A Snapshot of OST Programming in Philadelphia:

An Evaluation of Six 21st Century Community Learning Center Grantees

Prepared by Research for Action

April 2013

RESEARCH for ACTION

Tracey A. Hartmann, Ph.D.

Jian Gao, Ph.D.

Anurag Kumar

Kimberly Edmunds

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About Research for Action

Research for Action (RFA) is a Philadelphia-based nonprofit organization. We seek to use research as the basis for the improvement of educational opportunities and outcomes for traditionally underserved students. Our work is designed to strengthen public schools and postsecondary institutions; provide research-based recommendations to policymakers, practitioners, and the public at the local, state, and national levels; and enrich the civic and community dialogue about public education. For more information, please visit our website at www.researchforaction.org.

Acknowledgements

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This report was greatly enhanced by the contributions of many RFA staff. We especially appreciate the oversight provided by Dr. Kate Shaw, Executive Director, Dr. Stephanie Levin, Associate Director, Alison Murawski, Communications Director, and Allison Petrosky, Communications Assistant.

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EXECUTIVE SUMMARY

21st Century Community Learning Center (21st CCLC) grants are designed to support out-of-school time (OST) programs to provide academic support for youth attending high-poverty, under-performing schools. The programs also offer enrichment activities such as art and music, recreation, and career and technical education. Pennsylvania has funded 21st CCLC programs since 1998, and the 2011-12 awards are Pennsylvania's sixth cohort of grantees.

Of the 18 Philadelphia organizations awarded 21st CCLC grants in 2011-12, six organizations representing seven providers[1] selected Research for Action (RFA) as their local evaluator. RFA conducted a mixed-methods evaluation that examined student demographics, elements of program quality, and important student outcomes. We report aggregated findings in this report, and provide a set of recommendations for program improvement.

Student Participation

- The 21st CCLC programs enrolled students from underperforming schools.
- Between one third and two thirds of enrolled students qualified for Free and Reduced-Price Lunch.
- Representation of students with Limited English Proficiency and Students with Disabilities was lower in the OST programs than in the schools that they served.[2]
- The majority of elementary school students participated in 21st CCLC programs at a meaningful level (90+ days).

The majority of middle and high school students did not attend at a meaningful level (90+ days).

[1] One grantee was an intermediary organization representing two provider organizations.
[2] High schools were the exception. High school OST programs had a higher representation of LEP students than in the schools they served.

Elements of Program Quality

A. Alignment of Program to Student Academic Outcomes

- Programs aimed to impact academic achievement through homework help and project-based learning,[3] which comprised a majority of program time.
- Programs supplemented academic support with enrichment and skill-building activities to engage students.
- Programs were largely unable to provide a significant amount of one-on-one or small group academic support or align academic support to school day activities.[4]

B. Well-Prepared Staff

- Staffing was a challenge for all the 21st CCLC programs largely because most staff positions were part-time and low-paying, and therefore providers struggled to attract highly qualified personnel.
- Low salaries may continue to inhibit programs' ability to hire certified teachers.
- Providers were taking steps to elevate the skills and training of their staff by requiring and offering additional professional development, and by seeking staff with some postsecondary training.

C. Robust School Partnerships

- All but one of the 21st CCLC providers had supportive relationships with the principals of the schools they served. Principals supported 21st CCLC programs in recruiting students and provided the programs access to school space.
- OST providers hoped to improve and deepen relationships with schools in the coming school year. For many, this meant opening up the lines of communication with classroom teachers to facilitate more connection to school day activities.

Student Outcomes

Research on out-of-school time (OST) programs has found that these programs can have an impact on school attendance; academic outcomes, including standardized test scores; and socio-emotional outcomes.[5] 21st CCLC programs were designed to improve student outcomes in the areas of school attendance, academic performance, and student behavior. Our analyses examined the potential impact of OST program on student academic performance and behavioral outcomes. Overall:

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[3] Learning activities in which students work together to investigate relevant guiding question or problem chosen by students. PBL culminates in projects that require students to use and develop new skills and content knowledge.

[4] Black, A. R., Somers, M.-A., Doolittle, F., Unterman, R., and Grossman, J. B. (2009). *The Evaluation of Enhanced Academic Instruction in After-School Programs: Final Report* (NCEE 2009-4077). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education; Patricia A Lauer; Motoko Akiba; Stephanie B Wilkerson; Helen S Apthorp; et al. (2006). Out-of-School-Time Programs: A Meta-Analysis of Effects for At-Risk Students, Review of Educational Research,76;p. 275.; Moss, M., Swartz, J., Obeidallah, D., Stewart, G., Greene, D. (2001). Americorps Tutoring Outcomes Study. Abt Associates. Cambridge, MA.

[5] Durlack, R. & Weissberg, R. (2012?). After-school programs that follow evidence-based practices to promote social and emotional development are effective. Expanded Learning and After-school: Opportunities for Student Success. http://www.expandinglearning.org/docs/Durlak&Weissberg_Final.pdf; Little, P., Wimer, Christopher, Weiss, H. B. (2008). After School Programs in the 21st Century; Their Potential and What it takes to Achieve it. Issues and Opportunities in Out of School-Time Evaluation: Issue 10. Cambridge, MA: Harvard Family Research Project

- After taking into account pre-existing differences between students, there is no consistent evidence that elementary and middle school OST participants are doing better than non-participants in the following areas:
    - School attendance
    - Reading and Math course grades
    - Reading and Math PSSA scores
    - Suspensions

However, higher levels of participation are associated with better outcomes.

- **For elementary school students**, higher levels of participation in the OST programs were found to be associated with:
    - Fewer school absences;
    - A higher likelihood of earning a C or better in reading;
    - A higher likelihood of scoring proficient or advanced on PSSA Math; and,
    - Fewer out-of-school suspensions.

- For **middle school students**, higher levels of participation in the OST programs were found to be associated with:
    - Fewer out-of-school suspensions

Recommendations

For Program Providers

- Focus on increasing participation, particularly for middle and high school students.
- Offer more centralized planning and support for program staff, particularly in instances where staff do not have significant dedicated paid planning time.
- Continue to develop relationships with school personnel, particularly teachers, to facilitate linking of program activities to school day activities.
- Promote an awareness of the OST program in the school community so that schools see programs as a resource.
- Prioritize professional development for staff and identify resources so that part-time front-line staff are able to access professional development in-house or externally.
- Consider ways to provide more one-on-one and small group tutoring efforts.

For Philadelphia's OST System

Continue to Support Citywide Professional Development of OST Staff

- Offer professional development on increasing student participation in programs, particularly engaging middle and high school students.
- Provide more professional development for OST providers on school curriculum and state standards.
- Provide professional development on partnering with schools and working with classroom teachers.
- Consider alternate vehicles or venues for providing professional development.

Work with the School District of Philadelphia to Develop School-Level Support for OST-School Partnerships

The District could strengthen OST programs in the following ways:

- Encourage principals to better leverage the OST programs for academic improvement of their students.
- Encourage schools to have common professional development or common planning time with their OST providers about the curriculum and the academic improvement needs of their students.
- Make student data accessible to program providers in real time so that they can target academic interventions for program participants.

Consider Ways in Which the City Could Support the Development of the OST Workforce

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Introduction

In 2011-12, 18 organizations in Philadelphia were awarded three-year 21st Century Community Learning Center (21st CCLC) grants designed to support out-of-school time (OST) programs to provide academic support for youth attending high-poverty, under-performing schools. In addition to providing academic support, the programs offer enrichment activities such as art and music, recreation, and career and technical education. Pennsylvania has funded 21st CCLC programs since 1998, and these 2011-12 awards are Pennsylvania's sixth cohort of grantees.

Of the Philadelphia organizations awarded 21st CCLC grants, six organizations representing seven providers[6] selected Research for Action (RFA) as their local evaluator. As part of a citywide effort to create a system for OST programs, RFA agreed to aggregate the data from these local evaluations to provide an overview of OST programming and student outcomes in Philadelphia. While these providers represent a third of all Cohort 6 21st Century grantees in Philadelphia, the analysis and results presented in this report provide useful insights into the potential and the needs of OST programs in Philadelphia and help inform the development of Philadelphia's OST system-building efforts.

About this Report

This report looks at the 21st CCLC programs evaluated by RFA. It seeks to answer the following questions:

1. Who participated in the 21st CCLC programs and how frequently did they participate?
2. What elements of program quality were in place to achieve the intended outcomes? Specifically:
    a. What was the **content** of the 21st CCLC programs and how did the content support program goals for academic and behavioral improvement?
    b. What were the **characteristics of staff** who implemented the 21st CCLC programs and what types of **organizational supports** were available to support them?
    c. What was the reported **level of partnership between 21st CCLC programs and the schools** their students attended?
3. What was the relationship between program participation and academic, attendance and behavioral outcomes?

[6] One grantee was an intermediary organization representing two provider organizations.

RFA addresses these research questions through a mixed-methods study that includes an aggregate analysis of student outcomes data, program participation data, and qualitative data from the local evaluations including interviews with program staff, site visits, and a review of program documents. We report only aggregated findings to inform broader discussions about OST programs and system-building efforts in Philadelphia.

The study includes data from each of the 24 sites operated by the seven provider organizations. However, the analysis of student outcomes focuses on a smaller subset of nine sites which operated programs for the entire school year and for which we had sufficient data. The analysis of student outcomes considers math and reading course grades, math and reading Pennsylvania System of School Assessment (PSSA) scores, school attendance, and suspensions, and compares OST participants to other non-participating students within their schools and in relationship to their level of participation in the program. A more detailed description of data collected and methods can be found in the Appendix.

Overall, the study finds promising evidence of the benefits of the 21st CCLC programs in each of the outcome areas for elementary school students who participate more frequently. We found less evidence of the benefits for middle school students. However, the small sample size for middle school students reduced the strength of the analysis. Our analysis of 21st CCLC program content, staffing, and school partnerships demonstrated some elements of quality. It also suggested ways in which programs could increase their impact on students' academic outcomes.

The report begins with descriptive information about the providers and schools and then presents analyses addressing each of the research questions. The sections of the report are as follows:

I. Context: Providers and Schools
II. Participant Characteristics and Level of Participation
III. Elements of Quality Programming: Program Content, Staff and School Partnerships
IV. Student Outcomes: Academics, Attendance, Behavior

I. Context: Providers and Schools

21st CCLC programs are situated in a variety of settings, and providers bring a range of organizational resources to their programs (see Table 1). At this point in the study, we are not able to tie these characteristics to student outcomes, but it is important to be aware of the variety of contexts in which programs operate.

A diverse array of organizations received the 21st CCLC Cohort 6 grants:

- Five of the seven 21st CCLC providers are non-profit organizations. One provider is a charter school and one is a university-based center.
- Three providers focused on specific geographic regions and were based in the regions they served, while four providers were not focused on particular regions.
- Three providers had specific educational and youth development emphases. Four were multi-service agencies.
- Less than half of the providers had previously received 21st CCLC funding, and the others were new to 21st CCLC funding.
- All but one provider also received OST funding from the City of Philadelphia's Department of Human Services and, thus, were linked to the City's existing professional development supports.
- One of the grantees was an intermediary representing two providers. Therefore, while there were six grantees, there were seven providers.

