**Massachusetts Department of Elementary and Secondary Education**

**21st Century Community Learning Centers**

**Summer Learning Programs**

**Evaluation Report – Summer 2013**

**EXECUTIVE SUMMARY**

February 2014

*Prepared for:*

The Massachusetts Department

of Elementary and Secondary Education

*Prepared by:*

National Institute on Out-of-School Time

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**Massachusetts Department of Elementary and Secondary Education**

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# Introduction

During the summers of 2011 through 2013, the Massachusetts Department of Elementary and Secondary Education 21st Century Community Learning Centers (ESE 21st CCLC) Grant Program funded summer learning programs (Summer Enhancement Pilot) in partnership with the public school districts of North Adams (Brayton Elementary School), Triton (Salisbury Elementary School), and Wareham (Wareham Middle School).[[1]](#footnote-1) These programs, building on existing school year out-of-school time programs, emphasized project-based learning approaches and STEM (science, technology, engineering, and math) curricula.

Grantees were selected through a rigorous request for proposal process that addressed a number of key participation components. Each program site was required to expand enrollment 10–15% greater than their 2012 enrollment. Grantees also needed to provide evidence of a pre-summer planning team, partnership arrangements with local organizations, demonstration of in-kind funding, student outreach, and an innovative program design. Programs provided a minimum of 144 hours (6 hours per day for 6 weeks) of summer learning experiences along with a daily nutritious snack, breakfast (if applicable), and lunch that met the requirements of the USDA National School Lunch Program for meal supplements. Although the hours and menu of topics offered by programs varied, each program provided professional development opportunities for teachers and community-based organization partners prior to the start of the summer program.

Grantees were required to use the *Survey of Academic and Youth Outcomes* (SAYO) instrument on a sample of their youth participants. Additionally, in the fall of 2013, grantees were requested to submit district data useful for investigating summer learning gain/loss for participating students. This executive summary presents key findings from the evaluation conducted by the National Institute on Out-of-School Time (NIOST) at Wellesley College of the 2013 summer programs.[[2]](#footnote-2)

# Section One: Methods

Data for the evaluation report were collected through (a) program observations, (b) interviews with site directors, and (c) review of child-level assessment data collected by the school district and site directors. Table 1 shows the schedule of NIOST evaluation activities.

**Table 1: Data Collection Schedule and Tools**

|  |  |  |
| --- | --- | --- |
| **Data Collection Activity** | **Schedule** | **Measurement Tool** |
| Pre- and Post-Assessment of Youth Outcomes | Weeks 2 and 6  (Administered by Sites) | Survey of Academic and Youth Outcomes |
| Semi-Structured Interviews with Site Directors | Weeks 2 and 4/5 | Interview Protocol and Field Notes |
| Program Site Observations by NIOST Researchers | Weeks 2 and 4/5 | Assessment of Program Practices Tool  (Research Version) |

# Section Two: Participants

Table 2 describes the enrollment profile of the three ESE 21st CCLC pilot program sites. The total number of students attending was 557. The mean number of hours attended across all three programs was 157 hours, with a mean student attendance rate of 87%. A substantial proportion of the population served was noted as Special Needs.

**Table 2: Student Characteristics for All Sites, 2013**

|  |  |  |
| --- | --- | --- |
| **Characteristic** | ***N*** | **Percent of Population Served** |
| Gender |  |  |
| Male | 284 | 51% |
| Female | 273 | 49% |
| Race |  |  |
| White | 441 | 81% |
| Black | 28 | 5% |
| Asian | 10 | 2% |
| Hispanic | 29 | 5% |
| Multi-Race and Other | 34 | 6% |
| Low Income | 343 | 62% |
| Special Education (SPED) | 141 | 26% |
| Limited English Proficiency (LEP) | 9 | 2% |

*Note*. Income, SPED, and LEP status not available for all students.

# Section Three: Key Findings

Key Findings reported in this Executive Summary include results from SAYO assessment, APT observation and collection of summer learning loss data.

