Research for Action's Evaluation of 21st Century Community Learning Center Grantees:

A SNAPSHOT OF OST PROGRAMS IN PHILADELPHIA IN 2013-14

Prepared by *Research for Action* • May 2015

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RESEARCH for *ACTION*

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.

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EXECUTIVE SUMMARY

21st Century Community Learning Center (21st CCLC) grants are designed to support out-of-school time (OST) programs that provide academic support for youth attending high-poverty, underperforming 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. In 2011-12, Pennsylvania awarded two rounds of grants to its sixth cohort of grantees. The first round of Cohort 6 grants focused primarily on providing academic and enrichment programming for elementary school students, while the second round—Cohort 6A grants—focused primarily on providing middle school Science, Technology, Engineering, and Mathematics (STEM) and high school credit recovery programming.

Ten organizations representing one-third of all Cohort 6 and 6A 21st CCLC grantees in Philadelphia selected Research for Action (RFA) as their local evaluator.[1,2] Drawing from data gathered for local reports, RFA conducted a mixed-methods evaluation to examine program quality, attendance, and their relationships to student outcomes. We report aggregated findings in this report and provide a set of recommendations for program improvement. The key findings presented in the Executive Summary are discussed in further detail throughout the report.

Student Participation

- Philadelphia's 21st CCLC programs enrolled an ethnically and racially diverse population that was majority African-American or Hispanic/Latino.
- The population of 21st CCLC participants with limited English proficiency and students with disabilities was comparable, though slightly smaller, than the non-OST student population.
- A majority of K-5 students participated in 21st CCLC programming for at least 90 days, while less than half of all middle and high school students attended 30 or more days.

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[1] One grantee was an intermediary organization representing three provider organizations.

[2] See Appendix D for a map of providers in Philadelphia.

Program Quality & Student Outcomes

Philadelphia's 21st CCLC programs seek to improve academic achievement, student behavior, and attendance. Past research indicates that four domains of program practice influence these outcomes: academic content, staffing and professional development, school relationships, and community engagement. Overall, after ruling out the preexisting differences in student demographic characteristics and academic performance in the previous year, our analysis did not provide consistent evidence that OST participants outperformed non-OST students across all the outcome areas and over grade levels. However, our study indicated that:

- **OST participants scored higher than comparison students on PSSA Reading at the elementary level.**
- **High school OST participants were more likely to earn all credits attempted in math, ELA, and, science than comparison students**.

Furthermore, for students who participated in the OST programs, our analysis revealed:

- **Strong academic content and high quality staffing were positively associated with higher student participation in Philadelphia OST programs.**
- **Higher student OST participation levels were positively associated with student social, behavioral, and academic improvement as perceived by teachers.**
- **Implementation of the four quality domains varied widely across and within provider networks.**

Below, we summarize the implementation of quality practices within each of these domains and offer possible explanations for the domains' relationships with student participation and outcomes.

Academic Content: Homework Help and Academic Enrichment

- The quality of academic programming varied across providers and within provider networks. Sixteen programs operated by seven providers were identified as Promising Practice Programs, but only two providers had all their programs rated as Promising Practice Programs.
- Homework help and individualized support were common amongst a majority of programs, but very few programs provided more than 45 minutes of homework help or individual support by tutors.
- Almost all programs offered enrichment activities, but a majority were not connected to student learning.
- There was a positive relationship between academic program content and student participation levels (dosage).
    - Programs' focus on homework help may contribute to this relationship; program staff reported that a primary goal for parents was homework support, so parents, especially those of elementary school-aged children, may have enrolled youth in programs that advertised homework support.
- Academic program content had a limited impact on student academic achievement.
    - Limited alignment of academic supports to the school day may be why the analysis found limited impact on student achievement as measured by standardized test scores and course grades.

Staffing: Experience and Professional Development

- Staff experience and professional development opportunities varied across and within providers. All providers had at least one program that exhibited promising staffing practices, but only two providers' programs were all designated as Promising Practice Programs.
- Programs that exhibited promising practices in one dimension such as employing staff who have five or more years of experience, also tended to exhibit other promising practices such as providing staff with relevant professional development.
- Staff at a majority of OST programs had adequate experience working with youth and working for the provider. A solid majority (88%) of programs also characterized staff-youth relationships as generally positive.
- A majority of programs reported that they had insufficient access to professional development.
- There was a positive relationship between promising staffing behaviors and dosage.
    - Staff members' self-reports of education and childcare experience, rapport with youth, and relationship with the provider may help to explain this relationship; if youth feel comfortable with staff and staff work to ensure a safe and supportive atmosphere for participants, then participants may be inclined to attend the program.

School Relationships: Principals and Teachers

- Relationships with school staff varied across and within providers. While all ten providers had at least one Promising Practice Program, only one provider's programs were all designated Promising Practice Programs.
- Teacher hiring practices varied across provider. Roughly three-quarters (79%) of all programs hired staff members who were present during the school day, but only 39% of those programs used a blended staffing model that hired school day teachers. The remaining programs utilized an overlapping staffing model in which at least one staff member from the OST provider was present in the school building during the school day, or employed a combination of both models.
- There was also variation in relationships by school staff position; while OST staff described generally positive relationships with school day staff, more OST staff described promising practices related to principal relationships than for teacher relationships.
- The study did not identify a relationship between OST-school partnerships and dosage or student achievement.
    - Our analysis revealed that OST staff saw the program as distinct from the school day and not typically aligned to school curricula. Additionally, they reported that OST staff and schoolteachers communicated on an "as needed" basis regarding specific students. The lack of alignment between academic supports may mitigate any relationship between student achievement and OST-school partnerships since research suggests that alignment of school-day programming, achieved through ongoing communication with teachers and school staff, is associated with student achievement.

Community Engagement

- OST providers reported that they encouraged staff to interact with parents and offered opportunities for parents to attend OST programming events.
- A majority of programs partnered with at least one outside organization to provide extracurricular activities, academic support, and other enrichment opportunities.
- The study did not identify a relationship between OST-community partnerships and dosage or student achievement.

o   Programs reported that while they encouraged parent and community participation, it was often difficult to organize community events, and attendance was often low. The limited turnout and engagement may mitigate the relationship between community engagement and student outcomes.

Recommendations

Our findings suggest that the OST system as well as OST providers should improve practices across the four program quality domains—academic content, staffing, school partnerships, and community engagement. These recommendations include:

RECOMMENDATIONS	
Academic Content	
PL	Ensure that participants have at least 30-45 minutes of homework support and provide academic alternatives for students who complete their homework.
PL	Structure homework help in small groups to offer more individualized support.
PL	Align enrichment activities to academic skills and, when possible, to school day activities.
Staffing	
PL SL	Continue hiring and retaining high quality staff.
PL	Promote staff and site coordinator professional development.
School Relationships	
PL	Continue cultivating and strengthening OST program-principal relationships.
PL SL	Develop systems and strategies for strengthening OST program-teacher relationships.
Community Engagement	
PL SL	Actively seek out parents and encourage parents to participate in OST programming.
PL SL	Continue engaging partners to increase OST program's capacity for supplying high-quality academic and socio-emotional support.
General	
SL	Provide more uniform and practical guidance to all OST programs across the city or state to ensure consistent and high-quality program content and delivery.
PL	Encourage ongoing communication across programs to improve programming.
PL SL	Seek out additional funding to supplement current funding and provide additional resources for OST programming, including technology, program supplies, professional development, and higher staff salaries.

SL System Level   PL Provider Level

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Introduction

21st Century Community Learning Center (21st CCLC) grants are designed to support out-of-school time (OST) programs that provide academic support for youth attending high-poverty, underperforming 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 awarded two rounds of grants in 2011-12 to its sixth cohort of grantees. The first round of Cohort 6 grants focused primarily on providing academic and enrichment programming for elementary school students, while the second round—Cohort 6A grants—focused primarily on providing middle school Science, Technology, Engineering, and Mathematics (STEM) and high school credit recovery programming.

Of the Philadelphia organizations awarded 21st CCLC grants, 10 organizations representing 12 OST providers selected Research for Action (RFA) as their local evaluator.[3,4] In support of a citywide effort to create a cohesive system for OST programs, RFA has aggregated 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 and 6A 21st CCLC grantees in Philadelphia, the analysis and results presented in this report provide useful insights into the potential impact and needs of OST programs in Philadelphia and help inform the development of Philadelphia's OST system-building efforts.

About this Report

This report examines the 21st CCLC programs evaluated by RFA and aggregates analyses from individual providers' local reports to present key findings that inform broader discussions about OST programs. We were interested in learning:

1) To what extent are high quality OST practices in academic content, staffing, links to school, and parent and community engagement exhibited in Philadelphia's 21st CCLC programs?
2) How does quality relate to student classroom behavior and achievement outcomes? How does quality relate to student participation in OST programming?

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[3] One grantee was an intermediary organization representing three provider organizations.
[4] See Appendix D for a map of providers in Philadelphia.

3) How do student participation levels (dosage) relate to student academic behavior and achievement outcomes?
4) Do Philadelphia's 21st CCLC program participants demonstrate improvements in student classroom academic behaviors and achievement outcomes overall?

Using data from providers' local reports, RFA addressed these research questions through a mixed-methods study that analyzed:

- Student outcomes data;
- Program participation data;
- OST staff, OST participant, and school teacher survey responses; and
- Qualitative data from local evaluations, including interviews with program and school staff, program visits, and a review of program documents.

The study includes data from each of the 39 programs operated by the 10 grantee organizations that operate in public schools (including one charter school) in Philadelphia. The analyses exclude other schools in Philadelphia because this year's analyses focused on determining if program-level quality elements impacted student outcomes. In particular, researchers had to exclude parochial schools because of different grade structures and assessments utilized. Additionally, one charter provider was not included in student outcomes analyses because of the different scales used for some outcomes areas.

Student outcome analyses compared the academic and behavioral performance of OST participants and non-participating students.[5] We also examined the relationships between the quality of OST programs, student participation levels, teachers' perceptions of OST participants' classroom performance, and student performance in the following areas:

- Math, reading, and science course grades;
- Math and Reading Pennsylvania System of School Assessment (PSSA) scores;
- Developmental Reading Assessment (DRA) for 1st-3rd grade students;
- High school credits earned for 9th-12th grade students; and
- School attendance and suspensions.

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[5] The non-OST comparison group included students who attended schools with 21st CCLC programs but did not attend these programs. The non-OST student group was statistically identical in observed demographic characteristics and previous academic and behavioral performance.

Key findings from this report are highlighted in Table 1.

Table 1. Key Findings

PROGRAM QUALITY	**Overall**	• Programs' academic enrichment, staffing and professional development practices, communication with school staff, and parent and community engagement strategies varied across and within provider networks.
	Academic Content	• OST programs typically offered mandatory homework help four days a week and almost all programs offered enrichment and project-based learning. Programs did not frequently tie programming to the school day activities. • The strongest programs in the academic program content area implemented almost three-quarters of the promising practices we identified, but none implemented all practices.
	Staffing	• OST programs sought out highly qualified staff but struggled with staff retention. • Relevant professional development was available, but programs needed more of it.
	School Partnerships	• A majority of programs felt supported by their principals but did not believe principals were knowledgeable about their program. • Programs commonly hired school day staff including teachers and aides. • Communication with teachers was often positive but generally less formal than with principals. Most OST staff reported that school teacher communication was primarily logistical, and communication around individual students happened on an "as needed" basis.
	Parent & Community Engagement	• Most OST programs communicated with parents but did not offer parent programming or volunteer opportunities. • OST organizations partnered with other community organizations, but they also expressed a desire to further develop these relationships.
STUDENT OUTCOMES	**Participation**	• Academic Content and Staffing were positively related to OST participation levels.
	Intermediate Outcomes	• Academic Content was positively related to student social, behavioral, and academic improvement as perceived by teachers. • Student OST participation levels were positively related to student social, behavioral, and academic improvement as perceived by teachers.
	Academic Achievement	• There is no consistent evidence showing that OST participants outperformed non-OST students across all the outcome areas and grade levels. However, compared to non-OST students, OST participants did better in select areas, including credits earned in mathematics, literacy, and science.

The report is organized into the following main sections:

I.   Context: 21st CCLC Providers, Schools, and Programs

This section provides an overview of important contextual factors that inform the 21st CCLC Philadelphia landscape and this report. 21st CCLC programs operate in public, private, and parochial schools, and are run by a variety of providers, including non-profits, university-based centers, and charter schools.

A.   District School Closings, Fiscal Challenges, and other Contextual Factors

In spring 2013, the School District of Philadelphia (SDP) closed 24 schools ahead of the 2013-14 school year in response to a substantial fiscal crisis that has yet to be fully resolved. Although a few reports and researchers have begun to examine the impact of the school closings for students during the school day, none have examined the impact school closings have had on OST programs. Seven of the 10 providers RFA evaluated for its 21st CCLC evaluations in 2013-14 were affected by the school closings. Drawing from interviews with principals, directors, and site coordinators, the following is a brief summary of how the school closings and fiscal challenges impacted programming for some providers.

- **Program site changes**. School closings forced four of the 10 providers to find new school sites in which to operate their programs for the 2013-14 school year. This was a logistical challenge; providers needed to find a new school partner fairly quickly in order to formalize their partnerships by the beginning of the 2013-14 school year.

- **School administration changes**. Administrative transitions created challenges for some OST providers. One provider was not able to stay in an existing program site because the school's new administrator did not sign off on programming for the 2013-14 school year. Other providers were forced to seek out new partnerships. In some cases, this was a positive move—providers found their new schools to be a better match for their program, and others saw increased participation.

- **Programmatic challenges.** Several programs faced programming challenges due to space constraints, as well as the availability of particular kinds of facilities (i.e., spaces with particular types of equipment for programming).

- **Student transitional challenges.** When programs relocated to a new site or took on new students from a closed school, providers reported that it took additional time to re-establish norms; some providers noted that aspects of the "culture" of the program had changed with the influx of new students.

B.   Participant Characteristics and Enrollment

21st CCLC programs are designed to serve youth in high-poverty, underperforming schools. Research on OST program participation across the country has found that this population of students has less access to and participates less frequently in OST programs.[6]

Student Demographics
The 21st CCLC programs provided OST programming for low-income students of color in underperforming schools in Philadelphia. Figure 1 displays demographic characteristics of 21st CCLC participants by school level. Youth who participated in the 21st CCLC programs were generally comparable to non-OST students in terms of race, free and reduced-price lunch qualification, limited English proficiency status, disability status, and gender.[7]

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[6] Ibid.

[7] More details about the demographic characteristics of OST participants and the comparison students can be found in Appendix A. Comparison students were the students who attended the same schools that OST participants attended but did not participate in the 21st CCLC programs.

Figure 1. Demographics of OST Participants and Non-OST Students in the Same Schools

OST	NON-OST

Race and Gender

OST: Hispanic/Latino 33%, African-American 54%, Multi-Racial/Other 3%, White 5%, Asian 4%; Male 49%, Female 51%

NON-OST: Hispanic/Latino 35%, African-American 46%, Multi-Racial/Other 5%, White 9%, Asian 6%; Male 53%, Female 47%

Legend: Asian, Hispanic/Latino, African-American, Multi-Racial/Other, White, Male, Female

Free and Reduced Price Lunch

OST: Non-FRL 32%, FRL 68%

NON-OST: Non-FRL 27%, FRL 73%

Legend: Non-FRL, FRL

Limited English Proficiency

OST: LEP 13%, Non-LEP 87%

NON-OST: LEP 14%, Non-LEP 86%

Legend: Non-LEP, LEP

Students with Disabilities

OST: SWD 13%, Non-SWD 87%

NON-OST: SWD 17%, Non-SWD 83%

Legend: Non-SWD, SWD

Note: Percentages may not add up to 100 in some graphs because of rounding.

Notable findings include:

- **Race/Ethnicity:** The programs in our study served an ethnically and racially diverse population comparable to the population of non-OST students. Roughly one-half (54%) of OST participants were African-American, and approximately one-third (33%) of the participants were Hispanic/Latino students.

- **Gender:** Overall, there was similar representation between males and females in the OST program, though there were slightly more female participants.[8]

- **Free and Reduced-Price Lunch:** In 2013-14, roughly two-thirds (68%) of participants qualified for Free and Reduced-Price Lunch (FRL).[9] 21st CCLC programs served a slightly smaller percentage of students qualifying for FRL compared to the percentage of non-OST students qualifying for FRL (73%).

- **Limited English Proficiency:** Approximately one in eight OST participants (13%) were of Limited English Proficiency (LEP). The percentage of LEP students in 21st CCLC programs was comparable to the percentage of non-OST LEP students.

- **Students with Disabilities:** In 2013-14, approximately one in eight OST participants (13%) were identified as students with disabilities. This percentage was comparable to the percentage of students with disabilities in the non-OST student group (17%).