Table 1. Profile of Provider Organizations

Type of Organization	Geographic Focus	Service Focus	Previously Funded by 21st CCLC	Currently Receives City DHS Funds
CATHOLIC SOCIAL SERVICES				
Non-Profit	City-wide	Multi-Service	⊘	$
CONGRESO DE LATINOS UNIDOS				
Non-Profit	Eastern North Philadelphia	Multi-Service	$ Cohort 5	$
DIVERSIFIED COMMUNITY SERVICES (PHMC Serves As Intermediary)				
Non-Profit	South Philadelphia	Multi-Service	⊘	$
EDUCATION WORKS				
Non-Profit	City-wide	Education and Youth Development	$ Cohort 5	$
METHODIST SERVICES FOR CHILDREN AND FAMILIES (PHMC Is Grantee Serving As Intermediary)				
Non-Profit	City-wide	Multi-Service	⊘	$
NETTER CENTER FOR COMMUNITY PARTNERSHIPS OF THE UNIVERSITY OF PENNSYLVANIA				
University-based Center	West Philadelphia	Education and Youth Development	$ Cohort 5	$
PAN AMERICAN CHARTER SCHOOL				
Charter School	City-wide	Education	⊘	⊘

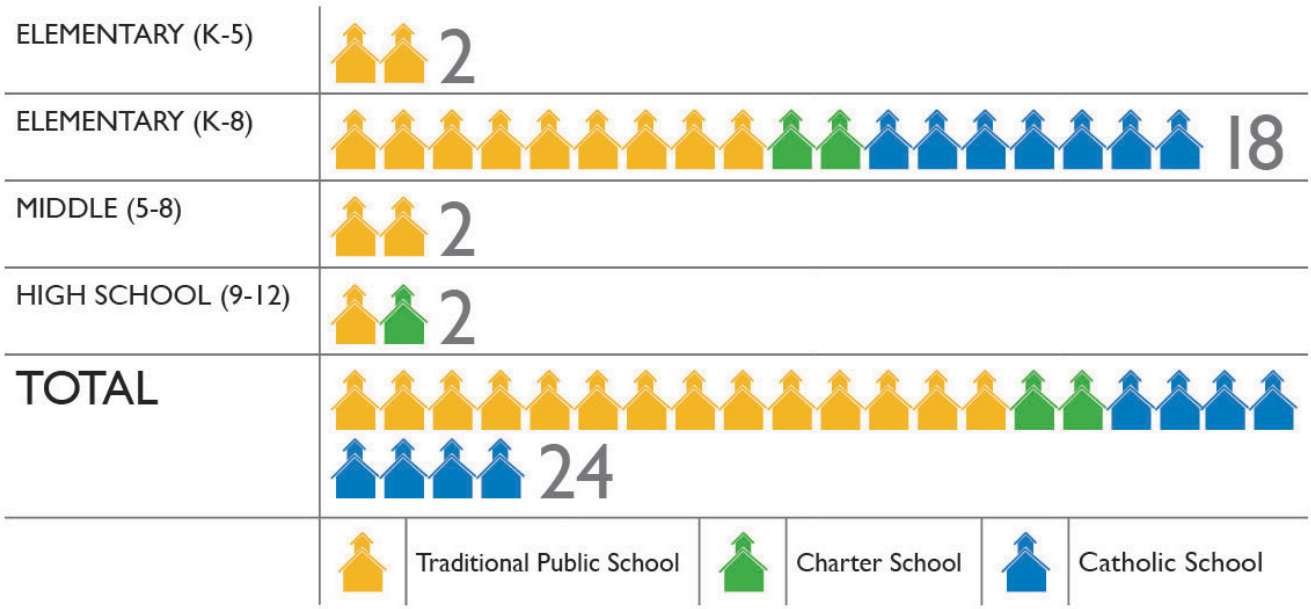
$ received funding ⊘ no funding

All providers served a diverse array of schools.

- The 24 sites in which 21st CCLC programs operated included 20 schools and four community centers, which served multiple schools.
- Programs typically drew participants from the schools in which the programs were located. However, the four community centers drew from several schools in their geographical areas. For the purposes of this study, we asked these programs to identify one primary feeder school.
- The schools included in this study were traditional public schools, charter schools, and Catholic schools.
- Schools included elementary (K-5 and K-8), middle, and high school grades.
- Overall, the 21st CCLC programs served students in schools that were under-performing and had student populations that were predominantly low-income students of color.[7]

Table 2 below displays the number and type of schools in the study.

Table 2. Profile of Schools Served by 21st CCLC Cohort 6 grants

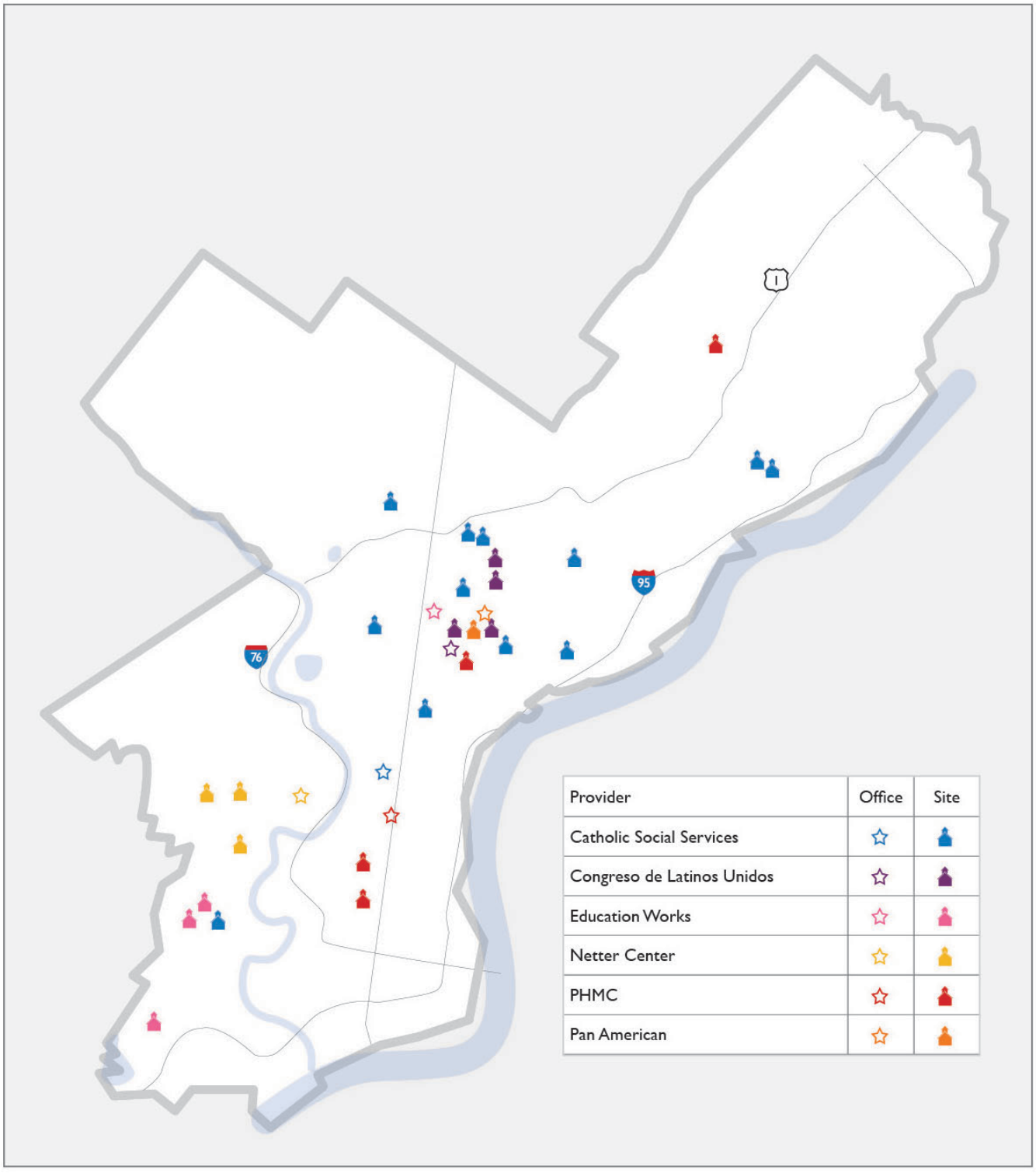


The 21st CCLC sites were located across the city.

Figure 1 displays the locations of the 21st CCLC provider headquarters and the sites in which programs were operating.

[7] Data was not available to determine the performance of these particular Catholic schools prior to the 21st CCLC implementation.

Figure 1. Locations of 21st CCLC Providers



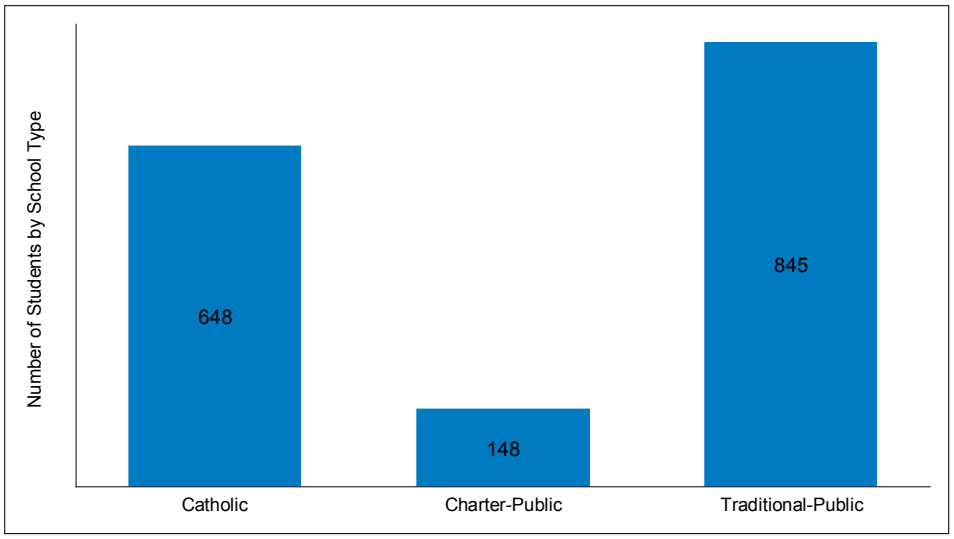
II. Participant Characteristics and Level of Participation

21st CCLC programs are designed to serve youth in high-poverty, under-performing schools. National research on participation in OST programs has found that this population of students has less access to, and participates less frequently in, OST programs.[8] Level of participation in OST programs is a key determinant of the benefits students receive from the programs.[9] In this section, we examine which students were participating in the 21st CCLC programs and examine their levels of participation.

A. Student School Enrollment and Demographic Characteristics

Figure 2 below displays the number of students enrolled in the 21st CCLC programs by the type of school they attended.

Figure 2. Number of Participants Enrolled in 21st CCLC Program by the Type of School Attended



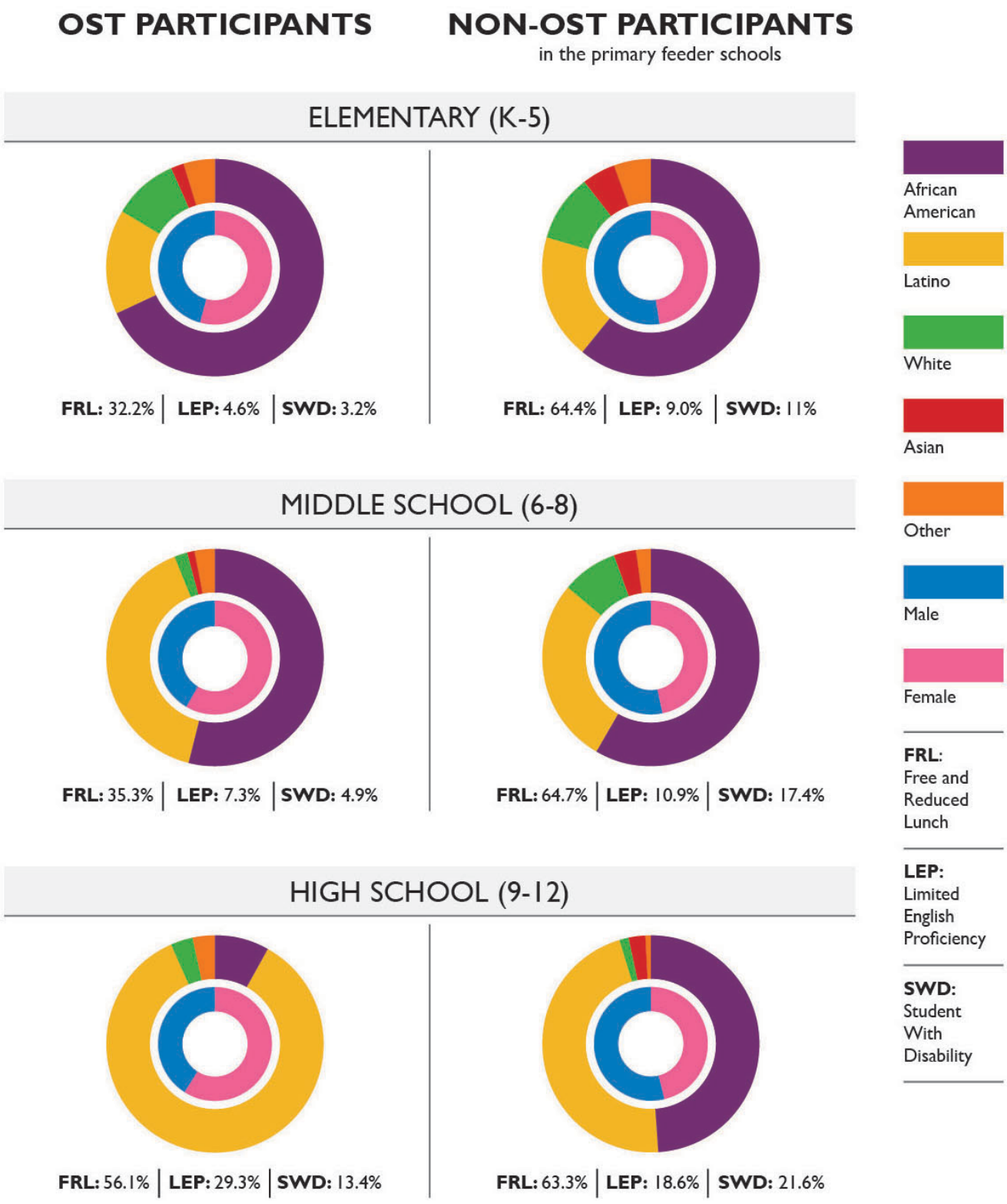
Note: This chart is incomplete as participation data was only available for 22 of the 24 sites.

