |
| Lowell Shaughnessy Elementary School | 63 | 105 |
| New Bedford Lincoln Elementary School | 52 | 93 |
| North Adams Brayton K–7 School | 223 | n/a |
| Pittsfield Reid Middle School | 32 | 136 |
| Triton/Salisbury Elementary School | 63 | 161 |
| Wareham Middle School | 67 | 106 |
| West Springfield Coburn Elementary School | 95 | 63 |
| Whitman-Hanson Regional High School | 42 | 124 |

# Study Methods

Data for this brief were collected through (a) program observations, (b) review of child-level assessment data collected by program leaders, and (c) post-program school-level data provided by program leaders and school district research or data managers.

The Survey of Academic Youth Outcomes(SAYO) was used to collect child-level assessment data. SAYO is designed specifically for use in out-of-school time programs and is a research-based scientifically tested instrument. Outcomes included for assessment included a combination of academic and intermediary skill domains. These outcomes included Science, Social Science, Reading, Verbal Communication, Written Communication, Mathematics, Mathematics Problem Solving, Learning Skills, Behavior, Initiative, Relations with Adults, Relations with Peers, and Problem Solving. Each outcome area is measured by asking teachers and staff to respond to four or five questions related to observable youth behaviors.

Each program was asked to select a minimum of two of the academic SAYO domains for measurement. In addition to the academic domains, programs were asked to select intermediary outcomes from the list of eight options: (1) Learning Skills (required), (2) Behavior, (3) Engagement, (4) Initiative, (5) Problem Solving, (6) Communication, (7) Relations with Adults, and (8) Relations with Peers.

The Assessment of Program Practices Tool (APT) was used to evaluate characteristics related to the overall structure/organization and functioning of the program, as well as features of the academic and enrichment activities. During a program visit, researchers observed the overall program according to five dimensions: (a) informal program time (e.g., arrival time), (b) academic organization, (c) youth participation, (d) staff management of academic learning time, and (e) overall social-emotional environment. In addition, researchers evaluated each of the academic and enrichment activities that they observed according to six dimensions: (a) organization and nature of the activity, (b) staff ability to promote youth engagement and stimulate thinking, (c) staff ability to positively guide youth behavior, (d) staff build relationships and support individual youth, (e) youth participation in activity time, and (f) youth relations with others.Researchers rated each of the items that comprised these dimensions on a scale from 1 *(not true)* to 4 *(very true).* Individual item ratings for each of the dimensions were combined, and then an overall mean score was created for each of the dimensions.

Data for examining summer learning loss were collected in the fall through program leaders and associated school personnel. Given the number of school districts participating, there was great variety in the assessments and in the rigor of assessments utilized to investigate possible impacts of summer participation on summer learning loss.

# Findings

***SAYO Assessment***

SAYO data were collected from all 10 programs participating in the 2014 Summer Enhancement Grant Program. Aggregate results show improvement from pre- to post-assessment overall for youth in almost every outcome area measured. One outcome area, Social Science, showed a slight decrease in ratings from pre- to post-assessment. Program teachers generally rated intermediary skill gain higher than academic (Social Science, Science, Reading, Communication, and Mathematics) skill gain (see Table 3).

**Table 3. SAYO Percentage Change from Pre- to Post-Assessment for All Youth**

| **SAYO Outcome** | **N** | **Mean Percent Change** |
| --- | --- | --- |
| Social Science | 64 | -5% |
| Science | 383 | 14% |
| Reading | 451 | 13% |
| Verbal Communication | 349 | 11% |
| Written Communication | 349 | 11% |
| Mathematics | 222 | 5% |
| Mathematics Problem Solving | 122 | 23% |
| Learning Skills | 801 | 23% |
| Behavior | 749 | 20% |
| Initiative | 801 | 25% |
| Relations with Adults | 801 | 24% |
| Relations with Peers | 801 | 22% |
| Problem Solving | 52 | 40% |

More than 85 percent of youth participating in this year’s summer learning program were enrolled in elementary-age programs. SAYO data indicate that on average youth in elementary-age programs showed improvement from pre-assessment to post-assessment in all outcome areas measured. Average gains ranged from 10 percent to 46 percent. High school youth showed less improvement from pre-assessment to post-assessment but were rated higher on average at pre-assessment than elementary children and sample size was much smaller. For high school youth, average gains for academic outcomes ranged from 1 percent to 2 percent, while average gains for intermediary outcomes ranged from 12 percent to 24 percent (see Table 4).