Enrollment by School Level and Cohort

Figure 2 provides an overview of the enrollment by school level for each cohort. Overall, 1,553 Cohort 6 participants and 2,278 Cohort 6A participants were considered in our analyses. A majority of the Cohort 6 participants were elementary school students, and a majority of the 6A participants were middle school students.

Figure 2. Number of Participants, by School Level and Cohort

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[8] Participant gender was not reported for roughly 6% of OST participants.
[9] Free and reduced priced lunch (FRL) may be a problematic indicator of income status because families are required to submit paperwork to qualify for this status, which can cause FRL to be under-reported. However, FRL is the only indicator of socio-economic status available through the School District of Philadelphia.

Participation and Retention

Recruiting and retaining OST participants has been an important goal for many 21st CCLC programs, and the importance of student participation has been documented in a number of previous studies.[10] Federal 21st CCLC reporting requirements define a student who attends at least 30 days as a regular participant, and some studies found academic benefits for students who participated in programming between 60-90 days.[11] In a 2004 evaluation, researchers found that participants showed slightly increased scores on the Iowa Test of Basic Skills (ITBS) after 60 days but a "stronger impact" on the ITBS score after 90 days.[12] This study intended to examine the potential impact of the OST programs on student behavioral and academic outcomes. Furthermore, this study explored the role of the quality of OST programs, student OST participation levels (dosage) for student classroom performance and, in turn, impact on student outcomes.

Figure 3 illustrates participation levels by school levels. **A majority of K-5 students participated 90 or more days, while more than half of middle and high school students participated less than 30 days.** Less than one-third of all high school participants attended 30 or more days, and less than 10% attended 90 or more days of programming.

Figure 3. Participation by Grade Levels and Dosage

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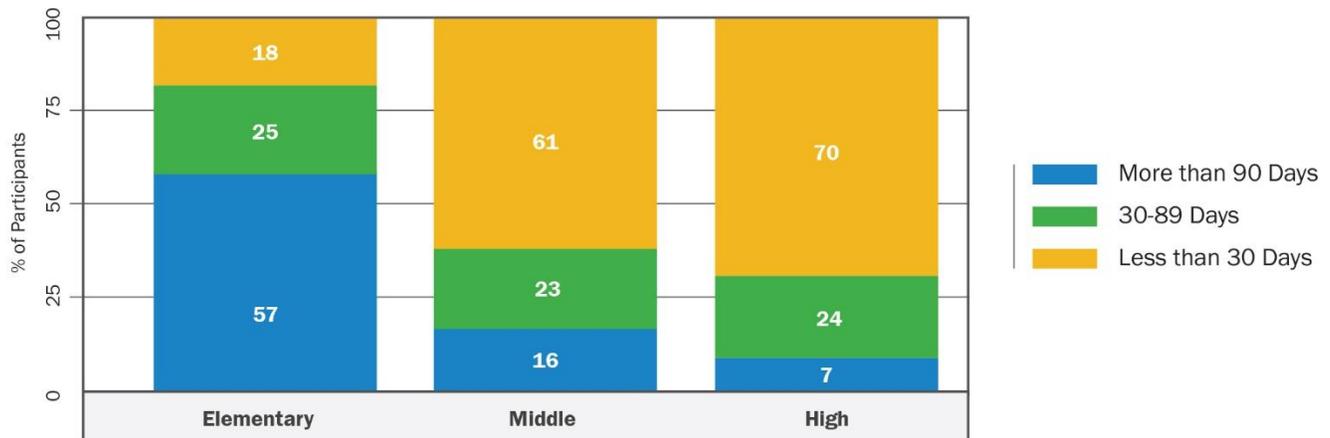
[10] Little, P., Wimer, C., & Weiss, H. B. (2008). After school programs in the 21st century: Their potential and what it takes to achieve it. *Issues and Opportunities in Out-of-School Time Evaluation: Issue 10*(1-12). Cambridge, MA: Harvard Family Research Project; Black, A. R., Somers, M. A., Doolittle, F., Unterman, R., & 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.

[11] Ibid.

[12] Little, P., Wimer, C., & 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*(1-12). Cambridge, MA: Harvard Family Research Project.

II. Analysis Framework and Program-Level Elements of Quality Programming

A. Quality Programming

21st CCLC funding is the only federal funding stream dedicated exclusively to out-of-school time programs.[13] 21st CCLC funding is designed to provide academic enrichment to students attending high poverty, low-performing schools to help them meet academic standards.

Theoretically, OST programs like 21st CCLC can influence student academic outcomes in several ways:

1) By providing additional time on task;[14]

2) By providing more individualized academic supports;[15]

3) By providing hands-on learning and enrichment activities that engage students and stimulate the curiosity and relevance that is essential to learning and skill development;[16] and

4) By providing support through caring adult-youth relationships, which create a safe environment for students' academic and socio-emotional learning to take place.[17]

However, research on the outcomes of 21st CCLC programs, as well as other OST programs, reveals mixed results.[18] For example, a review of research on OST programs[19] that examined experimental and quasi-experimental OST studies, found clear evidence that some OST programs had an impact on academic outcomes, but found no evidence that 21st CLCC programs had an impact on student school engagement or academic behaviors; it also found inconsistent evidence on the impact of 21st CCLC programs on academic achievement. Several recent meta-analyses have also found positive effects for OST programs' impacts on students' academic and socio-emotional outcomes.[20]

OST researchers and experts argue that the mixed outcomes for OST programs are a result of the variation in quality of OST programs. Several studies have examined the outcomes of OST programs that meet particular criteria for "high quality programming," and have found that these programs do have an impact

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[13] Afterschool Alliance. (2015). *21st Century Community Learning Centers: Providing afterschool and summer learning support to communities nationwide*. Retrieved from http://www.afterschoolalliance.org/documents/21stCCLC_Overview_030515.pdf

[14] 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.

[15] Rasco, C., Cheatham, J., Cheatham, S., & Phalen, E. (2013). Using after-school and summer learning to improve literacy skills. In T. K. Peterson (Ed)., *Expanding minds and opportunities: Leveraging the power of afterschool and summer learning for student success* (pp. 42-48). Washington, DC: Collaborative Communications Group; Black, A. R., Somers, M. A., Doolittle, F., Unterman, R., & 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; Lauer, P. A., Akiba, M., Wilkerson, S. B., Apthorp, H. S., Snow, D., & Martin-Glenn, M. L. (2006). Out-of-school time programs: A meta-analysis of effects for at-risk students. *Review of Educational Research*, 76(2), 275-313.; Moss, M., Swartz, J., Obeidallah, D., Stewart, G., & Greene, D. (2001). *AmeriCorps tutoring outcomes study*. Cambridge, MA: Abt Associates.

[16] Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American Journal of Community Psychology*, 45, 294-309.

[17] Heckman, P., & Sanger, C. (2013). How quality afterschool programs help motivate and engage more young people in learning, schooling and life. In T. K. Peterson (Ed)., *Expanding minds and opportunities: Leveraging the power of afterschool and summer learning for student success* (pp. 28-34). Washington, DC: Collaborative Communications Group.

[18] Redd, Z., Boccanfuso, C., Walker, K., Princiotta, D., Knewstub, D., & Moore, K. (2012). *Expanding time for learning both inside and outside the classroom: A review of the evidence base*. Bethesda, MD: Child Trends; Zief, S.G., Lauver, S., & Maynard, R.A. (2006). *Impacts of after-school programs on student outcomes*. Oslo, Norway: The Campbell Collaboration.

[19] Ibid

[20] Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American Journal of Community Psychology*, 45, 294-309.

on student achievement.[21] For example, Holstead and King[22] identified a set of high quality 21st CCLC programs in Indiana and found that the lowest performing participants in these programs showed significant increases in their standardized test scores. Therefore, it is important for OST research to consider measures of quality in assessing program outcomes.

The OST field, with some support from researchers, has begun to move toward consensus on high quality program components—including both structural (e.g., strong OST-school partnerships) and process-oriented (e.g., adult-youth relationships) elements.[23] And, while some research on high quality programs has shown positive impacts on student socio-emotional and academic outcomes, there is still limited evidence to support the existence of a relationship between specific elements of quality and student outcomes.[24] Therefore, more research is needed to definitively identify high quality indicators in OST programs, particularly at the structural level.

Given RFA's mixed findings regarding the academic impact of Philadelphia's 21st CCLC programs in previous years and the importance of quality in influencing student outcomes, RFA's third citywide report examines Philadelphia's 21st CCLC programs using research-based constructs of quality to address the research questions and help explain student performance outcomes.

B.   Analysis Framework

We developed an analysis framework to illustrate our hypotheses about the relationships between key elements of program quality, program participation, and student outcomes (Figure 4). The model below displays afterschool "inputs"—program quality and program participation—and student level "outputs"—academic and socio-emotional outcomes.

The literature describes program quality as having both structural and process components with several domains that are potentially important for OST programs seeking to impact participant academic outcomes. For our framework, we included the following structural elements: program content with a focus on academic enrichment,[25] staffing and professional development opportunities,[26] OST-school partnerships,[27] and partnerships with community and parents.

Another key component of our framework is dosage, or students' level of participation. Research has consistently documented that the more a young person participates in an OST program, the more likely it is that positive outcomes will be observed.[28] Therefore, we theorize that OST participation levels relate to intermediate classroom-level outcomes, as well as student achievement.

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[21] Ibid

[22] Holstead, J., & King, M. H. (2011). High quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk*, *16*(4), 255-274.

[23] Vandell, D. L., Reisner, E. R., & Pierce, K. M. (2007). *Outcomes linked to high-quality afterschool programs: Longitudinal findings from the study of promising afterschool programs*. Report to the Charles Stewart Mott Foundation. University of Wisconsin, Madison: Wisconsin Center for Education Research.

[24] Huang, D. & Dietel, R. (2011). *Making after-school programs better*. (CRESST Policy Brief). Los Angeles, CA: University of California.; Kidron, Y., & Lindsay, J. (2014). *The effects of increased learning time on student academic and nonacademic outcomes: Findings from a meta-analytic review* (REL 2014-015). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Appalachia. Retrieved from http://ies.ed.gov/ncee/edlabs

[25] Holstead, J., & King, M. H. (2011). High-quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk, 16*(4), 255-274.; Lauer, P. A., Akiba, M., Wilkerson, S. B., Apthorp, H. S., Snow, D., & Martin-Glenn, M. L. (2006). Out-of-school-time programs: A meta-analysis of effects for at-risk students. *Review of Educational Research, 76(*2), 275-313.

[26] Ibid.

[27] New York State Afterschool Network. (2011). *Afterschool professional development: Resources, outcomes, and considerations*. New York, NY: New York State Afterschool Network.

[28] Little, P., Wimer, C., & 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., & Grossman, J. B. (2009). *The evaluation of enhanced academic instruction in after-school programs: Final report* (NCEE 2009-

Finally, we hypothesize that the quality of a program's structural features may influence students' level of participation in the programs. For example, student participation might increase as a result of hiring highly qualified staff or having a strong partnership with the school and parents to facilitate their participation.

In the context of this framework, our study was also able to test the impact of the 21st CCLC programs on two types of outcomes:

1) Intermediate outcomes, which include teacher perceptions of student improvement in academic, behavioral and social areas over the course of the school year; and

2) Student achievement, which include standardized test scores (PSSAs), course grades in math, reading and science for all students, and credits earned for high school students.

Figure 4. Theoretical Framework

OST Program Quality:
- Academic Program Content
- Staff Quality and Professional Development
- School Partnership
- Community Partnership

Program Participation-Levels

Intermediate Outcomes:
Student social, behavioral, and classroom performance

Student Achievement:
- PSSA
- Course Grades
- Credits Accumulation

Characteristics of After School Programming

Characteristics of OST Programming

We were unable to assess critical "process" factors such as quality of program implementation due to limited data. As such, the process component of program implementation is excluded from the model. Aspects of implementation quality that were not assessed include quality of adult-student relationships,[29] delivery of program content (i.e., sequenced, active, focused and explicit[30]), and student engagement, all of which have been found to be a central feature of programs that demonstrate positive outcomes. In addition, we had limited data on student background characteristics and had little information regarding participation in other OST programs for both 21st CCLC participants and the control group. The finding should be interpreted with caution since these factors are deemed important for student performance.

In spite of these limitations, the framework provides a lens through which to understand how factors relate to Philadelphia's 21st CCLC's student achievement outcomes, and to determine where program quality can be improved. It also provides an opportunity to add knowledge to the field about the relationship between particular structural quality features and student levels of participations and key outcomes—topics that have not been extensively explored in other OST research.

4077). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, United States Department of Education.

[29] Smith, C., McGovern, G., Akiva, T., & Peck, S. C. (2014). Afterschool quality. New Directions for Youth Development, 2014(144), 31-44.; Vandell, D.L., Reisner, E.R., Brown, B.B., Pierce, K.M., Dadisman, K., & Pechman, E.M. (2004). The study of promising after-school programs: Descriptive report of the promising programs. Report to the Charles Stewart Mott Foundation. University of Wisconsin, Madison: Wisconsin Center for Education Research.

[30] Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. American Journal of Community Psychology, 45, 294-309.

III. Philadelphia's 21st CCLC Programs: Examining Structural-Level Indicators of Program Quality

In this third citywide study, we assessed Philadelphia's 21st CCLC program quality in four key areas, all of which were at the structural level. Drawing on Holstead and King's[31] assessment of 21st CCLC programs in Indiana, these areas are:

- Academically enriching program content;
- Highly qualified staff supported with professional development;
- Strong school partnerships; and
- Robust parent and community partnerships.

This section of the report describes our subset of Philadelphia's 21st CCLC OST programs in these four areas. We begin by describing our methodology for assessing strong programming in each area. We then move into a discussion of each structural area and its indicators of quality. We report on the broad distribution of these indicators across 21st CCLC programs and key differences that emerged between strong programs that demonstrated more of these high quality practices and others that did not. It is important to note that many programs demonstrated strengths in different areas, and a program that demonstrated strength in one area may not have done so in other areas.

A. Method for Assessing Quality

In order to define quality in these key structural areas, RFA identified a set of quality indicators (see Tables 2-5) suggested by the research literature for which we had sufficient data from 21st CCLC local evaluations. We used the following assessment process:

1. We drew on data from staff surveys, interviews with program directors and program coordinators, and program documents to rate each program according to these indicators.

2. The rating process involved scoring programs on each indicator to reflect the presence or absence of these practices (0 or 1) or varying degrees to which these practices were implemented (1=needs improvement, 2=satisfactory, or 3=excellent).

3. A "sum of points" then allowed us to see the variation in implementation of these promising practices across different programs.

4. Finally, we ranked programs according to their sum of points in each quality domain. We identified programs ranked in the top half as Promising Practice Programs. Since programs varied in their implementation of promising practices across domains, a Promising Practice Program for rigorous academics was not necessarily a Promising Practice Program for staffing and professional development practices.

    The data available for rating programs varied by topic area:
    - Data for **program content and structure** drew primarily on interviews and program documents than survey data and lent themselves to a more dichotomous rating system (the characteristic was present or absent) for most indicators.
    - Conversely, data for **school partnerships and staffing** were more robust and drew more extensively on survey data, which allowed for more refined ratings of "needs improvement," "satisfactory," and "excellent."

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[31]Holstead, J., & King, M. H. (2011). High-quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk, 16*(4), 255-274.

B.   OST Program Content and Structure: Rigorous Academic Enrichment

The amount and structure of academic enrichment offered in OST programs may influence the degree to which they can impact academic outcomes.[32] OST programs often integrate academic content in their programming through direct supports, such as homework help or tutoring, as well as indirect supports like learning integrated into enrichment activities.[33] In this section we evaluate academic enrichment programming and structure in Philadelphia's 21st CCLC programs by looking at the following:

- The presence and structure of homework help; and
- The degree to which learning was promoted through activities beyond homework help.

Quality in these key areas is defined by a set of promising practices (see Table 2). As described above, we assessed whether programs were implementing these practices by rating them present or absent. In several areas, we were we also able to rate the level of program implementation as being higher than or lower than the standard described in Table 2.

Table 2. Promising Practices in Academic Enrichment Programming

PROGRAM CONTENT AREA	PROMISING PROGRAM PRACTICES

Presence and Structure of Homework Help	**Regular and sufficient time for homework**
	• Homework help is a required element Mon-Thurs[34]
	• Homework help takes place for at least 30-45 minutes[35]
	  ○ Satisfactory: Homework help takes place for less than 30-45 minutes
	  ○ Excellent: Homework help takes place for more than 45 minutes
	• Academic alternatives are offered if students have no homework[36]
	• Extra support beyond homework help is offered if needed[37]
	
	Homework help is structured and targeted
	• Program has an established system for checking homework[38]
	• Homework help is informed by student performance data
	
	Sufficient individual supports are offered

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[32] Holstead, J., & King, M. H. (2011). High-quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk, 16*(4), 255-274.; Little, P., Wimer, C., & 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

[33] Holstead, J., & King, M. H. (2011). High-quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk, 16*(4), 255-274.