A total of 1,641 students were enrolled in the programs for which we had participation data (22 of 24 sites[10]). More than half of these students were enrolled in traditional Philadelphia public schools and approximately 40% were in Catholic schools (N=648). Less than 10% of these students were enrolled in charter schools.

Table 3 displays the demographic characteristics of participants from 22 of the 24 programs included in this study. The table reports the demographic characteristics of OST participants in comparison to the demographics of all other students in the same schools.[11]

[8] Little, P., Wimer, Christopher, Weiss, H. B. (2008). After School Programs in the 21st Century; Their Potential and What it takes to Achieve it. Issues and Opportunities in Out of School-Time Evaluation: Issue 10. Cambridge, MA: Harvard Family Research Project
[9] Little, P., Wimer, Christopher, Weiss, H. B. (2008). After School Programs in the 21st Century; Their Potential and What it takes to Achieve it. Issues and Opportunities in Out of School-Time Evaluation: Issue 10. Cambridge, MA: Harvard Family Research Project
[10] Data for one program was not available because the program didn't start until the summer. Data for another program was not provided to RFA.
[11] Note: Comparison data for students attending schools considers only the primary school feeder for the program.

Table 3. Demographic Characteristics of 21st CCLC participants



Participant Demographics

Race/Ethnicity: Overall, the programs in our study served a predominantly African-American and Latino student population. African-American students represented 68% of students at the elementary school level and 54% of students at the middle school level, while Latino students represented 40% and 85% of middle and high school participants, respectively.

Socioeconomic Characteristics: With one exception, the population of students served by the 21st CCLC programs in our study appeared to have fewer needs than the general population at their schools. Specifically:

- Sixty-four percent of non-OST elementary and middle school students qualified for FRL (Free and Reduced Priced Lunch), while 31-34% of OST participants qualified.[12]
- Nine to 11% of non-OST elementary and middle school participants were identified as LEP (Limited English Proficiency); 4-7% of OST participants were identified as LEP.
- Eleven to 17% of elementary and middle non-OST participants were identified as SWD (Students with Disability); 3-5% of OST participants were SWD.
- Fifty-six percent of high-school OST participants received FRL, while 63% of non-OST participants did.
- Thirteen percent of high school OST participants had disabilities, while nearly 22% of non-OST students in these schools were SWD.

However, at the high school level, OST participants were more likely to be identified as LEP than non-OST participants.

Gender: Male students were slightly under-represented in OST programs as compared to the non-OST population in the feeder schools, particularly in middle and high schools.

B. Participation Levels

Research has consistently identified a relationship between a student's level of participation in an OST program and the benefits received. No consistent level of overall program "dosage" has been identified for achieving the benefits of OST programs. However, at least two studies found academic benefits for students who participated in programming between 60-90 days.[13] In this report, we use 30 days as the minimum level of participation because 30 days is the cut-off used to define a program participant for federal 21st CCLC reporting requirements. We use 90 days as the threshold for the upper range because it matches the dosage level reported in a 2004 evaluation of 21st CCLC programs that resulted in positive academic outcomes for students. In this evaluation, participants showed slightly increased

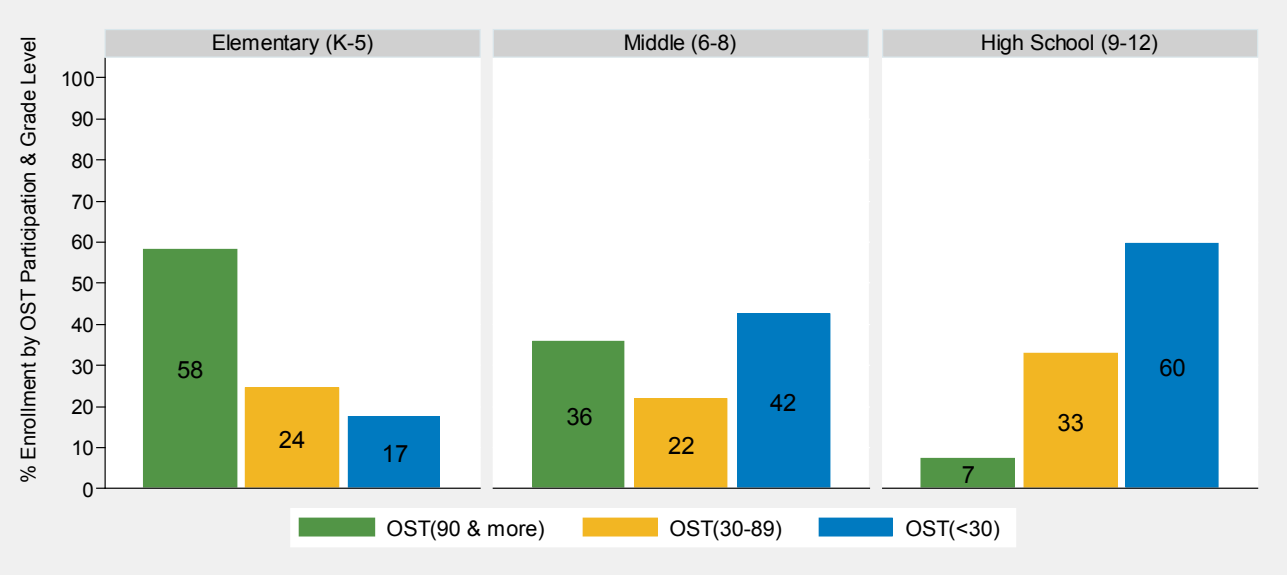
[12] Free and reduced priced lunch (FRL) is a problematic indicator of income status because families are required to submit paperwork to qualify for this status and can cause FRL to be under-reported. However, FRL is the only indicator of socio-economic status available through the School District of Philadelphia.

[13] Little, P., Wimer, Christopher, Weiss, H. B. (2008). After School Programs in the 21st Century; Their Potential and What it takes to Achieve it. Issues and Opportunities in Out of School-Time Evaluation: Issue 10. Cambridge, MA: Harvard Family Research Project; Black, A. R., Somers, M.-A., Doolittle, F., Unterman, R., and Grossman, J. B. (2009). *The Evaluation of Enhanced Academic Instruction in After-School Programs: Final Report* (NCEE 2009-4077). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, United States Department of Education.

scores on the Iowa Test of Basic Skills (ITBS) after 60 days but a "stronger impact" on the ITBS score after 90 days.[14]

A Note on Program Start-Up: Because grant awards from the federal government were not announced until January 2012, Philadelphia's 21st CCLC programs operated for varying amounts of time during the first year of the Cohort 6 grant. Of the 24 programs, 18 operated for the entire school year because they were running before the funding was received. Five programs were not operational until the spring, which gave them little opportunity to achieve a significant threshold of program participation. The remaining program was not operational until the summer, and thus there is no available data on this program for the 2011-12 school year. Figure 3 displays the level of participation across all sites by grade level.

Figure 3. Percentage Enrollment by OST Participation & Grade Level



Participation by Grade Levels

- More than half of elementary school students attended more than 90 days, while only a third of middle school students attended as frequently.
- Sixty percent of high school participants attended fewer than 30 days.

At least three of the programs serving middle school students were among those starting late in the school year; consequently, students may not have had the opportunity to attend 90 days. Both high school programs, however, were operating for the entire school year.

[14] Little, P., Wimer, Christopher, Weiss, H. B. (2008). After School Programs in the 21st Century; Their Potential and What it takes to Achieve it. Issues and Opportunities in Out of School-Time Evaluation: Issue 10. Cambridge, MA: Harvard Family Research Project, page 6.

Summary

The 21st CCLC programs enrolled students from underperforming schools and between one third to two thirds qualified for FRL (an indicator of poverty). However, representation of students with LEP and SWD was lower in the OST programs than in the schools that they served. The majority of elementary school students participated in 21st CCLC programs at a meaningful level (90+ days), yet the majority of middle and high school students did not attend 90 or more program days.

III. Elements of Program Quality

21st CCLC funding is awarded to programs with the goal of improving students' academic outcomes (e.g., standardized test scores and grades), as well as students' school attendance and behavior. Research identifies several aspects of high-quality, academically-focused OST programming. First, the quality of an afterschool program is largely determined by program content,[15] and the way in which the program's planned activities are implemented on a daily basis by its staff. Second, a key factor in the implementation of high-quality programming is the training and expertise of the staff who deliver program supports.[16] Third, academically-focused OST programs like 21st CCLC need a strong partnership with schools to inform the development of program content as well as other supports provided by staff.[17] In this section, we examine the extent to which these elements of quality were in place for the 21st CCLC Cohort 6 programs.[18]

A. Alignment of Program Content to Intended Student Outcomes

Research suggests that OST programs can impact academic achievement, school attendance and behavior when the programs:

- Set clear and consistent goals for academic improvement;[19]
- Provide academic support that includes:
    - A meaningful amount of support;[20]
    - Small-group or one-on-one settings;[21]
    - Alignment with the school curriculum or grade-specific academic standards;[22] and,
    - Alignment with student progress data.[23]

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[15] Durlack, R. & Weissberg, R. (2012?). After-school programs that follow evidence-based practices to promote social and emotional development are effective. Expanded Learning and After-school: Opportunities for Student Success. http://www.expandinglearning.org/docs/Durlak&Weissberg_Final.pdf; Little, P., Wimer, Christopher, Weiss, H. B. (2008). After School Programs in the 21st Century; Their Potential and What it takes to Achieve it. Issues and Opportunities in Out of School-Time Evaluation: Issue 10. Cambridge, MA: Harvard Family Research Project

[16] Huang, D., Dietel, R. (2011). Making after-school programs better. (CRESST Policy Brief). Los Angeles, CA: University of California.; Nee, J. (2011). *Core knowledge and competencies for Afterschool and Youth development professionals*. National Institute for Out-of-School Time: Wellesley Center for Women. ; Bodilly, Susan J. and Megan K. Beckett. *Making Out-of-School-Time Matter: Evidence for an Action Agenda*. Santa Monica, CA: RAND Corporation, 2005. http://www.rand.org/pubs/monographs/MG242. Also available in print form.; Starr, E., Gannett, E.,; Little, P., Wimer, Christopher, Weiss, H. B. (2008). After School Programs in the 21st Century; Their Potential and What it takes to Achieve it. Issues and Opportunities in Out of School-Time Evaluation: Issue 10. Cambridge, MA: Harvard Family Research Project

[17] Huang, D., Dietel, R. (2011). Making after-school programs better. (CRESST Policy Brief). Los Angeles, CA: University of California

[18] Note: We were not able to conduct an assessment of program implementation.

[19] Huang, D., Dietel, R. (2011). Making after-school programs better. (CRESST Policy Brief). Los Angeles, CA: University of California

[20] Black, A. R., Somers, M.-A., Doolittle, F., Unterman, R., and Grossman, J. B. (2009). *The Evaluation of Enhanced Academic Instruction in After-School Programs: Final Report* (NCEE 2009-4077). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education; Patricia A Lauer; Motoko Akiba; Stephanie B Wilkerson; Helen S Apthorp; et al. (2006). Out-of-School-Time Programs: A Meta-Analysis of Effects for At-Risk Students, Review of Educational Research,76;p. 275.; Moss, M., Swartz, J., Obeidallah, D., Stewart, G., Greene, D. (2001). Americorps Tutoring Outcomes Study. Abt Associates. Cambridge, MA.

[21] Black, A. R., Somers, M.-A., Doolittle, F., Unterman, R., and Grossman, J. B. (2009). *The Evaluation of Enhanced Academic Instruction in After-School Programs: Final Report* (NCEE 2009-4077). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education; Patricia A Lauer; Motoko Akiba; Stephanie B Wilkerson; Helen S Apthorp; et al. (2006). Out-of-School-Time Programs: A Meta-Analysis of Effects for At-Risk Students, Review of Educational Research,76;p. 275.; Moss, M., Swartz, J., Obeidallah, D., Stewart, G., Greene, D. (2001). Americorps Tutoring Outcomes Study. Abt Associates. Cambridge, MA.

[22] Huang, D., Dietel, R. (2011). Making after-school programs better. (CRESST Policy Brief). Los Angeles, CA: University of California

[23] Beckett, M., Borman, G., Capizzano, J., Parsley, D., Ross, S., Schirm, A., & Taylor, J. (2009). Structuring out-of-school time to improve academic achievement: A practice guide (NCEE #2009-012). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from http://ies.ed.gov/ncee/wwc/publications/practiceguides.

- Offer enrichment activities that involve skills building and hands-on, active learning.[24]

Table 4 below provides an overview of the type of program content offered at 21 of 24 sites for which program content data was available.[25]

Table 4: Profile of 21st CCLC Program Content

21st CCLC programs operated afterschool for 2.5-3 hours each day of the week.

