

Rhode Island 21st Century Community Learning Centers

Evaluation Report for 2018–19

JUNE 2020



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Executive Summary

In 2016, the Rhode Island Department of Education (RIDE) asked the American Institutes for Research (AIR) to conduct an evaluation of their statewide 21st Century Community Learning Centers (21st CCLC) program. Building on prior 21st CCLC evaluation work in Rhode Island, AIR proposed an evaluation focused on questions relating to program quality and how quality plays a role in program impact. Specifically, we proposed the following research questions:

- **Research Question 1 (RQ1).** What approaches are higher quality 21st CCLC subgrantees using to ensure process quality in their programs?
- **Research Question 2 (RQ2).** What content-specific practices are higher quality 21st CCLC subgrantees using to have an impact on the direct program outcomes specified in the Rhode Island theory of action (e.g., 21st CCLC skills, social and emotional learning) and outcomes related to academic success and college and career readiness?
- **Research Question 3 (RQ3).** Is there evidence that students participating regularly in higher quality Rhode Island 21st CCLC–funded activities demonstrate better performance on the outcomes of interest? How does this evidence vary by grade level and programmatic focus?

This report provides our answers to these questions, based on data collection activities and analyses carried out between 2016 and 2019.

Focus on Quality

The research available to date shows that there is good reason to consider program quality when assessing program outcomes. As noted by Granger (2008), research on the performance of afterschool programs in supporting student academic and behavioral growth has demonstrated an uneven level of effectiveness. For example, across three especially noteworthy meta-analyses of studies exploring the impact of afterschool programs on student achievement and behavioral outcomes, most studies in each review did not find evidence that the programs made a significant difference when compared with the outcomes for the control group (Durlak & Weissberg, 2007; Lauer et al., 2006; Zief & Lauver, 2006). Yet Durlak and Weissberg (2007) and Lauer et al. (2006) found average positive effects in academic and nonacademic outcomes, suggesting that a smaller domain of highly effective programs was driving a net average positive effect across programs. That is, it seems likely that considering only program-wide outcomes may not expose key variations in outcomes depending on program quality.

The question this raises, of course, is "what constitutes quality?" Evidence indicates that effective programs impacting academic and nonacademic outcomes rely on specific approaches and strategies. Strategies shown to be successful by the research include the following:

- Paying special attention to improving youth personal and social behavior and being intentional about how these services are delivered—in what Durlak and Weissberg (2007) describe as "Sequenced, Active, Focused and Explicit" (p. 7)
- Delivering tutoring-like services and activities (Lauer et al., 2006)
- Placing an emphasis on skill building and mastery (Birmingham, Pechman, Russell, & Mielke, 2005)
- Providing activities in accordance with explicit, research-based curricular models and teaching practices designed for the afterschool setting (Black et al., 2008)

This domain of research suggests that goals and objectives related to the achievement of desired academic and behavioral outcomes can be met by simply paying attention to how programming is delivered (Birmingham et al., 2005; Durlak & Weissberg, 2007). Along these lines, researchers have explored how youth benefit from participation in high-quality afterschool programs (Durlak, Weissberg, & Pachan, 2010; Eccles & Gootman, 2002; Vandell, Reisner, & Pierce, 2007).

Quality is therefore not monolithic and requires understanding in light of program goals, but certain aspects of quality can be elucidated. Notably, program quality has two broad senses: (a) organizational process quality and (b) content-specific practices. Process quality refers to the adoption of practices and approaches to service delivery that result in the creation of a developmentally appropriate setting for youth, where participants feel safe and supported and are afforded opportunities to form meaningful relationships, experience belonging, and become active participants in their own learning and development. These practices are universal because they are applicable to any type of youth programming, irrespective of content, approach, grade level, or setting (and, as such, are rightly measured as part of the Rhode Island Program Quality Assessment). Content-specific practices relate to those program practices designed to intentionally cultivate a specific set of skills, beliefs, or knowledge and, therefore, are contingent on program goals. For example, content-specific practices include approaches to cultivating literacy skills, formal curricula for social and emotional learning, or methods of teaching technology skills. Content-specific practices adopted by 21st CCLC grantees are remarkably diverse and must therefore be measured and assessed in a variety of ways. The evaluation methodology, as well as the evaluation questions posed herein, consider both process and content-specific aspects of program quality.

Analytic Sample

Given the framing of the RQs, AIR worked with RIDE to identify twenty-two 21st CCLC sites deemed to be high quality. Winnowed from an original list of 46 candidate sites, these 22 sites were associated with 16 grants and were split evenly between sites serving elementary school youth and middle school youth. This was an intentional split, given that program goals, activities, participation, and youth outcomes tend to be different for younger youth compared with older youth. AIR therefore used this 22 site sample to address all three RQs.

Data

To investigate the RQs, AIR relied on the following types of data:

- Program director/site coordinator interviews (10 total interviews)
- Site coordinator surveys (collected from site coordinators included in the sample)
- Site visit observations with activity scoring (all sites included in the sample)
- Pre-post teacher surveys at elementary sites (Teacher Survey of Academic and Youth Outcomes [SAYO-T])
- Pre-post youth outcome surveys at middle school sites (Youth Motivation and Engagement Survey [YMEB])
- Youth experience surveys at middle school sites (longer surveys designed to capture youth perceptions on overall program experience, collected once at year's end)
- Youth engagement surveys at middle school sites (short surveys designed to capture in-themoment youth experience, collected three times)
- Cityspan 21st CCLC data, including individual student participation data
- RIDE state warehouse data, including student demographics, unexcused school-day absences, disciplinary incidents, and test score data

A more complete description of all these data types, including timing of collection and important explanatory notes, is in the main text of this report. Copies of all relevant data collection tools are in the appendices.

Methods of Analysis

AIR employed several different methods for the three RQs, in terms of both data collection and analysis. For RQ1 and RQ2, AIR interviewed a mix of site coordinators and grant directors (10 interviews total), administered site coordinator surveys, and carried out site visit observations. Interviews were analyzed using NVivo software to highlight significant themes, whereas surveys and observations were analyzed using basic descriptive statistics.

RQ3 addresses program impact. AIR used a variety of data types to address this question, including pre-post teacher and youth surveys (for programs serving elementary and middle school youth, respectively); youth engagement surveys (for middle school sites); youth program experience surveys (again for middle school sites); the site visit observation data noted earlier; and 21st CCLC participation information, youth demographics, school-related outcome data (e.g., state assessment scores), and school building data obtained from RIDE. AIR analyzed these data using descriptive methods to establish a sample overview and converted much of the survey data into construct scores using Rasch analysis. The data were then analyzed using correlational techniques (notably hierarchical linear modeling [HLM]) to explore relationships across the data types. Finally, AIR conducted a quasi-experiment using propensity score matching (PSM) in conjunction with HLM, comparing participants attending high-quality centers with nonparticipants.

Summary of Key Findings

Findings from our full report are summarized here, following the order in which they are presented within the full text.

Grant, Center, and Attendee Descriptive Statistics

- Our ultimate sample included 22 centers, 11 each serving elementary school youth and middle school youth. These centers represented 14 separate grants, nine for elementary schools and seven for middle schools (in two cases, a single grant oversaw an elementary school and a middle school center).
- A total of 5,062 total youth attended these centers.
- On average, elementary centers served 205 youth, whereas middle school centers served 254 youth. The largest center, however, was an elementary center (serving 727 youth).
- Staffing varied to a great extent across centers, with no single staffing configuration appearing prominent across either elementary or middle school centers.
- Elementary center coordinators were more likely to indicate that reading/literacy and STEM (science, technology, engineering, and mathematics) were center priorities. However,

middle school center coordinators were more likely to report spending larger amounts of time on STEM activities each week.

- Middle school center coordinators indicated spending relatively large amounts of time on sports/recreation activities each week.
- About 51% of the elementary youth were classified as regular attendees (attending 30 days or more during the year), compared with 29% of the middle school participants.
- The median number of total days attended by participants was 30 for elementary youth, and 16 for middle school youth. The 25th and 75th percentiles were, respectively, 12 and 91 for elementary youth and 6 and 34 for middle school youth.
- For both elementary and middle school youth, STEM, arts/music, and physical education were the highest categories in terms of how participants spent their time in 21st CCLC.
- About 74% of elementary school participants were eligible for free or reduced-price lunch, compared with about 84% of middle school participants.

PQA Observation Findings

AIR conducted site-visit observations in 2018–19 as a way to confirm general program quality and to explore RQ1. Centers serving elementary youth were visited twice during the 2018–19 year, whereas centers serving middle school youth were visited once. Each site visit was conducted by one of two observers, with each visit lasting approximately 2–3 hours on a single day. Each visit included up to four 30-minute observations (i.e., up to four separate activities observed for up to 30 minutes each), with the visitor scoring each activity against a truncated form of the Weikert Center's Program Quality Assessment (PQA) observation protocol. All PQA domains were scored with values of 1, 3, or 5, with 5 being the highest.

Overall, the PQA scores show that our sample of centers included programs with generally high process quality (as defined by the PQA instrument). Elementary centers showed particular strength in terms of actively encouraging youth, ensuring programs were free of exclusive behavior, and offering concrete experiences, while being somewhat less strong in terms of supporting contributions made by youth (using specific language), asking open-ended questions, or substantively interacting with youth regarding activity content. There may therefore be room for staff to grow in these areas, becoming even more effective through relatively straightforward practice adjustments.

Middle school centers showed general strength in most domains, with notable strength in terms of engaging youth via guided practice, ensuring programming was not exclusive, providing supports or encouragement for struggling youth, and making sure the emotional climate was safe. Youth choice in terms of content, however, was the lowest scoring item (though still above a 3.0), which may suggest a straightforward way for middle school centers included in the sample to improve their programs further than they already have. Choice 2, however, which considers opportunities for open-ended choices in terms of process, received a score of 4.06.

Interview Findings

To address RQ1 and RQ2, we conducted 10 hour-long interviews with Rhode Island 21st CCLC staff, focusing on staff associated with high-quality programs. These interviews were associated with 18 of the 22 programs selected for the sample. (Some of the interviewed individuals work with multiple grants.)

Respondents indicated that their 21st CCLC programs are indeed serving the populations that 21st CCLC is intended to serve, notably those who are struggling academically, economically, or socially. Program goals as described by the interviewees are in keeping with these populations. In terms of RQ1, interviewees described their staff as essential to offering high-quality programming from a process standpoint. While hiring is clearly of importance, interviewees further noted staff professional development and training as their way of ensuring that staff know how to interact with youth in a positive, engaging way. In terms of RQ2, content quality, interviewees indicated that they offer many different types of activities (with many of the examples mentioned classifiable as academic enrichment) along with activities designed to facilitate relationship building. For activities tied to academic goals, interviewees noted that linkages to the school day are important, whereas content quality in general can be improved via youth feedback. Overall, interviewees perceived 21st CCLC as having an impact both academically and in terms of social-emotional outcomes, though they tend to be less sure that the 21st CCLC programming in particular is actually the cause of any positive change observed in academic outcomes compared with positive change observed for social-emotional outcomes.

Correlational Analysis Results

To begin exploring RQ3, notably with respect to nonacademic outcomes such as perceptions, beliefs, and skills, we collected a series of surveys during 2018–19. These included pre-post teacher surveys (SAYO-T) for elementary participants; and pre-post youth outcome surveys (YMEB), youth experience, and youth engagement surveys for middle school youth. The YMEB postsurvey also included questions concerning changes in terms of self-esteem and subject interest growth.

In terms of youth experiences in programming (based on responses to the youth experience and engagement surveys), middle school youth reported having positive relationships with activity leaders and feelings of positive affect when participating in activities. In addition, youth commonly reported feeling engaged, what they were doing in programming was relevant, or that they were learning or getting better at something. However, middle school participants were less likely to report opportunities to experience a sense of agency through voice and choice or experiencing challenge in program activities. Experiences with other youth also were mixed, with more positive responses provided on the youth engagement survey (taken three times during the year at the end of a programming day) and less positive responses on the youth experience survey (administered once at the end of the school year).

In terms of youth outcomes as measured by the SAYO-T and the YMEB, pre-post changes tended to either slightly increase or slightly decline on average, although in either case the average change in student scores was small. For both the SAYO-T and YMEB scales examined, the majority of students with pre-post data either witnessed a decline or stayed the same, whereas about 20% of the students witnessed an improvement equivalent to scoring higher on three items or more associated with a given scale. Nearly half of middle school youth completing the YMEB indicated their self-esteem had improved during the school year, with a full 20% indicating that their self-esteem had improved a lot. In terms of interest, middle school youth were most likely to report being more interested in sports compared with the beginning of the school year (46%), followed by art (36%) and computers/technology (33%).

We also conducted correlational analysis to explore how youth development outcomes measured by the surveys were related to PQA scores and youth experience scales. We found that higher scores on the Youth Program Quality Assessment were associated only with outcomes examined for middle school youth. This included an increase in interest in arts and sports and youth-reported improvements in self-esteem. We did not find PQA-related scores to be related to the outcomes assessed by pre-post scales measured by either the YMEB or SAYO-T, nor improved interest in STEM. Youth experiences in programming derived from the youth engagement survey (e.g., positive affect, challenge, relevance, engagement) were found to be related to a number of outcomes for middle school youth, including an increase in interest in arts and sports and improved self-esteem, the same domain of outcomes also associated with higher scores on PQA-related scales. In addition, certain scales from the youth experience survey taken by middle school participants were positively associated with youth development outcomes. Positive perceptions of activity leaders were associated with an increase in interest in STEM and greater improvement on the interpersonal skills scale of the YMEB, whereas higher scores on the skill-building scale were associated with greater improvement in self-esteem and improvement on both the positive mindsets and interpersonal skills scales. Each of these results is consistent with the broader literature about how key experiences in programming can promote positive youth development outcomes. However, these findings were strictly correlational: It is not possible to infer that certain practices or experiences caused certain youth development outcomes to occur.

Impact Analysis Results

In addition to the correlational analyses just described, we carried out a series of comparisons in which participants were matched with nonparticipants in a quasi-experimental design to investigate differences in terms of school-related outcomes. Specifically, we used a PSM approach to compare the two groups in terms of the following:

- Academic achievement in mathematics and English language arts (ELA)
- School-day absences
- Suspension rates
- Disciplinary rates
- Grade promotion rates

Importantly, we altered our sample of centers somewhat to carry out these analyses. We filtered the full set of 22 centers down to 17 based on PQA scores, filtering out the lowest performers (relative low performance) to concentrate the sample on the high-quality programs. However, one center was reinstated after both the 21st CCLC director and one of our site visitors indicated that one center should in fact be deemed high quality, regardless of the PQA results. We analyzed results of our impact models using samples with and without this particular center. The effects were generally the same for both analyses, with several previously nonsignificant effects changing to statistically significant once the single center was added. This is important because it suggests that PQA scores may not always be effective at identifying high-quality programs, at least in terms of the program outcomes we assessed.

Overall, our results supported the proposition that high-quality 21st CCLC programs can have a positive impact on mathematics and ELA assessment scores, as well as school-day absences. Our analyses for these three types of outcomes yielded multiple statistically significant and positive results (in terms of both all-group analysis and analysis by grade level). There also was evidence that 21st CCLC programs in our sample were having a positive impact on disciplinary incidents and suspensions (i.e., reductions), though those results were not quite as strong as the other results noted (i.e., we saw fewer statistically significant results when analyzed by grade level). Impact on grade promotion was not detected, though this may have been caused by the low number of youth lacking grade promotion in 2018–19.

These effects are relevant for the sample and, potentially, other high-quality centers; the results are not generalizable to all 21st CCLCs.