[34] Black, A. R., Somers, M. A., Doolittle, F., Unterman, R., & 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; Lauer, P. A., Akiba, M., Wilkerson, S. B., Apthorp, H. S., Snow, D., & Martin-Glenn, M. L. (2006). Out-of-school time programs: A meta-analysis of effects for at-risk students. *Review of Educational Research, 76*(2), 275-313.; Moss, M., Swartz, J., Obeidallah, D., Stewart, G., Greene, D. (2001*). AmeriCorps tutoring outcomes study*. Cambridge, MA: Abt Associates

[35] Black, A. R., Somers, M. A., Doolittle, F., Unterman, R., & 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; Lauer, P. A., Akiba, M., Wilkerson, S. B., Apthorp, H. S., Snow, D., & Martin-Glenn, M. L. (2006). Out-of-school time programs: A meta-analysis of effects for at-risk students. *Review of Educational Research, 76*(2), 275-313.; Moss, M., Swartz, J., Obeidallah, D., Stewart, G., Greene, D. (2001). *Americorps Tutoring Outcomes Study*. Cambridge, MA: Abt Associates.

[36] Holstead, J., & King, M. H. (2011). High-quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk,16*(4), 255-274.

[37] Ibid.

[38] Holstead, J., & King, M. H. (2011). High-quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk,16*(4), 255-274.; Geiger, E., & Britsch, B. (2003). *Out-of-school time program evaluation: Tools for action.* Portland, OR: Northwest Regional Educational Laboratory.

	- Homework is done in groups of 10-12[39] - Satisfactory: Homework is done in groups larger than 10-12 - Excellent: Homework is done in groups smaller than 10-12 - Staff provide individual support during homework help[40] - Program offers tutors as well as staff to provide individual academic support [41]
Degree to which learning is promoted through other activities beyond homework help	**Recreational activities include opportunities for learning** - Enrichment activities are offered[42] - Enrichment activities are linked to learning[43] - Project-based learning activities incorporate academic skills[44] - Lesson plans are created for PBL or other enrichment activities[45] - Lesson plans for program activities are clearly linked to the school day or academic standards[46] **Academic enrichment activities are offered**[47] (e.g., Robotics, 100 Book Challenge, Mathletes) **Provider offers centralized support for lesson planning**[48]

Each OST program displayed some of the promising practices listed in Table 2. However, the number of promising practices varied widely across programs.

FINDINGS: ACADEMIC CONTENT AND STRUCTURE

We begin this section by describing the variation in academic enrichment programming at the program level and end with a discussion of Promising Practice Programs, i.e., programs that reflect the greatest number of promising practices and provide exemplars of strong academic enrichment programming. We also provide a description of exemplary academic enrichment programming. Major findings are designated below with bold text and a star symbol.

⭐ **Philadelphia's 21st CCLC programs typically offer mandatory homework help four days per week for 30-45 minutes. A majority of programs offer homework help in groups of 10-12 students supported by staff who check homework and provide additional remedial support as needed.**

Figure 5 displays the distribution of the characteristics of high quality homework help across Philadelphia's 21st CCLC programs.

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[39] Ibid.

[40] Holstead, J., & King, M. H. (2011). High-quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk, 16*(4), 255-274.

[41] Lauer, P. A., Akiba, M., Wilkerson, S. B., Apthorp, H. S., Snow, D., & Martin-Glenn, M. L. (2006). Out-of-school-time programs: A meta-analysis of effects for at-risk students. *Review of Educational Research, 76*(2), 275-313.

[42] Holstead, J., & King, M. H. (2011). High-quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk,16*(4), 255-274.

[43] Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American Journal of Community Psychology, 45*(3-4), 294-309.

[44] Markham, T. (2012). *Ten tips for better PBL* [Web log]. Retrieved from http://edge.ascd.org/_Ten-Tips-for-Better-PBL/blog/6275699/127586.html.

[45] Holstead, J., & King, M. H. (2011). High-quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk, 16*(4), 255-274.

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

[47] Holstead, J., & King, M. H. (2011). High-quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk, 16*(4), 255-274.

[48] Afterschool Alliance. (2014). *Taking a deeper dive into afterschool: Positive outcomes and promising practices*. Washington, DC: Afterschool Alliance.

Figure 5. Distribution of the Characteristics of High Quality Homework Help

PRESENCE OF PROMISING HOMEWORK HELP PRACTICES *(n=39 programs)*

Practice	Percent
Homework help is a required element Mon-Thurs	69%
Homework help for 30-45 min.	64%
Homework help for more than 45 min.	18%
Homework done in groups of 10-12	62%
Homework done in groups smaller than 10	18%
Established system for checking homework	59%
Individual support provided by staff	59%
Individual support provided by tutors	23%
Remedial or specialized support offered	56%
Support informed by data	46%
Academic alternative if no homework	28%

Most programs engaged in the following best practices:

- **Mandatory homework help was offered Monday through Thursday.** Overall, 69% of programs had a regular homework help period in which all students were expected to participate Monday through Thursday. Fridays were typically a less structured recreational day.

- **Homework help was offered for 30-45 minutes.** In 64% of programs, homework help was scheduled to occur each day, Monday to Thursday, for 30-45 minutes. Homework help was usually offered at the beginning of the program or at the end of the OST program. Only 18% of programs offered homework for longer than 45 minutes.

- **Homework was done in groups of 10-12.** In 62% of programs, homework was completed in groups of 10-12 students; 18% of all programs conducting homework help did so in groups of fewer than 10 students. In other programs, students were not divided into smaller groups but seated together in the cafeteria or other large spaces. Programs used different strategies for grouping students. They were often grouped by grade level but some also grouped by classroom teacher or subject in which students had homework.

- **Staff supported homework help.** In 59% of programs, staff provided individual support to students as needed. Staff would focus on their particular small group and circulate around the group offering support to students as needed.

- **Staff had an established system for checking homework.** Fifty-nine percent (59%) of programs reported an established system for checking homework. Some staff had a regular routine of checking in with each student regarding their assigned homework, while staff at another program used a homework log, which students signed each day to report if they had homework; staff also used the logs to verify homework assignments with students' classroom teachers.

- **Remedial support (beyond homework help) was available to students as needed.** Overall, 56% of programs offered remedial or additional support, beyond homework help time, to students who needed extra help.

⭐ **Philadelphia's 21st CCLC programs were less likely to offer longer and more individualized homework help periods.**

As Figure 5 shows, the following practices were offered by less than half of all programs:

- **Academic alternative if homework help was not needed.** Overall, only 28% of all programs had an academic alternative, such as books to read, for students who did not have homework. This practice is important to ensure that students experience some direct academic enrichment for at least 30 minutes per day and/or don't disrupt others who are completing homework.

- **Individual support offered.** Overall, 23% of programs were able to offer tutors in their program, typically college students who volunteered in the program.

- **Support informed by data.** Overall, 46% of programs reported that their academic support was informed by data on student progress.

⭐ **Almost all of Philadelphia's 21st CCLC programs offered enrichment and project-based learning (PBL) activities. PBL activities were tied to academic skills and planning was supported through lesson plans.**

Programs varied in the extent to which they integrated academic skill-building in robust ways throughout their programming. Figure 6 displays the prevalence of promising practices to support academic enrichment beyond homework help.

Figure 6. Promising Practices to Support Academic Enrichment

PROMISING PRACTICES IN INTEGRATING ACADEMIC CONTENT BEYOND HOMEWORK HELP

Practice	Percentage
Provider offers centralized support for lesson planning	49%
Lesson plans are clearly linked to school day or standards	46%
Lesson plans are created for activities	82%
PBL clearly incorporates academic skills	72%
Program offers academic enrichment opportunities	49%
Enrichment activities are linked to learning	31%
Enrichment activities are offered	92%

- **Almost all programs offered enrichment activities.** A majority of programs offered enrichment activities (92%) such as sports activities or arts programming to engage students.

- **Most PBL was tied to academic skills**. PBL is a required element of Philadelphia's Department of Human Services prevention funding for OST programs, which is the largest OST funding stream in Philadelphia. Therefore, it is not surprising that almost two-thirds of programs (72%) reported that they tied project-based learning activities to academic skills. PBL requires students to identify driving questions around topics of interest that are explored through activities that integrate academic skill-building and lead to culminating projects.

- **Most staff created lesson plans for activities.** The vast majority of programs (82%) also reported completing lesson plans for their program activities, particularly PBL activities. Again, this activity was required of programs receiving funding from the City of Philadelphia.

⭐ **Philadelphia's 21st CCLC programs did not frequently tie programming to school day activities, offer specific academic enrichment programming, or support program lesson planning at the provider-network level.**

- **Less than one-third of programs linked enrichment with learning.** While the vast majority of programs were implementing enrichment activities such as arts or sports, few programs (31%) attempted to integrate academic learning into these activities. Programs that were more likely to integrate academic skill building into enrichment activities were those that did not offer project-based learning.

- **Fewer than half of the programs linked lesson plans to school day activities.** Fewer than half of programs (46%) reported linking lesson plans to school day curricula or state standards. However, this intentional linking of school day and after-school activities distinguished strong programs when compared to other programs.

- **About half of all programs offered academic enrichment beyond PBL and homework help.** Enrichment included STEM programming, activities such as 100 Book Challenge, Mathletes, spelling bees, etc. Again, based on our ratings, stronger programs reported more frequently that they were able to offer academic enrichment activities beyond homework help.

- **Centralized support for program planning was present in only half of programs.** Centralized support included curricular materials, guiding themes, and ready-made lesson plans. Centralized support is important, particularly as many activity leaders are part-time employees and may not receive paid planning time to develop lesson plans for activities.

- **Academic enrichment at some programs was focused on STEM.** Fifty-five percent (55%) of programs provided STEM enrichment activities. The call-out box below provides an overview of STEM practices across providers.

STEM AS ACADEMIC ENRICHMENT

In the 21st CCLC Cohort 6A request for proposals, applicants were encouraged to include STEM as an aspect of programming. Research suggests the following about STEM in the afterschool context:[49]

- STEM programs can influence student interest, engagement, and even academic achievement in STEM when they include hands on learning environments.
- High-quality STEM programs include opportunities for students to engage in hands-on, inquiry-based learning opportunities; encourage a high level of participant engagement through purposeful activities; and are driven by STEM content knowledge and practices.
- STEM providers should have at least some staff with rich content knowledge in a STEM field.

The following provides a brief snapshot of STEM programming across programs. Data is drawn from interviews with program directors, site coordinators, and principals as well as staff and student surveys.

STEM activities were present in more than half of all programs. Over half of the programs (22 out of 39) provided at least one STEM activity for their students. Site coordinators and principals cited the following goals for STEM activities most frequently:

- To increase student engagement and inspire student interest in STEM;
- To encourage critical thinking and problem solving; and
- To provide enrichment activities that relate to schools' STEM curricula.

Activities included all aspects of STEM. Among programs that noted specific STEM subject areas of focus (n=13), 85% provided activities related to science subjects, including biology, chemistry, physics, energy, and geography; 31% provided activities on engineering, including architecture and robotics; 15% of programs focused on math; and 8% provided activities on technology.

Staff lack STEM credentials and experience. Only 17% of staff across all programs that led STEM activities had a background in a STEM field. In interviews, project directors and site coordinators indicated that staff lacked the appropriate support and/or content knowledge to design and execute STEM lessons. Said one site coordinator, "A big frustration for me is kind of having to scale back on some [science activities] because I don't think that the group leaders would be able to successfully implement it in the way that I would like it done."

Youth report interest in STEM and positive experience with STEM activities. Across the providers (n=3) and programs where students were surveyed (n=62), the majority of students reported that they enjoyed the activities in the program (92%), liked STEM more than they did before participating in the program (77.5%), wanted to participate in more STEM OST programming (67.8%), would recommend the program to a friend (87.1%), and wanted to know more about what scientists do after participating in the OST STEM program (75.8%).

⭐ **Promising Practice Programs differed from other programs in significant ways.**
Programs designated by RFA as Promising Practice Programs implemented between 71% and 88% of the promising practices in Figure 6. In contrast, programs ranked in the bottom half implemented between 42% and 69% of these promising practices. Programmatic variation occurred along the following dimensions:

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[49] Campbell, P., Jolly, E., Hoey, L., & Pearlman, L. (2002). *Upping the numbers: Using research-based decision making to increase the diversity in the quantitative disciplines*. Newton, MA: Education Development Center, Inc.; Davis, C., Ginorio, A. B., Hollenshead, C. S., Lazarus, B. B., & Rayman, P. M. (1996). Program and curricula interventions. In *The equity equation: Fostering the advancement of women in the sciences, mathematics, and engineering*. San Francisco, CA: Jossey-Bass.; Froschi, M., Sprung, B., Archer, E., & Fancsali, C. (2003). *Science, gender, and afterschool: A research-action agenda*. New York, NY: Academy for Educational Development, Inc. Retrieved from http://www.edequity.org/sgaagenda.doc.; Hansen, S., Walker, J., & Flom, B. (1995). *Growing smart: What's working for girls in school*. New York: American Association of University Women Educational Foundation; Koch, J. (2002). *Gender issues in the classroom: The past, the promise and the future*. Paper presented at the Annual American Educational meeting, New Orleans, LA.; Lee, V. (1997). Gender equity and the organization of schools. In B. Bank & P. Hall (Eds.), *Gender, equity, and schooling*. New York: Garland Publishing, Inc.; Wenglinski, H. (2000). *How teaching matters: Bringing the classroom back into discussion of teacher-quality*. Princeton, NJ: Educational Testing Service; Coalition for Science in After School. (2007). *Science in after-school*. New York, NY.

- **Providing additional support for students who needed it, after homework help period ended:** Ninety-four percent (94%) of Promising Practice Programs provided this additional support after homework help while only 30% of other programs offered it.

- **Access to student data:** Sixty-three percent (63%) of the Promising Practice Programs indicated that they had access to student data to inform support while only 35% of other programs indicated they had access to this data.

- **Linking programming to the school day:** Over half of Promising Practice Programs (63%) as compared to roughly a third (35%) of other programs intentionally linked programming to the school day or state standards.

- **Specific academic enrichment games or activities:** Sixty-nine percent (69%) of Promising Practice Programs offered other academic enrichment activities as compared to 35% of other programs.

- **Centralized support for program planning:** Sixty-nine percent (69%) of Promising Practice Programs and 35% of other programs reported this support.

EXAMPLE OF STRONG HOMEWORK HELP SESSION

This program has a designated staff person who leads homework support. Students are divided into family groups, and staff responsible for that group sit at each table supporting homework help. When youth don't have homework, the program provides books for them to read. The program also offers tutoring clubs for students who might need extra support. Students have the opportunity to attend the tutoring club, if they need additional support, during the week in addition to homework help as one of their regular "club" activities. At the start of the school year, the program received referrals from teachers to identify students for tutoring Club. The provider is recruiting volunteer tutors from a local University who support homework help and tutoring Club.

EXAMPLE OF STRONG PROGRAMMING THAT INTEGRATES LEARNING BEYOND HOMEWORK HELP

In this program, homework time lasts 30-45 minutes and then participants break off into different project-based learning and/or academic enrichment activities that are organized around a theme lasting for 6-8 weeks. Academic enrichment activities include the 100 Book Challenge and the Let's Read Math program for younger students. Older students may be engaged in fashion design and media projects. After these projects, participants choose among another set of 3-4 different activities which again include academic enrichment such as math games or chess. The program also offers board games and physical activities. The program collects report cards after every marking period and prepares report card goal sheets based upon each child's academic goals for the next marking period.

⭐ **The strength of academic enrichment programming varied within Provider networks.**

Almost all provider networks (seven out of ten) had at least one academic enrichment Promising Practice Program. However, only two providers had all of their programs ranked as Promising Practice Programs.

C. OST Program Staffing: Highly Qualified Staff and Relevant Professional Development

Research posits that highly qualified staff are important to ensuring high quality OST programming and positive youth outcomes.[50] Key indicators of highly qualified staff include significant experience in the field and retention with their provider-network (i.e., years of employment with provider), higher levels of education, and opportunities to participate in relevant professional development.[51] In addition, the OST field has begun to develop a set of core competencies for OST staff that will enable them to deliver and manage high quality OST programs.[52] Fundamental to these competencies is OST staff members' ability to develop rapport with youth.