**Table 4. SAYO Percentage Change from Pre- to Post-Assessment by Grade Cohort**

| **SAYO Outcome** | **N** | **Mean Percent Change** |
| --- | --- | --- |
| **Elementary School Youth** |  |  |
| Science | 341 | 16% |
| Reading | 345 | 17% |
| Verbal Communication | 243 | 16% |
| Written Communication | 243 | 14% |
| Mathematics | 116 | 10% |
| Mathematics Problem Solving | 122 | 23% |
| Learning Skills | 695 | 25% |
| Behavior | 643 | 21% |
| Initiative | 695 | 27% |
| Relations with Adults | 695 | 24% |
| Relations with Peers | 695 | 22% |
| Problem Solving | 52 | 46% |
|  |  |  |
| **High School Youth** |  |  |
| Social Science | 64 | -5% |
| Science | 42 | 1% |
| Reading | 106 | 1% |
| Verbal Communication | 106 | 1% |
| Written Communication | 106 | 2% |
| Mathematics | 106 | 0% |
| Learning Skills | 106 | 13% |
| Behavior | 106 | 12% |
| Initiative | 106 | 15% |
| Relations with Adults | 106 | 24% |
| Relations with Peers | 106 | 19% |

## APT Observation

Using the APT, researchers conducted program observations at the 10 summer enhancement sites to identify best practice and support continuous program improvement. One observation was conducted at each site. A total of 35 separate activity sessions were observed across the 10 programs.

APT ratings are shown in Tables 5–7. Table 5 separates ratings by population served. Quality practices across programs were very strong based on the rating metric of the APT tool. A rating of “3” signals a best practice is “mostly true,” and a rating of “4” signals a best practice is “very true.” High school programs were rated slightly higher than programs serving elementary and middle school youth, although it should be noted that the high school group contained only two programs. Tables 6 and 7 present APT ratings for each program including at the overall program level and at the activity level. Activity-level ratings are aggregated across all activities observed at that site. Activity delivery was particularly strong in the New Bedford, Triton/Salisbury, Wareham, and Whitman-Hanson programs. All programs demonstrated strong overall organization, offered a wide breadth of activities, and provided learning environments conducive to fostering positive social-emotional experiences for children and youth.

**Table 5. APT Domain Ratings for All Program Sites**

| **APT Domain** | **Ratings for Elementary and Middle School Programs** | **Ratings for High School Programs** |
| --- | --- | --- |
| Arrival Time | 3.61 | n/a |
| Transitions | 3.80 | n/a |
| Informal Program Times |  |  |
| Staff Approaches | 3.71 | 4.00 |
| Youth Approaches | 3.88 | 4.00 |
| Program Space Supports Goals of Programming | 3.85 | 4.00 |
| Overall Program Schedule & Offerings | 3.58 | 3.90 |
| Overall Social-Emotional Environment | 3.92 | 3.88 |
| Organization | 3.79 | 4.00 |
| Nature of Activity | 3.06 | 3.18 |
| Staff Promote Engagement & Stimulate Thinking | 3.11 | 3.72 |
| Staff Positively Guide Behavior | 3.81 | 3.76 |
| Staff Build Relationships – Support Individual Youth | 3.54 | 3.66 |
| Youth Relations w/Adults | 3.68 | 3.59 |
| Youth Participation | 3.37 | 3.51 |
| Peer Relations | 3.78 | 3.93 |