Conclusion and Recommendations

Based on our descriptive analysis, the 21st CCLC programs selected for our study appear to be serving the populations intended by the 21st CCLC program generally and are offering activities in keeping with overall program goals. Further, as shown by the PQA data, the centers selected for inclusion in the study were generally of high quality (although opportunities for youth choice may be an area ready for growth). As illustrated by both the descriptive staffing data and interviews with key staff, the centers in the sample achieved a high overall level of quality using a variety of approaches, with different ways of assessing youth need and interest as part of their general operation. Our correlational findings, although not causal, seem to suggest the importance of youth having specific experiences while participating in programming, notably by connecting those experiences to development of new interests, improved self-esteem, and growth on select social and emotional outcomes. Findings based on our quasi-experiment provide evidence that high levels of participation in high-quality 21st CCLC programming has a positive impact on assessment scores, school-day absences, disciplinary incidents, and suspensions. All of this supports Rhode Island's theory of action, shown in Exhibit ES1.



Exhibit ES1. Rhode Island's Theory of Action

Despite these positive findings, however, these results are not generalizable to 21st CCLCs across Rhode Island. These results are predicated on a group of centers specifically chosen because of evidence that their programming was high quality. These results therefore are particular to our evaluation sample, and of potential value to centers likewise deemed high quality. The findings also support state efforts to improve overall program quality, suggesting that these efforts have a real impact in terms of positive youth outcomes.

Recommendations

Based on our findings, as well as review of Rhode Island's theory of action, we have several recommendations for RIDE's consideration:

- Investigate how COVID-19 and the attendant economic disruption affected 21st CCLC staffing.
- Continue exploring social-emotional outcome measures.
- Consider investigating how often youth have opportunities for youth voice and choice.
- Further explore definitions of program quality.
- Consider low-stakes ways to compare higher quality centers with lower quality centers.
- As a way to further explore Rhode Island's 21st CCLC action plan, consider a longitudinal study.

Each recommendation is discussed further in the conclusion provided in the full report.

Section 1. Introduction

This section provides an overview of the American Institutes for Research's (AIR's) evaluation of 21st Century Community Learning Centers (21st CCLC) in Rhode Island, along with a brief note concerning report organization.

Evaluation Overview

This report is the culmination of four years of planning and data collection at 21st CCLC programs in Rhode Island, with evaluation activities spanning the years 2016 to 2020. The evaluation effort focused on questions relating to program quality and how participation in high-quality programming affects participant outcomes. To explore these questions, AIR worked with RIDE to identify a sample of 22 centers in Rhode Island, split evenly between centers serving middle school youth and those serving elementary youth, deemed to be high-quality programs. This evaluation report presents results of our investigation into these programs.

The evaluation employs basic descriptive analysis, qualitative analysis, correlational analysis, and a quasi-experiment. Descriptive analyses provide an overall picture of the sample programs and summarize quality scores obtained by AIR through a series of program observations. The qualitative work focused on interviews conducted with a mix of center coordinators and grant directors who answered questions relating to program goals and activities. Correlational modeling assessed linkages between aspects of program quality, youth engagement, and youth experience on the one hand with desired outcomes on the other. The quasi-experiment compared youth participating in the sample of 21st CCLC programs with similar youth attending the same schools but who did not participate in 21st CCLC programming.

Report Organization

Section 2 introduces the research questions (RQs) and provides a rationale for our focus on program quality. We then present information on the data sources and general methods we used, along with notes on limitations of the results. Section 3 presents a descriptive overview of the center sample that AIR identified for inclusion in the study, with statistics for grants, centers, and participants attending sample centers. Sections 4 and 5, presenting PQA observation data and interview data, address RQ1 and RQ2 covering process and content quality. Section 6 addresses RQ3 by presenting the correlational analysis results, and Section 7 addresses RQ3 by presenting the results related to the quasi-experimental comparison. Section 8 provides our conclusions and recommendations based on the findings. Copies of all data-collection instruments used by AIR are in the appendices.

Section 2. Research Questions and Evaluation Approach

This section presents a general overview of the evaluation, including the evaluation goals and methods. First, we present the RQs we sought to answer as part of the evaluation. Next, given the focus of the evaluation questions, we provide a summary of our understanding of quality as it relates to 21st CCLC programming. Third, we describe the analytic sample we used for the evaluation, including the process used to derive the sample. Fourth, we describe all data sources and then the methods we used to analyze those data. Finally, this section concludes with a description of known limitations and challenges.

Research Questions

The evaluation conducted by AIR on behalf of RIDE focused on questions relating to quality. Specifically, AIR focused on three evaluation questions:

- 1. **RQ1.** What approaches are higher quality 21st CCLC subgrantees using to ensure process quality in their programs?
- 2. **RQ2.** What content-specific practices are higher quality 21st CCLC subgrantees using to have an impact on the direct program outcomes specified in the Rhode Island theory of action (e.g., 21st CCLC skills, social and emotional learning) and outcomes related to academic success and college and career readiness?
- 3. **RQ3.** Is there evidence that students participating *regularly* in *higher quality* Rhode Island 21st CCLC–funded activities demonstrate better performance on the outcomes of interest? How does this evidence vary by grade level and programmatic focus?

To summarize, the first two RQs focus on quality in terms of program offerings (with emphases on processes and content, respectively), while the third RQ focuses on the impact that highquality programs have on participating youth.

Program Quality

The research available to date shows that there is good reason to consider program quality when assessing program outcomes. As noted by Granger (2008), research on the performance of afterschool programs in supporting student academic and behavioral growth has demonstrated an uneven level of effectiveness. For example, across three especially noteworthy meta-analyses of studies exploring the impact of afterschool programs on student achievement and behavioral outcomes, the majority of the studies in each review did not find evidence that the programs made a significant difference when compared with the outcomes for the control group (Durlak & Weissberg, 2007; Lauer et al., 2006; Zief & Lauver, 2006). Yet Durlak and Weissberg (2007) and Lauer et al. (2006) found average positive effects in academic and nonacademic outcomes,

suggesting that a smaller domain of highly effective programs was driving a net average positive effect across programs. That is, it seems likely that considering only program-wide outcomes may not expose key variations in outcomes depending on program quality.

The question this raises, of course, is "what constitutes quality?" Evidence indicates that effective programs impacting academic and nonacademic outcomes rely on specific approaches and strategies. Strategies shown to be successful by the research include the following:

- Paying special attention to improving youth personal and social behavior and being intentional about how these services are delivered—in what Durlak and Weissberg (2007) describe as "Sequenced, Active, Focused and Explicit" (p. 7)
- Delivering tutoring-like services and activities (Lauer et al., 2006)
- Placing an emphasis on skill building and mastery (Birmingham, Pechman, Russell, & Mielke, 2005)
- Providing activities in accordance with explicit, research-based curricular models and teaching practices designed for the afterschool setting (Black et al., 2008)

This domain of research suggests that goals and objectives related to the achievement of desired academic and behavioral outcomes can be met by simply paying attention to how programming is delivered (Birmingham et al., 2005; Durlak & Weissberg, 2007). Along these lines, researchers have explored how youth benefit from participation in high-quality afterschool programs (Durlak, Weissberg, & Pachan, 2010; Eccles & Gootman, 2002; Pierce, Auger, & Vandell, 2013; Vandell, Reisner, & Pierce, 2007).

Quality is therefore not monolithic and requires understanding in light of program goals, but certain aspects of quality can be elucidated. Notably, program quality has two broad senses: (a) organizational process quality and (b) content-specific practices. **Process quality** refers to the adoption of practices and approaches to service delivery that result in the creation of a developmentally appropriate setting for youth, where participants feel safe and supported and are afforded opportunities to form meaningful relationships, experience belonging, and become active participants in their own learning and development. These practices are universal because they are applicable to any type of youth programming, irrespective of content, approach, grade level, or setting (and, as such, are rightly measured as part of the Rhode Island Program Quality Assessment). **Content-specific practices** relate to those program practices designed to intentionally cultivate a specific set of skills, beliefs, or knowledge and, therefore, are contingent on program goals. For example, content-specific practices include approaches to cultivating literacy skills, formal curricula for social and emotional learning, or methods of teaching technology skills. Content-specific practices adopted by 21st CCLC grantees are remarkably diverse and must therefore be measured and assessed in a variety of ways. The evaluation methodology, as well as the evaluation questions posed herein, consider both process and content-specific aspects of program quality.

Analytic Sample

As described in the preceding subsections, our 21st CCLC evaluation focused on questions relating to program quality. Given this focus, early in the project we worked closely with the Rhode Island Department of Education (RIDE) to identify a sample of high-quality 21st CCLC sites that could form the basis of our inquiry.

We began with a list of 46 candidate sites, which covered most 21st CCLCs operating in Rhode Island. To winnow this list of 46 sites, AIR then worked with the 21st CCLC director at RIDE to review the full list of possible sites and eliminated six from consideration (some sites were undergoing extensive staffing transitions and therefore were not good candidates for the study or were undergoing transitions of other kinds that could make participation difficult). Next, AIR worked with the RIDE 21st CCLC quality advisors to further narrow the selection. The quality advisors, who are contracted with RIDE to conduct regular 21st CCLC site visits at 21st CCLCs (scoring activities using the Weikert Center's Program Quality Assessment [PQA] tools), were asked to categorize the remaining 40 sites' 21st CCLC programming using values of "low quality," "average," "high quality," "very high quality," and "don't know." They also could indicate whether each site was "improving," "staying the same," or "getting worse." Based on the responses from the quality advisors, and in final consultation with the 21st CCLC director, we reduced the list of 40 candidate sites to 23 sites, 12 serving elementary youth and 11 serving middle school youth. One elementary site was later excluded, yielding a final analytic sample of 22 sites deemed to be high quality, 11 sites each in terms of sites serving elementary youth and middle school youth.

Our selection procedure only yielded a sample of sites that was likely to have higher quality 21st CCLC programming than a random sampling procedure was likely to generate. The goal of the selection procedure was not to select all sites in Rhode Island that were high quality but rather concentrate the sample with high-quality sites to focus the evaluation and, hopefully, enhance discovery of effects driven by high-quality programming. Also, AIR confirmed the generally high-quality nature of the sample during the evaluation by conducting our own site visit observations (as presented later in this report). Scores from our activity observations showed that the programs selected for inclusion in the sample were indeed generally high quality, albeit with some areas for growth.

AIR's evaluation, and all results presented in this report, are therefore based on data collected from this final set of 22 centers. That is, youth participant data, all youth survey results, and all

youth outcomes shown throughout this document are predicated on youth attending these 22 centers. (However, the impact analyses presented in Section 7 use a somewhat smaller group of centers from this set of 22 centers.) This must be kept in mind when reviewing our evaluation findings: The findings are based on selection of sites perceived to be high quality, and therefore the findings speak strictly to the effect of high-quality programming on youth outcomes. The results are not generalizable to all 21st CCLCs across Rhode Island.

Data Sources

To address the evaluation questions, we collected data from all 22 sites identified for inclusion in the sample. These data stemmed from a variety of sources, as outlined in Exhibit 1.

Data source	Description
Program director/site coordinator interviews (RQ1, RQ2)	In summer 2017, AIR conducted a series of 1-hour interviews with program coordinators and site directors. Ten interviews were conducted in total, with interviewees selected in conference with RIDE. The interview questions sought to uncover common practices and challenges among high-quality programs, along with information concerning program goals and program success. The interviews were used to better understand 21st CCLC programming in Rhode Island and to guide survey development. A copy of the interview protocol is in Appendix A.
Site coordinator survey (RQ1, RQ2)	A survey of site coordinators at 19 centers identified as being high quality was conducted in November 2017. This survey was a follow-up to the interviews and sought to confirm some of the major themes discovered through the interview process. Like the interviews, data from this survey helped drive the overall evaluation plan, notably regarding observation protocols, teacher survey items, and youth survey items. A copy of the site coordinator survey is in Appendix B.
Observations (RQ1, RQ2)	Observations of all sample programs were conducted during the 2018– 19 school year. Programs serving elementary youth were visited twice during the year, whereas programs serving middle school-age youth were visited once. Each visit included observations of up to four activities, with an observer scoring each activity against a modified (shortened) version of the PQA. Activities were observed for 30 minutes each to ensure that we could visit multiple activities during each visit. A copy of the observation protocol is in Appendix C.
Teacher surveys (Teacher Survey of Academic and Youth Outcomes [SAYO-T]; RQ3)	During the 2018–19 school year, AIR asked program staff at all sites serving elementary youth to administer both a pre- and postadministration version of the SAYO-T. A copy of the SAYO-T is in Appendix D.

Exhibit 1. Data Sources

Data source	Description
Youth Outcome Surveys (Youth Motivation and Engagement Survey [YMEB]; RQ3)	For programs serving middle school youth, AIR collected pre- and postadministration survey data concerning interpersonal skills and positive mindsets. The postsurvey also collected information on self- esteem improvement, interest development, and youth perceptions concerning how the program helped them. Surveys were administered directly by programs themselves via computer in fall and spring of the 2018–19 school year. A copy of the youth survey is in Appendix E.
Youth Experience Survey (RQ3)	For programs serving middle school youth, AIR collected a single youth survey concerning youth perceptions on program experience. The survey was administered by programs themselves via computer in spring 2019. A copy of the survey is in Appendix F.
Youth Engagement Survey (RQ3)	For programs serving middle school youth, AIR asked programs to administer a youth engagement survey at three points during the year. This survey was administered via paper copy at three points during 2018–19 (programs were provided administration date ranges for each survey but could determine specific dates themselves). These were short surveys designed to capture "snapshots" of program quality throughout the year. A copy of the survey is in Appendix G.
Cityspan 21st CCLC Data (RQ3)	Rhode Island 21st CCLC programs enter data on operations, activities, staffing, and attendance into a third-party data collection system called Cityspan. RIDE sent data extracted from Cityspan to AIR for inclusion in our impact models.
RIDE state warehouse data (RQ3)	AIR obtained data on youth participant demographics and school- related outcomes (e.g., assessment scores) directly from RIDE. These data were linked to 21st CCLC participants via dummy IDs created by RIDE. AIR also obtained a dataset of comparison youth who attended the same schools as 21st CCLC attendees but who were not participants themselves. RIDE also provided data on the schools themselves (for inclusion in our impact models).

Methods

AIR's goal in this evaluation was to explore questions relating to quality. As indicated by the RQs, this goal was twofold. First, by addressing RQ1 and RQ2, we sought to explore the practices and activities of programs identified as high quality. Second, we sought to identify how these high-quality programs are having an impact on participating youth (RQ3). The RQs were written to frame and define this exploration.

To address RQ1 and RQ2 concerning process and content-specific quality practices, AIR relied on site visit observations and interviews. We analyzed the site visit observation scores using basic descriptive analysis, and we analyzed the interviews with NVivo software (qualitative analysis). Combined, these analyses provided a high-level view of programming practices and procedures among the sample programs. To address RQ3, we collected program and outcome data directly from RIDE and administered a series of surveys at program sites to gauge youth experiences and youth outcomes. These data were used in both correlational models (see Section 6) and in models employing a comparison group (with the comparison group created via propensity score matching [PSM]; see Section 7). All analyses relating to the RQs will now be described in more detail.

Analyses Related to RQ1 and RQ2

To answer RQ1 and RQ2, AIR collected site visit observations using a truncated version of the Weikert Center's PQA, which were later summarized descriptively. AIR also conducted interviews with a mix of grant directors and site coordinators, with notes taken during the interviews analyzed using NVivo software.

Analyses Related to RQ3

Given that RQ3 is properly a question about program impact, the analyses related to RQ3 were more extensive than those relating to RQ1 and RQ2. Specifically, AIR used the following analytic methods to address RQ3:

- Analyses to Create Scale Scores. Many questions appearing on the youth and teacher surveys were designed as sets of questions all pointing to an underlying construct. After collecting survey responses, AIR combined survey items from the same set (typically five or six questions) to form construct scale scores, scores that could summarize the underlying construct (e.g., self-regulation as gauged by a teacher, relationships with adults as perceived by youth). To do this, AIR used Rasch modeling. Using Rasch, we converted item sets into scale scores that corresponded to the original survey response categories (e.g., a new scale score value of 1 could roughly equate to "not at all true" on a survey response scale for a given construct, whereas a 4 could roughly equal "completely true" on that same construct). Depending on the type of survey data involved, these scores could be left as individual scores (e.g., for use in analyzing youth survey data) or averaged to the center level (notably for youth perceptions of program quality). We analyzed construct scores as part of our correlational analysis, with pre-post survey scale score changes used as outcomes variables.
- **Correlational Multilevel Modeling Techniques.** As part of analyses intended to explore correlations across youth characteristics, center characteristics, and youth outcomes, we ran multilevel models. Multilevel modeling is useful when the data are nested, such as is the case when groups of youth all attend the same center. Center characteristics can affect groups of youth in a systemic way (e.g., programming goals, specific staff), so in these cases it is important to control for not only individual youth differences but also center differences. This is particularly important when investigating questions about overall program quality.