Table 3 displays the characteristics of staff that were examined in our analysis of 21st CCLC program staffing, drawing on the quality dimensions proposed by literature, and specifically by Holstead and King.[53] In this analysis, there were two distinct categories of assessment: Staff Experience and Credentials and Relevant Professional Development. Within each category, staff survey data allowed us to rate programs' promising practices at three levels: Needs Improvement, Satisfactory, and Excellent. Table 3 distinguishes between Satisfactory and Excellent. Any program that did not meet the requirements for a Satisfactory rating was rated "Needs Improvement."

Table 3. Staffing Quality Indicators

CONTENT AREA	PROMISING STAFFING PRACTICES
Staff Experience and Credentials	**Educational Credentials and Experience** • Satisfactory: Some program staff have five or more years of working with children and have at least a bachelor's degree • Excellent: Majority of program staff have significant experience working with children (5+ years) and have at least a bachelor's degree **Staff Retention** • Satisfactory: Some staff have worked with the provider for 5+ years • Excellent: Majority of program staff have worked with the provider for 5+ years **Staff Competency in Building Rapport with Youth** • Satisfactory: Some staff report building rapport with youth is a personal strength while others report it as a challenge or area where they need more support • Excellent: More staff report that building rapport with youth is a personal strength than a challenge or area where they need support

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[50] Asher, R. (2012). Human resources: Staffing out-of-school time programs in the 21st century. *Afterschool Matters, 16*, 42-47.; National Institute on Out-of-School Time. (2007). *A review of the literature and the INSPIRE model STEM in out-of-school time*. Wellesley, MA: Wellesley College.

[51] Huang, D., & Dietel, R. (2011). *Making afterschool programs better*. (CRESST Policy Brief). Los Angeles, CA: University of California.; Massachusetts After-School Research Study (2005). *Pathways to success for youth: What counts in after-school*. Lowell, MA: United Way of Massachusetts Bay and Merrimack Valley; Holstead, J., & King, M. H. (2011). High-quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk, 16*(4), 255-274.; Yoon, K. S., Duncan, T., Lee, S. W. Y., Scarloss, B., & Shapley, K. (2007). *Reviewing the evidence on how teacher professional development affects student achievement* (Issues & Answers Report, REL 2007–No. 033). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. Vandell, D. L., Reisner, E. R., Brown, B. B., Pierce, K. M., Dadisman, K., & Pechman, E. M. (2004). *The study of promising after-school programs: Descriptive report of the promising programs*. Report to the Charles Stewart Mott Foundation. University of Wisconsin, Madison: Wisconsin Center for Education Research.

[52] Holstead, J., & King, M. H. (2011). High-quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk, 16*(4), 255-274.; Cambridge, K., Ghosh, D., Jonas, S., Matloff-Nieves, S., & Quinn, J. (2012). *Strong directors/skilled staff: Guide to using the core competencies*. Boston, MA: National Institute on Out-of-School Time. Retrieved from: http://www.wallacefoundation.org/knowledge-center/after-school/quality-and-cost/Pages/Strong-Directors-Skilled-Staff-Guide-to-Using-the-Core-Competencies.aspx

[53] Ibid.

Professional Development	**Relevance of professional development**
	• Satisfactory: Some staff report engaging in professional development that is <u>focused on OST</u>
	• Excellent: Majority of staff report engaging in professional development that is <u>focused on OST</u>
	Availability of professional development for program coordinators
	• Satisfactory: The site coordinator(s) reports participating in less than 15 hours of PD
	• Excellent: The site coordinator(s) reports participating in 15+ hours of PD
	Availability of professional development for staff
	• Satisfactory: Some staff report participating in 15 hours of PD
	Excellent: Majority of staff report participating in 15+ hours of PD

FINDINGS

In this section, we begin by describing the variation that exists among programs in staffing practices. We then turn to a description of the Promising Practice Programs and conclude the section by highlighting distinctive practices of Promising Practice Programs with an example of a program that reflects high quality staffing characteristics.

Our analysis looks closely at how programs vary across the different dimensions of staff quality.

Figure 7 represents programs' ratings on staff credentials, experience, training, and competency.

Figure 7. Staff Characteristics Across All Programs

STAFF EXPERIENCE, CREDENTIALS, TRAINING AND COMPETENCY

| Experience with Youth and Education Level | Experience with Provider (i.e., staff retention) | Staff Competency: Self-reported competence in developing rapport with youth |

Experience with Youth and Education Level: 23% Excellent, 59% Satisfactory, 18% Needs Improvement

Experience with Provider: 13% Excellent, 56% Satisfactory, 31% Needs Improvement

Staff Competency: 21% Excellent, 67% Satisfactory, 13% Needs Improvement

Legend: Excellent, Satisfactory, Needs Improvement

Key findings are as follows:

⭐ **OST programs hire some highly qualified staff but struggle with staff retention.**

• **Most programs hired some staff with experience in the OST field and postsecondary credentials.** The majority of programs (59%) were satisfactory in this area, reporting that at least

some (but less than half) of their staff had five or more years of experience working with children and a bachelor's degree in education.

- **Providers experienced high staff turnover.** Only 13% of programs reported that a majority of their staff had been with the program for five or more years, suggesting that staff turnover, similar to previous years of programming, continued to be a challenge.

- **Staff reported mixed competence in building rapport with youth.** Sixty-seven percent (67%) of programs were rated satisfactory in this area, indicating that equal numbers of staff reported rapport-building as a strength as those who reported it as a challenge or area where they need support. Furthermore, staff in only 21% of programs reported this as a strength rather than a challenge. Nonetheless, in interviews, directors and program coordinators often noted how rapport with youth was a positive attribute of many of their staff. As one program coordinator noted, "the staff are great with the kids, very involved and bond well with the students. They are great with helping the students with homework and building relationships with them. They […] also have a good sense of how to organize the students."

⭐ **Relevant professional development is available, but programs need more of it.**

Next, we analyzed the availability of professional development for staff. Figure 8 below displays the percentage of programs that met the criteria for excellent, satisfactory or needs improvement for professional development described in Table 3.

Figure 8. Professional Development Participation and Relevance
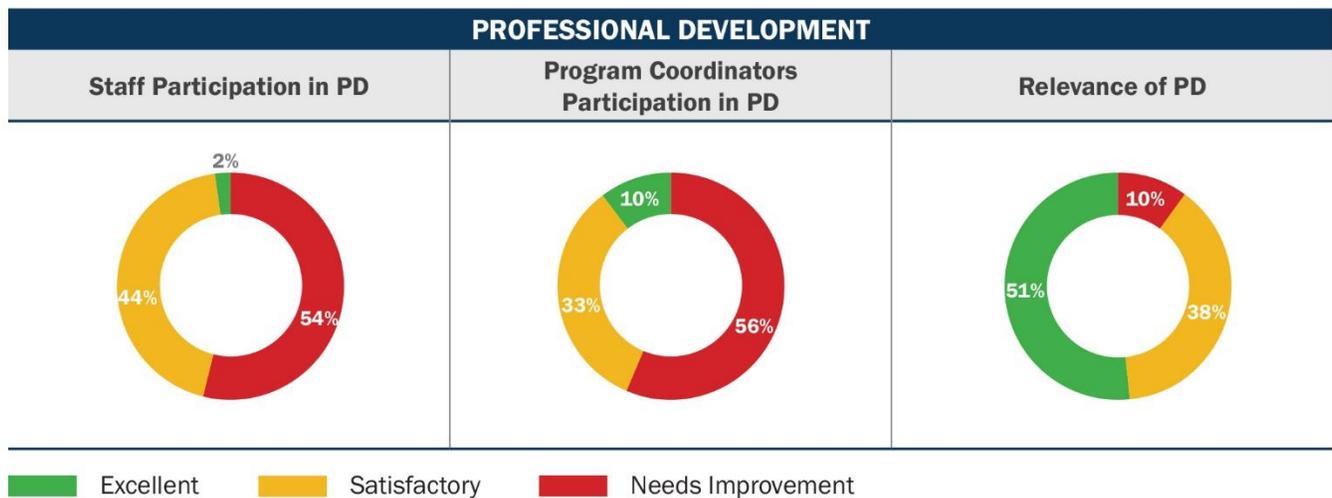
- **Most OST staff reported having OST-focused PD.** A majority of staff in 51% of all programs reported that the professional development they received was relevant to OST programming. An additional 38% of programs had at least some staff reporting access to OST-focused professional development.

- **Most OST staff did not participate in more than 15 hours of PD a year.** More than 50% of programs did not provide staff with sufficient professional development opportunities. Only 2% of programs had a majority of staff reporting more than 15 hours of PD (in-house or external) in the last year. As a program coordinator explained, "since I started working here, there have been a couple trainings, but a lot of staff members are unable to attend because they work other jobs

during the day. I'm trying to work with my staff through a module now […] and trying to support staff to find their own training opportunities."

- **Most OST site coordinators do not participate in 15 hours of PD a year.** Overall, more than half (56%) of all site coordinators did not receive more than 15 hours of professional development throughout the year.

⭐ **The 21st CCLC programs with the strongest staffing profiles had "satisfactory" or "excellent" ratings for most of the characteristics described above.**

Promising Practice Programs reported between 72% and 94% of practices associated with highly qualified and high-performing staff as identified in Table 3. However, several of these Promising Practice Programs still required improvement, particularly with regard to staff access to professional development.

Promising Practice Programs were particularly distinguished from other programs in the following ways:

- **Staff experience and credentials.** All of the programs with promising staffing practices fell in the satisfactory or excellent categories with regard to staff experience and educational credentials. However, 40% of other programs needed to improve in this category suggesting that very few of their staff had five or more years of experience and bachelor's degrees in an education related field.

- **Staff Retention.** Almost all of the stronger staffing programs reported that at least some or all of their staff had significant experience working with the provider, whereas 47% of other programs had few staff that had been retained for five years.

- **Site coordinator professional development.** Among the Promising Practice Programs, 84% of site coordinators reported that they had at least 15 or more hours of professional development while 56% of programs overall needed improvement in this area.

EXAMPLE OF A STRONG STAFFING PROFILE

The program coordinator and majority of program staff have at least five or more years in the OST field, are certified teachers and thus, have education backgrounds and high levels of education. The staff also includes the school's long-time community liaison who has worked with the program since its inception. A variety of professional development opportunities are readily available for staff, including in-person coaching or access to webinars about a particular OST topic. Finally, the program has been effective at retaining staff; almost all have been with the provider for over five years. Staff at this program are reported to be well-compensated relative to many of their OST peers, which may contribute to their retention.

⭐ **Staff characteristics varied across and within providers.**

While hiring and professional development are conducted at the provider level, our analysis again revealed some variation in staffing profiles within provider-networks as well as across networks.

- Seven of ten providers had at least one program that met the promising practice profile for staffing.

- Within these seven providers, however, there was a wide range (from 14-100%) in programs that ranked as Promising Practice Programs. This suggests that even within provider networks, programs vary in staff credentials and experiences, staff retention and staff access to professional development.

D.   OST-School Partnerships: Linking the School Day and After-School

OST experts, as well as some researchers, suggest that OST staff relationships with school personnel are necessary to provide high quality programming.[54] While evidence of the impact of OST-school partnerships is limited,[55] recent literature points to key dimensions of these partnerships that are important to implementing high quality programs: [56]

- Strong school principal support for the OST program;
- Active involvement of school teachers in the program; and
- School day presence of OST staff.

Within each of these areas, literature suggests promising practices for cultivating these relationships. Table 4 displays the promising practices we used to assess OST-school relationships. Again, the data permitted us to rate these partnerships in three categories: Needs Improvement, Satisfactory and Excellent. Programs whose practices did not meet the Satisfactory description were scored as "Needs Improvement."

Table 4. Links to School Quality Indicators

CONTENT AREA	PROMISING PROGRAM PRACTICES
Principal Relationships	**Principal communication with program coordinator** - Satisfactory: Principal is available on an informal, "as-needed" basis should an issue arise, but there are not regular formal meetings - Excellent: Principal and program coordinator have regular formal as well as informal "as needed" meetings to discuss the OST program **Principal knowledge of OST programming** - Satisfactory: Principal periodically visits the program and is familiar with some programming - Excellent: Principal visits the program frequently and is knowledgeable about the program **Principal support[57] and respect for OST programming** - Satisfactory: A majority of staff report that the principal usually respects, trusts, and supports staff - Excellent: A majority of staff report that the principal always respects, trusts, and supports the program staff, and the principal's goals for OST program align with 21st CCLC requirements **Principal advocacy for the program** - Satisfactory: Principal provides some assistance in securing resources, including space, at the beginning of the program - Excellent: The principal ensures that programs have adequate resources, including space, throughout the school year.

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[54] Huang, D. & Dietel, R. (2011). *Making afterschool programs better*. (CRESST Policy Brief, No. 11). Los Angeles, CA: University of California.; Kidron, Y., & Lindsay, J. (2014). *The effects of increased learning time on student academic and nonacademic outcomes: Findings from a meta-analytic review* (REL 2014-015). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Appalachia. Retrieved from http://ies.ed.gov/ncee/edlabs.

[55] 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.

[56] Holstead, J., & King, M. H. (2011). High-quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk, 16*(4), 255-274.
Garn, A. C., McCaughtry, N., Kulik, N. L., Kaseta, M., Maljak, K., Whalen, L., ... Fahlman, M. (2014). Successful after-school physical activity clubs in urban high schools: Perspectives of adult leaders and student participants. *Journal of Teaching in Physical Education*, 33, 112-133.

Teacher Relationships	**Teacher communication**[58] **with program staff**
	• Satisfactory: Teachers and staff communicate on an "as needed" basis
	• Excellent: Teachers and staff communicate frequently about students' academic and socio-emotional needs
	School-day teacher knowledge of OST programming
	• Satisfactory: Teachers are familiar with some of the OST programming
	• Excellent: Teachers are knowledgeable about OST programming
	OST staff presence in the school during the school day[59]
	• Satisfactory: One school day teacher or paraprofessional is on the OST staff (blended staffing) and/or site coordinator is present in school building during school day (overlap staffing)
	• Excellent: OST program employs multiple school teachers or paraprofessionals from the school or expects multiple OST staff to be present in the school building during the school day

FINDINGS

In this section of the report, we begin with a description of the variation in quality of OST-school partnerships at the program level. We then turn to a description of the Promising Practice Programs and share a brief description of an exemplary OST-school partnership. Finally, we share provider-level variation.

Quality of OST-School Partnerships

Figure 9 depicts dimensions of principal support for OST programs.

Figure 9. Characteristics of OST-Principal Relationships
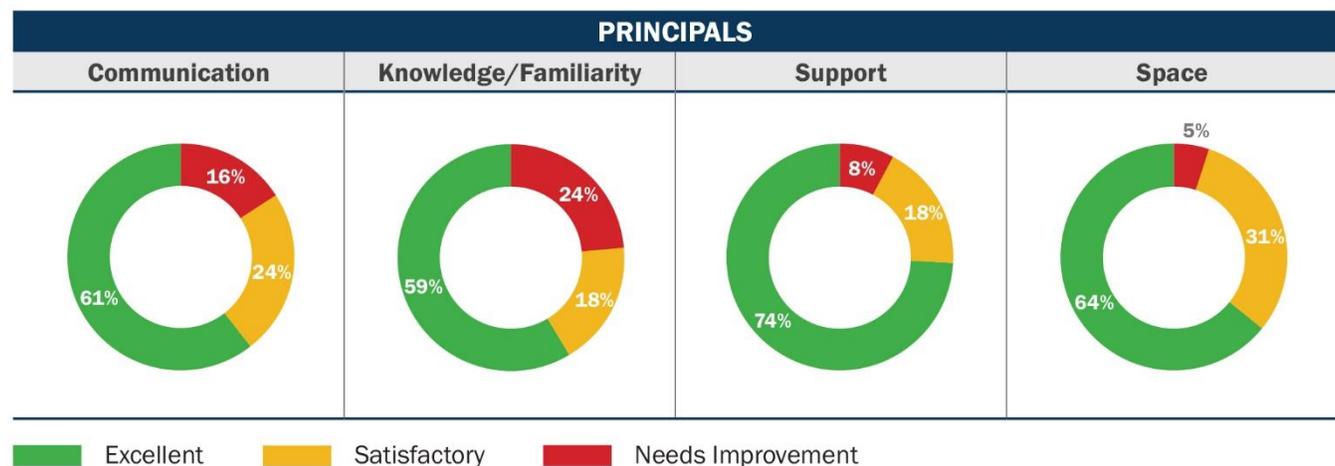
⭐ **Overall, OST programs experienced excellent principal support, but areas for improvement remained.**

OST staff generally reported strong relationships with school principals citing commitment to the program and provision of adequate space. Many principals also described positive OST-school relationships.

