

21st Century Community Learning Center Evaluation – Cohort 8

Prepared for the Neighborhood Learning Alliance

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Evaluation Team

MG Consulting & Training, LLC is contracted to provide the Neighborhood Learning Alliance (NLA) with an independent evaluation for its 21st Century Community Learning Centers programs. Megan Good, principal of MG Consulting & Training, serves as the lead evaluator. Megan Good provides capacity-building technical assistance to organizations across a wide array of topics, including program design, program evaluation, workplace inclusion, and staff development. Megan previously served as a Manager of Analytics at the Allegheny County Department of Human Services, where she led project teams and supervised staff on a wide variety of analytic, evaluation, programmatic, and technology implementation projects.

MG Consulting & Training began evaluating NLA's 21st CCLC programming in September 2017. To maximize the utility of evaluation results, the tools and methods of the previous teams who evaluated Cohorts 2, 3, 4, 5, 6, 6A, were used in this quantitative evaluation for Cohort 8.

Executive Summary

The Neighborhood Learning Alliance (NLA) partnered with Pittsburgh Public Schools to operate Little Learning Warriors, an after-school program that is made possible through a 21st Century Community Learning Centers (CCLC) grant. Little Learning Warriors served 316 students in 2017-18 who were most in need of support in reading, math, and science in seven schools and one community center across Pittsburgh. This report describes the population served and their short-term academic and behavioral outcomes.

Performance Targets

Students demonstrated progress on all academic and behavioral indicators, but targets for established performance measures were met for only 5 of the 15 indicators – one related to academic gains, one related to school attendance, and three related to behavioral changes. The full list of indicators and actual performance levels benchmarked against the targets is provided below in Table 1.

Additional Findings

Data were evaluated to assess student outcomes and progress beyond the performance targets. Key findings include:

- Regularly participating students increased their grade levels in reading and math more frequently than students who did not participate regularly, indicating the program had a positive impact on classroom performance and grades. 56% more regularly participating students improved their math grades, and 36% more improved in reading.
- Program participation has a stronger influence on academic achievement for the lowest performing students (the lower the grade in the fall, the more likely they were to improve).
- Students regularly participating in programming made the greatest gains in reading, as demonstrated across changes in grades, PSSA scores, and changes in DIBELS scores.
- Higher levels of program participation are *not* correlated with better school attendance. Program participants continue to experience high rates of absenteeism, which do vary by school.
- Math instruction is a potential area for program growth. While some students made classroom gains in math, those gains were at lower levels than those made in reading, and PSSA math scores remain very poor. 68% of regularly participating students scored Below Basic, with older students scoring Below Basic at the highest levels.
- Among regularly participating students, increased levels of program participation had a limited impact on the likelihood of grades improving; students participating for 90 or more days improved at a higher rate than other regularly participating students in math, but not reading or science.

Questions for Further Exploration

In addition to questions identified by program staff, potential items for further exploration include:

- **Math:** Why are students consistently making greater gains in their reading skills than math? What are the sites having more success with math doing differently?

- **Classroom Grades and PSSA Scores:** Why are students with high classroom grades continuing to score at the Basic or Below Basic level on the PSSAs? Are there core competencies that can be more strongly focused on within the CCLC programming? What is needed to boost students reading at the Basic level to be Proficient?
- **Program Involvement and School Attendance:** Is the program model designed to address the root causes of absenteeism? If not, should the relationship between program involvement and the impact of school absences be evaluated differently?
- **Teacher Surveys:** What are potential methods to increase the response rates in the next program year?
- **Evaluation:** Are there aspects of program implementation beyond student achievement that should be added to the evaluation to make it more meaningful for program staff, such as the staffing ratios at each site?

Table 1. Student Outcomes vs. Performance Targets

Description of Measure	Actual	Target	Met Target
Performance Measure #1: Students regularly participating in the program (attending 30 or more days) will meet or exceed state and local academic achievement standards in reading and math.			
Participants will improve their mathematics grades.	46%	48.5%	No
Participants will improve their reading/English grades.	47%	48.5%	No
Participants will improve their science grades.	35%	50%	No
Grade 4-5 program participants will improve from not proficient to proficient or above in reading state PSSA assessments.	2%	45%	No
Grade 4-5 program participants will improve from not proficient to proficient or above in math state PSSA assessments.	2%	45%	No
Grade 4 students will score proficient on the science PSSA assessment.	39%	45%	No
Participants will make achievement level gains in reading based on pre/post DIBELS scores.	78%	70%	Yes
Performance Measure #2: Students regularly participating in the program (who needed to improve) will show improvement in performance measures of school attendance, classroom performance and/or reduced disciplinary referrals.			
Participants will have teacher-reported improvement in homework completion and class participation (of students needing to improve).	64%	90%	No
Participants will improve their school attendance/behavior by reducing their number of days absent from the prior school year to the current year (of students needing to improve).	60%	70%	No
Participants will improve their school attendance/behavior by reducing their number of days tardy from the prior school year to the current year (of students needing to improve).	78%	70%	Yes
Participants will improve their school attendance/behavior by reducing their number of behavior incidents from the prior school year to the current year (of students needing to improve).	93%	70%	Yes
Participants will improve their class participation.	77%	60%	Yes
Performance Measure #3: Participants in 21st Century program (who needed to improve) will demonstrate additional positive educational, social, and behavioral changes.			
Participants will have teacher-reported improvements in student behavior.	52%	75%	No
Participants will improve their volunteering in class.	40%	60%	No
Participants will improve their motivation to learn.	66%	60%	Yes

* See Methodology for detailed descriptions of which students are included and excluded from each measure.

Background

The federally funded 21st Century Community Learning Centers (CCLC) program supports academic enrichment opportunities during non-school hours for students living in areas of high-poverty with low-performing schools. CCLC recommends its grantees implement a range of activities to improve student performance, including reading, math, science after-school education activities and tutoring.

Wireless Neighborhoods, dba Neighborhood Learning Alliance (NLA), has partnered with Pittsburgh Public Schools (PPS) to implement several CCLC cohorts, including Cohort 8, known as the Little Learning Warriors program. Through analysis of school data and crime statistics, and discussions with PPS, community leaders, and families, NLA identified seven schools to operate the Little Learning Warriors after-school program beginning in 2016-17 and continuing through 2017-18: Arlington K-5, Arsenal K-5, Lincoln K-5, Spring Hill K-5, Morrow K-5, Miller K-5, and Woolslair K-5. Woolslair and Arsenal also operated a summer-only site at Bloomfield Garfield Community Activity Center.

The Little Learning Warriors program specifically targets students who are not proficient in math, reading, and science. NLA worked with school leadership to identify the most academically struggling children based on assessments, grades, behavior, and attendance data. In the 2017-18 school year, Little Learning Warriors served 316 students who met these criteria.

The program's curriculum helps students master foundational math and reading skills, gives students opportunities to participate in STEM activities, and engages students in service learning by completing projects in their community. All the Little Learning Warrior Centers operate 12 hours of after-school programming per week, and most of that programming time is spent on academic activities. Program staff are provided with professional development to ensure high-quality programming.

Methodology

Findings in this report are based on analyses of program attendance data, student outcome data and teacher surveys. Each of the sections below describe common definitions or calculations utilized in the preparation and analysis of the findings detailed in the report.

Program Participation

Source: Little Learning Warriors Program Staff

Students' participation levels are determined by the number of days the student attended Little Learning Warriors during the fall, spring, and summer of the program year. The four categories of participation levels are fewer than 30 days, 30-59 days, 60-89 days, and 90 days or more. Students who attended 30 days or more are considered "regularly participating" students. Many of the performance measures are calculated using regularly participating students only, because students who participated less than 30 days did not receive adequate exposure to the program.

Report Card Grades

Source: Pittsburgh Public Schools

Report card grades are one method used to determine student outcomes. All grade levels, except for Kindergarten, use an A through F grading scale. Evaluators compared grades for Quarter 1 and Quarter 4 to determine changes in student outcomes from the beginning to the end of the school year. Students' report card outcomes are reported as Improved, No Change, Declined, or Did Not Need to Improve

based upon a full letter grade change. Students earning an A in Quarter 1 are categorized as Did Not Need to Improve, because they could not improve their letter grade from Quarter 1 to Quarter 4. Students who only participated in the summer were excluded from this analysis since grade progress is examined from the beginning to the end of the 2017-18 school year, and summer-only students did not participate during that window of time.

PSSA Scores

Source: Pittsburgh Public Schools

PSSA scores are another method used to determine student outcomes. PSSA scores are categorized as Below Basic, Basic, Proficient, and Advanced. Evaluators compared PSSA scores for the current year and the prior year to determine changes in student outcomes. Students' PSSA score outcomes are reported as Improved, No Change, Declined, or Did Not Need to Improve. Students which earned a Proficient or Advanced score in the prior year were categorized as Did Not Need to Improve for the current year.

DIBELS¹

Source: Little Learning Warriors Program Staff

Program participants' literacy skills are measured using Dynamic Indicators of Basic Early Literacy Skills (DIBELS), which are administered at the beginning, middle, and end of the school year. Student scores are categorized into benchmark levels, which are based on the grade level and time of year the measure is administered. DIBELS Composite scores aggregate multiple DIBELS measures and provide the best overall estimate of the student's literacy skills. However, due to limited availability of Composite DIBELS scores, the evaluator used individual DIBELS measures which were most appropriate for each grade level. The measures used for each grade level are listed in Table 2.

DIBELS benchmark goals are empirically derived, criterion-referenced target scores that represent adequate reading progress. A benchmark goal indicates a level of skill where the student is likely to achieve the next DIBELS benchmark goal or reading outcome. The framework for the DIBELS levels are built around cut points for risk and benchmark goals. The cut points for risk indicate a level of skill below which the student is unlikely to achieve subsequent reading goals without receiving additional, targeted instructional support (At Risk students). Benchmark goals indicate a skill level at which students are on track to achieve the next benchmark with instruction from core classroom curriculum (Low Risk). Students scoring between these two points have Some Risk and may need strategic support.

The DIBELS Benchmark Assessment provides a rubric that associates the number correct with a benchmark status. At Risk is usually equated with being below grade level or below basic at the time of administration. Some Risk is usually equated with being below grade level or basic at the time of administration. Low Risk is usually equated with being at grade level or proficient at the time of administration.

The five benchmark levels below are an expanded version of DIBELS benchmark levels. Evaluators used this expanded set of benchmarks to identify student progress at a more detailed level. The At Risk and Some Risk end of year rubric was divided into numeric half to form low and high sub-categories. Low Risk was designated as Proficient (P) and not divided since the goal was to move low-performing students to being at grade level.

¹ "DIBELS Next Benchmark Goals and Composite Score." Dynamic Measurement Group. 1 December 2010. <https://dibels.uoregon.edu/docs/DIBELSNextFormerBenchmarkGoals.pdf>.

Progress measured by the DIBELS is based upon how students' scores relate to the Post measure scales. The Pre scales are diagnostic for the level of support students may need when starting the year, but changes between categories from Pre to Post do not adequately reflect student progress during the year. Therefore, Pre scores are compared to the Post scale in each grade to illustrate the progress the student made over time. Students who were Proficient on the Pre test are excluded from the performance measure assessing progress towards proficiency. This method is consistent with how the program has been evaluated over the past fourteen years.