• Propensity Score Matching. In contrast to the multilevel modeling techniques, PSM approaches were employed to estimate the causal impact of 21st CCLC program participation on student performance in terms of youth outcomes (e.g., state assessment scores). Given that 21st CCLC program participants were not randomly assigned to participate in the program, we needed to address the problem of selection bias before we could explore program impact from a causal perspective. That is, it is likely that students who participated in 21st CCLC programming were different from those students attending the same schools who did not enroll in 21st CCLC. These differences can bias estimates of program effectiveness because they make it difficult to disentangle preexisting differences between participants and nonparticipants from program impact. PSM can mitigate existing selection bias in program effect. Note, however, that PSM approaches only account for variables contained in the datasets; any preexisting differences between treatment and control youth that are not captured in the available variables (whether directly or indirectly) cannot be controlled and can thereby introduce bias. We discuss this further in the limitations section.

We provide further detail concerning analytic approaches at the start of each section or subsection, where appropriate.

Limitations and Challenges

There are limitations associated with the types of data collected by AIR during 2018–19 and limitations intrinsic to the methods employed to support the evaluation. Without attempting to be exhaustive, the primary limitations are as follows:

Teacher surveys were administered directly by programs; teacher surveys, by their nature, also can be biased. AIR asked centers included in the sample that served elementary youth to administer a teacher survey in a pre-post format. School-day teachers completed the teacher surveys, up to one pre-post survey for each 21st CCLC participant. The centers themselves were responsible for identifying these teachers, sending them the surveys (via online systems set up by AIR), following up with the teachers, and ensuring the surveys were taken correctly. We can hypothesize that not all centers were able to do this equally well.

In addition, teacher surveys can be biased simply by their nature. Teachers will not have the same familiarity with all participants for whom they complete surveys, and it is possible that a well-meaning teacher could fill out a survey with an unconscious bias based on his or her initial impression of a student or based on selective recall.

• Youth surveys were administered by the centers themselves; youth surveys, by their nature, also can be biased. AIR asked centers included in the sample that were serving

middle school youth to administer youth surveys. During 2018–19, centers administered three youth engagement surveys (paper), a pre-post youth outcome survey (online), and a single retrospective program experience survey (also online). As with the teacher surveys, we can hypothesize that not all centers were able to administer these surveys equally well and had unequal access to computer labs for the online surveys. Also, Duckworth and Yeager (2015) identified three sources of potential bias for youth surveys in particular:

- Social desirability (answering a question based on what is deemed acceptable or wanted rather than on what is true)
- A desire to be agreeable (answering positively to a question, or high on an agreement scale, not because that answer is true but because the respondent tends to be agreeable)
- Reference bias (basing responses on a comparison to one's immediate peers, a standard that varies from center to center and school to school)
- An unknown number of youth participants did not take end-of-year youth outcome surveys seriously. Following administration of the youth outcome postsurvey, two Rhode Island 21st CCLC staff indicated to RIDE and AIR that they had observed some youth clicking through the survey very quickly. AIR subsequently ran a series of analyses on the survey datasets in an attempt to uncover suspicious survey response patterns (e.g., answering all questions the same way). However, we were unable to identify any response patterns that clearly warranted exclusion. AIR therefore used survey start and end times to omit surveys that took less than one minute to complete. Based on this filter, we removed 24 out of 440 total youth postsurvey records. Whether retained survey records still include responses from youth who simply clicked through is unknown.
- Only one set of PQA observations was conducted at centers serving middle-school youth. While AIR conducted PQA observations twice at every center serving elementary-age youth, we conducted observations at centers serving middle-school youth only once during the 2018–19 school year. We did this to reduce data-reporting burden for middle-school centers (which reported more survey data than did elementary centers), and due to resource constraints. This means that PQA findings for centers serving middle-school youth are predicated on less data than are PQA findings for elementary centers. Also note that AIR used a truncated form of the PQA instrument, given our interest in covering multiple activities during a single visit.
- Attendance and participation data are self-reported by grantees. In Rhode Island, 21st CCLC grantees are responsible for collecting and tracking youth attendance and participation data and reporting those data to RIDE. How well grantees do this likely varies. Some grantees may have provided more accurate data than others did.

• **PSM is not as strong as random assignment.** The ideal way to compare 21st CCLC youth participants with nonparticipants is to randomly assign youth either to participate or not participate in a 21st CCLC program. However, the youth at Rhode Island 21st CCLCs were not selected at random to participate. Instead, parents and families could self-select to enroll (or not) their children into one of the publicly available community learning centers.

In any evaluation of a program where participants are not randomly assigned to conditions (to participate or not participate), the issue of selection is paramount. We know that it is likely that youth who participate in 21st CCLC programming are different from those who do not attend. We used PSM to mitigate this bias, building a comparison group similar to the treatment population in terms of observable characteristics (e.g., demographics, prior year test scores). This approach is limited to the variables we have available, however. If some unobservable youth characteristic, for example, predicts 21st CCLC participation but is unavailable for PSM, bias can result. This limitation constitutes an unknown. The findings should therefore be interpreted with caution.

• Nonparticipants in the comparison group could have participated in non-21st CCLC programming. Following the preceding limitation, one significant unknown in this evaluation is the extent to which nonparticipants used to create some of the comparison groups participated in 21st CCLC program alternatives (e.g., team sports, competing non-21st CCLC afterschool programs at other sites). That is, a youth who is demographically similar to a participant (and attending the same school) might be included in the comparison group as a nonparticipant; but if that particular youth participated in other non-21st CCLC afterschool programming, then the effects of 21st CCLC programming may be more difficult to discern (i.e., the comparison in that case would not be "treatment versus nontreatment" but more akin to "treatment A versus treatment B," where only one of the treatments is known). Because we do not possess exhaustive information concerning nonparticipants' non-21st CCLC afterschool activities, this unknown must simply be kept in mind while reviewing the impact results.¹

¹ It bears noting that this type of limitation would likely pertain to any random-assignment model as well.

Section 3. Sample Grants and Centers

Programs funded by 21st CCLC grants often are characterized by a diversity of approaches to 21st CCLC programming based on organization type, program priorities, available staffing, and populations served. This section summarizes the characteristics of the 22 centers selected as part of our analytic sample, along with basic grant information. We also present data for all youth who attended the sample centers during summer 2018 and the 2018–19 school year.

Overall, our sample included 14 grants, 22 centers associated with those grants, and 5,062 total attendees associated with those centers.

Grant and Center Overview

The 11 elementary centers selected for inclusion in the study were associated with nine 21st CCLC grants, whereas the 11 middle school centers were associated with seven 21st CCLC grants. However, in two cases the same grant oversaw an elementary center and a middle school center. In all, our sample therefore represented 14 unique 21st CCLC grants. Of these 14 grants, a plurality were community-based organizations, and the second-largest category was school districts. See Exhibit 2.



Exhibit 2. Grants Associated With Sample Centers, by Grant Entity Type

As for the centers themselves, all were in public schools. Of these, one elementary center and one middle school were in public charter schools. On average, elementary centers had been in operation for about 13 years, whereas middle school centers had been in operation for about 9 years.²

² This implies serial 21st CCLC grants, given that 21st CCLC grants cannot be for more than 5 years. Also, a few centers with short histories were associated with grants with longer histories, the center location having been moved by the grantee for various reasons.

Center Staffing

To gain a sense of how the centers varied, AIR obtained 2018–19 staffing data from RIDE. These data are reported by the centers themselves and are submitted in terms of staffing for summer, fall, and spring terms. Centers are instructed to report unique individuals staffing each center (not full-time equivalents), including only "the people who work, in either a paid or unpaid capacity, in the center in direct support of the program and those that provided support for any activity for any amount of time in this term." This follows the 21st CCLC reporting requirements set forth by the U.S. Department of Education. We present these staffing figures in Exhibit 3, showing average numbers of staff by staff category (split by paid and volunteer). Data for elementary and middle school centers are shown separately.

		Elementary			Middle		
		Summer	Fall	Spring	Summer	Fall	Spring
	Administrators	2.82	3.2	3	4.64	5.91	6
	College students	3	1.44	3	0.3	1.3	1.56
	Community member	1.25	2.33	1.89	1	2.1	1.8
	High school students	3.43	0.71	1.38	0.4	0.8	0.7
Paid	Parents	0	0.43	0.38	0	0	0.22
	School-day teachers	4.67	4.33	5	1.73	5	6
	Other nonteaching school staff	1.89	3.38	4.63	1.73	3	2.64
	Subcontracted staff	1.5	3.5	4.5	1.27	7.18	8.91
	Other	7.25	1	0	0.11	0.5	0.5
	Administrators	0	0	0.5	0	0	0
	College students	4	21.63	21.25	0.3	2.2	2.2
	Community member	0.5	0.88	0.33	0.22	0.9	0.5
	High school students	3.22	1.44	2.38	0.3	0.2	1.22
Volunteer	Parents	0.75	1	2.88	0.22	0.2	0.29
	School-day teachers	0	0.14	1.14	0	0.2	0
	Other nonteaching school staff	0	0.14	0.29	0.1	0.55	0.38
	Subcontracted staff	0.67	0	0.43	0.8	0	1
	Other	0	0	0	0.89	0.2	0
	Total paid	17.45	17.5	21.5	10.91	25.36	27.64
	Total volunteer	5.2	20.3	23	2.45	4.09	4.45

Exhibit 3. Average Number of Staff per Center, by Staff Type and Term

There are several prominent takeaways from these data. First, middle school centers rely on a higher average number of administrators than do elementary centers. Second, elementary centers in particular rely on teachers and high school students (volunteers) for summer programming. Third, centers serving younger youth seem to involve parents more than do centers serving older youth (notably as volunteers), whereas centers serving older youth rely more on subcontractors (paid). Elementary centers also appeared to rely heavily on college students, though this finding is less meaningful than it might appear; the high average was driven entirely by one center associated with a university.

These high-level averages do not convey the variation in staffing patterns across centers, however. To better capture this variation, Exhibits 4 and 5 depict a series of radar charts showing each center's reliance on given staff types (Exhibit 4 shows elementary centers, and Exhibit 5 shows middle school centers).

Based on the charts shown in Exhibits 4 and 5, wide variety exists in how centers staff their programs, with the charts showing that some categories of staff are proportionally more important for some centers than for others. For instance, looking at elementary centers, college students figure prominently at about four centers

How to Read the Radar Charts

To read the radar charts in Exhibits 4 and 5, first review the staffing codes shown in each exhibit's legend. Then, view each set of charts as if they were analog clocks, with hands pointing to the major staff categories at each center. The charts are meant to convey the variation in staffing patterns across centers, along with rough estimates for relative staff proportions at each center. They are not meant to provide precise information about overall staffing counts or percentages.

(with a "hand" pointing toward college students at roughly the five-o-clock position), whereas subcontracted staff are more important at middle school sites (with a "hand" pointing toward subcontractors for at least six of the centers).

The primary lesson of these charts is that there appeared to be no single approach to providing programming at the 22 centers selected for inclusion in the study, though we can detect modest themes. Granting that each center in the sample was deemed high quality, there appear to be many staffing approaches when it comes to running a quality program. The specific approach will, presumably, depend on local context, resources, program size, and need. This point is particularly important to bear in mind when reviewing the interview findings, as described in Section 4.



Exhibit 4. Elementary Program School-Year Staffing Models (Percentage of Staff by Type, Combined Fall and Spring Staff, Paid and Volunteer)

Note. Admin. = center administrator; SD Teach = school-day teacher; NTSS = nonteaching school staff; Sub. = Subcontracted staff; Col. St. = college student; HS St. = High school student; Par. = parent; CM = community member.



Exhibit 5. Middle School Program School-Year Staffing Models (Percent of Staff by Type, Combined Fall and Spring Staff, Combined Paid and Volunteer)

Note. Admin. = center administrator; SD Teach = school-day teacher; NTSS = nonteaching school staff; Sub. = Subcontracted staff; Col. St. = college student; HS St. = High school student; Par. = parent; CM = community member.

Center-Wide Attendance Levels

As another way to assess differences across centers, we analyzed total attendees per center as reported by the centers themselves. The results showed that, for both elementary and middle school sites, the size of program varied widely. Although averages for both types of centers were modestly similar (206 total attendees for elementary centers, 255 total attendees for middle school centers), the median values were far apart at 139 for elementary centers and 304 for middle school centers. Notwithstanding, the largest center, by far, was an elementary center, with more than 700 total attendees reported. The standard deviations for both elementary and middle school were very large, at 185 and 116, respectively, which shows a wide range of program size within both subgroups. See Exhibit 6.

	Mean	Median	Minimum	Maximum	Standard deviation
Elementary centers	205.5	139	83	727	185.0
Middle school centers	254.7	304	79	429	115.5

Exhibit 6. Total Attendees, E	lementary and Middle School Centers
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These figures consider all youth attending during an entire year, however, and do not show how attendance can fluctuate across months. To explore total attendance patterns in a more detailed way, we looked at total attendance by month, again split by elementary or middle school center status (Exhibit 7). This shows that, in all, both elementary and middle school centers tended to serve approximately 1,400 youth per month, with elementary centers serving more youth in summer. Also, middle school centers served more youth overall early in the school year, about the same number as elementary centers mid-year, and fewer youth by the end of the school year. Both elementary and middle school centers have a dip in attendance in December, as expected given typical holiday schedules.



Exhibit 7. Total Number of Attendees Served Each Month in 2018–19

On average, monthly attendance for elementary centers as a group (looking only at October through May) was 117 and 112 for middle school centers. The lowest total attendance value for any month (again, looking only at October through May) was 51 for elementary centers and 43 for middle school centers. The maximum total attendance for elementary centers for a single month was 343 and 160 for middle school centers.

More information concerning individual youth participation levels is in the section titled Youth-Level Participation Data. The data presented here simply provide a general sense of the total attendance levels across the school year.

Center Priorities

During fall 2017, AIR asked all sample center coordinators to respond to an online survey concerning center priorities. We first asked centers to indicate their priorities in terms of overall program goals and then in terms of activity types offered at the center. Overall, we received 19 completed surveys, for an 86% response rate.

In terms of center goals, we provided respondents with a list of broad 10 goals and asked them to indicate how much of a priority each one was for their center. The question stem was: "On a scale of 1 to 10, where 1 is "Not a priority" and 10 is "Very high priority," please indicate the extent to which each of the following is a priority for your program in terms of overall program goals." All response options are in Exhibit 8, along with the percentage of respondents indicating that each statement was at least a seven on the 1-to-10 priority scale.

As shown by Exhibit 8, all respondents indicated that enhancing youth engagement in learning was a center priority, whereas all but one respondent indicated that both helping develop positive youth interpersonal skills and helping youth experience a sense of belonging and connectedness through positive and supportive relationships were priorities. Respondents overall were less likely to say that building interest in foreign languages/cultures was a priority or that building interest in the arts was a priority. Interestingly, the largest differences between elementary and middle school centers were observed for the goals building interest in reading/literacy and building interest in STEM (science, technology, engineering, and mathematics); elementary centers were much more likely than were middle school centers to indicate that building interest in these areas was a priority.