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[58] Anderson-Butcher, D., Stetler, G., & Midle, T. (2006). A case for expanded school-community partnerships in support of positive youth development. *Children & Schools, 28*(3), 155-163.
[59] Miller, K. (2007). The benefits of out-of-school time programs. *Principal's Research Review, 2*(2), 1-6.

However, ongoing communication issues at some programs and OST staff members' beliefs that many principals were unfamiliar with programming created challenges for principals and OST staff alike.

- **Principals generally supported the OST program and had common goals.** In almost three quarters of programs (74%), a majority of staff rated principal support as excellent. Program staff characterized their relationships with the principal as mutually respectful, trusting, and supportive.

OST staff also described a supportive principal as one who had goals that aligned with 21st CCLC program goals. During their interviews, principals described academic, behavioral, and attendance goals for the 21st CCLC programs. Specific goals included:

1. Academic: providing homework support (56.3%), college or career prep (12.5%), and PSSA prep (6.3%)

2. Enrichment: exposing youth to activities not offered during the school day (38%)

3. Behavior: aligning behavioral expectations to school day standards and helping students develop strong peer relationships and self-respect (18%)

4. Attendance and safety: providing a safe space for students (25%)

- **Principals helped secure adequate space for programming.** A majority of programs (64%) also reported having excellent access to space and other resources; many program coordinators cited numerous facilities available for OST programming, including classrooms, cafeterias, gymnasia, and auditoria. Five providers had at least one program with space challenges, but program coordinators reported that these challenges were often resolved over the course of the school year. The most often cited challenges included competing with other afterschool programs for space and coordinating room availability.

- **Principal communication varied by program**. Overall, a majority of programs (85%) reported having access to the school principal when necessary, and 61% reported regular, scheduled communication between the program coordinator and principal.

Conversely, 16% of programs reported that communication with the principal was uncommon and many of the providers and staff at those programs noted that it was difficult to get in contact with principals. Said one program director, "Sometimes [the principal is] so busy [that] it's hard for me to connect with them whether in person or on the phone or through email… which is why we're not able to have some of our open houses… I can't get approval and nothing's been done."

- **Principals were not always deeply knowledgeable about the OST program.** Roughly four out of ten program coordinators (42%) reported that principals were either completely unfamiliar or only somewhat familiar with OST program goals and activities. Program coordinators hypothesized that principals who were new to the school were less familiar with OST programs than incumbent principals. Others reported that principals were not in the school building during the afternoon and unresponsive to communication.

- **One-third of principals we interviewed identified some challenges with the OST program in their school,** including challenges communicating with the program coordinator, entry and dismissal procedures, and alignment of behavioral expectations with the school day. These principals added that if OST staff were either school day teachers or in better contact with school day staff, these issues would likely be resolved. For example, one principal described communication with the OST program as "remote," "distant," and unfamiliar with the supports and interventions being offered at the school.

Teacher Relationships with OST Programs

⭐ **Overall, OST programs experienced moderate success with teacher relationships.**

Despite the promising practice of hiring school day staff, relationships with teachers were generally less robust than they were with principals. Teacher-OST relationships also varied widely across programs. In general, OST staff reported some communication with teachers who were not employed by the program, but this was often on an "as needed" basis and was inconsistent for a majority of programs. Additionally, some principals shared concerns that teachers were not always familiar with programming and that the OST program was taking or misplacing school day teachers' materials.

Figure 10 displays the variation in OST teacher relationship dimensions across programs.

Figure 10. Characteristics of OST-Teacher Relationships
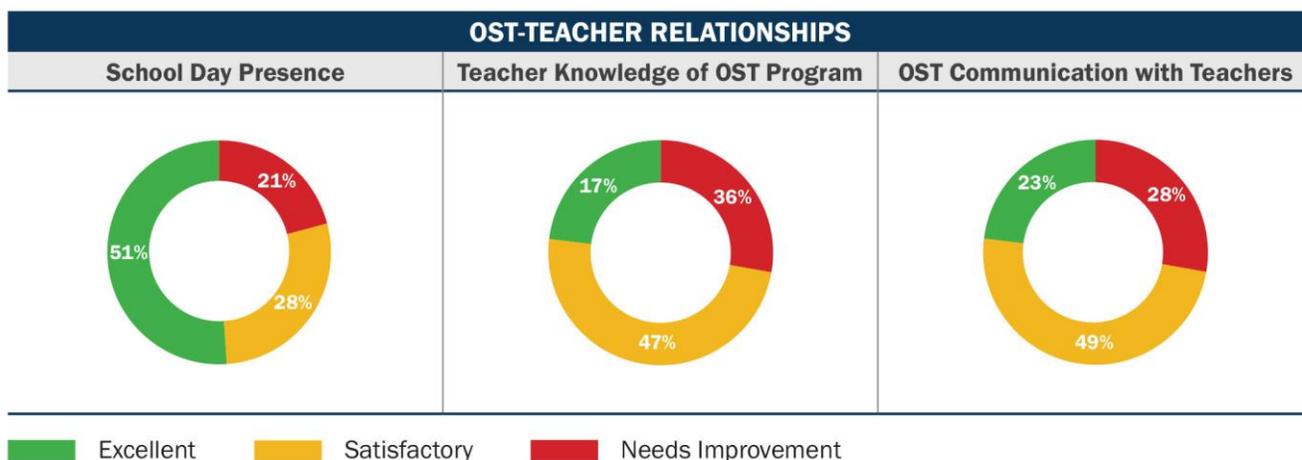
Notable findings are as follows:
- **OST programs tended to hire at least one school day employee.** Overall, 79% of programs employed at least one staff member who was present in the school during the school day,[60] and just over half (51%) of all programs hired more than one school day employee. Twenty-seven programs (69%) utilized an overlapping staffing model in which at least one staff member from the OST provider, typically the program coordinator, was present in the school building during the school day. Fifteen programs (39%) used a blended staffing model in which OST staff included school personnel (teachers or aides and paraprofessionals). Ten programs employed both models. Promising Practice Programs and other programs had similar staffing models; both utilized overlapping and/or blended staffing models at similar rates with only seven programs not hiring any school day personnel.

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[60] School-day employees include school day teachers, aides and assistants, and OST personnel who were present during the school day.

- **Teachers' familiarity with the OST program varied greatly by program.** Staff in nearly two-thirds (64%) of all programs reported that teachers had at least some familiarity with the program. Program coordinators reported that having staff also employed at the school, as well as the existence of personal relationships between school-day and OST staff, largely contributed to teachers' familiarity with the OST program. However, more than one-third of all programs (36%) reported minimal and infrequent contact with school day staff, especially if a majority of program staff were not school-day employees. Three principals believed that if OST staff were available to meet with teachers during the school day or during professional development opportunities, teachers would be more amenable to the OST program.

- **In about half of the OST programs, staff reported that teachers communicated "as needed" with the OST program.** Interviews with program coordinators suggest that this communication tended to be informal and based on personal relationships. Some teachers who shared their classrooms with after-school staff conversed with OST staff at the end of the school day, and some teachers sought out after-school staff regarding program logistics or students' homework. OST staff and principals added that there was often little time for teachers and OST staff to meet if OST staff did not arrive until the end of the school day, and if school staff were hired as OST staff, they did not necessarily communicate with their school colleagues about OST participants' specific needs. This finding was consistent with past research that suggests that teacher-OST staff relationships are often informal and tenuous.[61]

   Site coordinators who were also school employees described the OST program as separate from the school suggesting that aligning school and OST academic supports through teacher communication was not a priority. For example, one coordinator stated, "I have talked to [school teachers], but not about the afterschool program." Almost one-quarter (23%) of all programs reported that OST staff regularly discussed specific students with the students' school-day teachers. This practice was most common among programs that exhibited multiple promising practices around school relationships. Moreover, Promising Practice Programs reported few issues with OST-teacher communication whereas other programs frequently identified communication as a challenge.

⭐ **The 21st CCLC programs with the strongest school relationship profiles had either "satisfactory" or "excellent" ratings for at least two-thirds of the characteristics described above.**

We identified 18 programs that showed promising practices in school relationships. These Promising Practice Programs reported between 69% and 97% of practices identified in Table 4. These programs were particularly distinguished from other programs in the following ways:

- **High Levels of Principal program knowledge.** A majority (80%) of Promising Practice Programs reported that their school principals were very familiar with the activities and goals of the OST program. According to program coordinators at these programs, OST staff actively sought out the principal, invited the principal to OST events (e.g. open houses and science fairs), and provided an orientation to the program for new principals. They also stated that principals were often present after school and stayed for the duration of the program. Conversely, less than one-third (29%) of other programs reported that principals were deeply knowledgeable about the program.

- **Consistent and proactive communication between Principal and site coordinator.** Almost all (89%) of Promising Practice Programs reported that they communicated with their principals

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[61] Anderson-Butcher, D., Stetler, G. & Midle, T. (2006). A case for expanded school-community partnerships in support of positive youth development. Children & Schools, 28(3), 155-163.

frequently and had both formal and informal access to the principal. One program coordinator described a proactive approach to communicating with school administrative staff: "We try to keep open communication with all the administrators. We involve them in our trainings… [and] they're able to come during [OST] family night." Only 35% of other programs reported this level of communication. Moreover, while only 6% of Promising Practice Programs reported no communication with the principal, one-quarter (25%) of other programs reported that they did not communicate with their principal.

- **High levels of teacher program knowledge.** Promising Practice Programs were the only programs that reported that teachers had deep knowledge of the program; none of the other programs reported this. Moreover, while roughly one-quarter of Promising Practice Programs reported that teachers were unfamiliar with their programs, almost half (47%) of other programs reported this.

EXAMPLE OF A STRONG OST-SCHOOL RELATIONSHIP

At this program, the OST staff and the principal held each other in high esteem and described a supportive environment that was mutually beneficial. The principal highlighted the value of the program, explaining that students received opportunities and experiences that would otherwise be unavailable. In particular, the principal noted that the program enhanced the school's art programming and, in some cases, filled a void in school day programming.

The program coordinator took an active role in establishing and maintaining relationships with the principal and school day teachers. During the day, the site coordinator participated in school partnership meetings and worked with staff to recruit students. The program also recruited teachers to support programming and foster collaboration among OST and school staff.

OST staff used the words "respectful" and "supportive" when describing the program's relationships with school day teachers and identified the principal as an "advocate for the program." OST staff reported that they communicated regularly with school day teachers about students' homework and any social challenges that took place during the school day.

⭐ **The strength of program-school partnerships varied across and within providers.**

- All providers had at least one program evaluated as a Promising Practice Program in the school partnership area.

- Only one provider's programs were all Promising Practice Programs in the school partnership area.

E. OST Parent and Community Relationships: Cultivating Strong Community Connections

Research suggests that high-quality OST programs build robust partnerships with families and community organizations.[62] Through these relationships, OST programs and affiliated agencies can expand their service delivery network and ensure that families receive complementary services that address the development of the whole child.[63]

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[62] Holstead, J., & King, M. H. (2011). High-quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk, 16*(4), 255-274.

[63] Little, P., Wimer, C., & 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*(1-12). Cambridge, MA: Harvard Family Research Project.

Parent engagement in their child's education, including participation and communication with OST programs, has yielded a number of important benefits such as improved academic performance, attendance, and graduation rates.[64] Moreover, OST programs that work closely with parents and families in underserved and minority communities can leverage their relationships with schools and families to assist families in keeping abreast of their child's progress during the school day. The program can also help parents understand the benefits their children receive when attending the OST program, and equip parents with the knowledge and tools they need to support their children's academic success.[65]

Community partnerships can connect youth to issues that are pertinent to their neighborhood, bring outside expertise and real-world relevance to academic subjects, and connect students to new and different learning experiences that they may not be exposed to during the school day. Relationships with community organizations can also provide afterschool programs with added resources, such as equipment, volunteers, and donations—both in-kind and monetary.[66]

Holstead and King[67] posit that the quality of parent and community engagement contributes to the overall quality of an OST program. Using their research, we generated a list of promising program practices (see Table 5) on which to evaluate Philadelphia OST programs.

Table 5. Characteristics of Promising Community Relationship Practices

CONTENT AREA	PROMISING PROGRAM PRACTICES
Parent Engagement	**Staff-Parent Communication** • Satisfactory: Staff communicate periodically with parents • Excellent: Staff communicate regularly and formally with parents through newsletters, conferences, advisory councils, etc. **Scheduled Opportunities for Parent Participation** • Satisfactory: Opportunities for parent involvement with program (e.g. volunteering, family nights) including one opportunity for parent programming (e.g. parenting workshops) • Excellent: Regularly scheduled opportunities for parent involvement with consideration of parent needs and availability and multiple opportunities for parent programming designed with input from parents
Community Engagement	**Partnership with Community Agencies** • Satisfactory: Partnerships with community agencies that provide ancillary support for programming • Excellent: Robust partnership(s) with other youth-centric agencies that support and enhance programming (e.g. enrichment activities, social services)

[64] Afterschool Alliance. (2014). *Taking a deeper dive into afterschool: Positive outcomes and promising practices*. Washington, DC: Afterschool Alliance.

[65] Pompa, D. (2013). Family involvement as a critical element of quality expanded learning opportunities. In T. K. Peterson (Ed.), *Expanding minds and opportunities: Leveraging the power of afterschool and summer learning for student* success (pp. 7-11). Washington, DC: Collaborative Communications Group; Little, P., Wimer, C., & 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*(1-12). Cambridge, MA: Harvard Family Research Project.

[66] Little, P., Wimer, C., & 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*(1-12). Cambridge, MA: Harvard Family Research Project.

[67] Holstead, J., & King, M. H. (2011). High quality 21st Century Community Learning Centers: Academic achievement among frequent participants and non-participants. *Journal of Education for Students Placed at Risk, 16*(4), 255-274.

FINDINGS

In this section of the report, we begin with a description of the variation in quality of community relationship at the program level. We then turn to a description of the Promising Practice Programs and share a brief description of an exemplary community relationship.

Quality of Relationship between OST Program and the Community

Figure 11 shows dimensions of parent and community engagement with OST programs.

Figure 11. Community Relationship Characteristics across Programs
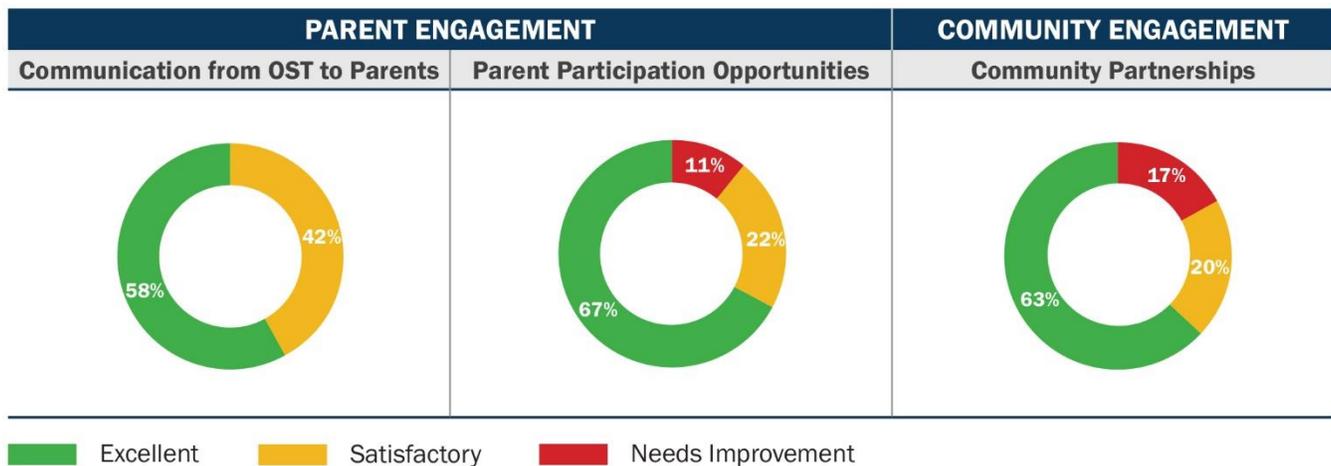
Notable findings are as follows:

⭐ **In general, programs communicated with parents, but could strengthen parent participation opportunities.** A majority of OST staff interviewees reported that they encouraged parent communication and participation, but they also believed they could be strengthened in a number of ways. These findings are discussed in more detail below.

- **All OST programs[68] reported some communication with parents.** A slight majority (58%) of OST staff interviewees characterized OST staff-parent communications with parents as regular and structured. Almost half (42%) also acknowledged that these efforts could be improved. For example, one site coordinator reported that there was little communication with parents because parents' schedules were not compatible with OST programming times. Another site coordinator spoke about the difficulty of maintaining a database with current phone numbers.