Table 2. DIBELS Benchmark Levels by Grade

Grade	Measure	At Risk		Some Risk		Low Risk	
		Low Below Basic (LBB)	High Below Basic (HBB)	Low Basic (LB)	High Basic (HB)	Proficient (P)	
Kindergarten	PSF	Pre	0-4	5-9	10-14	15-19	20+
		Post	0-12	13-24	25-32	33-39	40+
First	ORF	Pre	0-7	8-15	16-18	19-22	23+
		Post	0-15	16-31	32-39	40-46	47+
Second	ORF	Pre	0-18	19-36	37-44	45-51	52+
		Post	0-31	32-64	65-75	76-86	87+
Third	ORF	Pre	0-26	27-54	55-62	61-69	70+
		Post	0-39	40-79	80-89	90-99	100+
Fourth	ORF	Pre	0-34	35-69	70-79	80-89	90+
		Post	0-47	48-94	95-104	105-114	115+
Fifth	ORF	Pre	0-46	47-95	96-102	103-110	111+
		Post	0-51	52-104	105-117	118-129	130+

Attendance & Behavior Incidents

Source: Pittsburgh Public Schools

Evaluators used school data to determine attendance and behavior outcomes, which were categorized as Improved, Declined, No Change, or Did Not Need to Improve. For school attendance, students who were absent 10 days or fewer in the prior school year were categorized as Did Not Need to Improve. For school tardiness, students who were tardy 10 days or fewer in the prior school year were categorized as Did Not Need to Improve. And for behavior incidents, students who did not have any suspensions in the prior school year were categorized as Did Not Need to Improve.

Teacher Surveys

Source: Pittsburgh Public Schools Teachers

NLA provided teachers at Little Learning Warrior schools with a ten-question survey about their students' behavior. Some students had multiple teachers who completed surveys about them. In those cases, the evaluator selected the survey which indicated the student had the most room for improvement.

Data Limitations

Outcome data are not consistently available for the full cohort of 316 program participants. For example, only 37% of regularly participating students have a spring reading grade, current year PSSA reading test score, and a spring DIBELS score in the dataset. Missing data make program outcomes challenging to interpret since it is unknown whether the students for whom data is available are

representative of all student participants. There are numerous contributing factors to the incompleteness of the data, such as students entering or exiting the school district, PSSA test subjects not being administered to every grade level, etc. To assist with the interpretation of the findings, the total population for whom data are available and/or relevant for a given measure is provided throughout the report to give context to the data.

Findings

Population Served

316 students were served across Cohort 8's seven sites in the 2017-18 program year, a seven percent increase from the 2016-2017 program year. 114 (36%) of these students also participated in the 2016-17 school year. 73% (231) of students participated on a regular basis (30 or more program days), with returning students more likely to participate regularly (82% vs. 68%). 71% (196) of students who attended the program in the summer or fall remained engaged in programming, participating in two or more of the summer, fall and spring terms. Remaining engaged during the following term was less common for students active in the summer (65%) than for those who began in the fall (82%).

Demographics of the student population served in the 2017-18 program year include:

- 57% female
- 90% students of color: 77% of total were African American
- 92% eligible for free/reduced lunch
- 23% received special education services
- 9% had limited English proficiency (all served at Arsenal)

Students ranged from kindergarteners to fifth graders at each site. Overall, students were well distributed by age, but some sites had higher concentrations of students in grades K-2, 1-2, or 2-5 than others. Sites served 27 to 59 students over the course of the year and served more students in the fall and spring than during the summer (Table 4); the four smaller sites (Lincoln, Morrow, Spring Hill, Woolslair) averaged 31 students in the fall and spring terms, and the three larger sites averaged 43.

Table 3. Total Students Served by Grade by Center, 2017-18

Center	Grade level							Total
	K	1	2	3	4	5	Unknown	
Arlington	12	13	11	5	10	5	3	59
Arsenal	7	4	10	10	15	5	6	57
Lincoln	7	5	7	7	7	3	6	42
Miller	0	10	13	4	8	9	6	50
Morrow	0	9	3	5	8	12	3	40
Spring Hill	5	7	9	4	7	5	4	41
Woolslair	5	3	6	5	4	2	2	27
Total	36	51	59	40	59	41	30	316

Four sites² operated over the summer, and on average, two of every three students who participated in the program were active over the course of at least two terms (e.g. summer and fall). Woolslair had the highest retention of students, with 96% participating in the both the fall and spring. Most students who attended the program over more than one term also attended a higher number of days (Table 5).

² The Bloomfield Garfield Community Center hosted a summer site for students from both Arsenal and Woolslair because the school buildings were not available in the summer. The summer students' data are attributed to their school year placement, not Bloomfield Garfield.

However, the amount and duration of student engagement in programming differed by site and student age.

Table 4. Number of Total Student Participants, by Site and Term, 2017-18

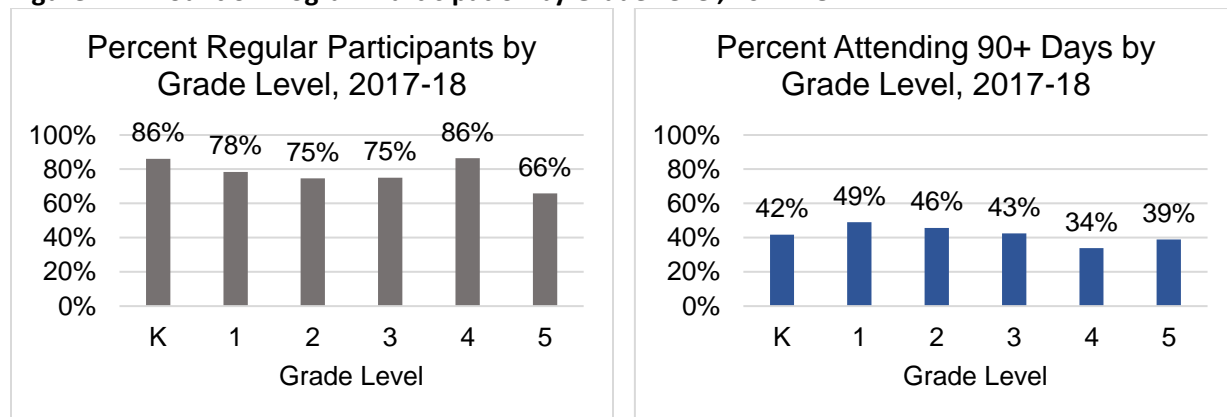
Site	Participants Each Term			Total Unique Students	Students Engaged in 2 or More Terms	
	Summer	Fall	Spring		Number	Percent
Arlington		48	48	59	37	63%
Arsenal	22	44	50	57	42	74%
Lincoln		34	30	42	22	52%
Miller	20	32	26	50	24	48%
Morrow	14	30	34	40	30	75%
Spring Hill	15	35	32	41	33	80%
Woolslair	3	26	27	27	26	96%
Total	74	249	247	316	214	68%

Table 5. Total Program Days Attended by Terms Attended, 2017-18

Program Days Attended	Length of Program Involvement			Total
	1 term	2 terms	3 terms	
Fewer than 30 days	68	16	0	84
30-59 days	30	30	2	62
60-89 days	4	39	5	48
90+ days		89	33	122
Total	102	174	40	316

Figure A displays participation levels by grade. Participation varies little by grade level. Kindergarten and 4th grade students participated in the program more regularly than other students (86%), with 5th graders attending least consistently (66% participating regularly).

Figure A. Amount of Program Participation by Grade Level, 2017-18



Academic Impact

The Little Learning Warriors program includes focused attention on math and reading fundamentals, STEM activities, soft skills development, and service learning. Serving some of the most at-risk children in the Pittsburgh Public Schools, the program is designed for students scoring at the Below Basic or Basic level of the DIBELS or PSSAs and/or students experiencing chronic absenteeism. Program goals include: developing students' skills so they are reading on grade level; mastering fundamental math skills; attending at least 90% of school days; demonstrating an increased interest in STEM; and, practicing soft skills that are vital to their future success.

Program participants did improve test scores and grades over the course of the 2017-18 program year, but the program only met one the seven targets set for improvements in academic performance. Seventy-eight percent of students below the Proficient level improved their DIBELS score over the course of the program year enough to reach the next level. Following the DIBELS, students made the greatest gains in letter grade improvements, narrowly missing the target goals in reading and math. Students struggled to bring up their math and reading PSSA test scores to the Proficient level. The targets and actual performance levels for each academic progress indicator are displayed in Table 6.

Table 6. Academic Progress of Regularly Attending Program Participants vs. Performance Targets

Description of Measure	Actual	Target	Eligible Number of Students*
Participants will improve their mathematics grades.	46%	48.5%	157
Participants will improve their reading/English grades.	47%	48.5%	171
Participants will improve their science grades.	35%	50%	69
Grade 4-5 program participants will improve from not proficient to proficient or above in reading state PSSA assessments.	2%	45%	46
Grade 4-5 program participants will improve from not proficient to proficient or above in math state PSSA assessments.	2%	45%	56
Grade 4 students will score proficient on the science PSSA assessment.	39%	45%	49
Participants will make achievement level gains in reading based on pre/post DIBELS scores.	78%	70%	157

* See Methodology for detailed descriptions of which students are included and excluded from each measure.

This section explores the academic progress of students more deeply, examining performance dynamics and identifying opportunities for improvement.

Report Card Grades

At least partial report card grades were provided for 192 (83%) of the 231 students who regularly participated in the program during the fall and/or spring terms. Students who only participated in the summer are excluded from this analysis since grade progress is examined from the beginning to the end of the 2017-18 school year, and summer-only students did not participate during that window of time.

While the program performance targets were not met, a majority of students did achieve gains in academic performance during the year. Classroom academic improvement is measured by letter grade improvement on report cards. 62% of students with room to improve their grades did so in at least one subject: 46% improved in math, 47% in reading, and 35% in science (Figure B). In math and reading, only one in ten students experienced a decline in their grades. Performance in science was more variable: while a third of students had a positive change in their grade, more maintained their grade, and a quarter experienced a drop in their letter grade.

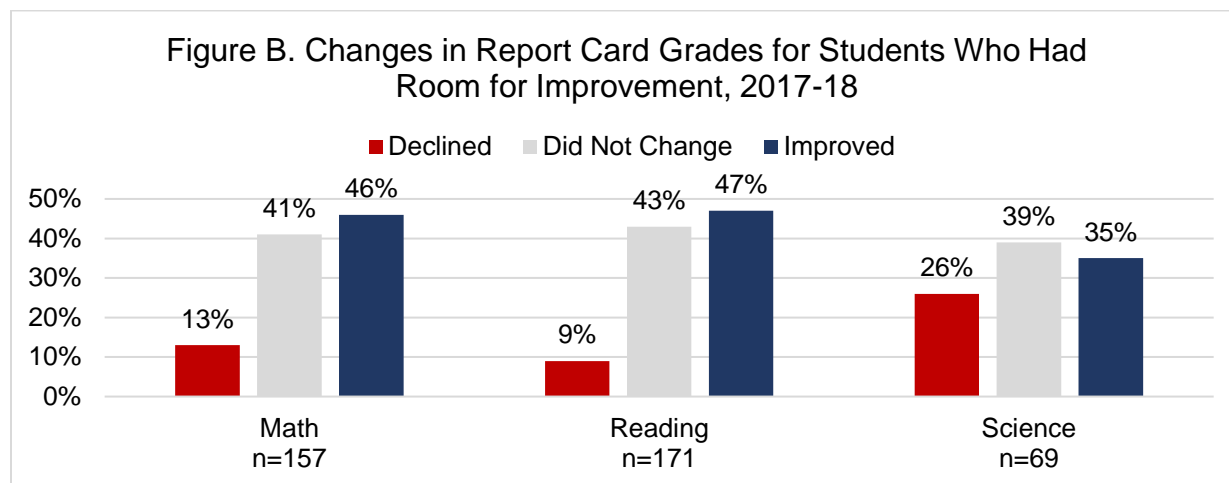


Table 7 lists the information displayed in Figure B, and adds the fourth quarter grade outcomes for students who started the year with an A. At least two-thirds of students entering the year with an A in each subject maintained that grade over the course of the year.