Exhibit 8. Site Priorities (Percentage of Site Coordinators Rating Each Goal as At Least a 7 on a Scale of 1 to 10)

Enhancing youth engagement in learning.	100% 100%			
Helping develop positive youth interpersonal skills.	100% 89%			
Helping youth experience a sense of belonging and connectedness through positive and supportive relationships.	100% 89%			
Building youth self-management skills (whether cognitive or emotional).	100% 78%			
Building interest in Reading/Literacy.	100% 56%			
Helping youth improve critical thinking/problem solving skills.	90% 89%			
Improving youth perseverance and effort.	90% 89%			
Building youth sense of purpose (e.g., "this is why what you do with your life matters").	90% 89%			
Developing youth interest by exploring new things.	90% 89%			
Helping youth develop a sense of agency (e.g., helping develop positive mindsets and beliefs, including confidence and a sense of self-efficacy).	90% 89%			
Building interest in STEM.	90% 56%			
Building interest in the Arts.	80% 78%			
Building interest in Foreign cultures/languages.	70% 56%			
Elementary Middle				

We also asked respondents to indicate approximately how many hours their center operated each week and approximately how much time was spent on different types of activities. Overall, centers estimated that they offered just under 14 hours of programming total per week (13 hours on average for middle school centers, 15 hours on average for elementary centers). In terms of specific activities, respondents could choose one of five responses options for each activity type we presented on the survey: "Less than one hour a week," "1–2 hours per week," "3–5 hours per week," "6–10 hours per week," and "More than 10 hours per week." Grouping
answers in the highest two categories (i.e., 6 hours or more), we found that more than one third of centers spend at least 6 hours on sports/recreation (one elementary center and six middle school centers), about one third spend more than 6 hours on STEM/STEAM (science, technology, engineering, arts, and mathematics) enrichment (two elementary centers and four middle school centers), and about one fifth spend 6 or more hours each on homework help (two elementary centers, two middle school centers) and arts enrichment (one elementary center and three middle school centers). As these results show, coordinators associated with middle school centers were more likely to indicate spending large amounts of time on STEM/STEAM, which is interesting given the fact that all elementary center coordinators indicated that *building interest in STEM* was a center priority (versus about half of the middle school coordinators). Coordinators associated with middle schools also were much more likely to report larger amounts of time spent on sports and recreation, although this is not as surprising given the age groups served.

Youth-Level Participation Data

We also sought to explore the extent to which youth participated in 21st CCLC programming at elementary and middle school centers. To do this, we assessed how often youth attended 21st CCLC activities in terms of days, using the federal definition of a regular attendee (30 days or more) as a starting point and then grouping youth who attended 30–59 days or more than 90 days. Unsurprisingly, a greater proportion of elementary participants reached the threshold for regular attendance (slightly more than half) than did middle school participants (less than one third) and generally were more likely to attend at higher levels than were middle school participants. This is typical for 21st CCLC programs, given that older youth often have competing programming options during afterschool hours. See Exhibit 9. Elementary youth participated in 21st CCLC programming for 55 days on average (median of 30), whereas middle school youth participated for 25 days on average (median of 16). Standard deviations for both groups were large, however, at 54 days and 26 days, respectively.



Exhibit 9. Percentage of Attendees by Days of Attendance Range

Note. Based on 2,260 total elementary youth and 2,829 middle school youth.

To provide a better sense of the overall attendance levels at both elementary and middle school centers, Exhibits 10 and 11 present the same information as in Exhibit 9 but as histograms rather than regular attendance groupings. This clearly shows the long tail associated with participation levels among elementary youth.







Exhibit 11. Histogram of Total Days Attended by Youth Participants (Middle-School Centers)

Finally, Exhibit 12 shows percentiles for elementary and middle school centers (25th percentile, median, and 75th percentile). The vertical lines shown for each group of centers therefore represent 50% of all participants in each group. As with the histograms in Exhibits 10 and 11, this shows how elementary youth generally attended more often than did middle school youth.

Exhibit 12. Percentiles for Total Days Attended, Elementary and Middle School Centers



Note. Minimum days attended was 1 for both elementary and middle school. The maximum days attended for elementary-age youth was 219 and 167 for middle school youth.

We also sought to explore how youth spent their time in 21st CCLC, investigating centerreported youth-level activity session data. Because activity reports have start and end times in Rhode Island, this allowed us to explore total hours of participation and to explore those hours in terms of activity types. As far as total hours of participation, elementary youth participated an average of 149 hours during the year (with a standard deviation of 168), whereas middle school youth participated 53 total hours (with a standard deviation of 61). On average, elementary participants spent 48 hours on STEM-related activities (the highest amount) and 28 hours on homework help. Middle school participants spent 12 hours on average in STEM activities and 12 hours in physical education activities. Middle school youth also spent an average of 11 hours in arts/music activities. See Exhibit 13.

	Elementary			Middle
	Mean	Standard deviation	Mean	Standard deviation
Arts/music	16	26	11	23
College/career	0	0	2	8
Community service	7	33	8	30
Counseling	0	0	1	10
Drug abuse prevention	0	0	0	1
English learner support	1	11	0	1
Entrepreneurial education	0	1	0	2
Homework help	28	95	2	11
Literacy	17	36	1	4
Mentoring	8	27	0	3
Physical education	13	26	12	21
STEM	48	112	12	34
Truancy prevention	1	7	0	0
Tutoring	4	13	2	15
Violence prevention	0	1	0	2
Youth leadership	2	8	1	7

Exhibit 13. Average Hours Spent in Different Types of Activities, Elementary and Middle	9
School Centers	

Note. Data calculated using total minutes but converted to hours to facilitate interpretation. Median values for nearly all activity categories for both elementary and middle school centers were zero.

To explore youth participation hours more thoroughly, we also calculated the proportion of time that each participant spent in activities of different types (using each participant's total hours as the denominator). Exhibit 14 displays the average proportion of time that youth spent in each type of activity. Interestingly, this shows a clear emphasis on STEM activities as well as arts/music (in terms of participation) for both elementary and middle school participants.

Physical education accounted for significant time for both elementary and middle school participants as well but was more prominent among middle school participants than elementary participants.





Finally, as a last way to view participation levels by activity type, we also calculated the percentage of youth who spent at least 10 hours in each type of activity. The results again show STEM, arts/music, and physical education as top activity categories (Exhibit 15).



Exhibit 15. Percentage of Attendees With 10 Hours or More in Each Activity Type (Elementary and Middle -School Youth)

Youth Participant Demographics

AIR also analyzed participant demographic data as provided by RIDE. In terms of grade levels served, elementary and middle school centers served the grade levels expected, with elementary centers concentrating on youth between kindergarten and Grade 5, whereas middle school centers served primarily youth in Grades 6–8. See Exhibits 16 and 17.

	Elementary		Middle		
Grade	N	Percentage	N	Percentage	
PF					
KF	261	11.7%			
1st	367	16.4%			
2nd	427	19.1%			
3rd	415	18.6%			

	Elementary		Middle	
Grade	N	Percentage	N	Percentage
4th	429	19.2%		
5th	281	12.6%	258	9.1%
6th	36	1.6%	987	35.0%
7th			761	27.0%
8th			779	27.6%
9th			32	1.1%
10th				
11th				
12th				
TOTAL ^a	2,236	100.0%	2,821	100.0%

^aThe total excludes 14 attendees who were associated primarily with one nonsample center location. We suppressed values less than 10, so the column totals will appear larger than sum of values shown.



Exhibit 17. Number of Attendees by Grade Level, Elementary and Middle School Centers

Note. The total excludes 14 attendees who were associated primarily with one nonsample center location. Values less than 10 are not displayed.

In terms of gender, elementary youth were almost evenly split between males and females, whereas middle school youth were slightly more likely to be female (Exhibit 18).

	Eleme	ntary	Middle		
	N	Percentage	N	Percentage	
Female	1,124	50.3%	1,523	54.0%	
Male	1,112	49.7%	1,298	46.0%	
TOTAL ^a	2,236	100.0%	2,821	100.0%	

Exhibit 18. Attendees by Group and Gender

^aTotals exclude 14 youth primarily associated with a nonsample center, along with 24 elementary youth and eight middle school youth without gender data.

In terms of ethnicity, elementary centers served slightly more White (not Hispanic) youth as a proportion of all participants than did middle school centers, with middle school centers serving proportionally more Hispanic youth. For both elementary and middle school centers, however, Hispanic youth were the largest group of youth served. See Exhibits 19 and 20.

Exhibit 19.	Sample	Participants	by Ethnicity,	Elementary a	and Middle	School Centers
			~,,,			

	Elementary		Middle	
	N	Percentage	N	Percentage
Native American	96	4.3%	80	2.8%
Asian/Pacific Islander	104	4.7%	103	3.7%
Black (Not Hispanic)	478	21.4%	616	21.8%
Hispanic	962	43.0%	1,569	55.6%
White (Not Hispanic)	596	26.7%	453	16.1%
TOTAL ^a	2,236	100.0%	2,821	100.0%

^aTotals exclude 14 youth primarily associated with a nonsample center, along with 24 elementary youth and eight middle school youth without gender data.



Exhibit 20. Sample Participants by Ethnicity, Elementary and Middle School Centers

One of the primary goals of 21st CCLC programming generally is to provide opportunities for youth who are economically disadvantaged or who need additional academic support. To gauge the extent to which sample centers were serving such youth, AIR calculated the percentage of youth participants with an individualized education plan (IEP), who Title I eligible, or who were eligible for free or reduced-price lunch. For both elementary and middle school centers, about one fifth of the participants had an IEP (22% for elementary centers, 21.2% for middle school centers). Elementary centers had a higher percentage of youth who were Title I eligible (95.6% compared with 83.5%) but had fewer youth eligible for free or reduced-price lunch (74.4% compared with 83.7%). See Exhibits 21 and 22. Overall, the centers selected for the sample were indeed serving youth the program is intended to serve.

	Elementary		Mi	ddle
	N	Percentage	N	Percentage
IEP	498	22.0%	599	21.2%
Title I eligible	2,167	95.9%	2,361	83.5%
Reduced-price lunch eligible	181	8.0%	215	7.6%
Free lunch eligible	1,500	66.4%	2,152	76.1%
Free or Reduced-price lunch eligible	1,681	74.4%	2,367	83.7%

Exhibit 21.	Attendees by Gro	up and Student IEP	, Title I, and	Lunch Status



Exhibit 22. Percentage of Attendees by Group and Student IEP, Title I, and Lunch Status

Section 4. Center PQA Observations

All centers included in our sample were selected because of their perceived high quality. During the 2018–19 school year, AIR conducted observations at each center selected for the sample as a way to further assess this classification and specify relative strengths and weaknesses in terms of specific kinds of quality. The scoring process also provided information useful for addressing RQ1:

• What approaches are higher quality 21st CCLC subgrantees using to ensure process quality in their programs?

The scoring itself, which covers a wide variety of domains relevant to overall process quality, provides data concerning the approaches that sample centers are taking to ensure high quality in their activity offerings. This section therefore presents data collected as part of our activity observations.

Conducting the Observations

Centers serving elementary youth were visited twice during the 2018–19 year, whereas centers serving middle school youth were visited once. AIR's decision to visit elementary centers twice and middle school centers only once was driven by the fact that we asked middle school centers to provide more survey data. The surveys, which included three separate youth engagement surveys and a youth program experience survey, not only required middle school centers to spend more time on surveys than required from elementary centers but also yielded data not available from elementary centers. This two-and-one approach also was an attempt to balance resources between the two types of centers.

Each site visit was conducted by one of two observers, with each visit lasting approximately 2– 3 hours on a single day. Each visit included up to four 30-minute observations (i.e., up to four separate activities observed for up to 30 minutes each), with the visitor scoring each activity against a truncated form of the PQA observation protocol (a copy of which is in Appendix C). Regardless of the total number of activities observed at a given site (ranging from one activity up to a total of six activities, with an average of four per site), we averaged domain scores to the center level to derive a center-level estimate for each quality domain included on the shortened PQA. The data shown in this section are elementary and middle school center group averages based on these center-level average scores.

The two observers scored three of the same activities together on the same day, scoring without consultation with each other as a way to check interrater reliability. Comparing these scores showed that one rater consistently rated harder than the other (i.e., lower on the PQA

scale). Scores shown here are not weighted or adjusted, however, so the data may be subject to systemic bias. That said, the two visitors split the elementary and middle school sites about evenly, and we can theorize that this bias should apply across all domains in approximately the same way (although this cannot be confirmed). Thus, the data can helpfully provide a view of sample-wide strengths and weaknesses, even if the scores should not be understood as providing perfectly reliable quality data for individual centers.³

This section therefore presents average quality domain scores for elementary and middle school sites as two overall groups, with a focus on areas that either scored very high or very low relative to all domain scores. All scores are based on a five-point scale (individual PQA items can be scored as a 1, a 3, or a 5), with 5 being the highest rating.

PQA Strengths and Weaknesses

Each activity observed was scored against 26 PQA items, collectively representing 13 quality domains. AIR selected the items and domains based on prior experience using PQA-derived data (including prior analysis involving PQA-derived data). The specific domain items, along with a brief description of what each domain item covered, are in Exhibit 23. Average scores for elementary centers and middle school centers also are provided.

Domain item name	Domain notes ^a	Elementary	Middle
Session Flow 1	Staff explain the activity clearly.	4.4	4.6
Engagement 1	Activities involve youth in engaging with materials or ideas or improving skill through guided practice for at least half the time.	4.7	5.0
Engagement 2	Staff provide all youth with structured opportunities to talk about what they are doing.	3.8	3.8
Engagement 3 (Y)	The activities balance concrete experiences involving materials, people, and projects with abstract learning.	3.9	4.5
Engagement 4 (Y)	Activities result in tangible products or performances that reflect youth designs.	3.5	4.6
Connections 1	Staff help connect activity to youth personal experiences.	4.1	4.4
Academic Climate 1	Activities are appropriately challenging for all participants.	4.1	4.6

Exhibit 23. PQA Items Scored During Site Visits

³ It logically follows that the scores presented in this report should not be compared with scores from other Rhode Island 21st CCLC observation work.

Domain item name	Domain notes ^a	Elementary	Middle
Skill Building 1	Staff encourage all youth to try out skills or attempt higher levels of performance.	4.2	4.5
Skill Building 2	Staff model skills for all youth.	4.0	4.0
Skill Building 3	When youth struggle, staff always provides learning supports or encouragement.	4.7	4.9
Skill Building 4	Staff attribute success to effort, attention, practice, or persistence.	3.9	4.5
Skill Building 5	At least two instances with different youth in which staff-youth conversations include substantive back-and- forth dialogue about activity content.	3.2	3.9
Encouragement 1	Staff supports at least some contributions/ accomplishments of youth by acknowledging what they have said or done with specific, nonevaluative language.	3.5	3.5
Encouragement 2	Staff makes use of frequent open-ended questions.	2.8	3.5
Encouragement 3 (Y)	Staff is almost always actively involved with youth.	4.9	4.7
Emotional Safety	Emotional climate is predominately positive.	4.5	4.9
Belonging 1	Youth do not exhibit any exclusion or staff intervene if it occurs.	4.8	4.9
Belonging 2	Youth strongly identify with program offering.	3.8	4.2
Collaboration 1 (Y)	Staff provides opportunities for all youth to work cooperatively in a team or group.	3.7	4.2
Collaboration 2 (Y)	Staff provides all youth opportunity to participate in activities with interdependent roles.	2.7	4.0
Collaboration 3 (Y)	Staff provides opportunities for all youth to work toward shared goals.	3.0	4.4
Leadership 1 (Y)	Staff provides all youth multiple/extended opportunities to practice group-process skills.	3.5	4.2
Adult Partners 1 (Y)	Staff shares control of most activities with youth, providing guidance/facilitation.	3.5	4.4
Planning 1 (Y)	Staff provides multiple opportunities for youth to make plans for projects and activities (e.g., how to do a task).	2.5	3.6
Choice 1 (Y)	Staff provides opportunities for all youth to make at least one open-ended content choice.	2.9	3.2
Choice 2 (Y)	Staff provides opportunities for all youth to make at least one open-ended process choice.	3.5	4.1

^aThe summary notes are abbreviated versions of the descriptions associated with a score of 5 on the PQA. A "(Y)" next to the domain name indicates a domain mostly targeted at older youth.

Looking at average scores for centers serving elementary youth, the highest-scoring item was Encouragement 3 (4.88), part of the Active Engagement domain (and which focuses on staff being actively involved with youth). The next highest items were Belonging 1 (4.8, lack of exclusion) followed by Engagement 1 (4.68, concrete experiences over abstract material).