Activity: Homework Help		
Description: OST staff supported students as needed in completing their daily homework.		
Daily allotted time per program	**Providers** (Out of a possible 7)	**Sites** (Out of a possible 21)
30-60 MINUTES	★★★★★★★	20

Activity: Tutoring		
Description: Students received concentrated one-to-one support in a particular subject in which they struggled.		
Daily allotted time per program	**Providers** (Out of a possible 7)	**Sites** (Out of a possible 21)
75 MINUTES	★	1

Activity: Project-based learning (PBL) *PBL was required for all providers except one as part of their funding from Philadelphia's Department of Human Services*		
Description: Learning activities in which students work together to investigate relevant guiding question or problem chosen by students. PBL culminates in projects that require students to use and develop new skills and content knowledge.		
Daily allotted time per program	**Providers** (Out of a possible 7)	**Sites** (Out of a possible 21)
45-60 MINUTES	★★★★★★	20

[24] Durlack, R. & Weissberg, R. (2012?). After-school programs that follow evidence-based practices to promote social and emotional development are effective. Expanded Learning and After-school: Opportunities for Student Success. http://www.expandinglearning.org/docs/Durlak&Weissberg_Final.pdf; Little, P., Wimer, Christopher, Weiss, H. B. (2008). After School Programs in the 21st Century; Their Potential and What it takes to Achieve it. Issues and Opportunities in Out of School-Time Evaluation: Issue 10. Cambridge, MA: Harvard Family Research Project

[25] Note: One site was not yet up and running in the time frame of the research, though we interviewed the program coordinator about the school and summer planning. We were not able to interview the program coordinators for two other sites.

Activity: Other academic enrichment activities		
Description: Included games, individual or group activities that were separate from the PBL activities		
Daily allotted time per program	**Providers** (Out of a possible 7)	**Sites** (Out of a possible 21)
10-60 MINUTES	★★★★★☆☆	17

Activity: Recreation		
Description: Included sports, karate, board games and non-academic games, movies		
Daily allotted time per program	**Providers** (Out of a possible 7)	**Sites** (Out of a possible 21)
30-60 MINUTES	★★★★★★★	17

Activity: Arts		
Description: Included visual arts, theater, dance		
Daily allotted time per program	**Providers** (Out of a possible 7)	**Sites** (Out of a possible 21)
30-60 MINUTES	★★★★★☆☆	17

Activity: Career/college preparation		
Description: Included resume development, interview skills, SAT preparation, support for college essays or college-related themes in programming		
Daily allotted time per program	**Providers** (Out of a possible 7)	**Sites** (Out of a possible 21)
OCCURRED ON A NON-DAILY, PERIODIC BASIS	★★☆☆☆☆☆	4

Overview of Program Content

Across providers, program content was similar in that:

- All programs offered homework help.

- All but one provider offered project-based learning.
- All offered enrichment activities in the areas of arts and recreation.

Across providers, program content differed in the following ways:

- Only one site offered one-on-one tutoring on a regular basis.
- Approximately half (11) of the sites offered art enrichment.
- Approximately half (11) of the sites offered sports or physical enrichment activities.
- Four sites had college preparation or college-themed activities.
- The amount of each activity that was offered varied by site.

Alignment of Program Content to Student Academic Outcomes: Promising Practices

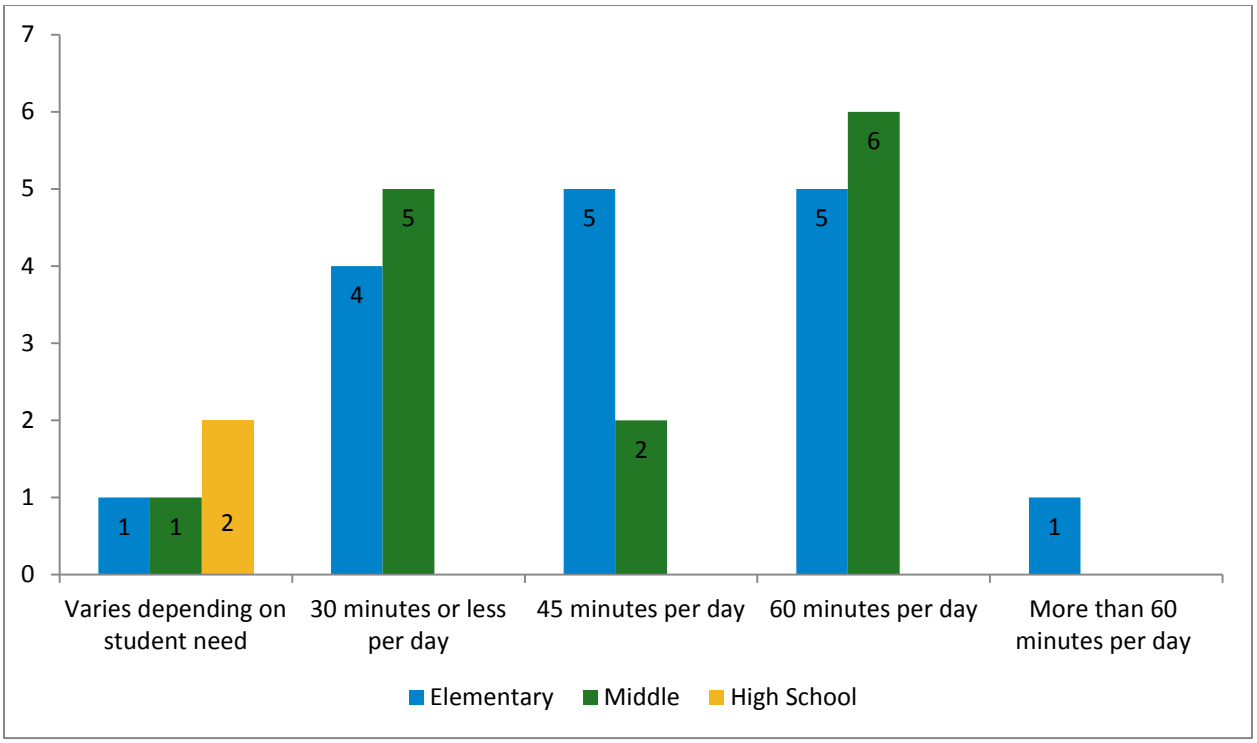
Across the 21st CCLC providers, programs supported academic improvement in one or more of the following ways detailed below.

Academic Improvement Goals: All providers clearly viewed academic improvement as a primary goal of their programs. However, none viewed it as their program's sole objective. Provider staff members also described broader goals, such as developing students' social skills, socio-emotional well-being, and future aspirations.

Academic Support: According to research, programs demonstrating achievement level gains in math and reading provide between 1.5 to 3.5 hours of academic support each week, depending on the structure of the support (e.g., studies of one-on-one support demonstrated impact on literacy outcomes with 1.5 hours of tutoring per week.).[26] As depicted in Figure 4, most providers devoted between 30-60 minutes per day, or 2-5 hours per week, to homework help—a meaningful amount of support according to research. Only three programs did not provide daily academic support for all of their students. Two of these programs served high school students and one served middle school students. These programs offered homework help on an "as needed" basis. When students did not request homework help, they were free to join their peers in social or recreational activities taking place in the program.

Figure 4. Amount of Homework Help Provided by Number of Sites and by Grade Level

[26] Moss, M., Swartz, J., Obeidallah, D., Stewart, G., Greene, D. (2001). Americorps Tutoring Outcomes Study. Abt Associates. Cambridge, MA.



Note: Sites that served grades K-8 are represented twice in the chart—once for middle school and once for elementary school.

- Five elementary and six middle school programs provided homework help for 60 minutes per day.
- Five elementary school programs but only two middle school programs provided homework help for 45 minutes per day.
- Four elementary and five middle school programs provided homework help for 30 minutes or less each day.
- The two high school programs provided homework help on an as-needed basis. One elementary and one middle school program had a similar approach.

Non-Academic Support: Effective OST programs augment academic support with other types of enrichment and skills-building activities.[27] All but one 21st CCLC site offered hands-on and active project-based learning activities for 3-5 hours each week, integrating academic skills into hands-on projects that students developed.

Arts activities were offered at eleven sites. These activities focused on skill development in areas such as dance, visual arts, and theater and were led by teaching artists. Physical and recreational activities were less focused on skill development but allowed students time for positive social interactions and relaxation.

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[27] Durlack, R. & Weissberg, R. (2012?). After-school programs that follow evidence-based practices to promote social and emotional development are effective. Expanded Learning and After-school: Opportunities for Student Success. http://www.expandinglearning.org/docs/Durlak&Weissberg_Final.pdf;

Alignment of Program Content to Student Academic Outcomes: Areas for Growth

Across providers, program content with the ability to impact academic outcomes was limited in several ways.

Most programs did not offer subject-specific academic support in a one-on-one or a small group setting.[28] OST programs that have demonstrated impact on academic outcomes provide one-on-one or small group tutoring to fewer than 9 students that is focused on particular subjects like math or English and provides explicit instruction in those subject areas.

- Only one of the 21st CCLC providers was able to offer these intensive tutoring supports—and at only one of its sites. This provider served as a Supplementary Educational Services (SES) provider and was able to offer individual tutoring to students performing below proficiency on the Pennsylvania System of School Assessment (PSSA) exams.
- Two other providers recruited college students to serve as tutors and were offering one-on-one supports in some instances, but these supports were not widely available or consistently offered on a daily basis.
- In all other sites, homework help was delivered either in a large group with staff circulating and providing support as needed, or students divided up into small age-level groups where staff could better supervise and support students' homework completion. Staff-student ratios in most of these smaller group settings were between 1:10 for younger students and 1:15 for older youth.

Alignment of program activities with the school-day curriculum happened infrequently. Two providers had intentions of aligning their program with the school curriculum in 2011-12, but this did not occur largely due to the late start-up of their programs. Two other providers intended to increase curricular alignment of their programs in 2012-13. Curricular alignment was less of a focus for the other providers.

Providers usually did not have access to student data to target interventions. Only one provider reported having access to student data –report cards and attendance—that would allow them to monitor students' academic progress. Without access to data, providers did not have a systematic way of knowing which students in their programs were struggling academically nor the specific subject areas in which they were struggling.

Alignment of Program Content to Student Academic Outcomes: Summary

The 21st CCLC programs had the opportunity to impact academic achievement through homework help and project-based learning (PBL), which comprised a majority of program time. In addition, programs supplemented academic support with enrichment and skill-building activities that can engage students. However, there were important limitations to the academic support provided by programs; particularly,

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[28] Black, A. R., Somers, M.-A., Doolittle, F., Unterman, R., and Grossman, J. B. (2009). *The Evaluation of Enhanced Academic Instruction in After-School Programs: Final Report* (NCEE 2009-4077). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education; Patricia A Lauer; Motoko Akiba; Stephanie B Wilkerson; Helen S Apthorp; et al. (2006). Out-of-School-Time Programs: A Meta-Analysis of Effects for At-Risk Students, Review of Educational Research,76;p. 275.; Moss, M., Swartz, J., Obeidallah, D., Stewart, G., Greene, D. (2001). Americorps Tutoring Outcomes Study. Abt Associates. Cambridge, MA.

the inability to provide more one-on-one or small group academic support. Research suggests that if programs are able to provide more individualized support they can increase program impact.

B. Elements of Program Quality: Well-Prepared Staff

Skills and expertise of OST staff play a major role in whether youth become engaged in a program and whether the program is beneficial to them. Research has found that:

- Higher levels of formal education among OST staff are associated with more impactful programming.[29]
- Well-designed professional development may support the development of a highly-effective OST staff.[30]

However, frontline OST positions are often entry-level, part-time and low-paying, which results in high turnover. A survey of Philadelphia youth workers revealed that more than half of respondents (59%) earned less than $20,000 per year and 38% of respondents received no benefits.[31]

Well-Prepared Staff: Promising Practices

OST providers were attempting to elevate the skills and training of their staff in two ways:

Providers attempted to increase the educational credentials of their staff. All providers were aiming to employ a majority of staff with college degrees or working towards a college degree. The site coordinators for four of seven providers had college degrees.

Five providers expected staff to receive some professional development throughout the year. Three providers required staff to receive 15 hours annually of professional development either within or outside of their provider organization. Professional development was offered for all OST providers through Philadelphia's OST Professional Development Project which aimed to make available training for OST staff on a variety of topics including project-based learning and group management. Two providers offered in-house professional development in addition to external trainings. Lastly, one provider had its own professional development division which arranged training for staff on a variety of topics including behavior management and teaching literacy.

Well-Prepared Staff: Areas for Growth

Programs encountered a number challenges that made it difficult to ensure well-prepared staff.