Table 7. Letter Grades Changes, by Subject and Grade in the First Quarter, 2017-18

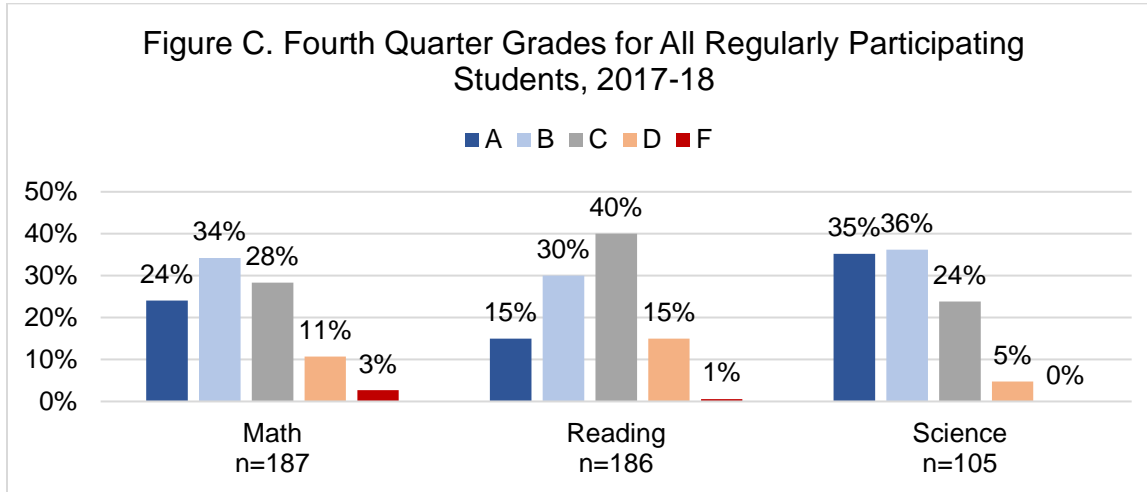
Subject	Grade in First Quarter (Q1)	Total Students	Change in Grade		
			Declined	Did Not Change	Improved
Math	A in Q1	26	35%	65%	
	Room for improvement	157	13%	41%	46%
Reading	A in Q1	11	27%	73%	
	Room for improvement	171	9%	43%	47%
Science	A in Q1	33	27%	73%	
	Room for improvement	69	26%	39%	35%

Among students with room to improve (did not have an A in the fall), the greatest gains were made by the students with the lowest grades (Table 8). Students with a C or lower improved their grades at higher rates than students starting the year with a B.

Figure C displays the report card grades of regularly participating students at the end of the program year. Student grades are strongest in science, followed by math, and then reading. Of all program participants, only 3% were failing math, and 1% failing reading (compared to 8% failing reading in the fall). As a whole, this cohort of at-risk students improved or maintained their academic performance rather than falling further behind.

Table 8. Grade Level Improvements, by Grade in the First Quarter, 2017-18

Grade in Q1	Math		Reading		Science	
	Total Students	Percent Improved	Total Students	Percent Improved	Total Students	Percent Improved
F	3	33%	15	100%	0	NA
D	34	59%	41	56%	3	100%
C	72	46%	72	40%	18	61%
B	48	38%	43	33%	48	21%



Students who attended the program but did not participate regularly may serve as a control group for assessing the impact of programming on student progress. They had a very small ‘dosage’ of programming, so their experience is a proxy for how students in the program may have progressed without the intervention. Figure D displays the percentage of students in each group who improved their letter grade in math and reading. Regularly participating students achieved letter grade improvements at higher rates than their peers, indicating the program had a positive impact.

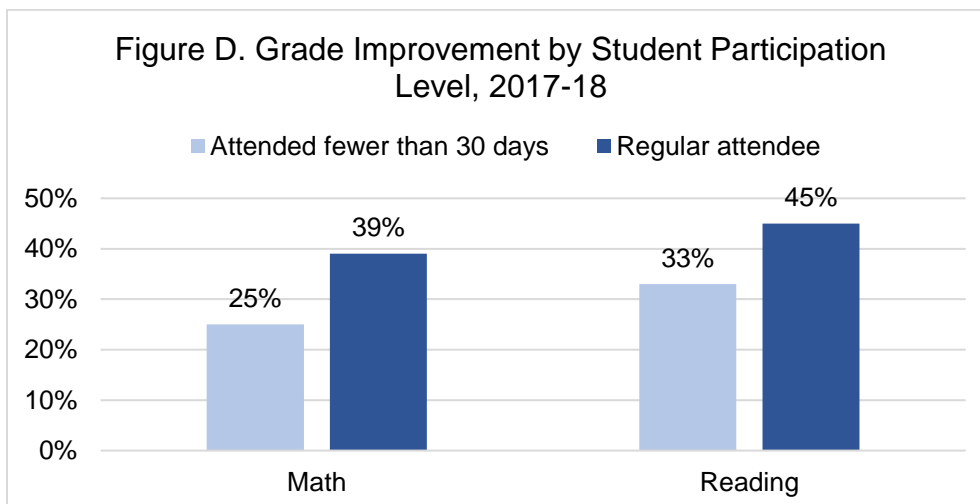
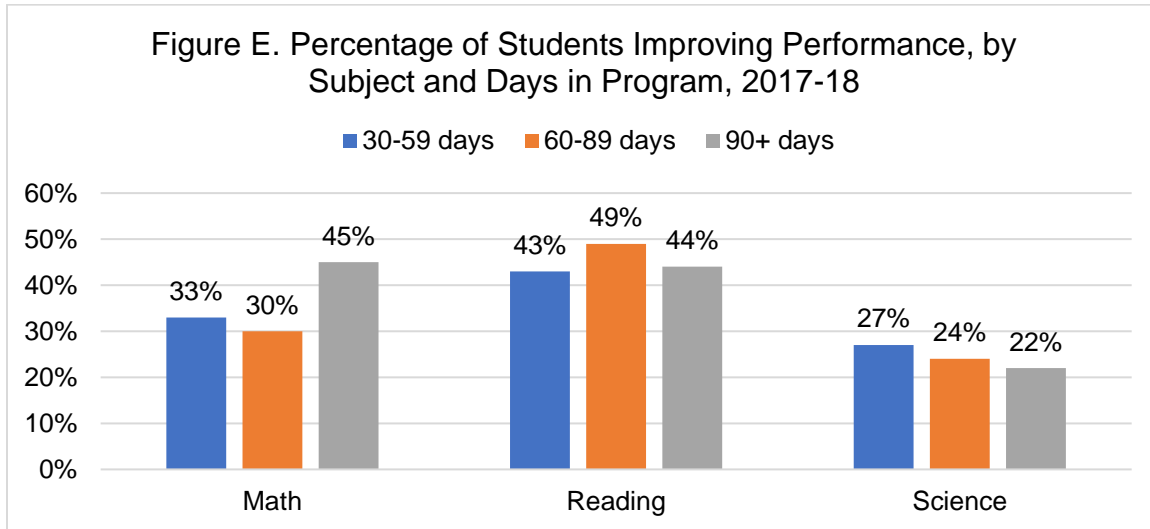
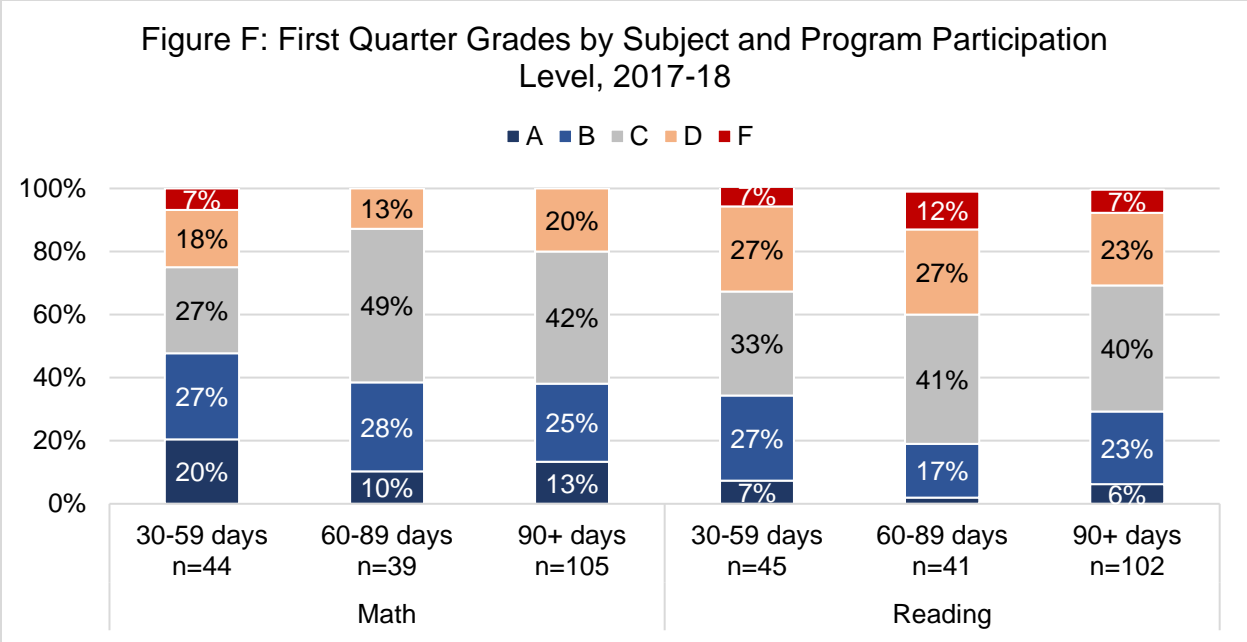


Figure E displays student achievement crossed with program participation to assess how much of an impact the dosage of programming influenced outcomes for regularly participating students. Students were more likely to increase their math grade if they attended more than 90 days of programming, but there is not a similar correlation between attendance and performance for reading and science. In fact, students attending for 90 days or more improved their grades less frequently than other regularly attending students.

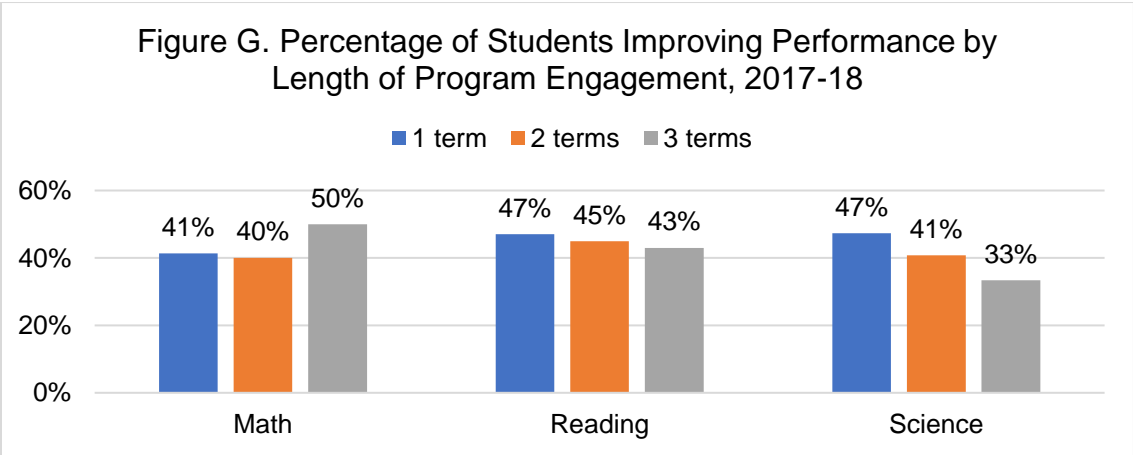


One question this raises is whether students who attend more frequently started with higher grades and had less room to improve. A comparison of math and reading grades in the fall (Figure F) does not reveal substantial differences between the groups of students, or clear patterns. While students attending 30-59 days had higher rates of failing grades in math than their peers, they also had higher rates of As and Bs.