Interestingly, however, Encouragement 1 (3.51, staff supporting contributions made by youth with specific language) and Encouragement 2 (2.84, making use of open-ended questions) did not score as highly, nor did Skill Building 5 (3.2, staff-youth interaction included substantive discussion of activity content). To some extent, it is possible that these items were scored lower because of the age of the youth involved (e.g., open-ended questions might not be as appropriate for very young youth), but these areas of relative weakness also could signal an opportunity to strengthen staffing practices during activity sessions.

That said, the lowest scores for elementary centers tended to be in domain items that were more geared for older youth [suffixed by a "(Y)"], and most scores were greater than 3.0, supporting our selection of these centers as generally high quality. See Exhibit 24.





Note. Bars shown in gold represent domains geared more for older youth.

Looking at middle school center scores, all domain item scores were greater than 3.0, again supporting our selection of these centers as generally high quality. The highest scoring domain items were Engagement 1 (5.0, activities involve youth in engaging with materials or ideas or improving skill through guided practice for at least half the time), Belonging 1 (4.94, youth are not exclusive), Skill Building 3 (4.94, staff provide learning supports or encouragement when youth struggle), and Emotional Safety 1 (4.91, emotional climate is positive).

Of some interest, however, is the fact that Choice 1 (3.21, opportunity for youth to make openended content choices) was the lowest scoring item. This may indicate an area where relatively strong programs can be further strengthened in the future via additional emphasis on openended choices. In addition, both Encouragement 1 (3.48, staff supporting contributions made by youth with specific language) and Encouragement 2 (also 3.48, making use of open-ended questions) did not score as highly as other areas, similar to what we observed for elementary centers (although these are still above the mid-point of the scale). See Exhibit 25.

Discussion

Overall, the PQA scores show that our sample of centers included programs with generally high process quality (as defined by the PQA instrument). Elementary centers showed particular strength in terms of actively encouraging youth, ensuring programs are free of exclusive behavior, and offering concrete experiences, while being somewhat less strong in terms of supporting contributions made by youth (using specific language), asking open-ended questions, or substantively interacting with youth regarding activity content. There may, therefore, be room for sample staff to grow in these areas, becoming even more effective through relatively straight-forward practice adjustments.

Middle school centers showed general strength in most domains, with notable strength in terms of engaging youth via guided practice, ensuring programming is not exclusive, providing supports or encouragement for struggling youth, and making sure the emotional climate is safe. Youth choice in terms of content, however, was the lowest scoring item (though still greater than 3.0), which may suggest a straightforward way for middle school centers included in the sample to improve their programs further than they already have. Choice 2, however, which considers opportunities for open-ended choices in terms of *process*, had a score of 4.06.

It must be emphasized that these findings are predicated on a limited number of observations and reflect the perceptions of the reviewers. Although useful, these data likely do not capture the dynamics of programming as carried out by sample centers on a regular basis. These findings must, therefore, be treated with some caution.





Section 5. Interview Findings Concerning Process and Content Quality

The data presented in Section 4 provide data relevant to RQ1 by showing the extent and strength of specific activity leader practices related to process quality. We wanted to further explore RQ1, however, by asking center leaders themselves how they perceive quality and how they ensure the quality of their programming. We also wanted to address RQ2 in this way, given the fact that content-specific practices are difficult to explore as part of observation work or through other types of uniform data collection. That is, we sought to further explore RQ1 and address RQ2 by talking at some length with key program staff about subjects relating to quality.

This section therefore addresses both RQ1 and RQ2 and does so by presenting findings related to AIR-conducted interviews with key center leaders. For convenience, the questions (as presented earlier in this report) are as follows:

- **RQ1.** What approaches are higher quality 21st CCLC subgrantees using to ensure process quality in their programs?
- **RQ2.** What content-specific practices are higher quality 21st CCLC subgrantees using to have an impact on the direct program outcomes specified in the Rhode Island theory of action (e.g., 21st CCLC skills, social and emotional learning) and outcomes related to academic success and college and career readiness?

Overview of the Interviews

To explore center leadership perceptions as they relate to RQ1 and RQ2, during 2017, AIR staff conducted a series of 10 interviews with a mix of program directors (individuals managing one or more 21st CCLC grants), center coordinators (individuals operating a program at a particular location), and individuals who were identified by RIDE as key to grant or program operations at one or more grants. The purpose of the interviews was to uncover themes relating to populations served, program goals, program quality in terms of both process and content quality, and perceived program outcomes.

Given these purposes, AIR, working in concert with RIDE, chose to interview individuals with long experience in 21st CCLC who were associated with programs perceived by RIDE to be high quality. Although the interviews took place before finalizing the sample creation, the 10 individuals selected for the interviews ultimately reflect 18 of the 22 sample center locations (some interviewees work with entities overseeing more than one grant).

The rest of this subsection presents findings from AIR's discussions with these individuals, presenting findings according to the four interview goals noted. A discussion of the findings

appears at the end of the section. A copy of the interview protocols used for all 10 interviews appears in Appendices A and B.

Youth Populations Served

Any discussion of program quality must begin with an assessment of the population the program serves, along with the goals or priorities programs have that are predicated on the perceived needs of those populations. AIR therefore asked interviewees about the youth their program (or programs) serve.

All interviewees indicated that they seek to serve youth attending schools associated with the program, with most respondents further indicating that they serve youth who are economically disadvantaged or in greatest social or academic need. This is very much in keeping with the purpose of 21st CCLC programming nationally and fits with the demographic data presented in Section 2. Beyond these basics, however, details varied somewhat. One interviewee indicated that the center specifically recruits incoming students, whereas others simply noted that they serve specific grade levels (in keeping with their identification as elementary or middle school centers). Four interviewees specifically stated that they serve youth who are English learners, such as youth who are from bilingual or immigrant families. Several interviewees indicated that participants have a parent (or parents) who work late or multiple jobs and need someplace for their child or children to be. One interviewee noted serving youth who have been affected by trauma. Three interviewees also mentioned serving youth who have struggled with behavioral problems during the school day. That is, there was nuance in how the interviewee described their youth populations, even if their descriptions were generally characterized by economic, social, or academic need.

Recruitment approaches varied as well. Several interviewees noted making announcements at meetings, such as at a parent-teacher organization meeting, distributing fliers, or simply letting principals and teachers know that the program is available. Others cited targeted intervention models, where school-day staff (including guidance counselors, school-day teachers, or principals) referred specific youth. Specifically, five interviewees mentioned taking references or referrals of this sort, though it was clear from conversations with the interviewees that more than half may be recruiting in similar fashion (informally, if not formally).

Program Goals and Program Design

Given the youth their centers serve, AIR asked the interviewees to talk about their program goals. Unsurprisingly, goals tended to align well with the populations served, along with overall 21st CCLC program goals. For example, all respondents indicated having academic goals, notably relating to reading/literacy (which was the most commonly mentioned academic subject, with nearly everyone citing literacy or reading improvement as part of their program goals). Two interviewees indicated that their programs specifically focus on teaching students who are learning English as a second language (not simply those with limited English proficiency), whereas two interviewees mentioned STEM or STEAM goals as a particular focus (six interviewees mentioned having STEM or STEAM programming, even if those aspects were not a central focus). The interviewees also tended to cite varying goals relating to attendance levels in terms of the overall number of youth served by the 21st CCLC program or regular attendance rates within the program), along with school attendance.

However, the interviewees generally did not emphasize academic goals. The academic goals were usually mentioned first (likely a reflection of the question prompt, which specifically asked about academic goals), but the interviewees typically spent more discussion time describing other types of program goals.⁴ These other goals often related to social-emotional learning. Six interviewees specifically mentioned having social-emotional goals, whereas other interviewees at least alluded to such goals in their discussion of overall program goals. Further, the interviewees tended to refer back to these kinds of goals in particular when describing program structure and outcomes. Notably, eight interviewees described efforts to build relationships (between staff and youth, mentioned by six individuals, or among youth, mentioned by three individuals, with one person mentioning both). The interviewees also mentioned efforts to provide youth with opportunities for leadership, enable mentorship, and provide attendees with enrichment activities or experiences they otherwise would not have. Also, the stories that interviewees tended to tell—which often involved change observed in a single student typically revolved around student growth in a nonacademic way, such as overcoming shyness or building a specific relationship. That is, although academic improvement is clearly a core aspect of the 21st CCLC programs represented by the interviewees, the responses tended to dwell on social-emotional goals and outcomes.

Other notable goals mentioned by the interviewees included discipline incident reduction, career readiness, dropout prevention, provision of opportunities, and youth safety. These are all common to 21st CCLC programming nationwide. Youth choice and youth voice also were mentioned several times in discussions of program design with respect to program goals. Finally, one interviewee emphasized the importance of support from school-day staff so that a program could meet its goals, going so far as to say "if a program has a strong connection to a school, and the school has strong support for the program, then it can succeed; without that school-day support, a program isn't likely to meet its goals."

⁴ This may simply reflect a perception that academic goals are a given for 21st CCLC programming and therefore do require extensive elaboration.

Process Quality

As part of the interview, respondents were asked the question "What do you think are the primary features of high-quality programming? How do you and your team go about ensuring

your programming is high quality?" Youth voice and youth choice were mentioned several times with respect to ensuring overall program quality, overlapping with responses concerning program goals. Specifically, three respondents said they use youth surveys to gauge youth interest in activities, and several interviewees indicated that they allow youth to choose the activities they want to participate in. Perhaps similar to this, four interviewees indicated that youth engagement is very important to overall program quality. Four interviewees also noted that engaging

"We also try to do good news reports. We make the staff reach out to parents, a sort of village approach, and they give out good news reports. Postcards, such and such had a great day, he helped me with this and THAT, and that made such a difference because their parents actually have details. So, if the student was working in the garden, the teacher might tell the parent 'ask him how the tomato is doing and how tall it is.' So now we have not only the students growing, but the parents as well, and that's really where we focus all our efforts."

the parents is key to ensuring overall program quality and mentioned several different ways of doing this: letters home, open-house events where parents are shown youth accomplishments, the establishment of parent committees, and so on. Parent surveys also were noted as a way to gain insight into parent needs or to capture parent opinion about the program.

Most commonly, however, respondents pointed to their staff when speaking about overall program quality, with six of the 10 interviewees indicating that engaging, kind, friendly staff who connect with the youth themselves are a (if not the) key to a strong, high-quality program. In this respect, interviewees noted the importance of having staff who simply like working with youth, who are "hands-on," who "pay attention to the children," or who are "aware of our students." In addition, one respondent who did not explicitly note staff quality as a key feature of high-quality programming nevertheless suggested that youth engagement was a key feature. Combining this interviewee with the six who noted staff as critical to engaging youth, seven of the 10 interviewees considered that engaging *youth*—whether through staff or by activity structure or offerings—was key to having a high-quality program.

The logical question this raises, of course, concerns how a program can ensure it has highquality, well-trained staff who are effective at engaging youth. Part of the answer is undoubtedly hiring practice, with center leaders looking for individuals who can "pay attention to the children," as already quoted, or, as one respondent stated, "In our hiring, something I always look for is someone who is sympathetic to middle schoolers, [to] challenges that young

"I think the [Rhode Island Program Quality Assessment] process has really opened all our eyes. It was the first time I had gone through it, and I had made the decision that we're going to be using that tool all year long, whether or not we're having someone come in and run it with us. So, it's something we're definitely going to be doing starting in September and training our staff on it—this is the quality that we're looking for, and here are the tangible things we're looking for. making that part of the Training is something we're doing this year." people might be going through." Three respondents further noted employing school-day teachers as part of their strategy because teachers have extensive practice working with youth and, as an added benefit, often know the youth in the program and the challenges each of those youth may have.

However, hiring practice was not mentioned nearly as much as

professional development and staff training. Whether offered through the school (as mentioned by two interviewees), offered by the center or grant itself, through RIDE, or through an outside organization, eight of the 10 interviewees made comments about the importance of training for staff to help them understand how to interact with youth. Interviewees noted multiple types of professional development, including the following:

- Active listening sessions
- STEM professional development
- Expert consultation on working with youth of different demographics
- Training on kindness
- CPR (cardiopulmonary resuscitation)/first aid
- General social-emotional needs training
- Rhode Island Program Quality
 Assessment training
- Relationship building

These specific types of training were mentioned alongside other more general professional development or training associated with the school or other agencies and were generally referred to as very helpful and very important. "I think the [primary feature of a high-quality program] would be consistency, kindness, and attention to detail at work . . . you can make a club out of anything as long as you can engage the children."

"We have specific STEM programs that expose students to science and math and engineering, experiences and opportunities they wouldn't typically have, and we see higher interest in those core subjects. And then better test scores or better grades in those areas." Beyond staff hiring and training, other approaches to ensuring process quality were mentioned, although none were brought up as frequently as staff-related topics. Two interviewees mentioned using data (e.g., SAYO results), whereas four interviewees mentioned soliciting feedback on programming directly ("the kids and staff tell you what's really going on"). See Exhibit 26 for a full summary of respondent topics to the interview question "What do you think are the primary features of high-quality programs? How do you and your team go about ensuring your programming is high quality?" This question was open ended, without further prompt.



Exhibit 26. Interviewee Responses Regarding What Makes a High-Quality Program

Content Quality

AIR asked several questions that relate to content quality. As stated previously, content-specific practices relate to those program practices designed to intentionally cultivate a specific set of skills, beliefs, or knowledge and, therefore, are contingent on program goals. Multiple questions in the interview protocol sought to address this question, directly asking respondents to explain how their activities link to academic, school-related, and social-emotional program goals. This subsection summarizes responses to these questions, beginning with descriptions of the activities themselves.

Activities Designed to Meet Goals

Not surprisingly, all 10 respondents said they offer specific types of activities to help meet program objectives. The activities specified can be divided into three broad sets of goals: activities relating to academics, activities relating to school-related outcomes (e.g., disciplinary

goals), and activities relating to social-emotional outcomes. Each set of activities is described briefly here.

Concerning activities intended to help youth meet **academic goals**, all but one interviewee said they offer a homework time or provide tutoring (with nearly all mentioning homework help specifically). The details of these activities were not described at length by the interviewees, but the names by which the interviewees referred to them indicated modestly different approaches: homework "club", "tutoring," or times set aside for "homework intervention." Although it is unclear the extent to which these activities truly varied, all conveyed a time set aside for direct, intentional focus on homework or study.

Beyond homework help and tutoring, however, the activity descriptions varied greatly. When talking about STEM goals, for example, one interviewee mentioned activities such as egg drop, along with broader events like vacation camps. Another talked about a community garden as a way to provide science instruction, noting specifically that they seek to teach about "seed germination," "photosynthesis," and "hybrid seeds" through active gardening. Yet another interviewee said they use journaling activities to pursue literacy goals, noting "we try not to overacademicize [the program]." Another respondent said they use "hands-on activities," giving an example of having youth use basic mathematics to figure out the age of a tree. Other activities included robotics, keeping track of animals in a given habitat, and water testing. Overall, the interviewees described what are typically known as academic enrichment activities that have academics embedded in them but are different types of activities from those of the school day.

Activities intended to support goals relating to **school-related outcomes and social-emotional outcomes** can be described together, given that the interviewees themselves tended to describe some of the same types of activities when talking about both of these types of goals. When asked how their program activities support these goals, the interviewees emphasized activities that were, in some direct way, about relationship building or community. In fact, nearly all interviewees mentioned activities that fit this description. One interviewee mentioned using a walking program to not only ensure youth attendance but also build relationships between youth and staff. Another mentioned using "good news reports," whereas others described "welcome circles" or gatherings to recognize youth accomplishments. One interviewee described a mentorship program intended to help young males in terms of behavioral challenges. Although some interviewees emphasized this relational aspect more than others (and only three talked about it in detail), relational activities were clearly an emergent theme when it comes to facilitating school-related and social-emotional program goals. The question remains, however, how programs actually ensure that their efforts with respect to these goals result in high-quality activities. That is, the foregoing descriptions of the kinds of activities sites offer to meet their goals is instructive but does not finally answer RQ2: *What are sites doing to ensure content quality?* Perhaps not surprisingly, participants tended to address this by citing two things: (a) strong linkages to the school day, whether through open communication with school-day staff or regular use of school-day data, and (b) youth feedback. We next describe answers relating to each of these.