Low salaries made it difficult to hire well-qualified and credentialed staff. Hiring well-qualified staff was the most frequently mentioned challenge for the 21st CCLC programs. Group leader

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[29] Bodilly, Susan J. and Megan K. Beckett. *Making Out-of-School-Time Matter: Evidence for an Action Agenda*. Santa Monica, CA: RAND Corporation, 2005. http://www.rand.org/pubs/monographs/MG242. Also available in print form.
[30] While research on the effectiveness of PD on improving program quality is inconsistent. Several studies have found benefits for program staff and programs. (New York State After-School Network (2011). After-school professional development; Resources, Outcomes and Considerations; Out-of-School Time Resource Center Summary of Literature: Evaluating the Impact of Teacher Trainings on OST Program Quality (2003).
[31] New York State After-School Network (2011). After-school professional development; Resources, Outcomes and Considerations; Out-of-School Time Resource Center Summary of Literature: Evaluating the Impact of Teacher Trainings on OST Program Quality (2003).

positions, and sometimes site leader positions, were part-time. Salaries for part-time group leader positions were reported to be $10 per hour for at least two providers. Given the low salaries, providers found that the pool of potential hires was limited. Only three of seven providers were able to hire a majority of staff that had college degrees. Compensation rates also made it difficult for providers to hire some certified teachers who generally demand higher hourly rates. Consequently, providers expressed concerns that, in some cases, staff were not well-qualified to assist students with homework and other academic work.

Front-line OST staff had difficulty taking advantage of professional development (PD) opportunities due to their part-time positions and scheduling challenges with other jobs. The three providers that required or made available 15 hours of external professional development for their staff during the year found there to be low participation in professional development. Staff who worked part-time in the OST program often had other employment outside the OST program, which made it difficult for them to access professional development.

Providers differed in the degree of supervisory support they provided staff for program planning. Most providers (4 out of 7) offered some support from the central office for the development of high-quality site-level activities, particularly for academically-rich PBL planning. For example, one provider had an education specialist who helped site leaders plan PBL lessons. One common PBL plan was developed for all elementary and middle school students, and lesson plans and curricular materials were distributed to staff at each site. It was more common for site leaders of other providers to plan activities with the guidance or feedback from the provider's central office manager. Providers offered planning templates, organizing themes, curricular materials and feedback on lesson plans. Three providers allowed site and group leaders to plan PBL activities autonomously without feedback or guidance from the program manager.

Our data do not allow us to conclude which approach or mix of approaches was most effective. Site leaders, and particularly group leaders, were not always in the best position to plan academically-rich PBL projects. Because providers were concerned about front-line staff members' skill levels and degrees of access to professional development, and because the part-time staff received limited paid planning time, involving full-time program managers in the planning may help to improve programming.

Well-Prepared Staff: Summary

Staffing was a challenge for all the 21st CCLC programs because most of the staff positions were part-time, low-paying and did not attract highly qualified personnel. However, providers were taking steps to elevate the skills and training of their staff both through requiring and offering additional professional development as well as seeking to hire staff with some postsecondary training. Nonetheless, low salaries may continue to hamper these programs and particularly inhibit their ability to hire certified teachers.

C. Elements of Program Quality: Robust School Partnerships

Programs seeking to have an impact on academic outcomes also need to develop strong, multi-leveled partnerships with the schools that serve their students.[32] Specifically:

[32] Huang, D., Dietel, R. (2011). Making after-school programs better. (CRESST Policy Brief). Los Angeles, CA: University of California; Beckett, M., Borman, G., Capizzano, J., Parsley, D., Ross, S., Schirm, A., & Taylor, J. (2009). Structuring out-of-school time to improve academic

- Relationships with principals provide entry to the schools for purposes of recruiting students. Principal support is also essential for managing the ongoing program operations, including access to space.

- Relationships with teachers of program participants allow program activities to be aligned with school-day activities,[33] and enable program staff and teachers to work together to address the needs of individual students.

School-based providers were generally able to obtain the support they needed from school principals to recruit students and manage the logistics of program activities. However, only a few providers had developed relationships with teachers for the purposes of aligning program activities to the school day and supporting the academic needs of individual students.

Robust School Partnerships: Promising Practices

The 21st CCLC programs in our study were developing relationships with principals that would allow them to recruit participants and access school space. Relationships with principals were fostered by building on pre-existing partnerships, the alignment of principal goals with 21st CCLC programs, and informal communication with principals during the school day.

Providers obtained support from principals to recruit students to the program and to use school spaces. All but one of the community-based and school–based providers[34] found principals and other school staff willing to refer students to their programs and to distribute flyers and make announcements about the program. In the majority of sites (19 out of 24), schools provided access to multiple school spaces for afterschool programming, including the cafeteria, the gymnasium, and classrooms. While schools worked with providers to offer adequate space for programming, at times schools were limited in the space they could offer due to overcrowding or the use of their facility by other programs. In addition, some providers reported that even when space was readily available, aging school facilities created programming challenges.

In several cases, providers built relationships with principals through leveraging pre-existing partnerships with the schools and through establishing alignment between principal and OST program goals. Providers had been offering OST programs prior to 21st CCLC funding in 18 of the 24 sites. In the case of two providers, the pre-existing partnerships went beyond the OST program and included offering supports to the school during the school day. A prior history with the school helped providers quickly gain the principal's acceptance of the 21st CCLC programs because providers had already established trust with the principal. In instances where providers were starting new partnerships, we heard that principals could be cautious and limit the scope of the program until they could see how the provider operated. However, continuity of relationships could still be undermined by principal turnover.

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achievement: A practice guide (NCEE #2009-012). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from http://ies.ed.gov/ncee/wwc/publications/practiceguides.

[33] Huang, D., Dietel, R. (2011). Making after-school programs better. (CRESST Policy Brief). Los Angeles, CA: University of California; Beckett, M., Borman, G., Capizzano, J., Parsley, D., Ross, S., Schirm, A., & Taylor, J. (2009). Structuring out-of-school time to improve academic achievement: A practice guide (NCEE #2009-012). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from http://ies.ed.gov/ncee/wwc/publications/practiceguides.

[34] We only heard about one site that encountered resistance from the school principal to offering the program, although the program operated there for the entire school year.

Principals' goals for making adequate yearly progress (AYP) based on PSSA performance were also well-aligned with the goals of the 21st CCLC program, making the program an easy sell for most schools.

School-based providers were able to communicate regularly with principals for the purposes of managing logistical issues. Only one provider reported having formal meetings with principals. But school-based site leaders, particularly those who were present during the school day, reported frequent informal and impromptu access to principals, as needed. The four sites located in community centers had greater difficulty getting access to principals and staying in regular communication with the schools, even to obtain routine information, such as the school calendar.

Robust School Partnerships: Areas for Growth

The provider-school partnerships could be strengthened in several ways, detailed below.

In a few cases, principal and OST staff expectations differed with regard to student behavior and the type of activities offered in the program. In four sites, providers reported that principal expectations for program content and behavioral expectations varied from those of the OST staff. In two sites, OST program staff wanted to offer students a more relaxed environment, while school principals wanted school norms and expectations to be maintained. Two providers also reported instances in which principals were not as supportive of program activities that were not academically-oriented and were impatient for program activities to result in tangible academic benefits for students. While these challenges only occurred in a few sites, it is an issue for programs to address early in their partnerships with a new principal.

The majority (19 out of 24) of sites did not have regular communication with teachers due to teacher misperceptions of the OST program, the size of the school, and lack of overlap in teacher and OST program schedules. Providers noted several challenges in building relationships with teachers. Some site coordinators reported that teachers assumed that OST programs were "babysitting." Yet they also reported that when teachers recognized the OST program as a resource supporting their students' academic achievement, they were more likely to reach out to the program. Site coordinators also reported that in some cases, it was difficult to effectively reach out to a significant number of teachers in large schools. One site coordinator reported that OST staff schedules conflicted with the teachers' schedules; OST staff were starting their day as teachers were completing theirs. This made it difficult to develop relationships. However, in five sites OST staff reported more consistent and regular communication with a wider range of teachers in the school. In these instances, program staff capitalized on the pick-up times when staff would meet program participants with their teachers in their classrooms or in the school cafeteria. The site coordinators with school-day presence indicated that they could attend teacher grade group meetings to learn about grade-level planning and share information about OST activities.

Robust School Partnerships: Summary

All but one of the 21st CCLC providers had supportive relationships with the schools. Principals supported 21st CCLC programs in recruiting students and provided them access to school space. OST providers hoped to improve and deepen relationships with schools in the coming school year. For many, this meant opening up the lines of communication with classroom teachers.

IV. Student Outcomes

Research on out-of-school time (OST) programs has found that these programs can have an impact on school attendance, academic outcomes including standardized test scores, and socio-emotional outcomes.[35] 21st CCLC programs were designed to improve student outcomes in four areas:

- School attendance
- Literacy and Math course grades
- Literacy and Math PSSA scores
- School behavior

In this section, we describe the outcomes of the 21st CCLC programs for each of these outcome areas for elementary and middle school students. The section begins with a description of our analysis.

Student Outcome Analysis

The analysis of student outcomes draws on a subset of the 24 21st CCLC programs that were included in our study. The subset of programs used for the analysis met the following criteria:

1) They provided a full year of programming during 2011-12
2) Two years of data were available for the analysis
3) They served elementary and middle school students

A total of 9 sites, representing 5 of 7 providers, met these criteria. A profile of the program content for the 9 sites included in the outcomes analysis can be found in the appendix.

The analysis examines student attendance, academic, and behavior outcomes in three ways:

1) Comparisons of OST participant and non-participant outcomes in 2011-12;
2) Comparative analysis between OST participants and non-participants, which controls for student characteristics; and,
3) Analysis examining the relationship between student outcomes and varying participation levels, which controls for student characteristics.

We also separate the analysis by elementary and middle school students.[36] More details about the statistical methods used in analysis, as well as limitations of the analysis, can be found in the appendix. While our analysis controlled for background characteristics, selection bias remains given the limited participant information available for this study. For example, the data on student background characteristics is limited to demographic information and prior academic performance. We do not know if OST participants or non-participants differ in other ways. We also do not have data on whether OST

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[35] Durlack, R. & Weissberg, R. (2012?). After-school programs that follow evidence-based practices to promote social and emotional development are effective. Expanded Learning and After-school: Opportunities for Student Success. http://www.expandinglearning.org/docs/Durlak&Weissberg_Final.pdf; Little, P., Wimer, Christopher, Weiss, H. B. (2008). After School Programs in the 21st Century; Their Potential and What it takes to Achieve it. Issues and Opportunities in Out of School-Time Evaluation: Issue 10. Cambridge, MA: Harvard Family Research Project

[36] Note: There are 95 participants available for our analysis at middle school level, which is relative small for some analyses.

participants and non-participants attended programs other than the 21st CCLC program. The impacts of 21st CCLC OST programs can be underestimated if some nonparticipants actually attended other enrichment programs. In this section we report on the results for each of the four outcome areas—attendance, course grades, PSSA scores, and suspensions by grade group.

A. School Attendance

The analysis of student attendance examines the likelihood of OST participants missing 10 or more days of school in comparison to non-participants, and in relationship to their level of program participation.

Comparison of OST Participants vs. Non-Participants

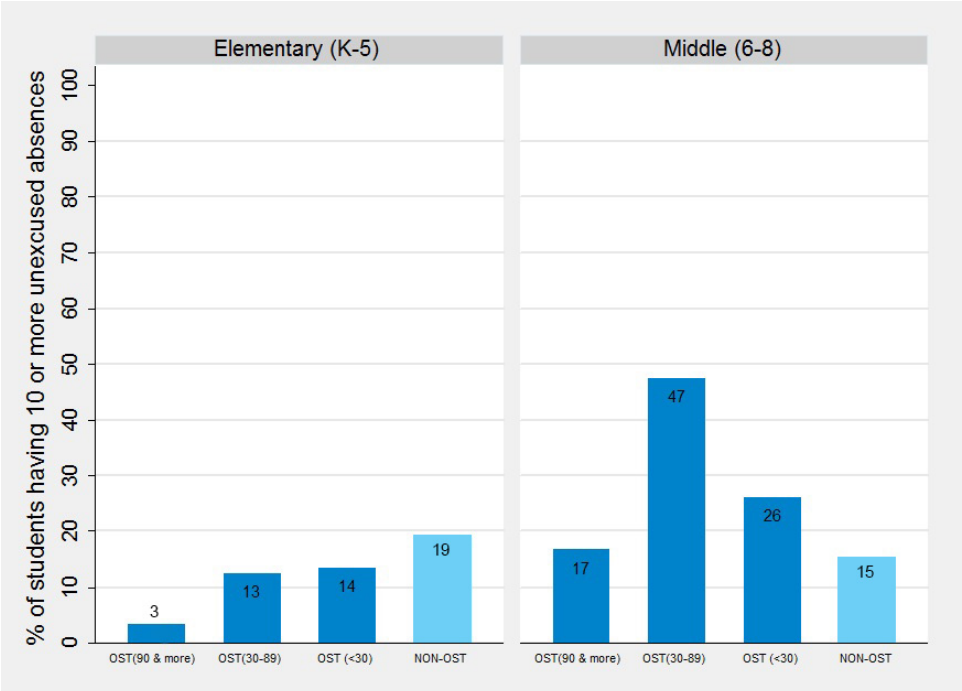
Elementary School:

At the elementary school level, a smaller percentage of OST participants than non-participants were found to have 10 or more unexcused absences. As can be seen in Figure 5 below, this was consistent at all levels of participation. For students attending 90+ days, only 3% of elementary school OST participants who attended had 10 or more absences while 19% of non-participants had 10 or more absences.