**Table 6. Ratings for APT Activity Domains by Program Site**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **APT Activity Domain** | **All Sites** | **Boston** | **Fitchburg** | **Lowell** | **New Bedford** | **North Adams** | **Pittsfield** | **Triton/Salis** | **Wareham** | **West Springfield** | **Whitman-Hanson** |
| Organization | 3.79 | 4.00 | 3.92 | 4.00 | 4.00 | 3.81 | 2.89 | 4.00 | 4.00 | 3.67 | 4.00 |
| Nature of Activity | 3.06 | 2.85 | 2.88 | 3.69 | 3.75 | 2.82 | 2.67 | 3.13 | 3.25 | 2.33 | 3.50 |
| Staff Promote Engagement & Stimulate Thinking | 3.11 | 3.60 | 3.11 | 3.96 | 4.00 | 2.69 | 2.38 | 3.43 | 3.05 | 2.26 | 3.83 |
| Staff Positively Guide Behavior | 3.81 | 3.77 | 3.79 | 3.85 | 3.90 | 3.80 | 3.82 | 3.92 | 4.00 | 3.44 | 3.75 |
| Staff Build Relationships – Support Individual Youth | 3.54 | 3.56 | 3.53 | 3.55 | 3.78 | 3.48 | 3.44 | 3.90 | 3.57 | 3.09 | 3.75 |
| Youth Relations w/Adults | 3.68 | 3.60 | 3.83 | 3.75 | 4.00 | 3.71 | 3.22 | 4.00 | 3.44 | 3.44 | 3.58 |
| Youth Participation | 3.37 | 3.36 | 3.33 | 3.67 | 4.00 | 3.23 | 2.80 | 3.50 | 3.40 | 3.02 | 3.65 |
| Peer Relations | 3.78 | 3.87 | 3.83 | 3.92 | 4.00 | 3.71 | 3.56 | 4.00 | 3.78 | 3.44 | 4.00 |

*Note*. APT items are reported on a scale ranging from 1 (*not true*) to 4 (*very true*).

**Table 7. Ratings for APT Overall Program Domains by Program Site**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **APT Overall**  **Program Domain** | **All Sites** | **Boston** | **Fitchburg** | **Lowell** | **New Bedford** | **North Adams** | **Pittsfield** | **Triton/Salis** | **Wareham** | **West Springfield** | **Whitman-Hanson** |
| Arrival Time | n/a | n/a | 4.00 | 4.00 | 4.00 | 3.50 | 3.00 | n/a | 3.50 | 3.25 | n/a |
| Transitions | n/a | n/a | 4.00 | 4.00 | 4.00 | 3.29 | 3.14 | 4.00 | 4.00 | 4.00 | n/a |
| Informal Program Times |  |  |  |  |  |  |  |  |  |  |  |
| Staff Approaches | n/a | n/a | 3.75 | 4.00 | 3.67 | 3.75 | 3.50 | 4.00 | 4.00 | 3.00 | 4.00 |
| Youth Approaches | n/a | n/a | 4.00 | 4.00 | 4.00 | 3.50 | 3.75 | 4.00 | 4.00 | 3.75 | 4.00 |
| Program Space Supports Goals of Programming | 4.00 | 4.00 | 4.00 | 4.00 | 3.80 | 4.00 | 3.67 | 4.00 | 4.00 | 3.33 | 4.00 |
| Overall Program Schedule & Offerings | 4.00 | 4.00 | 3.60 | 4.00 | 4.00 | 3.60 | 2.80 | 3.60 | 4.00 | 3.00 | 3.80 |
| Overall Social-Emotional Environment | 3.75 | 3.75 | 4.00 | 4.00 | 4.00 | 3.67 | 4.00 | 4.00 | 4.00 | 3.67 | 4.00 |

*Note*. APT items are reported on a scale ranging from 1 (*not true*) to 4 (*very true*). “Informal Program Times” did not take place in every program. “Arrival” was not included in the Teen APT version.

## Summer Learning Loss – Site Summaries[[1]](#footnote-1)

**Boston**

Grade point average (GPA) data were collected for English High School students (*N* = 48) who participated in the summer enhancement program. GPA information collected included final GPA posted for the 2013–2014 school year, cumulative GPA up to first quarter 2014, and GPA specifically for first quarter 2014. Sixty-five percent of students participating in the summer enhancement program improved their cumulative GPA from final school year GPA 2013–2014 through first quarter cumulative GPA. Paired sample analysis showed that mean GPA in June 2014 rose from 1.80 to 1.84, representing significant change from end of school year through first quarter, *p* < .01. Comparison group analysis was not available. GPA in the range of 1.84 represents a C- in letter grade equivalents.