## SAYO Assessment

Table 3 compares the SAYO results across sites. Three outcomes were measured across all three sites: Learning Skills, Behavior, and Relations with Peers. Teachers in North Adams and Salisbury rated their students more improved at post-test in these three outcome areas compared to teachers in Wareham.

Comparison SAYO data for the statewide 21st CCLC summer programs is provided in the last column of Table 10. Approximately 6,500 students participated in 21st CCLC program services offered by 40 grantees at 111 sites across the state during the summer of 2012. North Adams and Salisbury showed gains similar in most outcomes to the larger sample of 21st CCLC summer program sites. Reading improvement for North Adams was substantially higher than the statewide mean percent change.

**Table 3: Comparative Change in SAYO Across Sites, 2013**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Outcome Areas** | **North Adams** | **Salisbury** | **Wareham** | **Statewide 21st CCLC (2012)** |
| Science |  | 15% |  | 13% |
| Reading | 20% | 7% |  | 10% |
| Mathematics Communications |  |  | 7% | 13% |
| Mathematics Reasoning |  |  | 9% | 15% |
| Mathematics Problem Solving | 12% |  |  | 12% |
| Learning Skills | 18% | 17% | 8% | 17% |
| Behavior | 14% | 17% | 2% | 15% |
| Initiative | 18% | 18% |  | 18% |
| Relations w/Adults | 17% |  |  | 19% |
| Relations w/Peers | 17% | 17% | 5% | 16% |

*Note*. PDF report available at: http://www.doe.mass.edu/21cclc/reports/

## Program Quality

Using the APT, researchers conducted program observations at the three sites to evaluate the overall structure/organization of each program as well as the features of academic and enrichment activities. Two observations were conducted per site. A total of 26 separate activity sessions were observed.

Salisbury showed the strongest ratings in overall program delivery, especially in the cultivation of youth-staff relationships, organization of activities, positively guiding student behavior, and peer relationships. The findings show that Wareham program leaders and teachers were consistently strong in fostering a supportive social/emotional climate and overall program structure. North Adams teachers and staff were particularly strong in facilitating youth participating during informal program times and fostering a supportive program climate and environment. Tables 4 and 5 show findings for all sites.

**Table 4: Activity Implementation Domains, 2013**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Domain** | **All Sites** | **North Adams** | **Salisbury** | **Wareham** |
| Organization | 3. | 3.42 | 4.0 | 3.8 |
| Nature of Activity | 2.8 | 2.4 | 3.1 | 2.9 |
| Staff Promote Engagement & Stimulate Thinking | 3.2 | 2.8 | 3.6 | 3.1 |
| Staff Positively Guide Behavior | 3.7 | 3.6 | 3.9 | 3.6 |
| Staff Build Relationships – Support Individual Youth | 3.6 | 3.5 | 3.9 | 3.6 |
| Youth Relations w/Adults | 3.6 | 3.4 | 3.9 | 3.6 |
| Youth Participation | 3.2 | 2.9 | 3.4 | 3.4 |
| Peer Relations | 3.8 | 3.5 | 4.0 | 3.9 |

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

**Table 5: Overall Organization Domains, 2013**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Domain** | **All Sites** | **North Adams** | **Salisbury** | **Wareham** |
| Arrival Time | 3.5 | 3.6 | 3.5 | 3.4 |
| Pick-Up Time | 4.0 | 4.0 | 4.0 | 3.9 |
| Informal Program Times |  |  |  |  |
| Staff Approaches | 3.8 | 3.8 | n/a | 3.8 |
| Youth Approaches | 3.9 | 3.9 | n/a | 4.0 |
| Program Space Supports Goals of Programming | 3.8 | 3.9 | 4.0 | 3.6 |
| Overall Program Schedule & Offerings | 3.7 | 3.4 | 4.0 | 3.8 |
| Overall Social-Emotional Environment | 3.3 | 3.8 | 4.0 | 3.8 |

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

## Stemming Summer Learning Loss

**North Adams**

DIBELS analysis was conducted on a sample of summer participants and nonparticipants to investigate possible impact of program participation on stemming summer learning loss between June 2013 and September 2013. The DIBELS was administered in the spring of 2013 and then again in the fall of 2013 at the start of the 2013–2014 school year. Pre/post DIBELS assessment data was available for 619 students. The sample size for summer participants was 226 students compared to the comparison group of 393 students who did not participate in the summer program. Alternative summer program participation for the comparative group is unknown.