However, the rates of improvement in reading and science (not pictured) are reflective of which categories had more children poorly performing in the fall term, and therefore having more room for improvement. For example, 39% of students attending 60-89 days had a D or F in reading in the fall, compared to 34% of children attending 30-59 days and 30% attending 90 or more days. The higher rate of increase for this group reflects the data shared in Table 8, which shows positive gains occurring more frequently for the students with lower levels of performance at the beginning of the year.



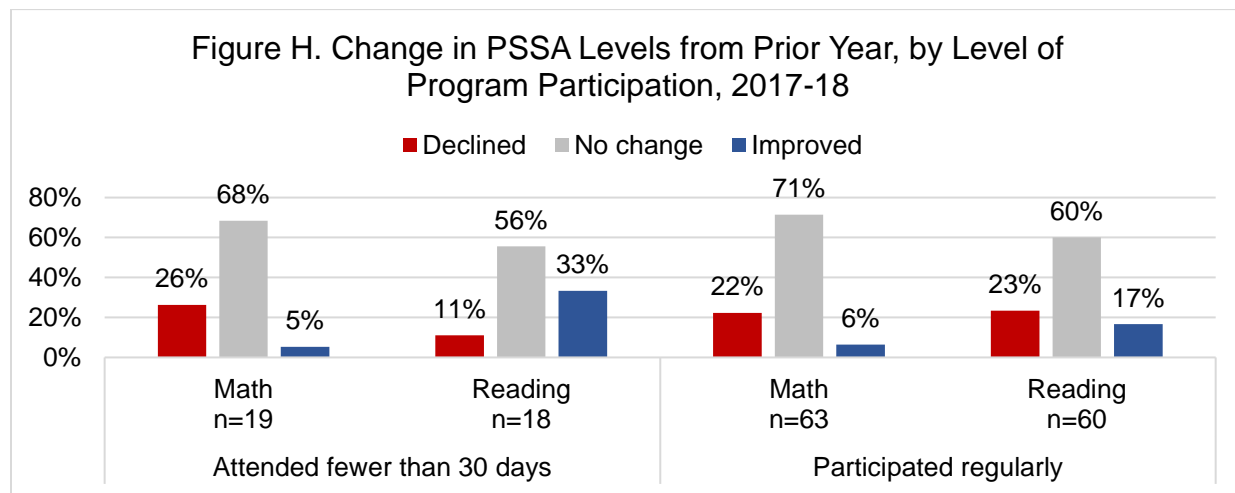
There does not appear to be an association between how long, or how many terms, a student participated and the academic impact of the program. Figure G displays the percentage of students improving their grades, disaggregated by how many terms they attended. The percentage of students improving their grades does not increase by terms. The increase in improvement in math for those attending three terms is most likely driven by the fact that those students attended the program for more days (reflected in Figure E).



PSSA Scores

As indicated previously in Table 6, very few students who scored Basic or Below Basic on the PSSAs in the prior year scored in the Proficient or Advanced ranges during the program year (2% in math and reading). However, program participants did make some gains, and 29% of all tested, regularly attending students scored Proficient in at least one subject of the PSSA; 39% of Grade 4 students scored Proficient on the science PSSA.

Figure H displays changes to PSSA scores for students, grouped by subject and whether the students were regular program participants. As indicated by the blue bars on the right of each cluster, students regularly participating in the program did not improve their scores at higher levels than those attending fewer than 30 days, and more students had a decline in their test scores than an improvement. This change over time reflects a different pattern than the changes in students' classroom grades.



Tables 9 and 10 cross students' scores from 2017 with 2018 to show how PSSA test performance changed from the prior year. The cells highlighted in grey indicate students who scored within the same category each year. Blue and red colored cells indicate movement in positive and negative directions, respectively. This more detailed view of performance (including those who were Proficient in 2017) indicates that most of the changes occur between the Basic and Below Basic levels.³

Table 9. Math PSSA Score Changes from 2017 to 2018, Grades 4-5

2017 Scores	2018 Scores				Total
	Below Basic	Basic	Proficient	Advanced	
Below Basic	36	3	0	0	39
Basic	9	7	1	0	17
Proficient	1	3	0	0	4
Advanced	0	0	1	1	2
Total	46	13	2	1	62

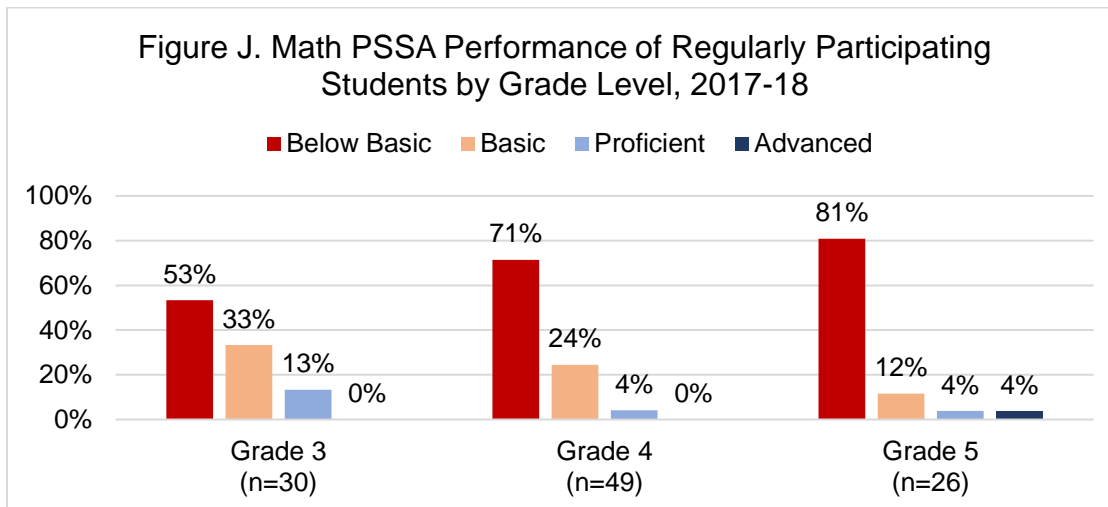
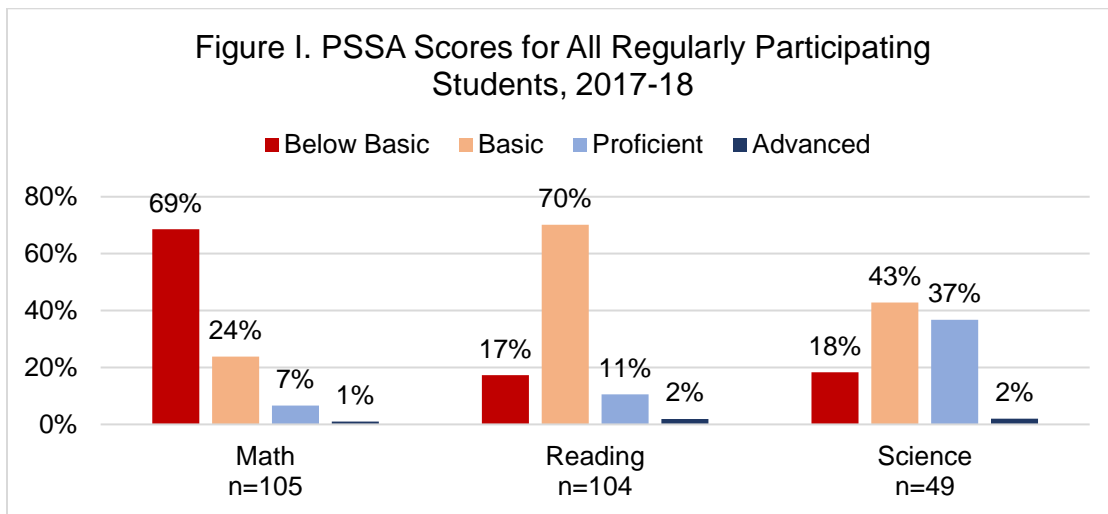
Table 10. Reading PSSA Score Changes from 2017 to 2018, Grades 4-5

2017 Scores	2018 Scores				Total
	Below Basic	Basic	Proficient	Advanced	
Below Basic	7	8	0	0	15
Basic	6	24	1	0	31
Proficient	0	8	3	0	11
Advanced	0	0	0	2	2
Total	13	40	4	2	59

³ Progress in science PSSA scores are not available since students do not take that portion of the exam two years in a row.

Figure I displays all standardized test scores for regularly participating students in 2017-18. Scores are lowest in math and highest in science. Two-thirds of students scored Below Basic on math, and another 24% scored at the Basic level. Examining the strategies utilized to build students' mathematical skills and comprehension may be an opportunity for program growth. While there are gains in students' classroom grades, PSSA results indicate there may still be significant unmet needs for the students. Examining test scores by grade also reveals that students in the highest grades are performing most poorly (Figure J), reflecting the compounding effects of their lack of mastery with concepts taught in earlier grades.

Comparatively, a majority of students score at the Basic level in reading (70%), and performance does not vary by student grade level (not pictured). While only 2% met the program goal of improving to Proficient or higher, this may be an area of relative strength to build on to more readily meet that goal.



DIBELS

Student literacy levels are measured through DIBELS activities at the beginning, middle, and end of the school year. 198 participants had at least two DIBELS scores with which to evaluate growth, and 178 of those students were regular participants. Pre scores are compared to the Post score scale in each grade to illustrate the progress the student made over time. The crosstab of these changes are displayed in Table 11. 78% of students made enough gains during the year that their score elevated by at least one level.

62% of students starting the program with scores below the risk cut point made enough progress to move past the risk cut point, into the moderate risk category (36%) or above the benchmark (26%). Overall, 43% of regularly participating students scored above the DIBELS benchmark (Proficient) in their Post test, indicating they are on track to continue to achieve positive reading outcomes.

Table 11. Progress of Regularly Participating Students with Pre and Post DIBELS Scores, 2017-18

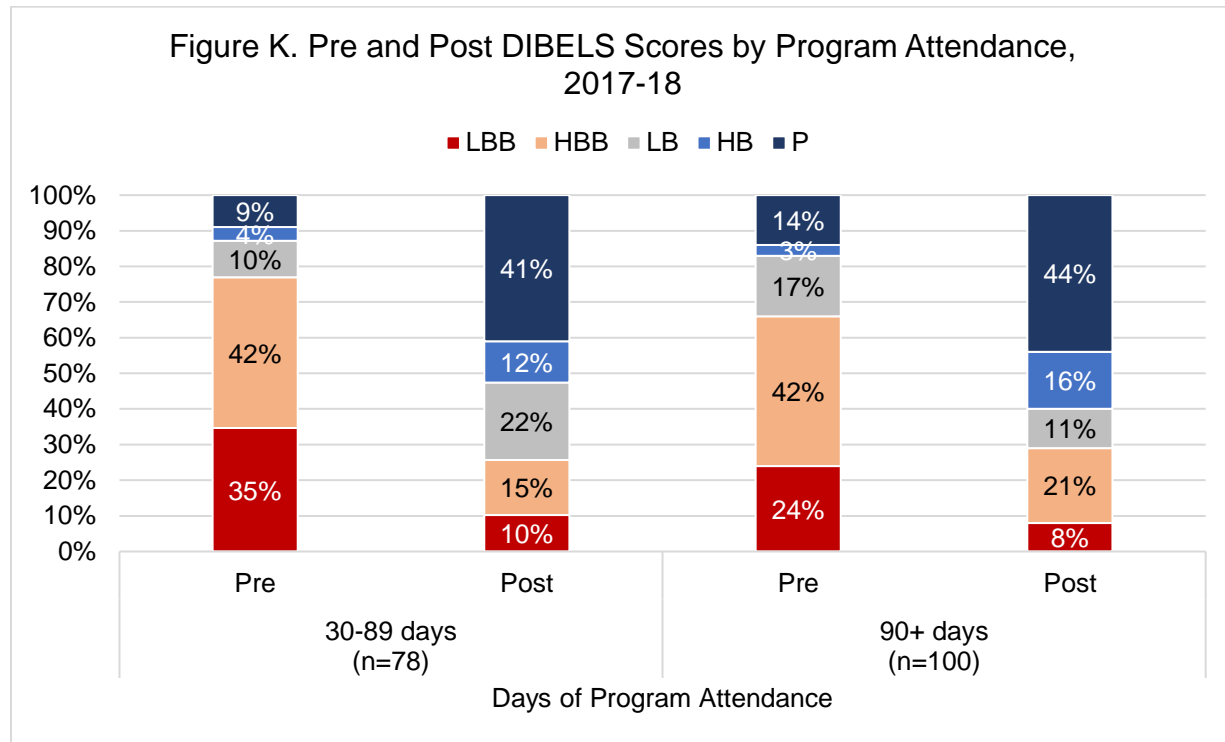
Pre Scores	Post Scores					Total	Percent Improved
	Well Below Benchmark		Below Benchmark		At or Above Benchmark		
	LBB	HBB	LB	HB	Proficient		
Low Below Basic (LBB)	16	15	9	2	9	51	69%
High Below Basic (HBB)		17	19	15	24	75	77%
Low Basic (LB)				7	18	25	100%
High Basic (HB)				1	5	6	83%
Proficient		1			20	21	NA
Total	16	33	28	25	76	178	78%