Middle School:

At the middle school level, a higher percentage of OST participants than non-participants were found to have 10 or more absences, except in the case of participants who attended 90+ days. As seen in the figure below, 17% of OST participants who attended 90+ days and 15% of non-participants had 10 or more absences.

Figure 5. Percentage of students having 10 or more unexcused absences by school level and participation level



Comparative Analysis of OST Participants and Non-Participants Controlling for Pre-existing Differences

Importantly, OST participants and non-participants differ by their demographic and family characteristics, such as race/ethnicity, socioeconomic status, gender, English proficiency levels, as well as disability status. The observed differences in student performance may be due to these pre-existing differences and may not reflect the potential impact of the 21st Century OST programs.

To further examine the impact of 21st Century OST program on student performance, we conducted an analysis intended to answer whether OST participants were more likely to miss 10 or more days of school than non-OST students, controlling for the characteristics of students and their families.

Elementary and Middle School:

After taking into account the measurable differences between students' background characteristics, our analyses do not provide consistent evidence that students who participated in OST programs in elementary or middle school were less likely to be absent 10 or more days than their peers who did not participate. (Detailed results of the comparative analysis controlling for various student characteristics are provided in the appendix Table 2B.).

The Relationship between Level of Program Participation and School Attendance

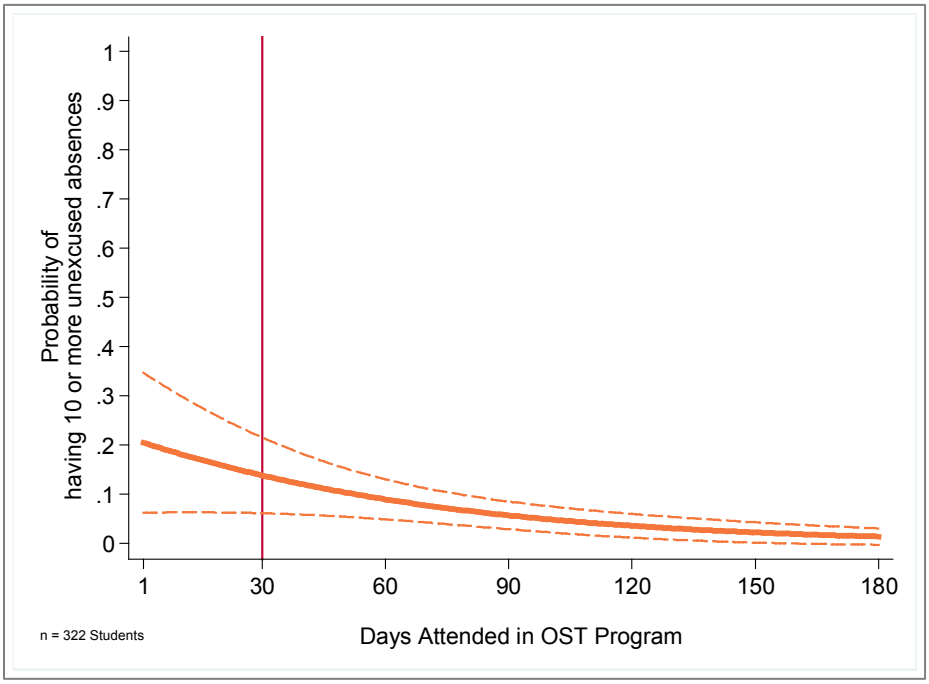
We conducted a set of analyses using program participation data to examine the relationship between days attending the OST program and student attendance, taking into account the differences in race/ethnicity, gender, English proficiency levels, FRL and disability status.

Elementary School:

Greater OST participation was related to better school attendance for elementary school students. Our analyses indicate that students who attended more days in the OST program were less likely to have missed 10 or more days of school than elementary school students who participated fewer days.

Figure 6 below displays the results of a regression analysis showing changes in school attendance as program participation increases. In the figure, the solid line shows the estimated probabilities at each participation level and the vertical line displays 30 days of participation in the OST program. The area within the dashed lines represents the range in which the probability is likely to fall 19 out of 20 times. As the range gets wider, the uncertainty increases.

Figure 6. The relationship between program attendance and school attendance for elementary school students



At the elementary school level, students who attended 30 days were 38% less likely to have 10 or more unexcused absences than students who only participated one day, and students who attended 90 days are 62% less likely to have 10 or more unexcused absences than those who attended 30 days in the OST program.

Middle School:

No relationship was found between program participation levels and school attendance for middle school students. Middle school OST participants who attended the program more frequently did not demonstrate better school attendance than those who attended less frequently. (See appendix for detailed results.)

B. Literacy and Math Course Grades

The analysis of literacy and math outcomes investigates the likelihood of OST participants receiving a C or better in English and math in comparison to non-participants.

Comparison of OST Participants vs. Non-Participants

Elementary School:

A higher percentage of elementary school OST participants who attended more than 30 days earned a C or better in reading and math as compared to non-participants. As can be seen in Figure 7, 96% of OST participants who attended 90 or more days received a C or better in reading, while only 88% of non-OST participants received a C or better in reading. Similarly, 91% of OST participants who attended 90 or more days received at C or better in math while only 87% of non-OST participants received a C or better in math.

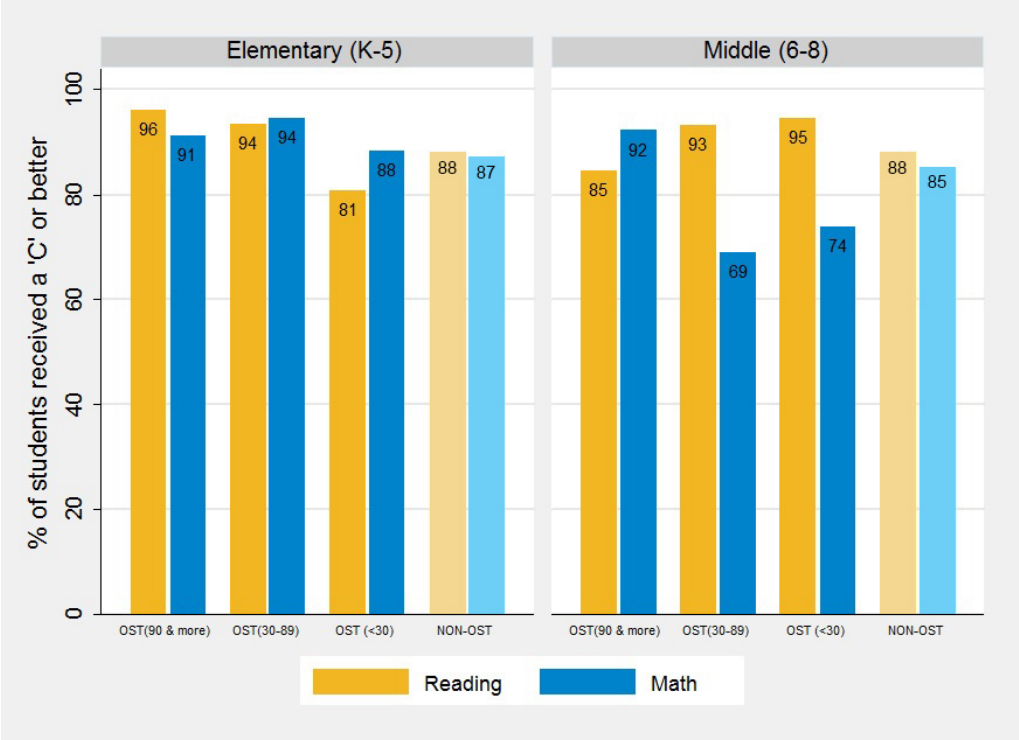
Middle School:

Math: A higher percentage of middle school OST participants attending 90 or more days earned a C or better in math as compared to participants attending less frequently and non-participants.

Reading: Higher percentages of middle school OST participants attending less than 90 days earned a C or better in reading, as compared to non-participants and participants attending 90 or more days.

As shown in Figure 7 below, 92% of middle school OST participants attending 90 or more days earned a C or better in math as compared to non-participants. In reading, 85% of middle school OST participants attending 90 or more days and non- participants earned a C or better.

Figure 7: Course Grades: Percentage of students earning a C or above, by age-group and OST subgroup.



Comparative Analysis of OST Participants and non-Participants Controlling for Pre-Existing Differences

Similar to our analysis of student attendance, the differences reported in our descriptive comparison above may be reflective of other differences between the OST participants and non-participants besides participation in the program. To address this, we conducted a second analysis that controlled for students' background characteristics.

Elementary and Middle School:

After controlling for background characteristics, we did not find consistent evidence showing that elementary or middle school OST participants were more likely than non-participants to earn a C or better in reading or math. The results showed a weak association between OST participation and elementary school students' likelihood of receiving a C or better in reading.[37] However, at the middle school level the results did not provide consistent evidence showing that OST students were more likely to receive a C or better than non-participants. The analyses also did not show that OST students did better in math than non-participants for all age groups when controlling for background characteristics. (See appendix Table 2B.)

Analysis Examining the Relationship Between Student Course Grades and Levels of Participation

We conducted a third analysis that examines the relationship between program participation and reading and math grades, after controlling for students' background characteristics.

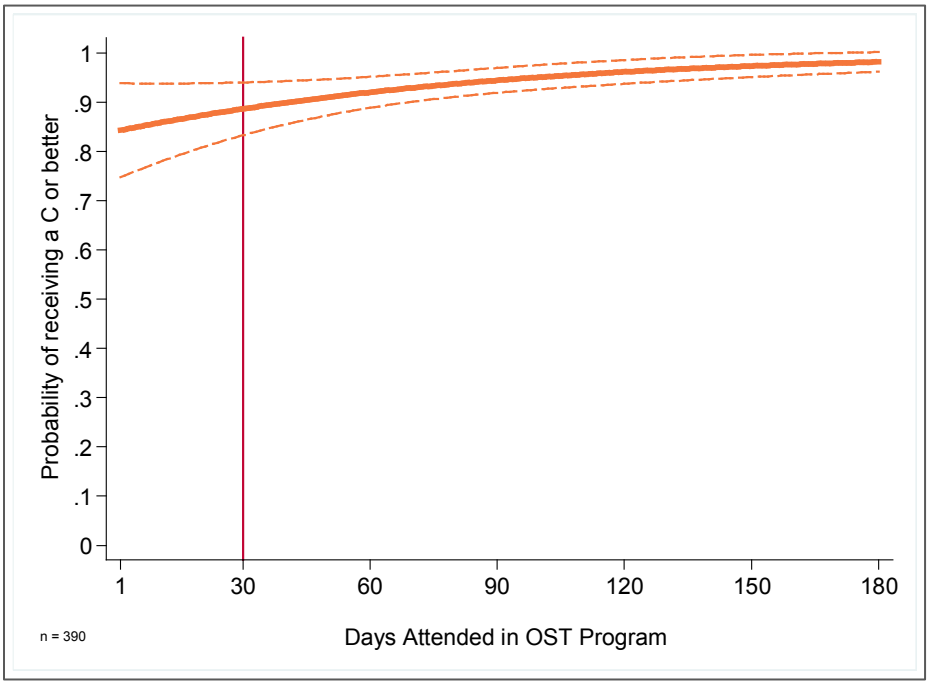
Elementary School:

Greater OST participation was related to higher reading grades. On average, elementary school OST participants who attended more program days were more likely to receive a C or better in reading than OST participants who attended fewer days.

Figure 8 below displays the results of a regression analysis showing changes in the likelihood of receiving a C or better in reading as OST program participation increased. Again, the solid line shows the estimated probabilities of receiving a C or better at each participation level, and the vertical line marks 30 days participation in the OST program. The area within the dashed lines represents the range in which the probability is likely to fall 19 out of 20 times. As the range gets wider, the uncertainty increases.

[37] (p=0.1)

Figure 8. The relationship between level of OST participation and elementary school students' reading grades



Students who attended 30 days are 1.4 times more likely to receive a "C" or better in reading than students who attended only one day in the program, and students who attended 90 days are about 2 times more likely to receive a "C" or better than those who attended 30 days in the OST program.

No relationship was found between program participation and math grades for elementary school students. (Detailed results are reported in the appendix Table 3B).

Middle School:

No relationship was found between program participation and reading or math grades for middle school students. (Detailed results are reported in the appendix Table 3B).

C. Math and Reading PSSA Scores

The analysis of PSSA scores investigates the likelihood of OST participants scoring proficient or advanced on the literacy or math PSSA.