**Fitchburg**

Students across the Fitchburg district participated in the PARCC, MCAS, DIBELS/AIMSweb, GRADE/Galileo Math, and Writing Performance Assessments during the spring of 2014.

Due to district Common Core alignment changes, some of the assessments were not repeated for the fall 2014. Available data were collected from district Math and ELA coaches to investigate summer learning loss. DIBELS[[2]](#footnote-2)/AIMSweb[[3]](#footnote-3) scores were available for 22 of 84 summer participants across a mix of grade levels. For the 22 students with pre/post assessment data, there was a slight decline between spring and fall scores. Sample size was too small for significance testing.

**Lowell**

The Fountas and Pinnell (F&P), a benchmark assessment that can be used to identify a student's current reading level and progress along a gradient of text levels over time, was administered to students participating in the summer enhancement program at Shaughnessy Elementary School. The initial administration of the F&P was in spring 2014, prior to the start of the summer program. The assessment was re-administered two weeks after school started in September 2014. Given that the assessment is administered on either side of the summer learning experience, there is an opportunity to compare growth between the summer enhancement program participants and their peers, although participation of the peer group in summer learning or other type of experiences over the summer was unknown. Forty-seven percent of kindergarteners (2013–2014 school year) participating in the summer enhancement program increased their scores from spring to fall compared to 59 percent of their nonparticipating peers. These kindergarten students were noted by program leaders as the most academically at-risk group enrolled for the summer. Rising second-, third-, and fourth-grade students participating in the summer enhancement program were more likely than their peers to show improved assessment scores in the fall. Sixty-nine percent of first graders, 74 percent of second graders, and 86 percent of third graders improved their assessment scores compared to 57 percent, 42 percent, and 67 percent of nonparticipating peers respectively.

**New Bedford**

The Galileo ELA and Mathematics assessments were administered to all students at Lincoln Elementary School (K–5) in spring 2014 as the end-of-year benchmark, and then again in the fall of 2014 as the beginning-of-year benchmark assessment. On average, the ELA spring benchmark score across all grades was 68.3. The ELA fall benchmark score was 64.3, for an average loss of 4 points. On average, the Mathematics spring benchmark score was 76.4. The Mathematics fall benchmark score was 59.6, for an average loss of 16.8 points. Data were collected for 61 students in grades 2–5 enrolled in the summer enhancement program. For these students, the average ELA loss was 1.1 points while the average Mathematics loss was 8.7 points.

**Triton/Salisbury**

Data were collected for 149 children attending the summer enhancement program at Salisbury Elementary School, including DIBELS and Grade Level assessments administered in fall 2014 and spring 2014. Review of pre/post assessments showed mixed results, with children in kindergarten, grade 2, and grade 3 showing negative change from spring to fall, while children in grade 1 showed positive change. DIBELS assessment categories utilized were (a) Intensive Need for Support, (b) Strategic Need for Support, and (c) Core Instruction. Kindergarten and First Grade DIBELS focused on DIBELS composite score. Second Grade DIBELS focused on Oral Reading Fluency/Words Correct Score since a composite score is not offered. Third-grade students were assessed using scores for the GRADE (Group Reading Assessment and Diagnostic Evaluation). Stanine descriptors utilized were (a) Intensive Need for Support (Stanine 1–3), (b) Strategic Need for Support (Stanine 4), and (c) Core Instruction (Stanine 5 and above).

At pre-assessment in the spring, 18 percent of the kindergarten sample tested into the Intensive Support category, while 36 percent tested into the Intensive category in the fall. The percent of children testing into the Strategic Support category rose from 12 percent to 21 percent from spring to fall. The percent of first graders testing into Intensive Support dropped by 5 percent from spring (19 percent) to fall (14 percent). Percent of children in Core Support remained the same. Second graders testing into Intensive Support rose from 27 percent in the spring to 39 percent in the fall. Fifteen percent of the third graders tested into Stanine 1–3 on the spring assessment, and this rose to 20 percent of third graders in the fall.