Table 12 shows the number of students whose pre and post scores were above and below key DIBELS benchmarks by grade level. Students in grades K-2 score at or above the benchmark at higher rates than students in grades 3-5. Similarly, older students are more likely to still be below the risk cut point at the end of the program year. While many improved, one in three 3rd through 5th graders remained below the risk cut point.

Table 12. DIBELS Changes Past Key Benchmarks for Regularly Participating Students, 2017-18

Grade	Below Risk Cut Point			Above Benchmark			Total Students
	Pre	Post	Post Percent of Total	Pre	Post	Post Percent of Total	
K	14	2	9%	6	19	83%	23
1	22	11	42%	2	13	50%	26
2	21	6	15%	4	14	36%	39
3	19	9	38%	1	7	29%	24
4	32	13	33%	3	12	31%	39
5	17	8	35%	4	7	30%	23
Total	125	49	28%	20	72	41%	174

Figure K displays pre and post DIBELS scores by program attendance. Students attending the program 90 days or more scored High Basic or Proficient at three times the rate (60%) of those attending 30-89 days (17%). However, these students were also less likely to score at the Below Basic level in the beginning of the year (66% vs. 77%). Examining the score distributions side by side reveals that each group of students made significant gains over the course of the program year.



Attendance

School attendance is critical to student achievement and engagement. Since the program targets at-risk students, many students regularly participating in the program miss a high volume of school days. 40% of students experienced eleven or more absences and 32% had eleven or more days tardy in the prior school year.

The results are mixed for whether or not attendance improved for program participants. While attendance improved for some, it worsened for others, and program participants still experienced high rates of absenteeism and tardiness. The program did meet one of its target performance indicators related to attendance: 78% of regular program participants who needed to improve their attendance from the prior year had fewer days tardy during the 2017-18 program year. However, 43% of those students were still tardy ten or more days.

Table 13. Attendance and Behavior Progress of Regularly Attending Program Participants vs. Performance Targets

Description of Measure	Actual	Target	Eligible Number of Students *
Participants will improve their school attendance/behavior by reducing their number of days absent from the prior school year to the current year (of students needing to improve).	60%	70%	77
Participants will improve their school attendance/behavior by reducing their number of days tardy from the prior school year to the current year (of students needing to improve).	78%	70%	63
Participants will improve their school attendance/behavior by reducing their number of behavior incidents from the prior school year to the current year (of students needing to improve).	93%	70%	15

Table 14 displays the breakdown of how many students had eleven or more absences during the program year, based on whether they had eleven or more in the prior year. 75% of those with eleven or more absences in the prior year continued to miss a high volume of school days, and 21% of those who missed ten or fewer days in the prior year missed eleven or more during the program year. Regardless of changes since the prior year, 41% of regular attendees were absent from school eleven or more days during the program year (Table 15).

Table 14. Absences During Program Year by Whether Student Needed to Improve from Prior Year (Regular Program Participants), 2017-18

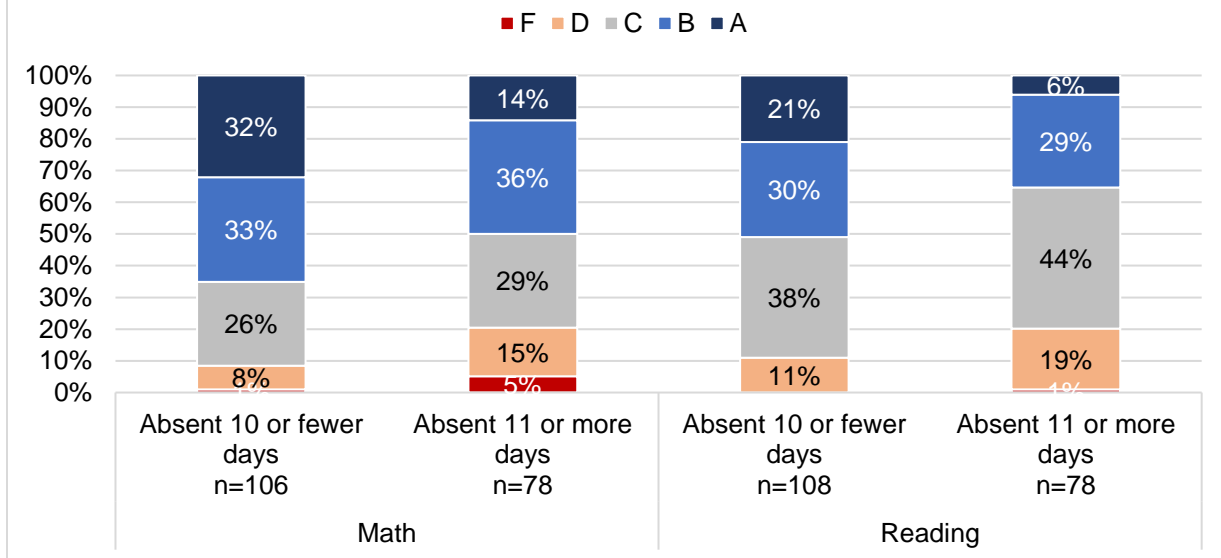
Absences in Program Year	11+ Absences in Prior Year?	
	No n=117	Yes n=77
10 or fewer	79%	25%
11 or more	21%	75%
Total	100%	100%

Table 15. Absences for Regular Attendees, 2017-18

	Count	Percentage
Absent 10 or fewer days	129	56%
Absent 11 or more days	94	41%
No data	8	3%
Total	231	100%

Figure L illustrates the letter grade distributions in math and reading for regularly participating students, split out by how many absences students had from school. There are differences in achievement in both subjects. 65% of students missing ten or fewer days of school have an A or B in math, and 51% have an A or B in reading, compared to 50% and 35% for students missing eleven or more days. Students missing eleven or more days also have a D or F in each subject at twice the rate of their peers.

Figure L. Spring Grades by Regularly Participating Students, by School Absences and Subject, 2017-18



Overall, there is not a correlation between the number of days of program participation and the number of days absent from school. However, two in three students who attended the program but were not regular participants missed eleven or more days of school. If addressing school attendance is a priority of the program, this indicates an intervention opportunity – students who do not regularly attend the program are more likely to be missing a high volume of school days as well.

Table 16. Absences During Program Year by Regular Student Participant Status, 2017-18

Absences During Program Year	Regular Participant?		Total n=286
	No n=63	Yes n=223	
0 to 3 days	10%	18%	16%
4 to 6 days	13%	17%	16%
7 to 9 days	14%	17%	16%
10 to 14 days	19%	17%	17%
15 to 19 days	27%	13%	16%
20 or more days	17%	18%	18%
Total	100%	100%	100%

In addition to missing full days, tardiness negatively impacts a child’s educational experience. Program participants experience high rates of tardiness slightly less frequently than high rates of absences. In the 2017-18 school year, 33% of regular participants were late for school eleven or more times.

Table 17. Percentage of Regular Attendees Tardy 10 or More Times, 2017-18

	Count	Percentage
Tardy 10 or fewer days	147	64%
Tardy 11 or more days	76	33%
No data	8	3%
Total	231	100%

78% of students who were late to school eleven or more times during the previous year experienced fewer days tardy during the program year, meeting the target of 70%. At the same time, two-thirds of students who were tardy eleven or more times in the prior year were still tardy eleven or more times during the program year (Table 18), so there is still much room for improvement.

Table 18. Tardiness in 2017-18 by Tardiness Level in Prior School Year

	11 or More Days Tardy in Prior Year?	
	No n=131	Yes n=63
Days Tardy in 17/18		
10 or fewer days	82%	32%
11 or more days	18%	68%
Total	100%	100%

A bright spot for program participants was the reduction in the number of school days missed due to suspensions. The program exceeded its target of 70% of students with suspensions in the prior year experiencing fewer during the program year, reaching 93%. Additionally, the number of school days missed by program participants due to suspensions dropped from 36 to 10, a 72% reduction.

Although two students who did not have a suspension in the prior year did have one during the current program year, proportionally, fewer students missed school days due to suspensions compared to the prior year (2% vs. 8%). These reductions may be partially attributed to local efforts to reduce and eliminate the use of suspensions for young students, but teacher surveys also indicate positive improvements in student behavior.

Table 19. Percentage of Regular Attendees Experiencing Suspensions, 2017-18

	Prior Year n=194	Program Year n=223
Any suspensions	8%	2%
<i>3+ days suspended</i>	2%	1%

Teacher Perceptions

Teacher surveys were distributed to measure students' behavioral changes in the classroom. Surveys were returned for 117 of the total 316 students, 116 of which were for the 231 students who regularly participated. Teachers completed the surveys on paper, and NLA staff entered responses into a spreadsheet. Table 20 details the number of surveys returned for regularly participating student at each site, and the response rate (percent of regularly attending students who had a completed survey about their performance).

Table 20. Teacher Survey Response Rates for Regularly Attending Students, by School, 2017-18

School	Number Completed	Percent Returned
Arlington	12	39%
Arsenal	35	71%
Lincoln	4	12%
Miller	17	61%
Morrow	11	35%
Spring Hill	28	85%
Woolslair	9	35%
Total	116	50%

Of the five performance measures established for the program related to teacher-reported improvements, two targets were met – the percentage of students improving their class participation and their motivation to learn. These each indicate a heightened level of engagement in the classroom.