Comparison of OST Participants vs. Non-Participants

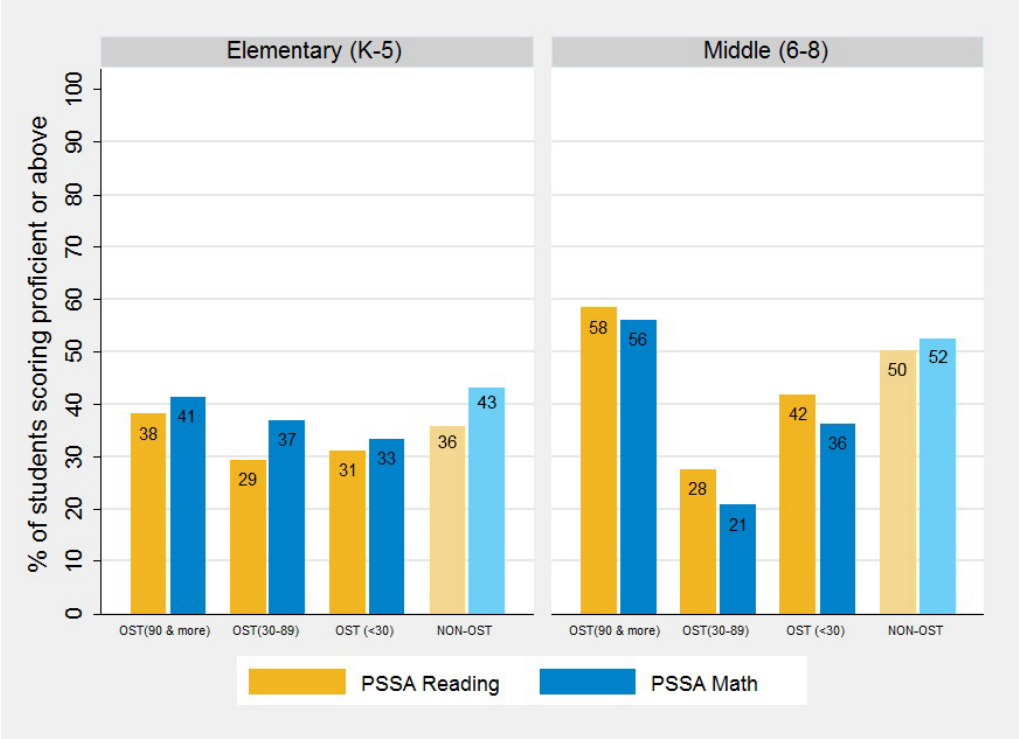
Elementary School:

Similar percentages of OST participants who attended the program 90 days or more and non-participants scored proficient or advanced on both the math and reading PSSA. **However, lower percentages of participants who attended fewer than 90 days than non-participants were proficient or advanced on the math and reading PSSA.**

Middle School:

Higher percentages of OST participants who attended the program 90 or more days than non-participants and participants who attended fewer than 90 days scored proficient or advanced on the math and reading PSSA.

Figure 9. PSSA: Percentage of students scoring proficient or above by age-group and OST subgroup.



Comparative Analysis between Participants Controlling for Pre-Existing Characteristics

In the second comparative analysis of PSSA scores, we controlled for differences in students' background characteristics to test whether the differences between OST participants and non-participants could be attributed to the program.

Elementary and Middle School:

There is no consistent evidence that program participants were more likely to score proficient or advanced on PSSA than non-participants at elementary or middle school levels. After taking into account the differences in students' background characteristics, OST participants were equally likely to score proficient or advanced in math and reading as non-participants. (See detailed results in appendix Table 2B).

Analysis Examining the Relationship between School Attendance and Level of Program Participation

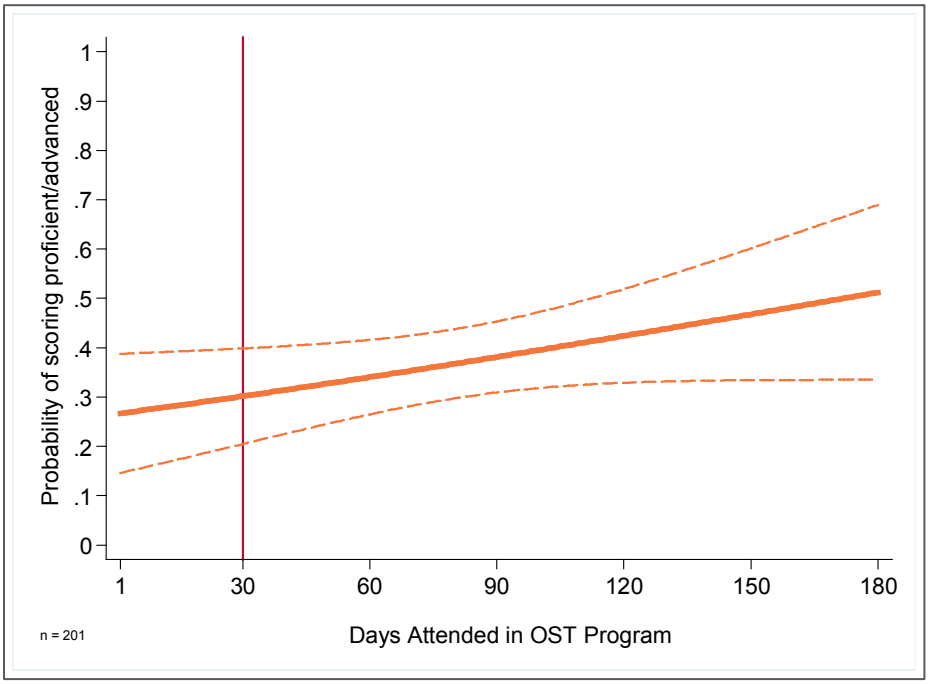
The third analysis looked at the relationship between program participation and likelihood of scoring proficient or advanced on the math and reading PSSA, after controlling for background characteristics.

Elementary School:

Greater participation in OST programming is related to PSSA proficiency. On average, elementary school OST participants who attend more program days are more likely to score proficient or advanced on the math PSSA than OST participants who attend fewer days.

Figure 10 below displays the results of a regression analysis showing changes in the likelihood of scoring proficient or advanced on the Math PSSA as OST program participation increased. Again, the solid line shows the estimated probabilities at each participation level, and the vertical line (x=30) displays 30 days participation in the OST program. The area within the dashed lines represents the range in which the probability is likely to fall 19 out of 20 times. As the range gets wider, the uncertainty increases.

Figure 10. The relationship between OST attendance and elementary school students' performance in PSSA math



Students who attended 30 days are 1.2 times more likely to score at proficient or above in math than students who attended only one day in the program, and students who attended 90 days are about 1.4 times more likely to score at proficient or above than those who attended 30 days in the OST program.

Middle School:

No relationship was found between program participation and PSSA scores for middle school students. (Detailed results are reported in the appendix Table 3B).

D. Behavior

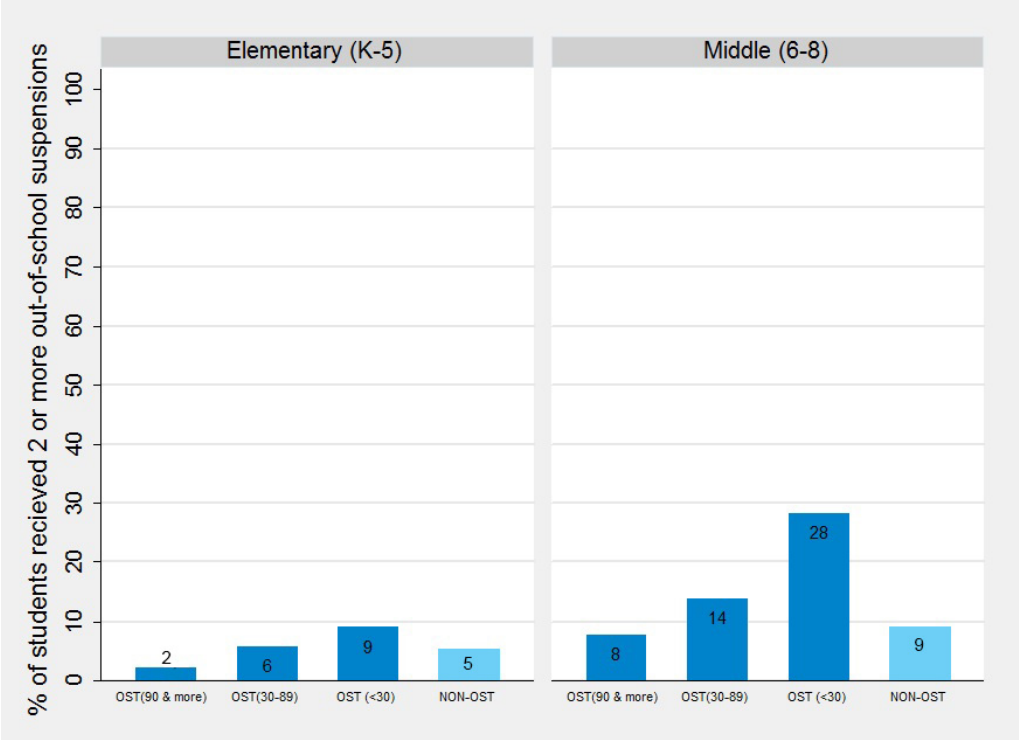
Analysis of student behavior outcomes examined the likelihood of OST participants receiving two or more suspensions in comparison to non-participants, and in relationship to their level of program participation.

Comparison of OST Participants vs. Non-Participants

Elementary and Middle School:

At the elementary and middle school level, slightly smaller percentages of OST participants who attended 90 or more days had two or more suspensions as compared non-participants. However, higher percentages of participants who attended less than 90 days had two or more suspensions than non-participants (see Figure 1).

Figure 11. Percentage of students having two or more out-of-school suspensions by grade level and days attended.



Comparative Analysis of OST Participants and non-Participants Controlling for Pre-Existing Differences

Elementary and Middle School:

When controlling for background characteristics, OST participation was not related to likelihood of suspension at either the elementary or middle school levels. OST participants and non-OST participants were equally likely to have two or more suspensions when controlling for background characteristics and the prior year's suspensions (see detailed results in the appendix).

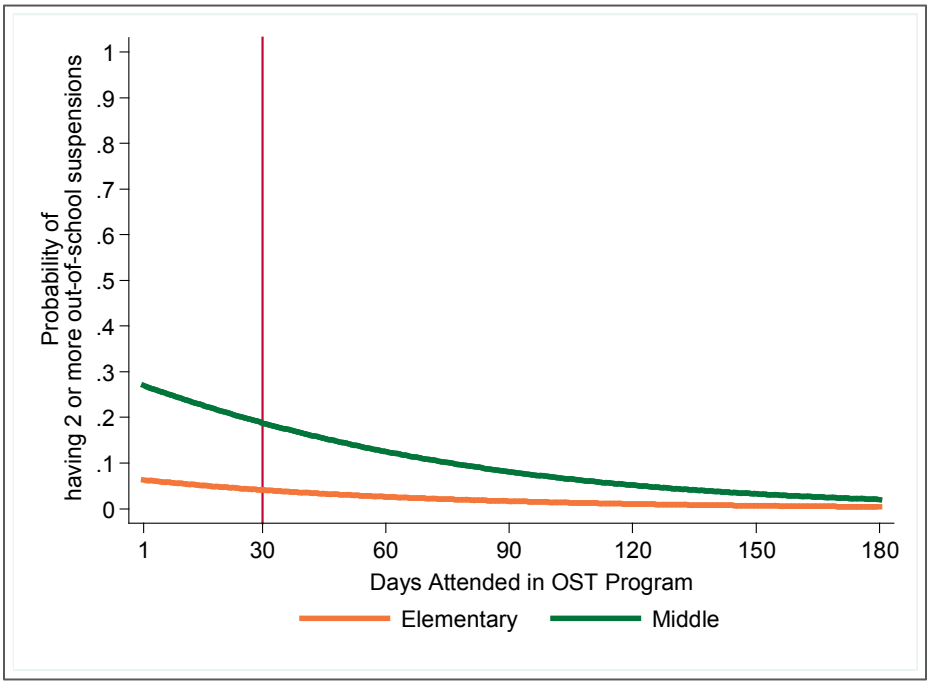
Relationship between Participation Level and the Likelihood of Receiving Two or More Suspensions

Elementary and Middle School:

On average, students who participate in OST programs more frequently are <u>less likely</u> to receive two or more suspensions than those participating less frequently.

Figure 12 below displays the results of a regression analysis showing changes in the likelihood of receiving two or more suspensions as program participation increased. Again, the solid line shows the estimated probabilities at each participation level, and the vertical line (x=30) displays 30 days participation in the OST program.

Figure 12. The relationship between OST attendance and elementary school students' suspensions



- Both elementary and middle school students are less likely to have 2 or more out-of-school suspensions if they attend more days in OST programs.
- At the elementary school level, students who attended 30 days are 31% less likely to have 2 or more out-of-school suspensions than those who participated only one day, and students who attended 90 days are about 53% less likely to have 2 or more out-of-school suspensions than those who attended 30 days in the OST program.
- At the middle school level, students who attended 30 days were 35% less likely to have 2 or more out-of-school suspensions than those who participated only one day, and students who attended 90 days are about 59% less likely to have 2 or more out-of-school suspensions than those who attended one day.