**Wareham**

Students in the Wareham school district participated in the DIBELS assessment during spring 2014 and the Formative Assessment System for Teachers (FAST) during fall 2014. The FAST includes a variety of subtests for early, adaptive, and curriculum-based reading and has been positively evaluated for its predictive utility and compatibility to the Minnesota Comprehensive Assessment – III. Spring and fall assessment scores for 49 students participating in the Community, Academic, Recreation, and Enrichmentprogram (CARE) were compared to scores for 43 non-CARE participants (multiple grade levels in both groups). Assessment results are reported in three “need” categories: High Need, Low Need, and Some Need. Proportionally, more students participating in the CARE program shifted from “High Need” in the spring to “Low Need” or “Some Need” in the fall. In the spring, 55 percent of CARE students tested in the “High Need” category and 37 percent of CARE students tested in the “Low Need” category compared 42 percent and 26 percent of the non-CARE students. Fall 2014 assessment indicated only 27 percent of CARE students remained in the “High Need” category and 41 percent tested into the “Low Need” category compared to 35 percent and 42 percent of non-CARE students. Identification in the “Some Need” category for CARE students shifted from 8 percent of students in the spring to 33 percent of students in the fall.

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**West Springfield**

The Benchmark Assessment System (BAS), the district measurement instrument for reading, was administered to district students in spring 2014 and then re-administered two weeks after school started in September 2014. Coburn’s summer enhancement program population was primarily LEP. Second graders in the summer program cohort showed a 2 percent increase in scores, while a random sample of peer students (non-LEP) showed no change. Third-grade summer program students also showed a slight increase in scores (1 percent), while their peers decreased 3 percent. Summer program students in grades 4 and 5 showed a similar improvement pattern compared to peers, with summer students improving scores by 2 percent within each grade and peers testing lower in the fall than in the spring assessment (-2 percent).

# Summary

Following three summers of the Summer Enhancement Grant Pilot, a successful model for organizing and supporting high-quality summer learning experiences was expanded across the state to seven additional 21st CCLC program sites. Each of these sites had prior knowledge in managing school year and summer out-of-school time learning experiences for children and youth, which likely contributed to their evident success in planning and executing well-organized and structured summer learning programs. Youth outcome assessment data, collected through teacher surveys, paint a very positive picture of the value added in social-emotional and academic skill gain for participating children and youth. Youth showed particularly high ratings in relationship building with adults and peers. High participation levels by children and youth suggest a substantial investment by each school community in creating engaging blended academic and enrichment learning experiences that feature extensive community partnerships and pre-program planning.

Summer learning loss data were collected in a variety of ways, using a mixture of assessment instruments and approaches, and therefore offer only modest insight into potential associations of participation in summer programs and reduction of summer learning loss. The most compelling positive findings are likely those from Wareham in which summer participants were more likely to return to school in the fall demonstrating “lower academic need” than their peers. A more rigorous research and data collection commitment by school districts with participating sites in the Summer Enhancement Grant Program will better inform how a blended academic and enrichment summer learning experience can contribute to student achievement and potentially reduce summer learning loss.

**This Research Brief was prepared by NIOST at Wellesley College. For more information on the research findings, contact:**

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1. Summer learning loss data not available for all sites. [↑](#footnote-ref-1)
2. The **Dynamic Indicators of Basic Early Literacy Skills (DIBELS)** are a set of procedures and measures for assessing the acquisition of early literacy skills from kindergarten through sixth grade. They are designed to be short (one minute) fluency measures used to regularly monitor the development of early literacy and early reading skills. [↑](#footnote-ref-2)
3. **AIMSweb** is a general outcome measurement, a form of **curriculum-based measurement (CBM),** used for universal screening and progress monitoring. This form of brief assessment measures overall performance of key foundational skills at each grade level. [↑](#footnote-ref-3)