Table 21. Teacher-Reported Progress of Regularly Attending Program Participants vs. Performance Targets, for Students Needing to Improve

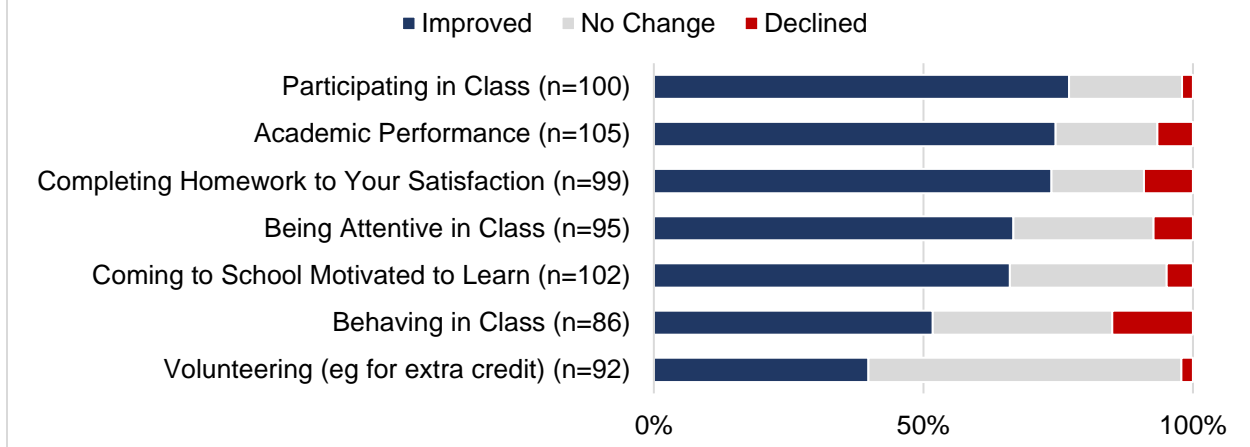
Description of Measure	Actual	Target	Eligible Number of Students*
Participants will have teacher-reported improvement in homework completion and class participation.	64%	90%	90
Participants will have teacher-reported improvements in student behavior.	52%	75%	86
Participants will improve their class participation.	77%	60%	99
Participants will improve their volunteering in class.	40%	60%	92
Participants will improve their motivation to learn.	66%	60%	102

* The eligible number of students varies for each item since some students were marked as Not Needing to Improve in certain areas.

Responses for all survey items are detailed in Figure M. Teachers reported some form of positive change for 91% of students who regularly participated in the program. The top 3 areas of improvement included:

- Participating in Class – 77% improved
- Academic Performance – 75% improved
- Completing Homework to Your Satisfaction – 74% improved

Figure M. Teacher Perceptions of Behavioral and Academic Progress for Regularly Participating Students, 2017-18



Engagement & Academic Outcomes by Site

This section highlights a few of the engagement and academic analyses presented above, disaggregating the students by their Little Learning Warriors site. The number of participants with data on each measure are not large, so data should be interpreted with caution. However, understanding the differing dynamics by location is useful for identifying both model sites to observe what is working well, and to identify sites' areas for development.

Table 22 displays information shared earlier in the report to provide context for the following analyses. The last column displays a new set of information, the percentage of students returning to the program from the prior year. This data on student retention provides context for what proportion of students understand the routines of the program and remain engaged over more than one year. It is not an indicator of differing levels of student academic performance, as analyses of student grades in the fall indicate that returning students begin the year performing at the same level as their peers who are new to the program. Arlington and Morrow have the lowest percentage of returning students (27% and 28%), and therefore the highest percentage of new students in the program. Woolslair has the highest percentage of returning students, at 52%.

Table 22. Number of Total Student Participants, by Site and Term, 2017-18

Site	Participants Each Term			Total Unique Students	Students Engaged in 2 or More Terms	Students Returning to Program from Prior Year
	Summer	Fall	Spring			
Arlington		48	48	59	63%	27%
Arsenal	22	44	50	57	74%	37%
Lincoln		34	30	42	52%	36%
Miller	20	32	26	50	48%	42%
Morrow	14	30	34	40	75%	28%
Spring Hill	15	35	32	41	80%	39%
Woolslair	3	26	27	27	96%	52%
Total	74	249	247	316	70%	36%

Figure N displays the percentage of students at each site who attended the program regularly (30 days or more) and most intensively (90 days or more). The chart is sorted such that sites with the highest rates of regular attendees begin from the left. Woolslair has both the highest rate of regularly attending students and students attending 90 days or more. The distribution of how frequently students attended at Arsenal, Spring Hill, Lincoln and Morrow were similar to each other, with about four in five youth attending regularly and just under half attending for 90 or more days (with the exception of Spring Hill at 59%). Miller and Arlington were outliers from the other sites, with just under half of the students participating for fewer than 30 days.

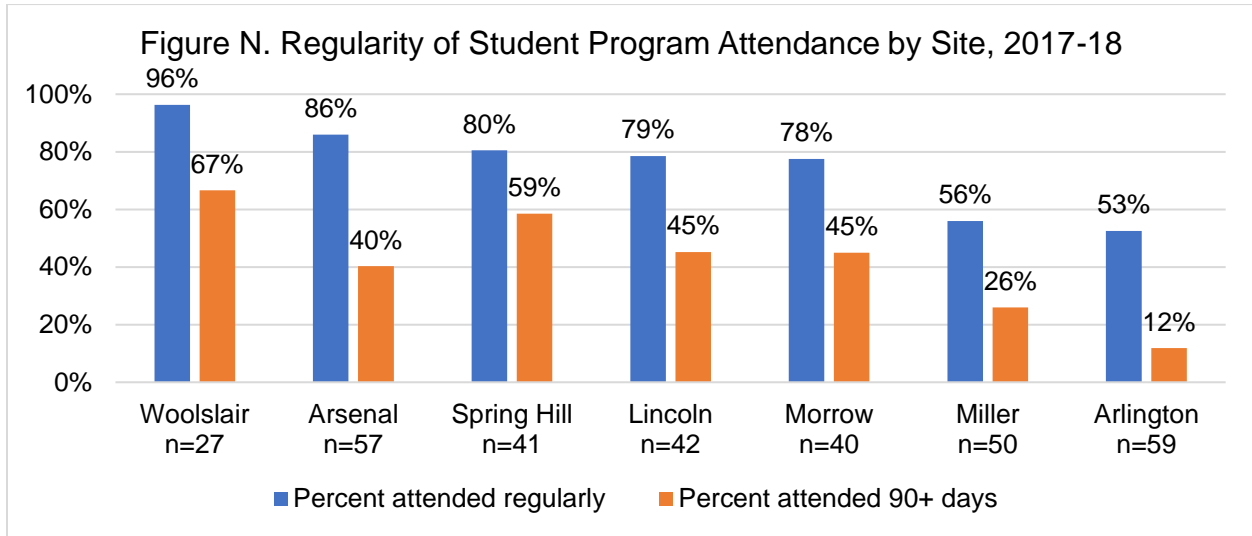


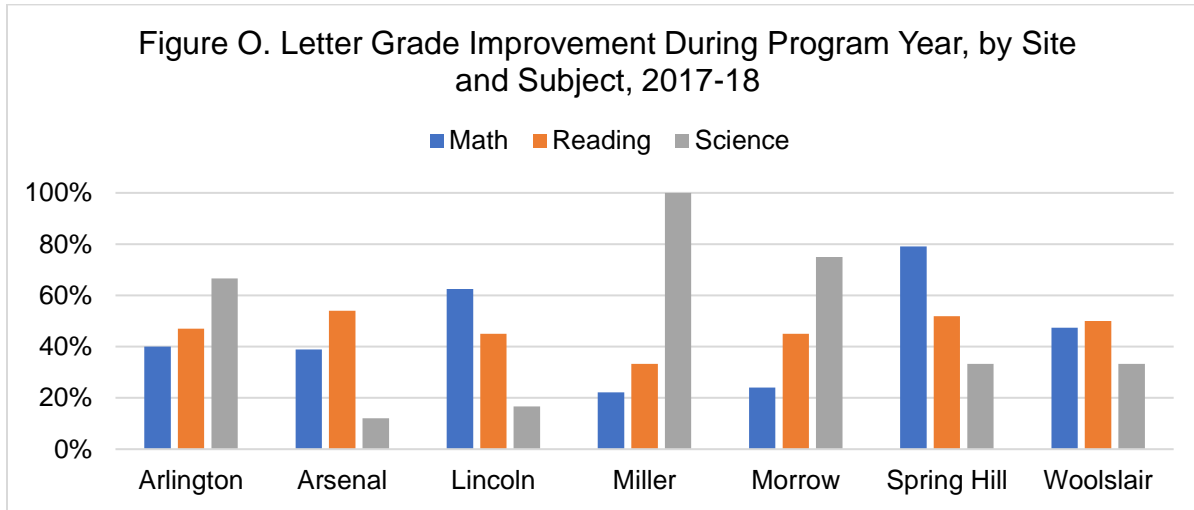
Table 23 provides additional data about the level of engagement students had at each site. Spring Hill and Woolslair served a smaller total number of children than other sites, but they had the highest percentages of students participating for 90 or more days.

Table 23. Attendance Levels by CCLC Site, 2017-18

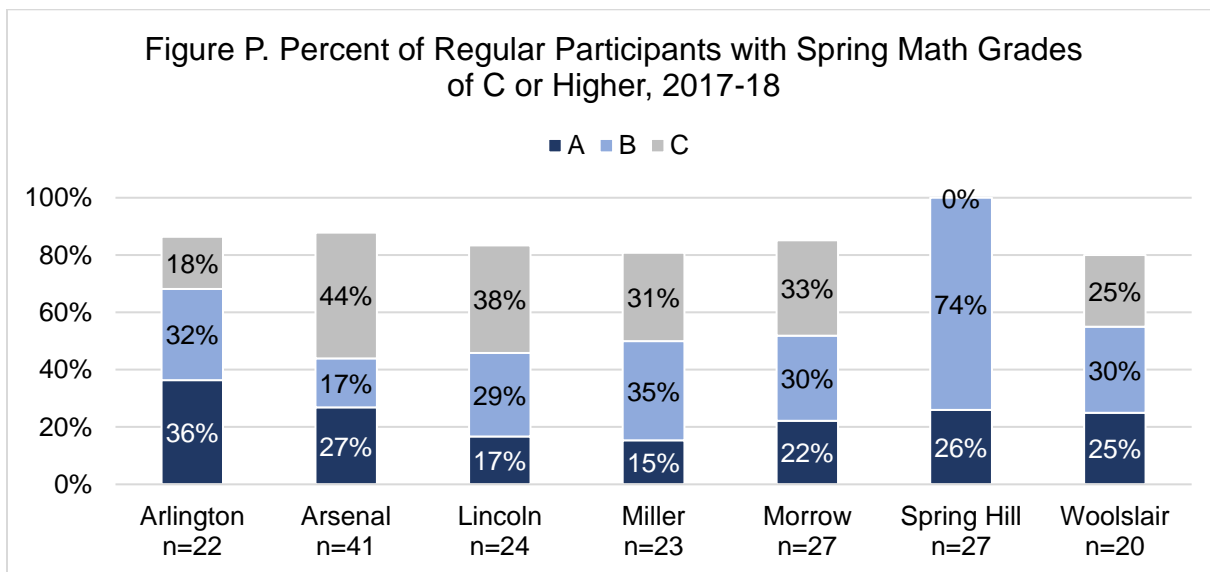
Center	Percentage Attending Regularly	Attendance Category by Site			
		Fewer than 30 days	30-59 days	60-89 days	90+ days
Arlington	53%	47%	17%	24%	12%
Arsenal	86%	14%	30%	16%	40%
Lincoln	79%	21%	31%	2%	45%
Miller	56%	44%	16%	14%	26%
Morrow	78%	23%	13%	20%	45%
Spring Hill	83%	17%	15%	10%	59%
Woolslair	96%	4%	11%	19%	67%
Total	73%	27%	23%	16%	34%