Results of paired samples *t*-test analyses show a decline in score between the spring and fall DIBELS assessments for summer program participants and nonparticipants, with the exception of second-grade summer participants. In fact, most of the grade levels for both summer participants and nonparticipants showed a significant decline (*p* < .05). Second-grade summer participants were the only cohort to show improvement between pre- and post-assessment, although this positive change was not significant.

For each grade except grade 6, summer participants showed less decline from pre- to post-DIBELS compared to their non-participating peers. In order to determine whether these differences in decline were significant, we conducted one-way ANOVA analyses for each grade subgroup. No significant differences in decline were found between the summer participants and nonparticipants within their grade groups. There was some evidence of a significant trend for summer participant first graders (*p* = .067) and summer participant fifth graders (*p* = .072) to show less decline than their comparison nonparticipant peers.

In general, across the combined sample there were no significant differences in DIBELS decline between students with Free or Reduced Lunch status or Special Education status and their peers. Additionally, the number of hours that youth attended the summer program was not significantly associated with mean change in DIBELS scores for all grades combined (*r* = .086, *p* = .198) and when each grade was analyzed individually.

**Salisbury**

The District Reading Assessment (DRA) was administered to students participating in the summer programat Salisbury Elementary School. The initial administration of the DRA was in the spring of 2013 prior to the start of the summer program. The assessment was re-administered again two weeks after school started in September 2013. Given that the assessment is administered on either side of the summer learning experience, there is an opportunity to compare growth between the summer learning program participants and their peers, although participation of the peer group in summer learning or other type of experiences over the summer was unknown.

The overwhelming majority of rising first graders (73%), second graders (76%), and fourth graders (76%) participating in the summer program were able to maintain or increase their reading level at post-test administration. Rising third graders in the summer program were the most academically at-risk group enrolled for the summer. Just less than half of these students were able to maintain or increase their reading level score at post-test. Fifth graders enrolled showed the strongest result between pre- and post-assessment with 92% of students maintaining or increasing their reading level score at post-assessment.

**Wareham**

Analyses of Wareham youth scores on several academic assessments (i.e., DIBELS, GRADE, and GMADE) were conducted to examine associations between summer program participation and students’ assessment scores. These assessments were completed in spring 2013 and fall 2013 after youth had participated in the summer program.

Data were available for 79 youth in grades 3 and 4 at John W. Decas and Minot Forest Elementary Schools (*n* = 79). Forty-nine percent (49%, *n* = 39) had participated in the summer learning program. Differences in average change scores (for DIBELS, GRADE, and GMADE assessments) and mean scores (for summer reading grades) were also examined across grades to determine whether any significant effects existed with regard to grade level.

With regard to DIBELS test scores, a total of thirty-eight (*n* = 38) summer participants had both pre- and post-test data available. Across both grades, youth DIBELS scores improved from the spring assessment to the fall assessment with a mean change of 0.21, although this difference was not significant (*p* > .05). Third graders made up the largest portion of the DIBELS sample (*n* = 21). Paired sample *t*-test showed that third graders significantly improved their DIBELS scores between the spring and fall assessments, *t*(19) = 2.50, *p* = .02. DIBELS scores for fourth graders decreased between spring and fall, but this decrease was not significant (*p* > .05). Because the sample sizes are small, findings should be interpreted cautiously.