- **A majority of OST programs[69] offered parent participation opportunities.** According to OST staff and school principals, a large majority (89%) of programs provided opportunities for parental involvement in the OST program. Moreover, two-thirds (67%) of all programs reported that they strategically planned these opportunities with consideration of parents' needs and availability. These activities included volunteer hours during programming, culminating events (e.g. art shows and science fairs), open houses, and parenting classes. OST staff reported that when parents attended events that displayed students' OST work, it built trust among parents and increased parent support. Said one program director,

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[68] This analysis included data from 26 programs; data for 13 programs were unavailable.
[69] This analysis included data from 16 programs; data from 23 programs were unavailable.

> *[Parents] want to feel that their child has actually gained something from the program […] and that has definitely been the case since we've been implementing [parent events]. […] I feel in a way that it's awakened their awareness of what we're already doing, and they've become more involved and want to be a part of their children's education process even more.*

- **A large majority of programs[70] partnered with other community organizations.** Overall, 83% of OST programs reported partnering with at least one community-based organization, and nearly two-thirds (63%) described multiple robust partnerships that contributed substantially to their OST programming. Common partners included:
  - Local universities
  - Museums
  - Libraries
  - Arts organizations
  - Youth-based non-profits, and
  - Local businesses

Partners provided a variety of services including academic tutoring, enrichment activities, guest speakers, field trips, and STEM curricula.

EXAMPLE OF STRONG COMMUNITY RELATIONSHIPS

Parent Relationships

One provider encouraged its sites to set concrete goals related to improving OST staff-parent relationships. To identify areas of support and encourage feedback, the provider created parent surveys. These surveys gave parents an opportunity to offer suggestions to the program and provided staff with an opportunity to connect with the parents. The OST staff were also encouraged to reach out to parents, invite them to assist during homework help periods, and provide suggestions on how parents could support their children academically. Additionally, through informal conversations, OST staff were able to recommend additional activities and services to support families. Interviewees reported that these initiatives were very successful.

Community Partnerships

One program established multiple partnerships with local organizations including a community service organization and a local university. The community service organization provided resources and programming for the OST program, and youth visited the organization and participated in service activities. The program director described this relationship as being mutually beneficial, stating that youth received community service training and were then able to assist the organization in a service project. Youth also benefited from a partnership with a local university. Through this partnership, youth received one-on-one academic tutoring and homework help. By partnering with local organizations which provided a variety of resources, the OST program was able to provide students with additional enrichment opportunities and increase its capacity for academic and social programming.

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[70] This analysis included data from 30 programs; data for nine programs were unavailable.

⭐ **OST-Community partnership strength varied across and within provider networks.** Our analysis revealed that providers and their programs varied in their strategies for communicating with attendees' parents and with community partners. Specifically:

- Eight of ten providers had programs that ranked as Promising Practice Programs in parent and community relationships.

- Only two of nine[71] providers had all their programs ranked as Promising Practice Programs.

IV. Student Outcomes

Research has demonstrated clear connections between student participation levels in OST programs and student outcomes.[72] This connection is also intuitive—to benefit from a program, one must attend and participate in programming. However, as detailed in our theoretical framework (see Figure 4), contextual factors such as program quality and availability of other non-21st CCLC afterschool opportunities may affect youth participation in 21st CCLC programming. In this section, we detail our analyses of the following:

- Indicators of OST program quality
- The relationships between 21st CCLC participation and OST program quality,[73] and
- The relationship between student outcomes and OST participation levels.

A. Comparisons between OST Participants and Comparison Students

We conducted quasi-experimental statistical analyses by identifying non-OST students with characteristics similar to those of OST students to examine whether there was a causal relationship between OST participation and observed student outcomes.[74] Overall, after ruling out the preexisting differences in student demographic characteristics and academic performance in the previous year, our analysis did not provide consistent evidence that OST participants outperformed non-OST students (See Tables B4 and B5 in Appendix B). However, our study indicates that:

- **OST participants scored higher than non-OST students on PSSA Reading at the elementary level.**

- **High school OST participants were more likely to earn all credits attempted in ELA, math, and science than non-OST students; these results are statistically significant** (see Figure 12).

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[71] One provider had only one program.

[72] Roth, J. L., Malone, L. M., & Brooks-Gunn, J. (2010). Does the amount of participation in afterschool programs relate to developmental outcomes? A review of the literature. American Journal of Community Psychology, 45(3-4), 310-324.

[73] Due to limited data sources, we were unable to assess availability of other OST activities and its relationship to 21st CCLC program participation. Research on access to OST options and its impact on program participation is outlined as an area for future research on p. 45.

[74] Propensity Score Matching was utilized in selecting the comparison group.

Figure 12. The Predicted Probability of Earning All High School Credits Attempted in ELA, Math, and Science[75]
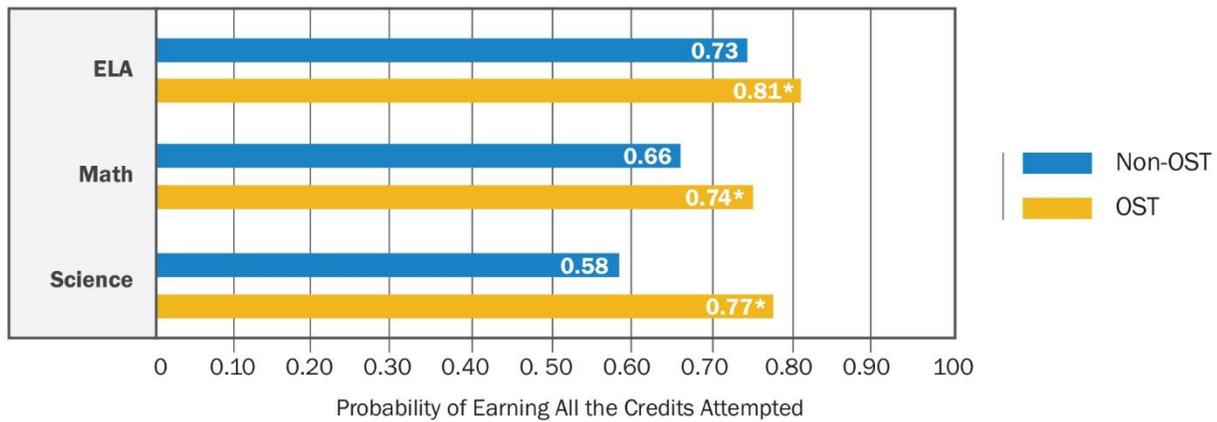
*These findings are statistically significant at p<0.05.

B. Relationships between Quality Indicators, Participation, and Outcomes

We conducted a series of analyses to examine the relationships between the quality of the 21st CCLC OST programs and student participation levels, their influence on student classroom performance, and in turn, their impact on student academic and behavioral outcomes. Based on the results of our analyses, we constructed a modified version of our analysis framework detailing how the OST program could impact participants (Figure 13).

Figure 13. A possible path of impact of OST program on student classroom performance
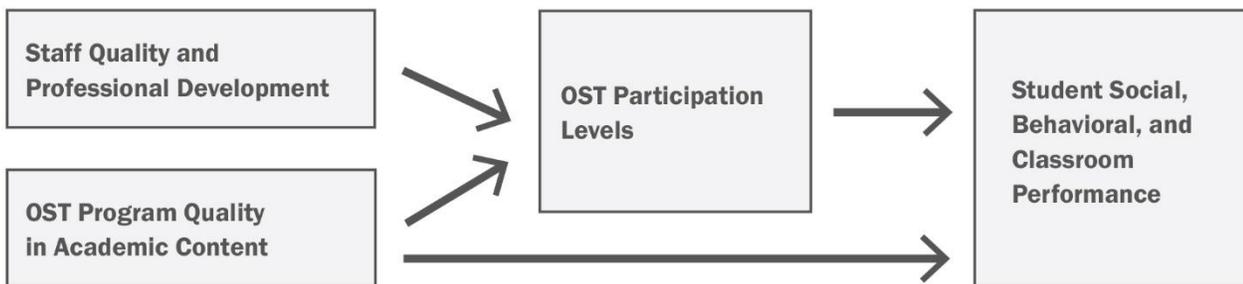
As shown in Figure 13, the quality of staff and academic programming of the OST programs as well as student participation levels were direct or indirect predictors for teacher-perceived improvements in social, behavioral and academic classroom performance. The following sub-sections report more details of the analyses and findings.

RELATIONSHIP BETWEEN PROGRAM QUALITY AND STUDENT OST PARTICIPATION LEVELS

To analyze the relationship between quality indicators and OST participation, we used the quality domains discussed in our qualitative findings (see Section III). As in our qualitative analysis, we characterized program quality in terms of academic content, staffing, school partnerships, and community partnerships. After establishing that quality indicator domains were independent of one another, we conducted a regression analysis examining the relationships between program quality measures and student OST

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[75] p<0.05 for the relationship displayed in the figure. All other variables considered in the analyses are held constant at their mean values. Detailed results are reported in Table B4 in Appendix B.

participation levels while controlling for students' race/ethnicity, gender, grade level, and eligibility for FRL, LEP, and Students with Disability (SWD) status.

Our results indicate that **staff quality and academic content were positive predictors of student OST participation levels**. As shown in Figure 14, higher staff quality and stronger academic programming were associated with participants attending more days of programming. Our regression analysis did not reveal a relationship between school or community partnerships and OST participation levels.

Figure 14. Estimated Relationships between Program Quality Measures and OST Participation Levels[76]
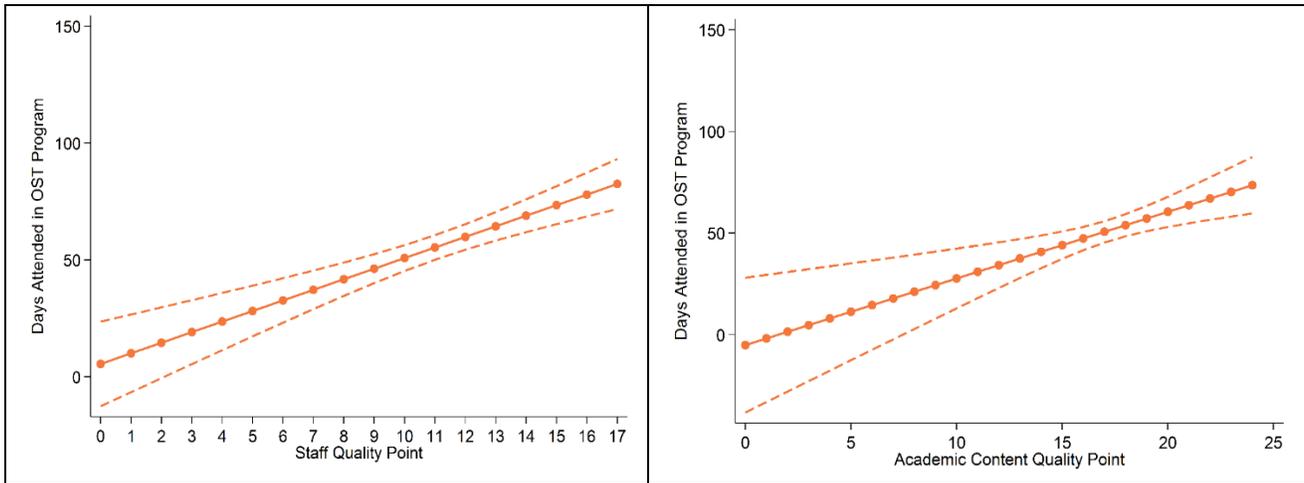
RELATIONSHIP BETWEEN DOSAGE AND STUDENT OUTCOMES

After ruling out the observed preexisting differences in student demographics, such as race/ethnicity, gender, student eligibility status for FRL, LEP, and SWD, and grade levels, the statistical results suggest that OST participation levels were only associated with better student performance in some outcome areas. However, such relationships varied across different subject areas and grade levels.[77] More specifically:

- For *elementary school* students: K-3 students who attended more OST days were more likely to read on grade level than students who attended fewer days.

- For *middle school* students: higher OST participation levels were associated with higher PSSA math scores and higher course grades in math, reading, and science.

- For *high school* students: students who participated for more days in the OST programs were more likely to earn all the credit attempted in English Language Arts (ELA) and science than those who attended fewer days of the OST programs.

- For *all grade levels*: Students who participated for more days in the OST programs were less likely to be absent 10 or more school days than those who did not participate or who attended fewer days of the OST programs.

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[76] p<0.05 for the relationship displayed in the figure. All other variable considered in the analyses are held constant. Detailed results are reported in Table B3 in Appendix B. The solid line shows changes in student participation levels as program quality increased. The area within the dashed lines defines the confidence interval, or range, in which participation levels could fall. As the range gets wider, uncertainty increases.

[77] For more details, please see Table B4 in Appendix B. This analysis focuses only on OST participants. We compared OST participants to one another to better control for estimation bias; non-21st CCLC students may have participated in other OST programs thus potentially contributing some error to our analyses. We do not report the analysis including both OST participants and non-OST students in this report, but the results are available upon request.

- For *elementary and middle school students*: Students who participated for more days in the OST programs were less likely to have out-of-school suspensions than those who did not participate or attended fewer days of the OST programs.

To further examine the relationships between OST participation levels and observed student outcomes, we conducted comparisons between active OST participants, e.g., students who attended at least 30 or 90 days of the programming, and comparison groups[78] of non-OST students. However, the results did not provide consistent patterns of results showing that groups with higher participation levels were associated with better outcomes than comparison students.[79] Given the limited data sets available for this study, the conflicting results from our analyses may not be enough to disprove a causal link between student OST participation levels and observed outcomes. However, these findings should be interpreted with caution as these analyses do not show causality.

RELATIONSHIP BETWEEN OST PARTICIPATION LEVELS, PROGRAM QUALITY, AND STUDENT CLASSROOM PERFORMANCE

To eliminate some of the biases discussed above, our next set of analyses focused on teachers' perceptions of 21st CCLC participants' academic, social, and behavioral changes over the course of the school year.[80]

Figure 15. Relationship between OST participation levels and student improvement in social, behavioral, and academic performance[81]
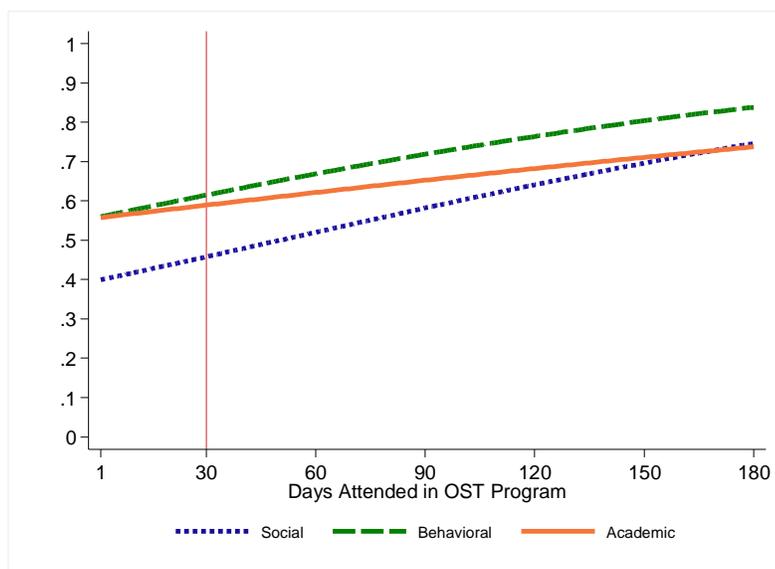
As displayed in Figure 15, after controlling for the preexisting differences in student demographic characteristics and the historical academic and behavioral performance, our analyses suggest that teachers perceived frequently-attending OST participants as being more likely to make positive progress in their social, behavioral, and classroom performance than OST participants who attended less frequently.

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[78] Propensity Score Matching was utilized in selecting the comparison groups.

[79] The results from comparisons of active OST participants with high participation levels and control groups identified by PSM are reported in Tables B6 and B7 in Appendix B.

[80] These data were collected through a teacher survey in spring 2014.

[81] p<0.05 for the relationship displayed in the figure. All other variables considered in the analyses are held constant. Detailed results are reported in Table B2 in Appendix B.

The positive relationships between program quality, student OST participation, and student social, behavioral, and academic improvement as perceived by teachers indicated a potential indirect impact of OST programs' staff quality and academic content on student intermediate outcomes. We also conducted analyses examining the direct relationship of the quality of the OST program and student classroom performance. After controlling for the observed preexisting differences of the students, the results suggested that **academic content quality was positively related to student social, behavioral, and academic improvement as perceived by teachers.** However, the program quality measures of school partnership, community partnerships, and the quality of staff of the OST programs was not correlated with student social, behavioral, and academic improvement as perceived by teachers.