Linkages to the School Day

Particularly (though not exclusively) with respect to academic goals, eight of the 10 interviewees indicated that linkages to the school day are important for ensuring that their activities help their programs meet their objectives. These responses were less about specific curricula or activities (although those were mentioned) and more about ensuring their activity offerings address real youth needs, and do so in a very targeted, timely fashion. That is, respondents indicated that a major strategy in ensuring high-quality activity content is high-quality information, notably specific and current information about what youth are learning during the school day and how they may need additional support.

The approaches identified by the interviewees to do this, however, varied somewhat. For three interviewees, ensuring that activity staff have precise knowledge of youth needs was as straightforward as using school-day teachers as activity leaders (with one interviewee noting that the teachers design the activity units themselves). For six interviewees (two of whom also said they use teachers as staff), the 21st CCLC program consults with school-day staff on a regular basis (e.g., weekly) to ensure activity planners remain up-to-date on how youth need help. This was typically described as an ongoing, in-person process, with some interviewees indicating that they can simply "walk down the hall" to talk to a principal or a curriculum advisor. Three interviewees also said they closely consult school-day curricula to ensure their activities build and augment school-day learning. See Exhibit 27. Four interviewees indicated employing more than one strategy for maintaining linkages to the school day.

	Interviewee									
	1	2	3	4	5	6	7	8	9	10
School-day staff run activities	Х			Х			Х			
Consult with school-day staff		Х	Х	Х	Х	Х	Х			
Review school-day curriculum			Х			Х		Х		

Exhibit 27. Interviewee-Reported Center Linkages to the School Day

Youth Feedback

In addition to ensuring linkages to school-day learning, a second clear theme with respect to ensuring content quality was the importance of engaging youth. As one interviewee succinctly noted, if a participant "likes what they're doing, they'll be more attached, will listen, and will have a better attitude." To help ensure youth do enjoy what they are doing, nine of the 10 interviewees mentioned specific ways they gather youth feedback on the activities they offer (with one interviewee nevertheless asserting that youth engagement is a key element of program quality). Surveys were by far the most commonly mentioned mechanism, with eight interviewees noting that they use youth surveys to get feedback on the program (five interviewees further stated that they administer feedback surveys multiple times during the year, sometimes as frequently as every session). Three of these eight interviewees mentioned using the SAYO in particular to garner youth feedback. Youth focus or advisory groups also were a fairly common approach, with five interviewees indicating they use these types of groups to obtain youth feedback. Other strategies included having youth note their "favorite thing" about each day, having youth volunteer as administrative assistants for the program (thereby allowing them greater input into how the program operates), and simply having an open-door policy.

As a final note on youth feedback, most of the answers provided by the interviewees indicated a multipronged, relational approach to obtaining youth feedback, as a quote from one interviewee shows:

"We'll also get together as a group and ask for input on what they want to do. And that's sort of a guiding principle for the program itself: the kids figure out what they want to do."

We found that the students talked most when I was in the room. And we asked them why, and it was a trust issue. So, we started thinking about how to get youth to trust other staff. So, the focus groups have been giving us great mounds of clean feedback.

This same interviewee went on to say:

And we just started talking to the little kids. We found they don't take surveys on the computer very seriously. A quick example. We were talking to the elementary kids and asked how we could make it better. They suggested decorating the cafeteria with themes. Now they have 28 kids helping with their spring event, people donating carpet, lighting, etc.

These quotes reveal how important the relational aspect of programming really is, tying back to comments concerning overall program quality. It further shows how reliance on a single mechanism for obtaining youth feedback may not prove effective, depending on what it is.

Perceived Outcomes

As a way to begin thinking about RQ3 concerning program impact, AIR asked the interviewees to talk about their perceptions concerning program outcomes. In response, the interviewees most frequently indicated that their programs had at least some impact on academic improvement, with seven of the 10 mentioning academic improvement "I always feel like the [academic] data that we collect—we don't get enough information from it, and I'm not sure that it is from the afterschool program. I struggle with that, if it's actually the afterschool program that's making that impact. But I do know that, emotionally and socially, we are definitely making an impact on students, and I've gotten this information from face-to-face meetings with parents, student behaviors changing. The students feel supported, they feel safe, it's hard to get them out the door at the end of the day."

as an outcome they believe the 21st CCLC program is having on participating youth. The second most cited outcome was building relationships with trusted adults (with six interviewees noting relationships with adults as an important outcome), whereas half of the interviewees indicated that provision of new or different experiences was an important outcome. See Exhibit 28.



Exhibit 28. Perceived Outcomes of 21st CCLC Programming

Note. SEL = social-emotional learning.

The figures presented in Exhibit 28 lack important detail, however, because the certainty and depth with which the interviewees described each type of perceived program impact varied. For instance, while most interviewees indicated some level of program impact in terms of academic outcomes, some interviewees said only that students who were not performing well at the beginning of the year performed better later in the year or at least did not decline. One

interviewee merely asserted that youth "benefit academically" without further elaboration. Further, two interviewees who indicated they perceived an academic outcome also noted that academic outcomes are difficult to discern because of lack of data or difficulty in interpreting data. For instance, it is difficult to attribute specific academic outcomes to the 21st CCLC program specifically because youth are engaged in many different types of interventions across the school year.

Other types of outcomes were discussed at greater length and with more confidence. Notably, the interviewees tended to have more to say about relationship building, social-emotional outcomes, and the provision of new experiences. When discussing these kinds of outcomes, the respondents tended to be more expansive, even if they could not specifically quantify the outcome they perceive. For example, in discussing how youth have benefited from 21st CCLC programming, one interviewee stated,

I think the best way they've benefited is that there's another adult in their world who knows who they are and appreciates them. That's so underrated, but it's so important that a child might know who they are.

Another stated,

I think a lot of students feel connected—feel appreciated by the adults in our program, and that's something we really try to foster. The students often come just because they have a relationship with the support staff, they want to come to talk to them.

Others discussed how youth are simply exposed to new activities such as gardening or art, activities that may not have an immediately obvious outcome but may constitute "planting seeds," as one interviewee put it. Other interviewee emphasized positive changes in behavior, general social-emotional learning outcomes, and so on. Overall, however, few interviewees mentioned only one type of outcome; nearly all indicated multiple perceived outcomes, with academics simply being the most common. See Exhibit 29.

	Interviewee										
	1	2	3	4	5	6	7	8	9	10	Total
Academic improvement		Х	Х		Х	Х		Х	Х	Х	7
Relationships with adults			Х	Х		Х		Х	Х	Х	6
New or different experiences			Х				Х	Х	Х	Х	5
Discipline or behavior	Х	Х		Х						Х	4
SEL outcomes				Х	Х	Х		Х			4
Attendance				Х	Х				Х		3

Exhibit 29. Perceived Outcomes Mentioned by Interviewees, by Type

	Interviewee										
	1	2	3	4	5	6	7	8	9	10	Total
School attachment			Х					Х		Х	3
Relationships with youth						Х		Х		Х	3
Safety				Х	Х						2
Family involvement									Х		1
Unclear ^a		Х		Х		Х					3

^aThat is, the interviewee indicated not being able to tell what the program impact was because of uncertainties about the data.

Discussion of Interview Data

To summarize the data presented in this section, it appears that the programs represented by the interviewees—which, to repeat, covers 18 of the 22 sample centers—are serving youth that 21st CCLC programs are intended to serve, notably those who are struggling academically, economically, or socially. Program goals as described by the interviewees are in keeping with these populations. In terms of RQ1, the interviewees describe their staff as essential to offering high-quality programming from a process standpoint. Although hiring is clearly of importance, interviewees further noted staff professional development and training as their way of ensuring that staff know how to interact with youth in a positive, engaging way. In terms of RQ2, content quality, the interviewees indicated that they offer many different types of activities (with many of the examples mentioned classifiable as academic enrichment) along with activities designed to facilitate relationship building. For activities tied to academic goals, the interviewees noted that linkages to the school day are important, and content quality in general can be improved via youth feedback. Overall, the interviewees perceive 21st CCLC having an impact both academically and in terms of social-emotional outcomes, though they tend to be less sure that the 21st CCLC programming in particular is actually the cause of any positive change observed in academic outcomes compared with positive change observed for social-emotional outcomes.

Section 6. Youth Development Outcomes and Key Program Experiences

As suggested in Section 5, one of the substantive challenges associated with evaluating the impact 21st CCLC programs can have on participating youth is difficulty in finding measures that adequately represent how programs feel they are actually influencing youth growth and development. Although 21st CCLC programs should be oriented at helping students develop skills and knowledge that will help them improve academically (as all the interviewees noted), most programs funded by the program take a broader view of how the programming they provide can contribute to positive youth development. This is very important when considering RQ3:

• Is there evidence that students participating *regularly* in *higher quality* Rhode Island 21st CCLC–funded activities demonstrate better performance on the outcomes of interest? How does this evidence vary by grade level and programmatic focus?

That is, in this section we seek to explore this question in terms of nonacademic outcomes, notably perceptions, beliefs, and skills that we theorize 21st CCLC programming may positively affect.

This section begins with descriptions of some of these outcome areas (including citations to relevant research), proceeds through a description of our efforts to measure these outcome areas using surveys, and then shows the results of the surveys. Lastly, we present findings from a series of correlational analysis (hierarchical linear modeling [HLM]) in which we sought to explore relationships among center quality characteristics, youth experiences, and the youth outcomes we measured via the surveys.

Outcome Areas

Youth Agency and Positive Self-Concept

Youth can develop positive mind-sets and beliefs about their capacities, including confidence and a sense of self-efficacy by participating in high-quality afterschool programs. Many of the opportunities afforded to youth in high-quality afterschool programs also provide youth with the opportunity to experience a sense of agency by allowing choice and autonomy in program offerings (Beymer, Rosenberg, Schmidt, & Naftzger, 2018; Larson & Angus, 2011; Naftzger & Sniegowski, 2018; Nagaoka, 2016). As Larson and Dawes (2015) assert, this sense of agency is particularly important starting in early adolescence, enabling youth to use emerging cognitive skills, such as higher order reasoning and greater executive control of their own thought processes to more effectively solve problems and take the steps needed to achieve the goals they are pursuing. This provides youth with feedback about what they can accomplish and their ability to solve problems and overcome challenges, enhancing an underlying sense of self-efficacy and competence. Providing youth with opportunities to experience a sense of agency has emerged repeatedly as being significantly related to both youth engagement and improvement on pre-post youth development outcomes in other studies undertaken by the evaluation team (Naftzger et al., 2018; Naftzger & Sniegowski, 2018).

The successes that youth have while participating in afterschool programs also support the development of a positive self-concept. Consistently, when youth reflect on how they have benefited from participation in afterschool programs, they have reported that attending the program helped them feel good about themselves (Naftzger & Sniegowski, 2018). Larson and Dawes (2015) noted that program staff can play a crucial role in supporting and stabilizing youths' sense of efficacy when encountering challenges or self-doubt while participating in programming. For example, practices represented in the PQA address the extent to which this role is undertaken effectively by afterschool activity leaders.

New Sustained Interests

Afterschool programming can afford youth the opportunity to experience new things, which supports both identity development and young people's ability to make sense of themselves and the world around them, as well as develop new interests in domain-specific content areas, such as STEM and the arts. Interest development is a critical component of youth growth, and youth development and has been linked to numerous motivational elements related to learning, including goal-directed behavior, self-efficacy, self-regulation, and achievement value (Renninger & Hidi, 2011).

For example, in one recent study, two of the top three ways that youth reported being impacted by attending afterschool programming was that doing so helped them discover things they wanted to learn more about and find out what they like to do (Naftzger & Sniegowski, 2018). According to Renninger and Hidi (2011), the latent potential for interest in a particular area to develop is present in a person's genetic makeup, and interactions with the environment help determine whether it develops and is sustained. It is hypothesized that experiences in high-quality afterschool programs help youth navigate this interest development process by affording them the opportunity to try many different types of activities and dive more deeply into areas in which they discover they are especially interested.

Belonging/Mattering

Youth participating in high-quality afterschool programs can experience a sense of belonging and mattering through positive and supportive relationships, both with activity leaders and

their peers in the program (Akiva, Cortina, Eccles, & Smith, 2013; Auger, Pierce, & Vandell, 2013; Durlak & Weissberg, 2007; Kauh, 2011; Larson & Dawes, 2015; Miller, 2007; Naftzger & Sniegowski, 2018; Traill, Brohawn, & Caruso, 2013). These experiences are important because youth who have positive relationships and meaningful friendships demonstrate better emotional well-being, prosocial behaviors, and better academic performance than youth lacking such relationships (Wentzel, Donlan, & Morrison, 2012).

Knowledge and Skills

Youth participating in high-quality afterschool programs have the opportunity to learn new content and develop and practice new skills. For example, the development of interpersonal skills has been commonly identified by afterschool practitioners as one skill domain in particular that appears to be positively impacted by sustained youth participation in programming (Sniegowski et al., 2019).

It also is hypothesized that participation in high-quality afterschool programming will afford youth the opportunity to develop new knowledge and skills that will help them better understand what they excel at, what they value, and what they would like to do more of or learn more about as they make the transition to higher grade levels, where they have more choice in what classes they take.

Measuring Youth Development Outcomes

A key goal of the 2018–19 evaluation (as indicated via RQ3) was to explore how participation in higher quality 21st CCLC programs was associated with the development of those youth development-related outcomes that higher quality afterschool programs are theorized to engender. To measure youth growth and development on these outcomes, we employed two survey-based measures on a pre-post basis during the 2018–19 school year:

Survey of Academic and Youth Outcomes Teacher Survey (SAYO-T). The SAYO-T is a survey taken by school-day teachers to assess how individual students in their classroom are functioning on a series of social and emotional outcomes originally developed for use in 21st CCLC–funded programs in the state of Massachusetts by the National Institute on Outof-School Time. Although several different kinds of outcomes can be measured by the SAYO-T, three scales were selected for inclusion on the version of the tool used with Rhode Island grantees represented in the higher quality sample: (s) engagement in learning, (b) peer relationships, and (c) self-regulation. These scales were seen as being representative of the types of youth development outcomes theorized to be associated with youth participation in higher quality afterschool programs and representative of the types of outcomes likely seen in the sample of programs examined in Rhode Island. SAYO-T surveys were administered to teachers for students attending programming in kindergarten

through fifth grade at the 10 centers serving primarily elementary youth. The full survey is in Appendix D.

- Youth Motivation and Engagement Survey (YMEB). The YMEB is a survey taken directly by youth to assess students' experiences in afterschool programming, the manner in which they felt they benefited from participation in programming, and how they are functioning on a series of youth development outcomes. The survey was originally developed by the Youth Development Executives of King County to support the Road Map Project, a regional collective impact project. AIR helped revise the tool and has been using it since 2015 as an outcome measurement tool in various statewide evaluations. Like the SAYO-T, the YMEB measures a variety of youth outcomes, although the version of tool used to support the 2018–19 evaluation explored youth outcomes in four primary ways:
 - Items pertaining to youth's sense of how they may have been affected by participation in the program. The purpose of these items was to explore the extent to which youth believed the program may have helped them in terms of developing positive youth development outcomes, such as developing new interests, a positive selfconcept, and new friendships. Examples of items of this type included *This program has helped me to make new friends* and *This program has helped me discover things I want to learn more about*. This set of items represented the most direct way youth were able to communicate how they benefitted from program participation.
 - Items pertaining to how youth reported functioning at present when taking the survey on a series of areas related to positive youth development and social and emotional outcomes. The purpose of these items was to gauge how well youth described themselves as doing in two key areas: (a) maintaining a positive mindset in terms of trying new things and when encountering challenges and (b) perceptions of their interpersonal skills. Examples of items that appeared on these scales included *I try things even if I might fail* and *I focus on my goals, even when it is difficult* (mindsets) and *I work well with others on group projects* and *I respect what other people think, even if I disagree* (interpersonal skills).
 - Items pertaining to the degree to which youth reported a change in how interested they were in a given content area, such as science, computers/technology, music, art, from the start of the school year.
 - Finally, an item on the post survey asked youth to reflect on how their self-esteem may have changed during the course of the school year.