DIBELS for the comparison students across both grades showed a significant trend for decline

(*M* = -0.22) between spring and fall scores (*p* = .057). Students in both grade groups declined, although neither was significant. In a one-way ANOVA analysis of DIBELS, third-grade summer participants (*n* = 20) made significant improvement compared to third-grade nonparticipants, *n* = 21, *F*(1, 39) = 6.95, *p* = .01. Because the sample sizes are small, findings should be interpreted cautiously. No significant differences were found for fourth graders.

GRADE assessment scores for summer participants and nonparticipants declined between the spring and fall. Only the decline for nonparticipants was significant, *t*(35) = 2.03, *p* = .05. Results of one-way ANOVA analysis of GRADE comparing participants with nonparticipants in grade groups showed no significant results, suggesting that participant and nonparticipant pre/post scores similarly declined. Both summer participants, *t*(37) = 4.89, *p* = .00, and nonparticipants, *t*(35) = 5.72, *p* = .00, showed a significant decline on the GMADE between the spring and fall assessments. Findings from ANOVA analyses of GMADE were consistent with GRADE data, showing no significant differences in decline between participants and nonparticipants by grade.

Comparisons of Summer Reading Assessment scores for summer program participants (*n* = 63) and nonparticipants (*n* = 58) across grades 5–8 showed no significant differences. Analyses by grade subset also did not yield any significant differences.

# Section Four: Summary

Three years of work on the Summer Enhancement Pilot has demonstrated that experienced OST programs with targeted support are able to implement high-quality summer learning experiences that feature engaging learning approaches and heavy investment in school-community organization partnerships. In this section, we will summarize our major research findings and the implications of these findings for strengthening future summer programming.

Youth participating in the 2013 summer programs attended at an even higher rate (87%) than 2012 students (82%). On average, students attended for more than 150 hours in 2013; data for 2012 statewide summer programs showed an average attendance of 97 hours.[[3]](#footnote-3) Given that summer program attendance has been linked to preventing summer learning loss (McCombs et al., 2011), this is a significant investment in student time in programs designed to enhance knowledge retention and excitement about learning.

SAYO results across all three programs suggest that teachers feel students benefit through the current program models and perceive positive outcomes for most students attending. Very few subsets of students did not show positive gain from pre- to post-SAYO assessment. SAYO outcome gains for the Summer Enhancement Pilot programs were mostly consistent with statewide data while serving a high proportion (26%) of Special Needs students. Programs generally worked equally well for boys and girls and youth of diverse racial/ethnic groups. Across all three sites, students improved most in Learning Skills and Initiative.

Based on the scale for the APT, which ranges from 1 (*low*) to 4 (*high*), programs in the Summer Enhancement Pilot are functioning at a high level of quality. Program practices were consistently rated by research observers between 3.00 and 4.00. The only area with comparatively lower ratings was “Nature of Activity,” which includes activity characteristics such as (a) ongoing project, (b) challenging and stimulating thinking, (c) youth choice and decision making, and (d) youth collaboration.

Analysis of summer learning loss data continues to show some promise, although much of the data do not represent significant findings. In some cases, summer learning students show decline between the spring and the fall similar to their nonparticipating peers, but the decline is comparatively less. First and fifth graders in North Adams showed a significant trend towards less learning loss than their peers based on DIBELS data. Wareham provided the strongest evidence of impact on summer learning loss. Third graders actually improved from pre- to post-DIBELS and showed significant improvement compared to their nonparticipating peers. As the three summer learning programs continue to mature, more rigorous data provided through school districts will help to augment understanding of how a blended academic and enrichment summer learning experience can contribute to student achievement.

# Reference

McCombs, J., Augustine, C., Schwartz, H., Bodilly, S., McInnis, B, Lilchter, D., Cross, A. (2011).

Making summer count: How summer programs can boost children’s learning. Santa Monica, CA: RAND.

1. 2011 and 2012 also included the Springfield Public School District. [↑](#footnote-ref-1)
2. An executive summary of the 2012 summer evaluation is available at: http://www.doe.mass.edu/21cclc/reports/ [↑](#footnote-ref-2)
3. Report is located at: http://www.doe.mass.edu/21cclc/reports/ [↑](#footnote-ref-3)