SUMMARY

Overall, our analyses provided mixed results on the impact of OST programs. The analyses did not provide evidence showing that OST participants consistently outperformed non-OST students across outcome areas and grade levels. However, two major findings emerged:

- *Elementary school OST participants* scored higher than non-OST students on standardized tests in reading.

- *High school OST participants* were more likely to earn all the credits attempted in ELA, math, and science.

An important component of our study was to explore how the *quality* of the OST programs and student participation levels influenced student social, behavioral, and classroom performance and, in turn, impacted student academic achievement. Although our analyses did not provide consistent evidence linking program quality and student participation levels to student academic achievement in standardized tests and course grades, the results show promising relationships between program quality, student OST participation levels, and student classroom performance. More specifically:

- Higher staff quality and stronger academic programming were associated with higher student OST participation levels.

- Student OST participation levels were positive predictors of their teacher-perceived social, behavioral, and academic improvements.

- Stronger academic programming was also directly related to the improvements in social, behavioral and academic improvement perceived by teachers.

V.   Summary of Findings

The primary goals of 21st CCLC programs are improving academic achievement, student behavior, and attendance. Past research indicates that four domains influence these student outcomes: academic content, staffing, school relationships, and community engagement. Our analysis, however, revealed that only two of these areas—academic content and staffing—had an impact on participation in Philadelphia OST programs. A number of factors including school closures, financial challenges, and insufficient data regarding program implementation and students' participation in other after-school programs may have influenced these relationships. Below, we highlight the variation in quality practices across domains and offer possible explanations for the domains' relationships with student participation and outcomes.

Academic Content: Homework Help and Academic Enrichment

The quality of academic programming varied across providers and within provider networks. Sixteen programs operated by seven providers were identified as Promising Practice Programs, but only two providers had all their programs rated as Promising Practice Programs. Additionally, while some practices such as homework help and individualized support were common amongst a majority of programs, very few programs provided more than 45 minutes of homework help or individual support by tutors. Similarly, while almost all programs offered enrichment activities, less than one third of programs reported that a majority of their enrichment activities were connected to student learning.

Our quantitative analysis revealed that academic content was positively related to student participation in the program (dosage) and also to student social, behavioral, and academic improvement as perceived by teachers. Our analyses also suggests that quality in the academic content lies in the ability to provide regular homework help and integrate learning throughout other enrichment activities. Importantly, program staff reported that parents' goals for the 21st CCLC program centered on homework assistance, which may help to explain the relationship between academic program content and dosage, particularly for elementary school participants whose parents enroll them in the program and pick them up at the end of the program. In addition, the opportunity to complete homework may help to explain why teacher ratings of classroom academic progress, including homework completion, were positively related to dosage. However, the programs fell short in this quality area in their ability to align academic supports to the school day and provide individualized academic support, which may be why the analysis found limited impact on student achievement as measured by standardized test scores and course grades.

Staffing: Experience and Professional Development

Promising practices related to staff experience and professional development opportunities varied across and within providers. All providers had at least one program that exhibited promising staffing practices, but only two providers' programs were all designated as Promising Practice Programs. Programs that exhibited promising practices in one dimension, such as employing staff who have five or more years of experience, also tended to exhibit other promising practices such as providing staff with relevant professional development. One exception was strong staff rapport with youth; the rate at which Promising Practice Programs and other programs described staff rapport with youth as excellent, satisfactory, or needing improvement was similar.

Staff at a majority of OST programs had adequate experience working with youth and working for the provider. A solid majority (88%) of programs also characterized staff-youth relationships as generally positive. Conversely, a majority of programs reported that they had insufficient access to professional development. While most staff (89%) believed that their professional development was at least somewhat relevant to their programs, only 2% of programs reported that a majority of their staff engaged in 15 or more hours of professional development. Similarly, only 10% of programs reported that their site coordinators participated in 15 or more hours of professional development.

Quantitative analysis revealed that strong staffing practices were positively related to student participation but not related to student social, behavioral, and academic improvement as perceived by teachers. Staff members' self-reports of education and childcare experience, rapport with youth, and relationship with the provider may help to explain the relationships between quality indicators and participation; if youth feel comfortable with staff and staff work to ensure a safe and supportive atmosphere for participants, then participants may be inclined to attend the program. However, without an adequate amount of professional development opportunities to support the academic needs of individual youth, staff may not be able to have an impact on student outcomes.

School Relationships: Principals and Teachers

OST programs' relationships with school staff varied in quality. For example, while some programs reported mutually respectful relationships and regular communication between the program and school staff, others reported significant tensions and little communication with school staff. Teacher hiring practices also varied. Roughly three-quarters (79%) of all programs hired staff members who were present during the school day, but only 39% of those programs used a blended staffing model that hired school day teachers. The remaining programs utilized an overlapping staffing model in which at least one staff member from the OST provider was present in the school building during the school day, or employed a combination of both models.

There was also variation in relationships by school staff position; more OST staff described promising practices related to principal relationships than for teacher relationships. Specifically, 61% of site coordinators reported regular access to principals through formal and informal meetings whereas less than one-quarter (23%) of OST staff reported regular communication with school day teachers. OST staff also rated principals' and teachers' familiarity with the program differently; while 59% of programs reported that their school principal was deeply knowledgeable about the OST program, only 17% of programs reported that teachers were deeply knowledgeable.

The study did not identify a relationship between OST-school and community partnerships and dosage in spite of the fact that other research and experts in the OST field point to this as an important quality area. An examination of our assessment of these partnerships may provide insights regarding the lack of relationship that was observed. Although the 21st CCLC programs' partnerships with principals were positive, programs did not consistently have strong relationships with classroom teachers. Relationships with teachers could allow for consistent connections across settings, which could then facilitate higher levels of participation among youth and greater alignment with the school day programming. Greater alignment with school-day programming is associated with student achievement in the literature. In general, OST staff reported some communication with teachers, but this was often on an "as needed" basis and was inconsistent for a majority of programs. Interviews with program coordinators suggest that this communication tended to be informal. Additionally, principals shared concerns that teachers were not always familiar with programming and that the OST program was taking or misplacing school day teachers' materials. These findings are consistent with past research that suggests that teacher-OST staff relationships are often informal and tenuous[82] and could help explain our current results.

Community Engagement

In general, OST providers reported that they encouraged staff to interact with parents and offered opportunities for parents to attend OST programming events. Programs that exhibited promising parent communication practices such as sending out newsletters and contacting parents about student progress also tended to show promising practices related to parent engagement opportunities. Conversely, programs that reported parent communication as an area for improvement cited few or no events to encourage parent engagement.

Program staff reported community partnerships as another key strategy for increasing community engagement. A majority of programs partnered with at least one outside organization to provide extracurricular activities, academic support, and other enrichment opportunities. Promising Practice Programs characterized their partnerships as robust and key for ensuring that youth had access to a variety of experiences.

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[82] Anderson-Butcher, D., Stetler, E G., & Midle, T. (2006). A case for expanded school-community partnerships in support of positive youth development. *Children & Schools, 28*(3), 155-163.

In terms of parent and community partnerships, parent partnerships, in particular, may be expected to influence student levels of participation. However, our data in this regard were limited with respect to actual engagement of parents rather than the provision of parent engagement opportunities. While programs reported offering a range of opportunities for parents to become involved in the OST program, the complexity of parent-school relationships suggests that more data on actual parent participation is needed to truly identify the variation among programs in their ability to engage parents.

VI.   Recommendations

The city-wide analysis of OST programming and outcomes offer insights into the strengths and challenges of OST programs in Philadelphia. Quantitative analyses revealed that program quality, specifically academic content and staffing, may contribute to student attendance and outcomes. However, these effects, in addition to the null effects of school and community partnerships, were less robust than findings reported in the literature. Below, we provide recommendations that could be addressed at the system or provider level for programmatic improvements that could strengthen the relationship between program quality and student outcomes.

SL System Level   **PL** Provider Level

Academic Content

PL **Ensure that participants have at least 30-45 minutes of homework support and provide academic alternatives for students who complete their homework.** Research suggests that OST programs should strive for 45 minutes of homework help per session. Additionally, our analyses indicate that academic support is positively related to student participation and student outcomes. Providing ample time for students to receive homework help may further strengthen this relationship. If some students complete their homework before the allotted time, programs can provide quiet academic activities such as the 100 Book Challenge. Attention to academics and alternative academic activities will ensure that students maximize academic programming time and provide fewer distractions for youth who need the full period to complete their homework.

PL **Structure homework help in small groups to offer more individualized support.** Research suggests that homework should be done in small groups, yet only 18% of programs conducted homework help in groups of ten or fewer students. If students are separated into smaller groups and supervised by a staff member, they may have more opportunities to receive one-on-one support with fewer distractions from peers. To maintain low staff-to-student ratios during homework time without adding significant costs, some programs have successfully recruited volunteer tutors from the community and/or local universities.

PL **Align enrichment activities to academic skills and, when possible, to school day activities.** One of the major goals of 21st CCLC programs is to improve students' academic outcomes in school. In order to accomplish this goal, students' out-of-school time should be aligned with academic content during the school day. STEM projects, for example, could enhance and complement concepts that students are learning in the science classes. Programs that cited strong alignment with the school day curriculum described ongoing contact between the school and OST program and hiring school day teachers to facilitate or review lesson plans.

Staffing

(PL) (SL) **Continue hiring and retaining high quality staff.** Hiring staff with youth development experience and a college education is associated with some student outcome gains.[83] Additionally, staff who have been with the provider multiple years help maintain the quality of the programming from year-to-year and provide consistency for students. This recommendation is unlikely to be achieved without additional resources. To that end, programs should work with funders and/or system-level staff to increase salaries for OST staff.

(PL) **Promote staff and site coordinator professional development.** While site coordinators and staff reported that professional development opportunities were generally relevant, very few programs reported that the majority of their staff received 15 or more hours of professional development—a threshold seen as key for enacting meaningful programmatic change.[84] As providers struggle to find time for staff to attend external professional development opportunities, providers may consider offering in-house professional development time during which staff could collaborate with one another and share promising practices.

School Relationships

(PL) **Continue cultivating and strengthening OST program-principal relationships.** Research suggests that robust OST program-principal relationships are associated with securing adequate programming space, improving school-OST communication, and increasing awareness of OST goals among school staff and students. Programs should continue to nurture relationships with principals and be proactive in orienting new principals to the program.

(PL) (SL) **Develop systems and strategies for strengthening OST program-teacher relationships.** Many site coordinators reported that their staff only communicated with teachers as students transitioned from the school day to the afterschool program. However, programs with a staff member, typically the site coordinator, who was present during the day reported frequent contact with teachers. Arranging times for OST staff to meet school teachers during the school day or during afterschool activities may strengthen relationships and encourage more communication between school teachers and staff about students' needs.

Community Engagement

(PL) (SL) **Actively seek out parents and encourage parents to participate in OST programming.** Programs that described multiple opportunities for parent involvement also reported satisfactory levels of communication with parents. Programs should continue to seek out parents and invite them to activities. Building these relationships and finding time to identify a child's strengths may increase parent engagement and encourage communication regarding home and program resources to the support the child.

(PL) (SL) **Continue engaging partners to increase OST program's capacity for supplying high-quality academic and socio-emotional support.** A majority of programs have at least one community partnership that supplements OST resources. Research suggests that these partnerships can enrich programs and build wider provider networks that ensure that children receive adequate support for

[83] Asher, R. (2012). Human resources: Staffing out-of-school time programs in the 21st century. *Afterschool Matters*, 16, 42-47.

[84] Yoon, K. S., Duncan, T., Lee, S. W. Y., Scarloss, B., & Shapley, K. (2007). *Reviewing the evidence on how teacher professional development affects student achievement* (Issues & Answers Report, REL 2007–No. 033, p, 12). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. Retrieved from http://ies.ed.gov/ncee/edlabs.

academic and socio-emotional needs. OST programs should continue to develop their partnerships and seek out new partners who can provide additional support for students.

General

SL **Provide more uniform and practical guidance to all OST programs across the city or state.** A possible explanation for the study's inconsistent findings is the frequent changes in OST program content resulting from a lack of common and clear content guidelines across all OST programs. Another explanation could be the high mobility of OST staff and students. Strengthening the consistency of program content and delivery across all programs might help address disparities in program quality and mitigate the disruptions caused by staff and/or student mobility.

PL **Encourage ongoing communication across programs.** Programs showed great variation across and within provider networks in terms of academic enrichment offerings, staffing and professional development practices, communication with school staff, and parent and community engagement strategies. Programs that are struggling with one or more of these aspects of programming may benefit from working with the provider's other programs to learn about best practices and share strategies and ideas for improvement.

PL **Seek out additional funding.** Comparing 21st CCLC programs' cost per student ratios to those recommended using The Wallace Foundation's Out-of-School Time Cost Calculator,[85] it is clear that **SL** 21st CCLC programs are doing a lot with little funding. Additional funding—through either increased 21st CCLC funding or other grants or donations—could supplement current funding and provide more resources for OST programming including technology, program supplies, professional development, and higher staff salaries.

Recommendations for Future Research

The results of this study encourage us to consider how we can build upon this work to offer further insights into factors supporting the development of high-quality OST programs and promising practices that support positive student outcomes. The following activities are worth considering to strengthen future research:

- **Analyses with more robust data for OST and comparison students.** Our analyses has limited information about OST and non-OST students.[86] As such, we are unable to fully identify and eliminate the potential bias in our estimations. The available data also limits our ability to examine the long term effects of OST participation on student academic achievement as the number of students participating from year to year is not sufficient to do analyses of statistical significance. As few studies actually track student outcomes over multiple years, a longitudinal study in Philadelphia could deepen our understanding of how OST participation impacts student achievement over time, and could make a major contribution to the field.

- **Additional data regarding participation in other OST programs.** Our current study does not take into account students' participation in after-school programs funded by sources other than the 21st CCLC program since such data was not available. Thus the estimated program effects can be biased if OST participants or non-OST students attended other enrichment programs. Given that an increasing number of OST programs has become available for students across the nation in recent

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[85] The Wallace Foundation. (n.d.). *Cost of quality: Out-of-school time cost calculator* [Online tool]. Retrieved from http://www.wallacefoundation.org/cost-of-quality/cost-calculator/Pages/cost-calculator.aspx
[86] Although we have worked with several providers for three years, a lack of unique identifiers for all the students over the years did not allow us to track OST students over time.

years, we suggest a study that would examine the potential simultaneous impact of other enrichment programs while also examining the isolated impact of the 21st CCLC programs.

- **Additional data collection and analyses regarding an OST program's quality of implementation.** Due to timing and budget constraints, we were unable to collect sufficient data regarding program implementation. Furthermore, it would be advantageous to utilize more in-depth observations across a variety of programs in future studies to more closely examine implementation and address current gaps in our design.

Appendix A. Student Demographics

This study included 39 OST programs operated by ten 21st CCLC grantee organizations. OST programs operated in Philadelphia public schools, including one charter school, during the 2013-14 school year. Altogether, 3,831 youth including 1,134 elementary school students, 1,792 middle school students, and 705 high school students were served by these OST programs. Tables A1 through A5 report the demographics of OST participants and non-OST students who attended the same schools. Overall, the majority of students included in the study attended public school, identified as African-American or Hispanic/Latino, and qualified for FRL.

Table A1. The Race/Ethnicity of OST Participants and Non-OST Students from 2011-12 through 2013-14

		OST PARTICIPANTS (%)			NON-OST STUDENTS (%)		
		2013-14	2012-13	2011-12	2013-14	2012-13	2011-12
Elementary (K-5)	White	5	7	11	9	9	11
	African-American	54	57	68	45	51	60
	Hispanic/Latino	33	29	15	34	29	18
	Asian	3	2	2	5	5	5
	Other	5	5	4	8	7	6
Middle (6-8)	White	6	3	2	14	10	10
	African-American	59	73	62	46	56	52
	Hispanic/Latino	28	21	33	28	28	34
	Asian	4	2	1	8	4	3
	Other	3	1	2	3	2	2
High (9-12)	White	5	3	3	4	3	1
	African-American	53	66	8	51	53	18
	Hispanic/Latino	33	28	85	38	39	80
	Asian	8	3	0	6	4	1
	Other	1	1	3	1	1	1

Note: All conventional public school and charter school students are included in the analysis.

Table A2. The Gender Distribution of OST Participants and Non-OST Students

		OST PARTICIPANTS (%)			NON-OST STUDENTS (%)		
		2013-14	2012-13	2011-12	2013-14	2012-13	2011-12
Elementary (K-5)	Male	47	48	46	52	52	53
	Female	53	52	54	48	48	47
Middle (6-8)	Male	51	53	46	58	51	52
	Female	49	47	55	48	49	48
High (9-12)	Male	51	51	41	56	55	54
	Female	49	49	59	45	45	46

Note: All conventional public school and charter school students are included in the analysis.