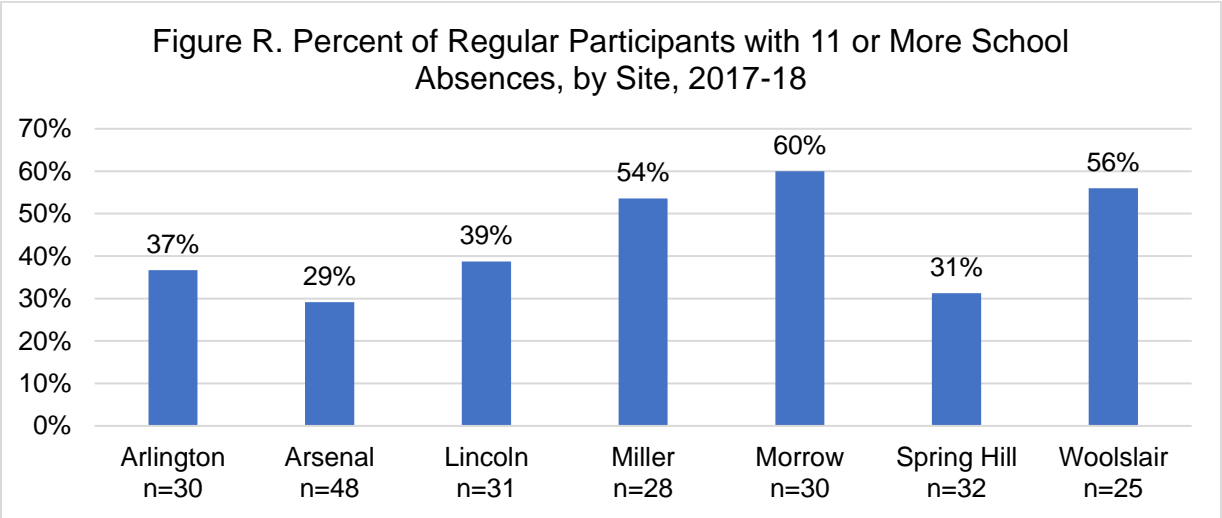
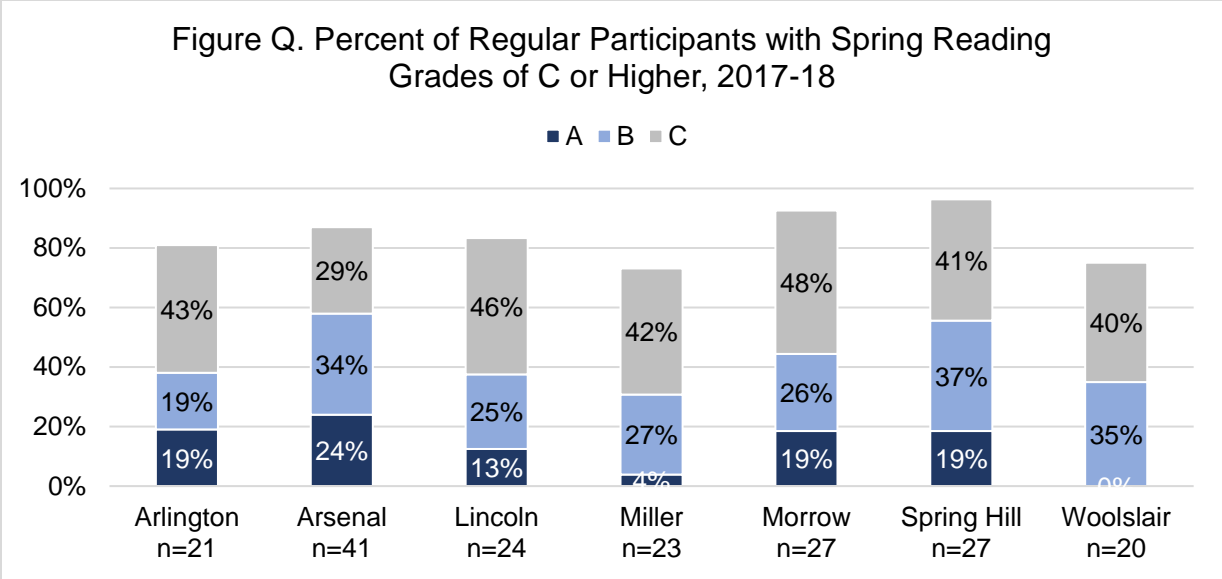
Figure O displays the percentage of students achieving grade level gains in each subject area from the beginning to the end of the program year, grouped by site. Each site has different comparative strengths and weaknesses, with Miller, Morrow and Arlington standing out in science, Spring Hill and Lincoln in

math, and Arsenal and Woolslair in reading grade improvements. Spring Hill and Lincoln are the only sites where more students improved in math than reading.



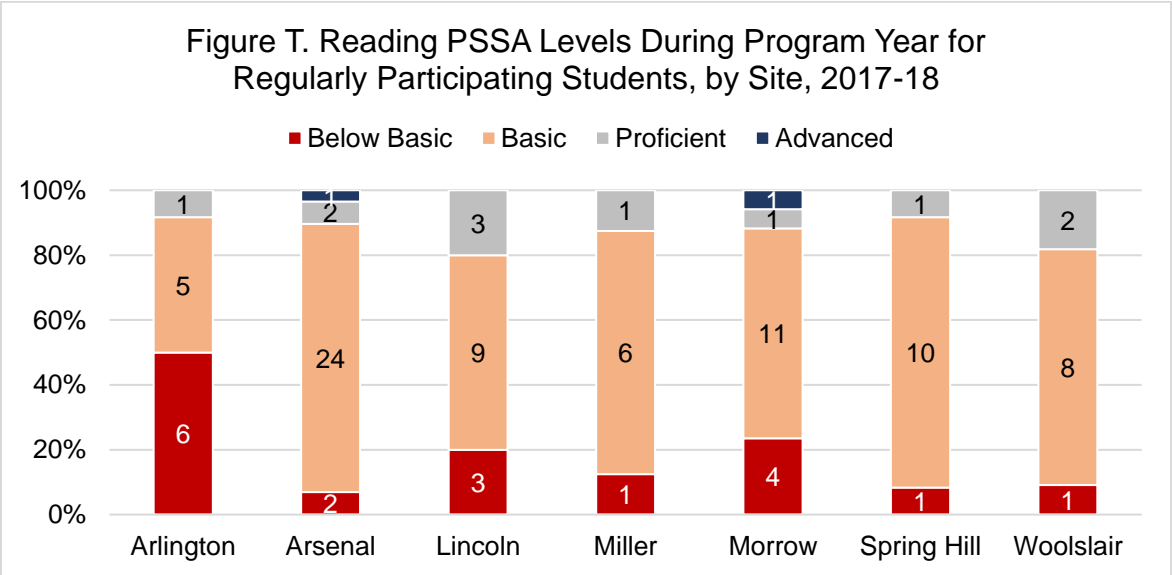
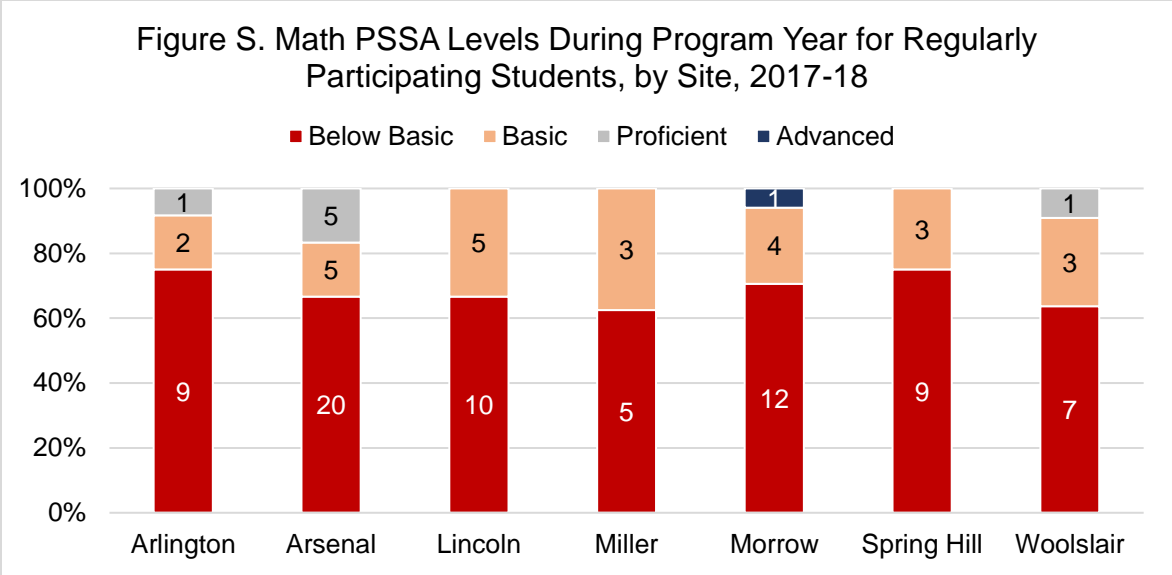
Progress made during the year may be reflective of differing levels of need, indicated by letter grade distributions at the different schools. Figures P and Q display the percentage of students with a C or higher in math and reading at each school. End of year grades for regularly attending students varied slightly by site. Although more of the student gains identified in the outcome analyses above pointed to strides made in reading, lower percentages of students have strong grades in reading than math in most of the seven schools. The grades of student participants at Miller and Woolslair are notably lower than the other schools. Students attending these schools experience some of the highest rates of absenteeism (Figure R), which may be impacting their classroom outcomes. (The relationship between absences and grades is explored in Figure L).



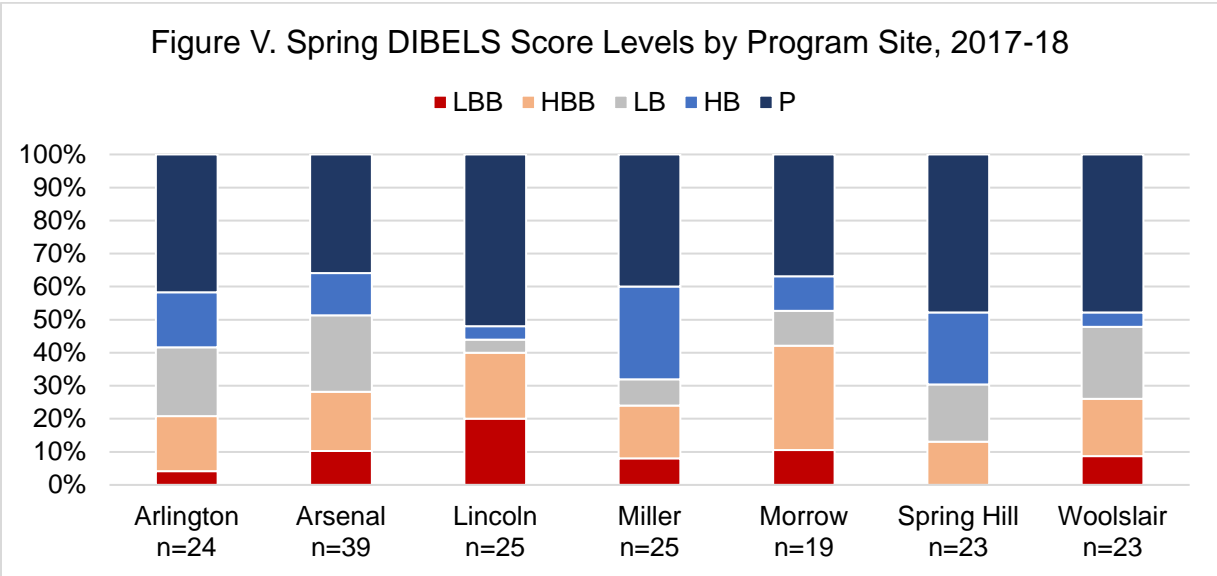
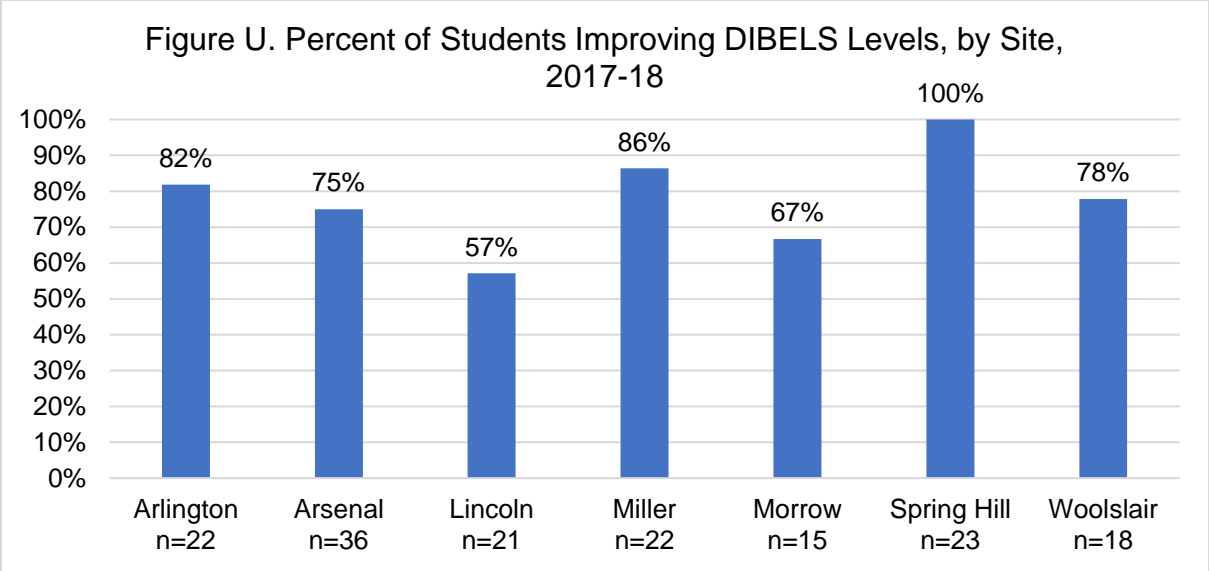