The pre-post versions of the youth outcome survey derived from the YMEB is in Appendix E.

We turn to a presentation of these surveys' results next.

SAYO-T Results

During the 2018–19 school year, pre-post SAYO-T data were collected from 412 students attending 10 centers serving elementary youth. The number of students with pre-post SAYO-T data averaged 41 students per center, ranging from 6 to 87 students per center. On average, students with pre-post SAYO-T data attended a total of 263 hours of 21st CCLC programming during the school year.

As shown in Exhibit 30, slight growth was demonstrated across all three scales represented on the SAYO-T between the fall and spring administrations of the survey, although this growth was statistically significant only in relation to the engagement in learning and self-regulation scales. For both the engagement in learning and self-regulation scales, students demonstrated an average growth of .07 scale score point.



Exhibit 30. Change in Average SAYO-T Scores Between the Fall and Spring Administrations

Note. Based on surveys associated with 412 students where pre-post data were provided. An asterisk signifies the change between the pre-post administrations was statistically significant (p < .05) based on paired sample *t*-tests.

As shown in Exhibit 31, we took steps to outline what percentage of students demonstrated growth on each SAYO-T scale that corresponded to improvement on one, two, or three items on the scale in question, as well as the percentage of students that demonstrated no improvement or a decline between the fall and spring administrations of the survey. As shown in Exhibit 31, more than 60% of the youth had either no change in how they scored on a SAYO-T construct or demonstrated a decline. When youth did show growth on a SAYO-T scale, this growth had a tendency to be substantive, with approximately 20% of the students showing improvement on three or more items appearing on a given scale.

Exhibit 31. Percentage of Students With Pre-Post Data by Degree of Change Demonstrated Between the Fall and Spring Administrations

	No change or a decrease	Improvement on one item	Improvement on two items	Improvement on three or more items		
Engagement in learning	60%	9%	11%	20%		
Peer relationships	66%	10%	6%	18%		
Self-regulation	63%	10%	8%	19%		

Note. The results in this exhibit are based only on those cases where all items appearing on a given scale were completed on the pre-post surveys. Results are based on 408 students both for the engagement in learning and peer relationships scales and 407 students for the self-regulation scale.

Pre-Post Youth Survey Results

Also during 2018–19, data related to the pre-post scales appearing on the YMEB were collected from 357 students attending 11 centers serving middle school youth. The number of students with pre-post data on the positive mindsets and interpersonal skills scales averaged 34 students per center, ranging from 17 to 70 students per center. On average, students with pre-post YMEB data attended a total of 101 hours of 21st CCLC programming during the school year.

As shown in Exhibit 32, a very slight decline was demonstrated on average between the fall and spring administrations of the youth survey on both the positive mindsets and interpersonal skills scales, although neither decline was statistically significant.





Note. Based on surveys associated with 357 students where pre-post data were provided. Efforts to assess the significance of pre-post changes were based on paired sample *t*-tests, and neither result was to be significant for the two scales examined.

Shown in Exhibit 33, we took steps to outline the percentage of students demonstrating growth on each YMEB scale that corresponded to improvement on one, two, or three items on the scale in question, as well as the percentage of students that demonstrated no improvement or a decline between the fall and spring administrations of the survey. Here again, about 60% of the youth had either no change in how they scored on a YMEB construct or demonstrated a decline. When youth did show growth on a YMEB scale, this growth had a tendency to be substantive, with more than 25% of the students showing improvement on three or more items appearing on a given scale.

Exhibit 33. Percentage of Students With Pre-Post Data by Degree of Change Demonstrated Between the Fall and Spring Administrations

	No change or a decrease	Improvement on one item	Improvement on two items	Improvement on three or more items
Positive mindsets	61%	8%	5%	27%
Interpersonal skills	58%	9%	7%	26%

Note. The results in this exhibit are based only on those cases where all items appearing on a given scale were completed on the pre-post surveys. The results are based on 300 students for the interpersonal skills scale and 292 students for the positive mindsets scale.

Change in Youth Interests

On the post outcomes survey, middle school youth also were asked to reflect on they felt when taking the survey compared with the beginning of the school year in terms of how interested they were in a series of topics listed on the survey. Youth could respond that they were less interested, interested about the same amount, or more interested in the topic in question.

As shown in Exhibit 34, youth were most apt to report being more interested in sports (46% indicating they were more interested), followed by art (36%) and computers/technology (33%).


Exhibit 34. Percentage of Youth Survey Respondents Who Indicated Being More Interested in Topic Relative to the Beginning of the School Year

Note. Based on survey responses from 369 youth.

It is important to note that youth answered these questions without being directly asked how participation in 21st CCLC programming may have contributed to the development of these interests. We will return to this team in later sections of the report.

Change in Youth Self-Esteem

Also on the post outcomes survey, middle school youth were asked to reflect on how they felt their self-esteem may have changed during the school year. Youth could indicate their selfesteem had decreased a lot, decreased a little, stayed the same, increased a little, or increased a lot.

As shown in Exhibit 35, one third of the youth indicated that their self-esteem had largely stayed the same during the 2018–19 school year, whereas almost half indicated an improvement, including a full 20% who indicated their self-esteem had improved a lot. This is notable, especially because middle school is commonly a time when there are drops in self-esteem among some student populations (Adams, Kuhn, & Rhodes, 2006). Approximately 20% of responding youth reported a drop in self-esteem during the school year.





Note. Based on survey responses from 365 youth.

Here again, youth answered these questions without being directly asked how participation in 21st CCLC programming may have contributed to any changes in their self-esteem. Like changes in interests, we will return to this themes in later sections of the report.

Youth-Reported Program Benefits

Finally, on the post youth outcome survey, we asked youth to identify the top three areas where they thought the program had helped them the most by selecting from a list of possible impact areas. This provided students with the opportunity to indicate how they thought they may have benefitted from participating in their 21st CCLC program. Exhibit 36 provides the percentage of responding youth selecting a given impact area in their top three.

Exhibit 36. Percentage of Youth Experience Survey Respondents Indicating a Particular Program Impact

How has this program helped you specifically?	Percentage in top three
Make new friends.	45.8%
Find out what I like to do.	31.6%
Feel good about myself.	25.6%
Find out what I'm good at doing.	24.5%
Discover things I want to learn more about.	20.4%

How has this program helped you specifically?	Percentage in top three
Think about what I might like to do when I get older.	19.6%
With my confidence.	16.3%
Learn things that will be important for my future.	14.7%
Learn things that will help me in school.	13.9%
Think about the kinds of classes I want to take in the future.	12.0%
Feel good because I was helping my community.	10.9%
Find out what is important to me.	10.1%
Learn about things that are important to my community.	8.4%
This program hasn't actually helped me.	7.4%
I prefer not to answer.	9.0%

Note. Based on survey responses from 365 youth.

The top five youth-reported impacts fell within three primary categories:

- New friendships
- Improved confidence or self-esteem
- Discovery of new interests or abilities

These results are consistent with what the evaluation team has observed in other studies where similar data were collected from students participating in 21st CCLC programs (Naftzger & Sniegowski, 2018; Naftzger et al., forthcoming). They also are aligned with how afterschool programs have been shown to support positive youth development. For example, students can develop positive mindsets and beliefs about their capacities, including confidence and a sense of self-efficacy, by participating in high-quality afterschool programs that provide youth with opportunities to experience a sense of agency by solving problems or pursuing goals related to the program (Beymer et al., 2018; Larson & Angus, 2011; Naftzger & Sniegowski, 2018; Nagaoka, 2016). As noted previously, such experiences provide youth with feedback about what they can accomplish and their ability to solve problems and overcome challenges, enhancing an underlying sense of self-efficacy, competence, and self-concept.

Youth participating in high-quality afterschool programs also experience a sense of belonging and mattering through positive and supportive relationships, both with activity leaders and their peers in the program (Akiva et al., 2013; Auger et al., 2013; Durlak & Weissberg, 2007; Kauh, 2011; Larson & Dawes, 2015; Miller, 2007; Naftzger & Sniegowski, 2018; Traill et al., 2013). Having a feeling of belonging is a precondition for motivation (Baumeister & Leary, 1995), highlighting the importance of practices that contribute to participating students experiencing belonging and principled, high-functioning relationships with both staff and other youth in the program (Larson, McGovern, & Orson, 2019).

Afterschool programming can afford youth the opportunity to experience new things, which supports both identity development and young people's ability to make sense of themselves and the world around them, as well as develop new interests in domain-specific content areas, such as STEM and the arts. The development of new interests is a critical component of youth growth and development and has been linked to numerous motivational elements related to learning, including goal-directed behavior, self-efficacy, self-regulation, and achievement value (Renninger & Hidi, 2011). The results outlined in Exhibit 36 are largely consistent with what is known about how high-quality afterschool programs support the development of participating youth.

Youth Experiences in Programming

The domain of youth development outcomes described in the preceding subsection are hypothesized to be the result of youth having a key set of positive experiences while participating in high-quality 21st CCLC programming. During the 2018–19 school year, youth experiences in programming at the middle school centers were measured using two approaches:

- Youth Experience Survey. The youth experience survey was administered near the end of the school year and asked youth to reflect more broadly on their experiences in programming. A copy of the survey is in Appendix F.
- Youth Engagement Survey. This survey was administered at three points during the 2018– 19 school year and was designed to capture "snapshots" of youth experiences in programming throughout the year by asking youth to answer questions on what they experienced in programming on a particular day. A copy of the survey is in Appendix G.

Questions asked on the youth experience survey focused on the degree to which students perceived opportunities to experience a sense of agency through voice and choice, students' perceptions of how positive their relationships were with program activity leaders and other youth attending the 21st CCLC-funded center, and the extent to which youth reported having skill-building opportunities. Collectively, these types of experiences have been shown to be related to youth developing a sense of agency, a positive self-concept and sense of self-efficacy, confidence, and feelings of belonging and mattering that have ramifications for how they relate to school more broadly and other learning environments outside the program (Larson & Angus, 2011; Larson & Dawes, 2015; Larson et al., 2019; Naftzger & Sniegowski, 2018).

The youth engagement survey differed from the youth experience survey in two important ways. First, the end-of-session survey was administered at the end of a given day of

programming and asked about what participating youth experienced in the 21st CCLC program on that specific day. This approach was designed to obtain relatively immediate reactions from students about the 21st CCLC programming in which they had just participated. A key advantage of this approach was that youth reported on recent events and experiences, thereby enhancing the quality and authenticity of their responses given less difficulty with recall.

The survey asked students about a different set of experiences than what was asked on the youth experience survey. More specifically, questions on the youth engagement survey focused on six areas of youth experience:

- Engagement. Engagement refers to active participation, investment, and value in learning (Schmidt et al., 2020). Engagement is generally a composite variable based on a set of discrete experiences happening in-the-moment for participating students. Similar studies oriented at measuring in-the-moment expressions of engagement base their conceptualization of this construct on the concept of flow as articulated by Csikszentmihalyi (1990). Flow refers to the state when interest, concentration, and enjoyment occur simultaneously (Naftzger et al., 2018; Shernoff & Vandell, 2007; Shumow & Schmidt, 2014). On the end-of-session survey, four items measured engagement: (a) *Were today's activities interesting?* (b) *Did you enjoy today's activities?* (c) *Did you have to concentrate to do today's activities?* and (d) *Do you feel you worked hard during today's activities?* This set of items has been used in other studies related to engagement in out-of-school-time programs (see Naftzger et al., 2018, as an example).
- **Relevance.** Relevance occurs when students perceive an activity as having meaning, importance, or utility beyond the learning activity they are currently engaged in. Promoting relevance is one of the best strategies for triggering and sustaining student interest and engagement in learning environments (Assor, Kaplan, & Roth, 2002). On the youth engagement survey, relevance was defined by combining responses from the following three items asked on the survey: (a) *Were today's activities important to you?* (b) *Were today's activities important to your future goals?* and (c) *Could you see yourself using what you were learning in today's activities outside this program?*
- Positive Affect. Emotions influence student learning in a variety of ways, including how students process, store, and retrieve information. They also support student motivation to participate in a given learning task or activity given the enjoyment and joy they receive from doing so (Ashby, Isen, & Turken, 1999; Linnenbrink & Pintrich, 2000). On the youth engagement survey, positive affect was defined by combining responses from the following two items asked on the survey: (a) *How HAPPY were you feeling in the program today?* and (b) *How EXCITED were you feeling in the program today?*

- Interaction. Having opportunities to experience a sense of belonging, a culture of inclusion, and collaborative work have all been shown to be important components of a motivating learning environment for early adolescent youth (Larson et al., 2019). These concepts are reflected in the items that appeared on the youth engagement survey that were used to create a scale we titled interaction. This scale consisted of the following items: (a) *Were youth treating each other well today*? and (b) *Were youth doing what they were supposed to be doing today*?
- **Challenge.** Based on Emergent Motivation Theory (Csikszentmihalyi, 1990; Csikszentmihalyi & Schneider, 2000), students are most apt to experience a state of engagement when there is a relative balance between the difficulty of a task and their ability in an area where they feel generally competent, putting them in a position where there is a need to focus and concentrate to undertake the task in question. When this balance is achieved, students will experience an appropriate level of challenge in the activity they are undertaking. On the youth engagement survey, challenge was measured by asking the following question: *How challenging were today's activities*?
- Learned Something. Students participating in afterschool programs also have the opportunity to learn new content and develop and practice new skills. Participation in high-quality afterschool programming in particular has been shown to provide students with the opportunity to develop new knowledge and skills that will help them better understand what they excel at, what they value, and what they would like to do more of or learn more about (Larson & Dawes, 2015; Shumow & Schmidt, 2014). This process also can be linked to their developing interests, which is a critical component of student growth and development linked to numerous motivational elements related to learning, including goal-directed behavior, self-efficacy, self-regulation, and achievement value (Renninger & Hidi, 2011). Finally, the successes that youth have while participating in skill-building activities can support the development of a positive self-concept and enhance motivation to participate in additional learning opportunities (Larson et al., 2019). On the youth engagement survey, learning something was measured by asking the following question: *Do you feel like you learned something or got better at something today*?

The constructs measured on both the youth experience and engagements surveys are important to understanding how youth potentially benefit from their participation in 21st CCLC programming, particularly in relation to the domain of youth development-related outcomes examined in Section 5. A key goal of the section of the report is to explore to what extent did middle school youth participating in 21st CCLC programming have experiences that are associated with positive youth development.

Opportunities for Agency

The opportunities for agency scale explored the degree to which participating students reported having the opportunity to experience a sense of agency by allowing choice and autonomy in program offerings.

The seven items making up the scale asked how often students had the opportunity to engage in various types of decision making related to the program (Exhibit 37). Rasch analysis techniques were used to combine items on the scale into one overall scale score for each respondent, ranging from 1.00 to indicate that these opportunities were never afforded to the responding student to 4.00 to indicate each type of opportunity was often a part of the programming they participated.

Exhibit 37. Survey Items Making Up the Opportunities for Agency Scale

When you are at this program, how often...

- Do you get to choose how you spend your time?
- Can you suggest your own ideas for new activities?
- Do you get to choose which activities you do?
- Do you get to help plan activities for the program?
- Do you get the chance to lead an activity?
- Do you get to be in charge of doing something to help the program?
- Do you get to help make decisions or rules for the program?

Exhibit 38 summarizes the percentage of responses for the opportunities for agency scale. The approach used to create the overall scale score for each scale also made it possible to identify how many respondents fell within each response option category associated with the scale—never, rarely, sometimes, or often. Fifty-eight percent of the respondents fell within the sometimes portion of the scale, indicating these types of opportunities were typically made available to participating youth occasionally. Another 20% of the respondents indicated these types of opportunities were rarely afforded as part of the program, whereas a similar percentage of respondents were characterized with a scale score that placed them in the often range of the scale.