Summary: Student Outcomes

Our analyses examined the potential impact of OST programs on student academic performance and behavioral outcomes. Overall:

- After taking into account pre-existing differences between students, there is no consistent evidence that elementary and middle school OST participants are doing better than non-participants in the following areas:
    - School Attendance
    - Reading and Math course grades

- Reading and Math PSSA scores
- Suspensions

However, higher levels of participation are associated with better outcomes:

- **For elementary school students**, higher levels of participation in the OST programs were found to be associated with:
  - Fewer school absences;
  - A higher likelihood of earning a C or better in reading;
  - A higher likelihood of scoring proficient or advanced on PSSA Math; and,
  - Fewer out-of-school suspensions.

- **For middle school students**, higher levels of participation in the OST programs were found to be associated with:
  - Fewer out-of-school suspensions

V. Recommendations

The results of this cross-site analysis of OST programming and participation outcomes offer insights into the strengths and challenges of OST programs in Philadelphia, and suggest recommendations for providers to strengthen their individual programs as well as to improve the city's OST system-building efforts.

Recommendations for Program Providers

- **Focus on Participation.** The benefits of frequent participation are significant. Programs should work to increase participation, particularly for middle and high school students.
- **Offer more centralized planning and support for program staff, particularly in instances where staff do not have significant dedicated paid planning time.** Concerns about the skill levels of staff and the lack of paid planning time suggest that front-line staff need more centralized support for planning activities.
- **Continue to develop relationships with school personnel, particularly teachers.** Schools and OST providers could work together to identify periodic common planning time for teachers and OST staff, and to develop communications systems such as "homework logs,"[38] through which teachers could share information about daily homework. OST staff and schools could also explore common professional development that would promote alignment of supports for students.
- **Promote an awareness of the OST program in the school community so that schools see programs as a resource.** OST leaders could look for avenues to promote teacher awareness of the program so that teachers begin to view the program as a resource. OST leaders could present at faculty meetings or find other venues to make teachers aware of the academic supports they provide.
- **Prioritize professional development for staff and identify resources so that part-time front-line staff are able to access professional development in-house or externally.** Providers should support part-time staff in accessing the professional development that would be of greatest benefit.
- **Consider ways to provide more one-to-one tutoring efforts.** Programs can have the greatest impact on academic outcomes when they provide regular one-to-one tutoring supports. Programs should consider strategies, such as recruiting high school or college student volunteers, to provide these supports. However, this would require programs to create an infrastructure to support tutors, including appropriate supervision and training.

Recommendations for Philadelphia's OST System

Continue to Support Citywide Professional Development of OST Staff.

- **Offer professional development on increasing student participation in programs, particularly engaging middle and high school students.** Middle school and high school students had low levels of participation in the 21st Century OST programs and program

[38] Huang, D., Dietel, R. (2011). Making after-school programs better. (CRESST Policy Brief). Los Angeles, CA: University of California

participation was related to improved outcomes for students. Programs could benefit from support in thinking about how to better engage middle and high school students.

- **Provide more professional development for OST providers on school curriculum and state standards.** Even if academic supports are not central to a providers' program model, homework help sessions would benefit if program staff were familiar with the topics that students are expected to learn. For older students, it would be beneficial for staff to learn more about Keystone exit exams and consider ways to support students in passing those exams.
- **Provide professional development on partnering with schools and working with classroom teachers.** Our analyses suggest that most OST programs were not working closely with classroom teachers and could benefit from support in thinking about how to develop productive working relationships with teachers.
- **Consider alternate vehicles or venues for providing professional development:** Part-time staff have difficulty attending centralized professional development events. City-wide professional development could be made available at provider organizations' sites. Alternatively, professional development could be offered at different regions about the city or online.

Work with the School District of Philadelphia to Develop School-Level Support for OST-School Partnerships.

The District could strengthen OST programs in the following ways:

- **Encourage principals to better leverage the OST programs for academic improvement of their students**. This may include: organizing more regular and formal meetings between OST staff and teachers to further communication about individual student needs; helping OST staff become familiar with the curriculum and standards; and creating avenues for teacher input into planning.
- **Encourage schools to have common professional development or common planning time with their OST providers about the curriculum and academic improvement needs of their students.** School District staff could provide professional development to OST providers about the District curriculum. OST providers could provide training for teachers on project-based learning or STEM programming.
- **Make student data accessible to program providers in real time so that they can target academic interventions for program participants.** OST programs could better target academic and behavioral interventions if they had real-time access to student benchmarks, report cards, daily attendance and disciplinary incidents.

Consider Ways in Which the City Could Support the Development of the OST Workforce.

Clearly this is one of the most significant issues facing the city OST programs. There are no easy answers but system level OST professionals should continue to consider levers for creating a larger pool of highly qualified staff for OST programs.

Appendices

Appendix A. Qualitative Methodology

Research for Action conducted one round of interviews with 21st CCLC program directors and site coordinators during the spring of 2012. Researchers also collected and analyzed program documents, e.g., Quarterly Performance Reports (QPRs) and program schedules.

21st CCLC Provider	Program Directors Interviewed	Site Coordinators Interviewed	Site Visits
Catholic Social Services	2	9	4
Congreso de Latinos Unidos	2	3	2
Education Works	3	4	1
Netter Center	2	2	2
Pan American Charter School	1	1	1
PHMC	5	0	2
Total	**15**	**19**	**12**

Interviews were transcribed and data were coded using Atlas ti. Analytic memos were developed for each local provider covering several themes including program content, student characteristics, school partnerships, staffing, and use of youth development principles. Provider memos were the basis for the provider-level local evaluation reports. Data was then combined into three matrices (academic program content, staffing, and school partnerships) that reflected data across all 24 sites. Data from these matrices formed the basis for city-wide analytic memos on the same three topics.

Appendix B. Quantitative Methods

As described in the report, RFA conducted two sets of analyses to examine the potential impacts of OST programming on student academic performance and behavioral outcomes. The first set of analyses examine whether students attending OST programs are more likely to score at proficient/advanced levels on PSSA math and reading exams or to earn a letter grade "C" or better in course grades than non-participants. These analyses also examine whether participation in OST programs reduces students' probability of having 10 or more unexcused absences or the likelihood of receiving 2 or more out-of-school suspensions. Using participant data, the second set of analyses examines the relationship between the number of days students participated in OST programs and observed academic and behavioral outcomes. All the analyses use logistic regression methods, and the variables controlled in the models include student demographic and family characteristics (i.e., race/ethnicity, socioeconomic status, gender, English proficiency levels, disability status). These characteristics are deemed important for student academic and behavioral performance in the literature. Table 1B provides the descriptive statistics of the variables considered in the logistic analyses.

Table 1B. Descriptive Statistics

Variables considered in the analyses	Elementary (K-5th)		Middle (6-8th)	
	Mean	N	Mean	N
Scoring proficient/advanced on PSSA reading(2011-12)	0.36	2532	0.49	1047
Scoring proficient/advanced on PSSA math(2011-12)	0.43	2554	0.51	1060
Earning a C or better(>=70) on reading grades (2011-12)	0.88	4464	0.88	1052
Earning a C or better(>=70) on math grades (2011-12)	0.87	4508	0.84	1057
Scoring proficient/advanced on PSSA reading(2010-11)	0.51	1614	0.51	1045
Scoring proficient/advanced on PSSA math(2010-11)	0.61	1623	0.57	1061
Earning a C or better(>=70) on reading grades (2010-11)	0.82	3541	0.83	1050
Earning a C or better(>=70) on math grades (2010-11)	0.85	4451	0.82	1047
Receiving 2 or more out-of-school suspensions (2011-12)	0.05	6120	0.10	1157
Having 10 or more unexcused absences (2011-12)	0.18	5370	0.16	988
Receiving 2 or more out-of-school suspensions (2010-11)	0.04	5232	0.08	1101
Having 10 or more unexcused absences (2010-11)	0.23	4482	0.26	932
Race/Ethnicity=Black	0.53	6152	0.41	1158
Race/Ethnicity=Hispanic	0.20	6152	0.32	1158
Gender=Female	0.48	6114	0.48	1157
Students with Limited English Proficiency	0.10	6152	0.11	1158
Students with Disability	0.10	6152	0.15	1158
Students with Free Reduced Lunch	0.74	6152	0.75	1158

Table 2B reports the estimated odds ratio of the second set of analyses using the entire population of students, including OST participants and non-participants in feeder schools. The predictor is the indicator of student participation in the OST program, and other variables controlled in the logistic regression include student race/ethnicity, FRL status, ELL status, and gender. Odds Ratio (OR) is a measure of association between the treatment and the outcome of interest (e.g. scoring proficient/advanced in PSSA, receiving a C or above), controlling for the variables that may be predictive of the outcome under study. Specifically, student participation in OST programs is not

associated with odds of outcome if OR=1; student participation in OST programs is associated with higher odds of outcome if OR>1; and, student participation in OST programs is associated with lower odds of outcome if OR<1. Table 2B also presents results from a logistic regression adjusted for propensity scores (the third and fourth rows). Propensity score is the estimated probability of a student participating in the OST programs given the observed background characteristics as well as the student historical academic and behavioral performance.[39] Since students are not randomly assigned to OST programs and many characteristics that are deemed important for student academic performance and behavioral outcomes are not available for this study, adjusting for propensity score was employed to reduce estimation bias. Overall, after adjusting for the propensity scores, our analyses did provide consistent evidence showing that students who participated in OST programs did better than non-participants (OST participants are more likely to receive a C or better in reading at elementary level (α=0.1).

Table 2B. Estimated odds ratio from analyses using full sample

	Scoring Prof./adv. in PSSA Reading	Scoring Prof./adv. in PSSA Math	Receiving C or better in Reading	Receiving C or better in Math	Receiving 2 or more out-of school Suspension	Absences 10 or more days	Adjustment for Propensity Score
Elementary (k-5th)	0.99	0.90	1.81**	1.72**	0.82	0.30**	No
Middle (6th-8th)	0.76	0.54*	1.66	0.75	2.10*	2.44**	
Elementary (k-5th)	1.05	0.97	2.72†	1.13	0.74	0.65	Yes
Middle (6th-8th)	0.57	0.34*	1.31	0.58	1.43	1.52	

†p<0.10; *p<0.05; **p<0.01

Table 3B reports the statistical results from logistic analyses using participant data. The predictor is *total days attended in the OST program*. These sets of analyses examine the correlations between days students attended the OST program and students' academic and behavioral outcomes. After taking into account of student differences in race/ethnicity, gender, English proficiency levels, as well as FRL and disable status, results show that attending more days in OST programs do matter for some measures of student academic and behavioral performance.

[39] Rosenbaum, P., & Rubin, D. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika, 70*(1), 41-55.

Table 3B. Estimated odds ratio from analyses using data of OST participants

	Scoring Prof./adv. in PSSA Reading	Scoring Prof./adv. in PSSA Math	Receiving a C or better in Reading	Receiving a C or better in Math	Receiving 2 or more out-of school Suspensions	Absences 10 or more days
Elementary (k-5th)	1.00	1.01†	1.01*	1.00	0.98*	0.98**
Middle (6th-8th)	0.98	1.01	0.99	1.01	0.99*	0.99

†p<0.10; *p<0.05; **p<0.01

While our analysis provides promising evidence showing that positive student academic and behavioral outcomes are associated with students' participation levels in the 21st Century OST programs, it is important to note that readers should be cautious about making causal references based on these results given the limitations associated with this study. One possible example of this study's limitations is that, if students were not randomly assigned into the OST programs, our estimation may be biased. Although this study incorporated propensity score matching methods into our analysis to adjust for potential confounding, the number of covariates available for our analysis was relatively small. Furthermore, estimation can be inaccurate if students attended other enrichment programs as such information was not available for our analysis.

Appendix C. Profile of Sites Included in the Student Outcome Analysis

Table 1C. Site Descriptions

Site	Provider	Grade Level Enrolled	Students Enrolled
Morton	Education Works	K-8	181
Fairhill	Congreso	K-6	104
Casa Del Carmen	Catholic Social Services	K-5	39
NE Family Services	Catholic Social Services	K-6	82
Lea	Netter Center	1-8	116
Comegys	Netter Center	1-6	70
Welsh	PHMC-Methodist	K-5	28
Farrell	PHMC-Methodist	K-4	39
Girard	PHMC-Diversified	K-4	34

Table 2C. Program Characteristics

Program Characteristics of Sites Included in Outcomes Analysis	**Number of Sites with Program Characteristic**
Homework help 45-60 minutes	3 sites
1:1 or small group tutoring	1 site + three sites that had occasional opportunities for tutoring
Additional enrichment activities	All conducted project-based learning 5 sites hired artists or contracted with art organizations to provide art activities