Table A3. Percentage of Students Eligible for Free and Reduced-Price Lunch (FRL)

	RFL_D	OST PARTICIPANTS (%)			NON-OST STUDENTS (%)		
		2013-14	2012-13	2011-12	2013-14	2012-13	2011-12
Elementary (K-5)	Non-FRL	22	14	36	23	16	29
	FRL	78	86	64	77	84	71
Middle (6-8)	Non-FRL	25	18	27	25	20	29
	FRL	75	83	73	75	80	71
High (9-12)	Non-FRL	28	27	25	29	26	33
	FRL	72	73	75	71	74	68

Note: All conventional public school and charter school students in 2013-14 school year are included in the analysis.

Table A4. Percentage of Students Identified as Limited English Proficiency (LEP)

		OST PARTICIPANTS (%)			NON-OST STUDENTS (%)		
		2013-14	2012-13	2011-12	2013-14	2012-13	2011-12
Elementary (K-5)	Non-LEP	88	90	93	87	88	92
	LEP	12	10	8	13	12	8
Middle (6-8)	Non-LEP	88	91	91	88	89	89
	LEP	13	9	9	12	11	11
High (9-12)	Non-LEP	80	88	61	83	86	75
	LEP	20	12	39	17	14	25

Note: All conventional public school and charter school students are included in the analysis.

Table A5. Percentage of Students Identified as Student with Disability (SWD)

		OST PARTICIPANTS (%)			NON-OST STUDENTS (%)		
		2013-14	2012-13	2011-12	2013-14	2012-13	2011-12
Elementary (K-5)	Non-SWD	89	91	95	87	87	91
	SWD	11	9	5	13	13	9
Middle (6-8)	Non-SWD	85	83	94	80	78	83
	SWD	15	18	6	20	22	17
High (9-12)	Non-SWD	85	85	82	78	79	79
	SWD	16	15	18	22	21	21

Note: All conventional public school and charter school students are included in the analysis.

Appendix B. Program Quality Relationships

Based on the quality domains discussed in Section II, we established four program quality measures: academic content, staffing, school partnerships, and community partnerships. To ensure that these indicators were measuring different constructs of program quality, we examined the correlations between the domains. Except for a moderate correlation between academic content and school partnerships, correlations between these domains were low and statistically insignificant (see Table B1). The low correlations indicate that the domains are relatively independent measures of program quality from different domains.

Table B1. Correlations between Measures of Program Quality

	STAFFING & PD	ACADEMIC CONTENT	SCHOOL PARTNERSHIP
Academic Content	0.04	--	--
School Partnership	0.12	0.48**	--
Community Partnerships	0.29†	0.06	0.17

†p<0.10; *p<0.05; **p<0.01

Table B2 reports statistical results from the multiple regression analysis. Characteristics of student demographics, such as race/ethnicity, gender, student eligibility status for FRL, LEP, and SWD, as well as grade levels are controlled in the analysis. The results suggest that high quality staff and strong academic content were positively associated with higher student OST participation levels.

Table B2. Estimated Relationships between Program Quality Measures and OST Participation Levels

Dependent Variable	INDEPENDENT VARIABLES			
	Staffing & PD	Academic Content	School Partnership	Community Partnership
OST Days	4.53** (0.77)	3.28** (0.94)	-1.44† (0.77)	1.65 (1.23)

*Note: †p<0.10; *p<0.05; **p<0.01. Standard errors are clustered at program level, and robust standard errors are reported in parentheses.*

Table B3 reports statistical results from the multiple regression analysis. This analysis examined the relationships between program quality, student OST participation levels, and teachers' perceptions of student classroom improvement. Characteristics of student demographics, such as race/ethnicity, gender, student eligibility status for FRL, LEP, and SWD, as well as grade levels were controlled in the analysis.

Table B3. Relationship between OST Participation Levels and Student Improvement[87]

	SOCIAL PERFORMANCE		BEHAVIORAL PERFORMANCE		ACADEMIC PERFORMANCE	
	(1)	(2)	(1)	(2)	(1)	(2)
OST Days	0.010**	0.007**	0.032**	0.026**	0.011**	0.006*
	(-0.002)	(0.002)	(-0.007)	(0.007)	(-0.002)	(0.002)

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[87] Odds Ratio analysis shows the relationship between the OST participation levels and indicators of student improvement in social, behavioral, and academic performance. Specifically, student OST participation levels are not associated with odds of improvement if OR=1; student participation in OST programs is associated with higher odds of improvement if OR>1; and, student participation in OST programs is associated with lower odds of improvement if OR<1. Statistically significant and positive coefficients from OLS regression indicate a possible positive change in student performance with each extra day students attended the OST programs.

Staffing & PD	-0.002	-0.069	-0.054†
	(0.031)	(0.098)	(0.031)
Academic Content	0.154**	0.582**	0.170**
	(0.033)	(0.115)	(0.033)
School Partnership	-0.059*	-0.155†	-0.029
	(0.026)	(0.082)	(0.026)
Community Partnership	0.022	-0.059	0.039
	(0.036)	(0.115)	(0.036)

*Note: †p<0.10; *p<0.05; †p<0.10; *p<0.05; **p<0.01. Standard errors are clustered at program level, and standard errors are reported in parentheses.*

Table B4 reports statistical results from OLS and logistic regression analyses. These analyses examined the relationships between student OST participation levels and student academic and behavioral outcomes. Characteristics of student demographics, such as race/ethnicity, gender, grade levels, student eligibility status for FRL, LEP, and SWD, as well as previous years' academic and behavioral performances were controlled in the analysis.

Table B4. Statistical Results from OLS and Logistic Regressions[88]

	ELEMENTARY	MIDDLE	HIGH
Estimated coefficients from OLS regression			
PSSA Math	0.157	0.226**	--
	(0.127)	(0.070)	
PSSA Reading	0.199	0.019	--
	(0.126)	(0.078)	
Course grade in math	0.002	0.015**	--
	(0.005)	(0.005)	
Course grade in reading	0.005	0.021**	--
	(0.004)	(0.004)	
Course grade in science	0.003	0.040**	--
	(0.004)	(0.005)	
Estimated odds ratio from Logistic regression			
Reading on grade level (DRA K-3rd)	1.005*	--	--
	(0.002)		
Earning Credit attempted in math	--	--	1.004
			(0.004)
Earning Credit attempted in ELA	--	--	1.009*
			(0.004)
Earning Credit attempted in science	--	--	1.017**
			(0.005)
Unexcused Absence for 10 or more days	0.991**	0.993**	0.990**
	(0.001)	(0.002)	(0.003)
Having out-of-school suspension	0.991**	0.993**	0.994
	(0.002)	(0.002)	(0.004)

*Note: Elementary PSSA data analyses only include students in 3rd – 5th grades. Standard errors are clustered at program level, and standard errors are reported in parentheses. †p<0.10; *p<0.05; †p<0.10; *p<0.05; **p<0.01.*

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[88] Estimated coefficients from the OLS regression indicate the possible changes in outcomes with one extra day students participate in the OST programs. Odds Ratio (OR) is a measure of association between OST participation levels and student outcomes, such as reading at grade level, earning all the credits attempted in each subject area, having an unexcused absence for ten or more days, or having out-of-school suspensions. Specifically, student OST participation levels are not associated with odds of outcomes if OR=1; student participation in OST programs is associated with higher odds of outcomes if OR>1; and, student participation in OST programs is associated with lower odds of outcomes if OR<1.

Table B5 provides a comparison of OST participants' and non-OST students' average PSSA performances and course grades using Propensity Score Matching (PSM). The covariate considered in PSM included characteristics of student demographics, such as race/ethnicity, gender, grade levels, student eligibility status for FRL, LEP, and SWD, as well as previous years' academic and behavioral performances, and nearest neighbor matching within caliper strategy was used in the analysis. Comparison students were students who attended a school with a 21st CCLC program but did not attend the program.

Table B5. PSSA and Course Grades: OST Participants vs. Comparison Students

	Elementary			Middle		
	OST	Non-OST	Difference	OST	Non-OST	Difference
PSSA Math	1216.20	1203.39	12.81	1264.00	1265.66	-1.66
PSSA Reading	1164.18	1128.53	35.65*	1216.54	1229.62	-13.08
Reading Course Grades	80.28	80.32	-0.04	78.04	78.99	-0.95**
Math Course Grades	80.57	80.56	0.01	77.34	77.71	-0.37
Science Course Grades	84.05	84.41	-0.36	78.93	79.05	-0.12

†p<0.10; *p<0.05; **p<0.01

Table B6 reports odds ratio from logistic regression analyses. The analyses compared OST participants with comparison students on behavioral outcomes, high school credits accumulation, and 1st-3rd grades DRA.

Table B6. Estimated Odds Ratio from Logistic Regression: Regular Participants vs. Comparison Students

	Out-of-school Suspension	10+ Unexcused Absences	DRA (1st -3rd)	Earning Credit Attempted (9-12th grade)
Elementary	1.33†	0.86	1.01	
Middle	1.18†	1.09		
High	0.97	0.96		ELA: 1.52* Math: 1.46* Science: 2.50**

†p<0.10; *p<0.05; **p<0.01

Table B7 provides a comparison of student performance on PSSA and course grades between regular OST participants' (30+ and 90+ days attended) and comparison groups that were selected from non-OST students using PSM methods.

Table B7. PSSA and Course Grades: OST 30+ or 90+ day Participants vs. non-OST Students

	OST Regular participants versus Non-OST			OST 90+ versus Non-OST		
	OST (30+)	Non-OST	Difference	OST (90+)	Non-OST	Difference
Elementary School						
PSSA Math (4-5th Grade)	1220.09	1203.49	16.60	1210.66	1195.95	14.71
PSSA Reading (4-5th Grade)	1137.15	1152.31	-15.16	1168.83	1121.80	47.03
Reading Course Grades	80.58	80.57	0.01	81.26	81.54	-0.28
Math Course Grades	81.15	81.03	0 .13	81.58	82.34	-0 .76
Science Course Grades	84.49	84.16	0.33	84.59	85.55	-0.97†

Middle School						
PSSA Math (6-8th Grade)	1275.25	1289.51	-14.26	1306.06	1290.52	15.54†
PSSA Reading (6-8th Grade)	1234.29	1226.77	7.52	1236.38	1255.84	-19.46
Reading Course Grades	78.81	79.19	-0.39	80.60	79.56	1.04
Math Course Grades	77.89	78.29	-0.39	79.74	78.78	0.96
Science Course Grades	78.88	80.67	-1.79**	83.18	79.91	3.27**

*Note: †p<0.10; *p<0.05; **p<0.01*

Table B8 reports odds ratios from logistic regression analyses. The analyses compared regular OST participants (30+ day or 90+ day participants) with comparison students on behavioral outcomes, high school credits accumulation, and 1st-3rd grades DRA.

Table B8. Estimated Odds Ratio from Logistic Regression: OST 30+ or 90+ day Participants vs. non-OST Students

		OST (30+) versus non-OST	OST (90+) Versus non-OST
		Estimated Odds Ratio	Estimated Odds Ratio
Out-of-school Suspension	Elementary	1.30	0.71
	Middle	0.91	0.81
	High	0.71	0.23
10+ Unexcused Absences	Elementary	0.85	0.65**
	Middle	0.80†	0.79
	High	1.03	0.41†
Earning Credit Attempted (9-12th grade)	ELA	1.51	--
	Math	1.25	--
	Science	3.12**	--
DRA: read at grade level	(1-3 grade)	0.94	1.00

*Note: †p<0.10; *p<0.05; **p<0.01*

Appendix C. Summary of Three Years of Citywide Analyses

A.   OST Outcomes

RFA has conducted three "citywide" studies using school district data and data from individual providers across Philadelphia.[89] This section summarizes the findings across these reports to identify trends and areas for future research. However, it is important to note that the OST programs and student populations included in our studies changed in several ways across the three years. For example:

- Students considered in 2011-12 studies were from five Cohort 5 and Cohort 6 providers;
- Students considered in 2012-13 studies included 10 providers under Cohort 5, Cohort 6, and Cohort 6A;
- Results reported in this report included 2013-14 data from 10 Cohort 6 and Cohort 6A providers; and
- OST participant composition changes were accompanied by changes in the content areas of the programs, program characteristics, and sample sizes available for our analyses.

We adjusted our research methods accordingly to best fit the data, but the variations in our analyses also created challenges for comparison across the years:

- OST participants in 2013-14 and regularly attending participants in 2012-13 did better than comparison students in some outcome areas. However, such impacts varied across grade levels, and the patterns changed over the years.

- There is a positive relationship between student OST participation levels and student outcomes in some areas, however, this relationship varied across grade levels, and changed over the three years. No causal impacts can be concluded from the analyses.

Given the high mobility of OST staff and students, the frequent changes in OST curricula and content areas, as well as other factors in student feeder schools that were not available for our studies, it is not surprising to see the variations in our results across the years. Rather, we would call for clearer practical guidelines for all the 21st CCLC OST programs across the city or state based on the evidence documented in the literature. Furthermore, as discussed earlier, the potential impact of the OST program might take time to be reflected in student academic achievements, and the minimum dosage necessary to observe such impact is unclear.

The promising findings regarding the positive relationship between OST participation levels and intermediate outcomes in student social, behavioral, and academic performance identified in this year's 2014-15 study suggests the need for more studies using longitudinal data to examine the long-term impact of the OST program on students and its persistence over time.

B.   Quality Indicators

The following section includes program quality trends over time and is organized under three quality domains: academic program content, staffing, and school day partnerships. Due to limited data on community partnerships, we were unable to identify trends over time in this domain.

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[89] For additional details regarding the findings from statistical analyses of 2011-12 and 2012-13 data, please refer to our 2011-12 and 2012-13 citywide reports.

SUMMARY: TRENDS OVER TIME IN ACADEMIC PROGRAM CONTENT AND STRUCTURE

The strengths and challenges of the program content and structure of Philadelphia's OST programs have remained relatively consistent over the three years of RFA's study of these programs. Providers have consistently offered homework help and project-based learning as core academic components of program content over time. Homework help has consistently been offered regularly for 30-45 minutes/day at most programs. While program staff have reported that 30-45 minutes has been sufficient for youth to complete their homework, the research suggests that 45 minutes is the minimum threshold for homework help to have an impact on students' academic outcomes.

Linking program activities to school day activities continues to be a challenge. Each year, providers have reported it challenging to link program's academic activities to school day activities or standards. While lesson plans are developed to make these connections, staff have consistently reported through surveys and interviews that program activities do not consistently make these connections.

Offering individual academic support to youth remains a challenge. In addition, over the span of the three study years, providers have reported challenges with offering individualized academic support, particularly tutoring.

SUMMARY: TRENDS OVER TIME IN STAFFING

Staff Retention continues to be an issue for providers and programs. Over the past three years of the 21C evaluation, retaining high quality staff has continued to be a challenge for providers. In 2013-14, 13 of 39 (34%) programs reported staff retention and turnover as an issue; this is actually an increase from the prior year, where 6 of 39 programs (15%) reported this as a major challenge. Some of the barriers most widely noted in regards to retaining staff include:

- **Low wages**. Program directors and program coordinators noted that the salaries they were able to provide were not always enough to retain high quality staff for consistent periods of time.

- **Part-time status**. Because most of the programs hired part-time staff to lead activities for students, these staff needed to have other, part-time jobs which could lead to challenges with scheduling and getting to locations that may not be close to staff members' homes or other job(s).

One program coordinator summarized this ongoing challenge by stating that, "a challenge with staff is turnover. We currently have raised the wage by $1/hour, which is still an area we could improve on. The position itself is an entry-level position, but skilled, so it's tricky to find folks in the right place in their life for it and who are up for the challenges [of the work]."

SUMMARY: TRENDS OVER TIME IN SCHOOL DAY PARTNERSHIPS

Principal support continues to grow for a majority of programs, but principals see areas for OST improvement. Data from Cohort 6 and 6A suggest that many programs feel supported by their principals. This support is expressed through ongoing communication with the program coordinator, positive rapport between the principal and OST staff, and assistance in securing space for the program. However, program coordinators and principals alike continue to identify areas of growth for OST programs including aligning behavioral expectations with school policies, strengthening attendance and dismissal policies, and improving academic support.

Teacher communication continues to be informal at most programs. Across most programs and providers, OST staff-teacher communication has been on an "as-needed" basis for the duration of 21CCLC programming. As described in the Teacher Relationships section, a majority of interactions have been related to logistics or behavioral issues and hinge upon personal relationships between OST staff and school day teachers.

Appendix D. Provider Locations

Figure D1. Map of 21st Century Citywide Provider Locations