The next two Figures (S and T) chart the program year PSSA results for regularly participating students at each school. The visuals highlight the ongoing academic challenges students involved in the program face. Students are faring better in reading than math, where 69% of students scored Below Basic. Proportions vary slightly by school, but since these results are for small numbers of children (provided in each section of the column), they may be subject to noise⁴ and should be interpreted with caution.

⁴ Data ‘noise’ refers to situations where data fluctuates widely over time in a way that is not meaningful. When outcomes for very small numbers of individuals are analyzed over time, small changes at the individual level can create large shifts in percentages. These shifts may be more reflective of changes in the population than anything related to program operations and impact. As a result, such data may still be valuable, but should be carefully reviewed and considered in the context of other program information.



DIBELS scores provide more information about how students progressed with their literacy skills. Figure U shows the percentages of students at each site who improved their DIBELS level over the course of the program, and Figure V displays where each student tested in the spring. Patterns by site differ slightly from patterns related to letter grade changes. Some of these differences may be caused by the narrowing of the student population for DIBELS testing. Students attending the program more frequently are overrepresented among those with DIBELS scores, so higher rates of improvement here may reflect gains made by those most intensively involved students. Site-specific observations are included in the next section.



A summary of the demographics, strengths and areas for development for each site are outlined below.

Arlington

Arlington was one of the largest sites and served the most students (n=59) even though it did not operate over the summer. Due to this large number, Arlington still served an average number of regularly participating students (31), even though their percentage of students regularly participating was below average (53% vs. 73%). Only 12% of students participated for 90 days or more.

The demographics of student participants at Arlington, such as gender and race, mirrored those of the program at large. Arlington served a higher proportion of K-2nd graders than other sites (64% vs. 48%). Regularly participating students had a modest rate of school absences compared to other sites: 37% of students missed eleven or more days of school.

Strengthening student achievement in science appears to be Arlington's comparative strength, and gains made in reading and math are more modest. Overall, the academic progress made by Arlington's regularly participating students was average for the program. 86% of students had a C letter grade or higher in math and reading in the spring, and over the course of the year, 47% improved their reading grades, 40% improved in math, and 67% improved in science.

A higher than average percentage of Arlington students with PSSA test results scored Below Basic in reading. There are only data for twelve students, so it is unclear if this is representative of the larger population of the students involved in the program at this site. However, it may be worth examining since it indicates a higher level of need related to reading than is demonstrated by students at other sites. Four of the seven students scoring at this level improved their DIBELS level, demonstrating some progress for these at-risk students.

Arsenal

Arsenal was one of the largest programs, serving 57 students. They had the second highest percentage of students attending regularly (87%), and an average percentage attending the program for at least 90 days (40%). Their student population is unique from other sites in that 49% of students have Limited English Proficiency, and 20% are Hispanic. Students with Limited English Proficiency were among some of the most regular attendees: 24 of the 25 students attended the program regularly. Arsenal's students are mostly in 2nd-4th grade (69%), and they had the lowest percentage of students with eleven or more absences (29%).

Arsenal's academic strength is reading development, with 54% of students improving by a grade level during the year, and a higher than average percentage scoring at the Basic level or above on the PSSA. 87% of students ended the year with a classroom grade of C or higher. These gains were consistent across student participants: 50% of students with Limited English Proficiency improved their grades, and 10 of the 12 with PSSA scores scored at the Basic level (vs. Below Basic). Teachers also recognized improvement in Arsenal's students at higher than average rates. Teachers reported that 82% of students (with room to improve) improved their homework completion, and 63% improved their classroom behavior.

Arsenal students' grades in math were above average, with 88% earning a C or higher in the spring. The percentage of students improving in the subject was average (39%), and PSSA scores are predominantly Below Basic. Consistent with the experiences of other sites, mathematical comprehension remains an area of development.

Lincoln

Forty-two students participated in the program at Lincoln in the fall and spring of 2017-18, with only 52% of students participating during both terms. Despite the student turnover, Lincoln still had an average number of students attend the program regularly (79%) and for 90 days or more (45%). The demographic makeup of students at Lincoln mirrored the program as a whole, except they served a higher than average percentage of African American students (94%). Students at this site experienced an average level of absenteeism from school.

63% of students at Lincoln improved their classroom grade in math. This was the second highest rate of improvement, and students only improved in math more than reading at one other site. This seems to

be a comparative strength, yet remains an area for growth as students' PSSA scores remained weak and spring math grades were still average despite the improvements students made over the course of the year.

Student achievement in reading was a comparative weakness for Lincoln. Lincoln had the lowest percentage of students improve their DIBELS level (57%), and only 45% of students improved their letter grade. At the same time, the students' spring reading grades and improvement are on par with other program sites.

Miller

Miller had the third largest program, serving 50 students over the 2017-18 program year. This site had the second lowest proportion of regularly participating students, at 56%, and a below average percentage of students participating for 90 days or more (26%). This low level of attendance follows a different pattern than that at other sites since Miller had both a summer program and a higher than average percentage of students returning from the prior year (42%). This percentage is driven by a high number of students attending in the summer, but not staying in the program through the school year (15). 78% of students who participated in the fall attended the program for 30 days or more.

The demographics of the students at Miller differed from other sites in a couple ways. Miller's students were 100% African American and were more likely to be in 1st- 2nd grade than those at other sites (52% vs. 36%). Miller also did not have any kindergarten students participating in the program.

Miller's students demonstrated the greatest progress in their reading skills. 86% improved their DIBELS level during the program, and 68% tested at the High Basic or Proficient level in the spring. While students at Miller saw fewer academic gains in the classroom than their peers, they also improved their letter grades in reading (33%) more frequently than in math (22%). It appears in Figure O that students made strides in Science, but a closer examination of the data reveals that the 100% improvement statistic represented only one student.

Despite student gains, the students' fourth quarter grades were lower than average for program participants. Academic performance for Miller's students may be impacted by high levels of absences. Miller's students attended the program less frequently than in the prior year (when 49% attended for 90 days or more), and even among Miller's regularly attending students, 54% missed eleven or more days of school.

Morrow

Morrow served an average number of unique children (40), and they had an average percentage of students who regularly attended programming (78%). While the percentage that attended for 90 days or more was also average for the sites (45%), Morrow had a higher than average percentage attending for 60 days or more (65% vs. 50%). The demographics of the students at Morrow matched those of other sites, except that the students were older. Morrow did not have any kindergarten students and 54% of students were in grades 4-5, compared to 32% at other sites.

Morrow's students made their greatest academic gains in their classroom grades. This is an interesting finding since they also experienced absenteeism at the highest rate – 60% of regularly participating students missed eleven or more days of school. Students' gains despite their absences may be

attributed to the impact of program involvement. Teachers completing surveys for regularly participating students recognized improvement in their students at higher than average rates. Teachers reported that 80% of students (with room to improve) improved their homework completion, and 63% improved their classroom behavior.

Classroom grades improved the most in science (75%), followed by reading (45%). 93% of students ended the school year with a C or higher in reading. This is the second highest percentage of all sites. In contrast, Morrow's students had below average scores and progress on their DIBELS, indicating that there is more room for development in students' reading skills. Consistent with the experiences of other sites, mathematical comprehension also remains an area of development.

Spring Hill

Spring Hill served an average number of unique children (41), and they had a higher than average percentage of students who regularly attended programming (83%). The ages and academic needs of the students at Spring Hill were consistent with other sites, but student demographics differed in a couple ways. Spring Hill had a higher percentage of students who were White (32%) and female (70%) than other locations. A smaller than average percentage of regularly participating students missed eleven more days of school (31%).

Students at this site had strong academic gains in both math and reading. The strongest gains in their grades were in math (79% improved), and 100% of students had A or B in math at the end of the year. 96% also ended the year with a C or higher in reading, after 52% of student improved their grade level. All regularly participating students with room to improve on their DIBELS score moved up at least one level.

Spring Hill's success with helping students improve in math may be a strength on which they can build, as their students' stronger academic performance in the classroom is not reflected in their PSSA scores. Their PSSA scores are on par with students at other sites. Even though they all ended the year with As and Bs, 9 out of 12 regularly participating students with math PSSAs still scored at the Below Basic level.

Woolslair

The demographics of student participants at Woolslair mirrored those of the program at large. Woolslair served the smallest number of total students (27) but had the highest percentage (96%) who stayed with the program over the course of the year, and the highest percentage of students who attended the program at least 90 days (67%). However, a high percentage of regularly participating students (56%) missed more than ten days of school during the year. This may contribute to the more moderate academic gains made by students at this school.

About half of the regularly participating students made grade level improvements in both reading (50%) and math (47%), yet the percentage of students with a spring grade of C or higher in math and reading were still lower than average. Students' DIBELS and PSSA scores were consistent with the distributions of scores at other sites.

There is not a specific academic area that stands out as Woolslair's strength. Rather, it appears to be their student engagement. While students experienced higher than average levels of absenteeism, they

attended the program at the highest rates. The heightened level of engagement appears to have helped students make some gains and maintain their academic performance rather than falling further behind.

Questions for Further Exploration

The analyses presented in this report generate more questions than they answer. This evaluation will be shared with program staff and used to inform program modifications in the coming year. In addition to questions identified by the program team, the evaluation team proposes the following questions as potential items for further exploration:

- **Math:** Why are students consistently making greater gains in their reading skills than math? What are the sites having more success with math doing differently?
- **Classroom Grades and PSSA Scores:** Why are students with high classroom grades continuing to score at the Basic or Below Basic level on the PSSAs? Are there core competencies that can be more strongly focused on within the CCLC programming? What is needed to boost students reading at the Basic level to be Proficient?
- **Program Involvement and School Attendance:** Is the program model designed to address the root causes of absenteeism? If not, should the relationship between program involvement and the impact of school absences be evaluated differently?
- **Teacher Surveys:** What are potential methods to increase the response rates in the next program year? How are teachers utilizing the “Did not need to improve” response on the survey? Are they consistently using it, or are some teachers ranking all students in each category, potentially creating bias in the data if high-performers are rated as “no change”?
- **Evaluation:** Are there aspects of program implementation beyond student achievement that should be added to the evaluation to make it more meaningful for program staff, such as the staffing ratios at each site?