Exhibit 38. Opportunities for Agency Scale—Percentage of Students by Response Category

Note. Based on survey responses from 318 youth.

When examining responses to individual items, students reported most frequently being able to choose how to spend their time (35% responding having this option often), whereas youth were least apt to report having the opportunity to help make decisions or rules for the program (19% indicating never having this opportunity).

Perceptions of Activity Leaders and Other Youth in the Program

The youth experience survey contained items designed to assess the degree to which youth had positive perceptions of both the adult activity leaders providing programming and the other youth attending the center. Respondents were asked to indicate the degree to which statements expressing a positive perception of activity leaders (seven items) and other youth enrolled in the program (four items) were true. The questions appearing on these scales are in Exhibits 39 and 40.

Exhibit 39. Survey Items Making Up the Perceptions of Activity Leaders Scale

Thinking about the adults in this program, how true are these statements for you? In this program, there is an adult here . . .

- Who is interested in what I think about things.
- Who I can talk to when I am upset.
- Who helps me when I have a problem.
- Who I enjoy being around.
- Who has helped me find a special interest or talent.
- Who asks me about my life and goals.
- Who I will miss when the program is over.

Exhibit 40. Survey Items Making Up the Perceptions of Other Youth Scale

At this program, how do kids get along? Indicate how true each statement is based on your own experience in this program.

- Young people here are friendly with each other.
- Young people here treat each other with respect.
- Young people here listen to what the teachers tell them to do.
- Young people here support and help one another.

Here again, we combined responses to all items for a given scale into one overall scale score for each respondent using Rasch analysis techniques. As a result, respondents were classified as falling within one of the following response options: not at all true, somewhat true, mostly true, or completely true. Generally, the results associated with student perception of activity leaders were more positive than results related to the opportunities for agency scale, as shown in Exhibit 41.

Exhibit 41. Perceptions of Activity Leaders and Other Youth Scales—Percentage of Students by Response Category



Note. Based on survey responses from 306 youth to the Perceptions of Activity Leader scale and 304 youth to the Perceptions of Other Youth scale.

For example, 73% of the respondents found the positive descriptions about staff represented by the survey items to be completely true or mostly true. This was most commonly the case in relation to the following two items: (a) In this program, there is an adult here who I enjoy being around (76% responding completely true or mostly true) and (b) In this program, there is an adult here who helps me when I have a problem (74% responding completely true or mostly true). The item with the lowest percentage of youth responding completely true or mostly true was as follows: In this program, there is an adult here who asks me about my life and goals (63% responding completely true or mostly true).

Findings related to the student perceptions scale were generally less positive, although the majority of respondents still fell into the completely true or mostly true portion of the scale, indicating generally positive perceptions of their peers in the program. However, among the four response options associated with the scale, respondents mostly commonly fell in the somewhat true portion of the scale. In terms of individual items, students were most positive about the following two items: (a) Young people here are friendly with each other (64% responding completely true) and (b) Young people here listen to what the teachers tell them to do (61% responding completely true or mostly true). The item students were least apt to find true was as follows: Young people here treat each other with respect, with close to half of the respondents finding this only somewhat true (38%) or not at all true (7%).

Skill-Building Opportunities

High-quality afterschool programming can provide youth with not only key skill-building opportunities that promote both positive mindsets but also important feedback regarding what they are capable of accomplishing. Project-based learning opportunities are particularly effective in supporting these types of outcomes. Part of doing project-based learning well is helping youth maintain an optimistic outlook in regard to their project, helping them avoid the "sky-is-falling" type of mentality when they encounter failure or setbacks. Damon (2008) noted that what is important to point out to youth is that they have some level of control in how things turn out and the importance of persisting when encountering challenges. Findings by Larson and Angus (2011) supported Damon's advice in this regard. In a study of youth participation in arts and leadership programs, Larson and Angus found that youth developed what they termed strategic thinking skills, which developed from wrestling with the challenges associated with real-world scenarios and being able to plan how to carry out specific tasks and work. Key to building these skills was working though challenges they encountered and getting feedback on the outputs they produced. In this sense, project-based learning components that challenge youth to think through and solve problems with the appropriate amount of scaffolding and well-timed encouragement and support to help youth push through those challenging moments can be a key component of effective afterschool programs.

The youth experience survey contained items that were designed to assess the degree to which youth had key skill-building opportunities while participating in 21st CCLC programming. Questions appearing on the skill-building scale are in Exhibit 42.

Exhibit 42. Survey Items Making Up the Skill-Building Scale

Please indicate if you have had the following experiences in this after-school program.

In this afterschool program, ...

- I tried new things.
- I set goals for myself.
- I learned to push myself.
- I learned to focus my attention.
- I learned about developing plans for solving a problem.
- I used my imagination to solve problems.
- I learned about setting priorities.
- I learned to consider possible obstacles when making plans.

We combined the responses to the eight items represented on the skill-building scale into one overall scale score for each respondent using Rasch analysis techniques, resulting in respondents being classified as falling within one of the following response options: not at all; sort of; and yes, definitely.

As shown in Exhibit 43, respondents had a tendency to fall in either the sort of (46%) of or yes, definitely (49%) portions of the scale. The most common skill-building experience reported by youth was trying new things, with 53% of the respondents endorsing or yes, definitely to this item. The item with the lowest percentage of respondents endorsing yes, definitely was I learned about setting priorities, where 39% of the respondents selected this particular response option.

Exhibit 43. Opportunities for Skill-Building Scale—Percentage of Students by Response Category



Note. Based on survey responses from 270 youth.

Positive Experiences

In a similar fashion, the extent to which students reported having important positive experiences while participating in 21st CCLC programming on the day they completed the youth engagement also were summarized. In Exhibit 44, the percentage of scores associated with a given type of experience (i.e., engagement, relevance, challenge, positive affect, expression of learning something or getting better at something, and interaction) are outlined across each of the four response options used on the youth engagement survey—not at all, a little, somewhat, and very much.

Exhibit 44. Summary of Responses to Key Constructs From the Youth Engagement Survey— Percentage of Students by Response Category



Note. Based on 1,528 responses to the questions asked on the engagement scales, 1,527 responses to the questions asked on the relevance scale, 1,520 responses to the question asked on the challenge scale, 1,521 responses to the questions asked on the affect scale, 1,510 responses to the question asked on the learned something scale, and 1,532 responses to the questions asked on the interaction scale.

Key findings include the following:

 Youth demonstrated the most positive responses to questions related to interaction and positive affect, with 67% and 60% of students, respectively, having scores that put them in the very much category. In this sense, most students felt youth in the program were treating each other well and indicated being very happy and excited during the 21st CCLC programming they participated in on the day in question.

- Responses related to relevance and expressed learning or getting better at something were also generally positive, with 47% of responses falling in the very much response category for these two constructs.
- Results for engagement were less positive, with most youth only being somewhat engaged in programming (69% of the respondents). Again, engagement here is a composite variable consisting of students being interested in what they're doing, enjoying it, and having to concentrate.
- Students largely did not feel very challenged by program activities, with 41% of the respondents providing responses of not at all in terms of experiencing challenge while participating in program activities. This is a common finding when the evaluation team has used this survey in other 21st CCLC-related settings.

Exploring the Relationship Between Program, Youth Experiences in Programming, and Youth Development Outcomes

As stated at the start of this section, a central aim of the 2018–19 evaluation was to explore the degree to which youth participating in higher quality 21st CCLC programs demonstrated growth on key youth development outcomes and how this growth related to both the level of program quality observed in these centers and key youth experiences in programming as described in the preceding section.

To explore these relationships, the evaluation team took steps to construct a series of models using HLM to assess how a series of center- and student-level characteristics were related to changes in key youth development outcomes. Exhibit 45 summarizes the outcomes we examined.

Exhibit 45. Key Youth Development Outcomes Examined With Hierarchical Linear Modeling

SAYO-T outcomes (elementary school grade levels)
Growth in engagement in learning
Growth in peer relationships
Growth in self-regulation
YMEB outcomes (middle school grade levels)
Growth in positive mindsets
Growth in interpersonal skills
Improvement in self-esteem
Development of a greater interest in STEM
Development of a greater interest in the Arts
Development of a greater interest in Sports

Although each outcome was described in previous sections of the report, some additional information needs to be provided about these outcomes pertaining to interest development in STEM, the arts, and sports. We decided to focus on these outcomes because (a) they represented the top three ways in which youth reported their interests changing during the 2018–19 school year, and (b) students had a tendency to participate in 21st CCLC–funded activities in each of these areas relatively frequently. In addition, for STEM and the arts, different interest items appearing on the youth outcome survey were combined to create broader categories of interest. For STEM, responses to items pertaining to increased interest in computer/technology and science were combined, whereas for the arts, items pertaining to art and music were combined.

In conducting these analyses, a series of student-level variables were considered in terms of how they may have been related to changes in the domain of youth development outcomes examined. The student-level variables considered in these models are outlined in Exhibit 46 and include demographic variables; variables related to youth participation in 21st CCLC programming during the 2018–19 school year; and, in the case of middle school youth, variables pertaining to youth experiences in programming.

Exhibit 46. Student Characteristics and Experiences Included in Hierarchical Linear Mode
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Demographic and school performance variables
• Gender
• IEP
Limited English proficiency
Eligible for Free or Reduced-Price Lunch
Section 504 plan
• Reading scale score on the New England Common Assessment Program (NECAP) taken in 2017–18
Mathematics scale score on the NECAP taken in 2017–18
Variables related to 21st CCLC participation
Total hours of participation in 21st CCLC activities
Hours of participation in STEM activities
Hours of participation in arts activities
Hours of participation in physical fitness/sports activities
Percentage of total 21st CCLC participation time spent in STEM activities
Percentage of total 21st CCLC participation time spent in arts activities
Percentage of total 21st CCLC participation time spent in physical fitness/sports activities

Variables to youth experiences in programming (middle school youth only)

- Score on the perceptions of activity leader scale
- Score on the perception of other youth in the program scale
- Score on the opportunities for agency scale
- Score on the skill-building experiences scale

In addition, a series of center-level characteristics were examined when running the models; however, because separate models were run for elementary and middle school youth, the number of centers included in each model was relatively small (10 for models related to elementary youth and 11 for models related to middle school youth). This small number of centers associated with each analysis had two ramifications:

- Having a small number of center-level variables may have made it more difficult to detect significant relationships between the center-level variables and the youth development-related outcomes examined. Thus, some relationships that were in reality significant may not have been identified as such.
- We were limited in how many center-level characteristics we could feasibly examine in a given model. Consequently, separate models were run to explore how individual center-level variables were related to the outcomes examined. Instead of displaying all the models that were run, the best performing model is fully displayed, with separate tables provided relative to how other center-level variables may have been significantly related to the outcomes examined.

The full domain center-level characteristics examined are in Exhibit 47.

Exhibit 47. Student Characteristics and Experiences Included in Hierarchical Linear Models

PQA-based quality-related variables (included in all analyses)
Score on the learning formats scale
Score on the agency practices scale
 An indicator to represent if the center received a top 5 score on both the learning formats and agency practices scales
Variables related to youth experiences in programming collected from the youth engagement survey (middle school youth only)
Mean center-level engagement scale score
Mean center-level relevance scale score
Mean center-level positive affect scale score
Mean center-level interaction scale score
Mean center-level challenge scale score
Mean center-level learned something score

Generally, in constructing the hierarchical linear models to examine the relationship between center- and youth-level characteristics and growth on the youth development outcomes of interest, we hypothesized that the following characteristics in particular would be positively associated with the outcomes examined:

- Characteristics related to program quality derived from the PQA
- Characteristics based on youth experiences in programming
- Characteristics based on youth participation in programming

As shown in the results that follow, most of these expectations were met only partially.

Models With SAYO-T Outcomes

Exhibit 48 outlines the results from models where growth on the three SAYO-T outcomes (engagement in learning, peer relationships, and self-regulation). Overall, in addition to the prescore for each scale, four youth-level variables were significantly related to growth on one or more of the SAYO-T outcomes examined:

- Total hours of participation in 21st CCLC activities
- Hours of participation in physical fitness/sports activities
- Male
- Section 504 plan

As shown in Exhibit 48, the total hours of participation in 21st CCLC activities was found to be positively related to growth on the peer relationships scale, whereas the number of hours youth participated in physical fitness/sports activities was found to be positively related to growth in the engagement in learning scale. This last finding is curious and was not necessarily anticipated, but, as we will see, this variable proves to be positively related to other youth-development outcomes as well.

In addition, male students demonstrated significantly less growth on the engagement in learning and peer relationships scales, although in the latter case, this finding was only moderately significant (p < .10). However, this result has been found in other studies conducted by AIR employing the SAYO-T (Naftzger et al., forthcoming). Having a Section 504 plan was found to be negatively related to growth on the engagement in learning scale as well (also moderately significant).

In addition, of particular interest, none of the center-level PQA-related variables was significantly related to growth on the SAYO-T outcomes examined.

	Engagement in learning		Peer relationships			Self-regulation			
	Coefficient	SE	Significance	Coefficient	SE	Significance	Coefficient	SE	Significance
Pre-survey score for the scale in question	0.711	0.038	<0.001***	0.677	0.039	<0.001***	0.737	0.040	<0.001***
Male	-0.134	0.059	0.049*	-0.230	0.106	0.059+	-0.170	0.103	0.132
Section 504 plan	-0.388	0.225	0.072+	-0.081	0.309	0.800	-0.346	0.220	0.150
Total hours of participation in 21st CCLC activities				0.001	0.000	0.030*	0.000	0.000	0.165
Hours of participation in physical fitness/sports activities	0.002	0.001	0.091+						

Exhibit 48. Summary of HLM Results: SAYO-T Outcomes

Note. SE = standard error.

+*p* < .10. **p* < .05. ****p* < .001.

HLM Models With Interest-Related Outcomes

Exhibits 49 and 50 outline the results from models where growth in youth interest in one of three content areas (STEM, the arts, and sports) was the outcome of interest. Exhibit 49 contains results for student-level predictors when the mean center-level engagement scale score was included in the model specifically. Exhibit 50 contains results associated with other center-level predictors when they were alternately included in the model.

First, as hypothesized, the more time youth spent in programming related to a given content area, the more apt they were to report an increase in that area. This was particularly true for interest in STEM and sports. In terms of STEM, a positive relationship was found between the number of total hours youth spent in STEM activities and an increase in interest in STEM-related content areas. For sports, the percentage of total 21st CCLC participation time spent in physical fitness/sports activities was positively associated with an increase in interest in sports. Although not quite significant (p = .118), a similar positive relationship was found between the percentage of total 21st CCLC participation time spent in interest in the arts.

In addition, males were found to be more apt to report an increase in interest in both STEM and sports, although both of these associations were found to be only moderately significant (p < .10).

Students who reported more positive perceptions of activity leaders also reported more of an increase in STEM specifically, although again this association was only moderately significant (p < .10).

Of some interest was that scores on the PQA-related variables were not strongly associated with an increase in interest across all three areas considered, although scores on the PQA agency practices scale were positively associated with an increase in interest in the arts (moderately significant), and centers that scored in the top 5 score on both the PQA learning formats and agency practices scales were associated with an increase in interest in sports (also moderately significant).

In addition, an increase in interest in sports was positively associated with a number of variables describing key youth experiences in programming derived from the youth engagement survey, including the center's mean engagement, positive affect, interaction, and learned something (moderately significant) scores. It is curious that some of the key predictors we hypothesized would be associated with growth on a series of youth development outcomes were most strongly correlated with an increase in an interest in sports specifically. But we did not predict this finding.

	Interest in STEM		Interest in the arts			Interest in sports			
	Coefficient	SE	Significance	Coefficient	SE	Significance	Coefficient	SE	Significance
Student-level variables									
Male	0.579	0.288	0.075+	-0.232	0.296	0.453	0.646	0.333	0.085+
Perceptions of activity leader scale	0.575	0.260	0.054+	0.238	0.287	0.429	0.386	0.279	0.199
Hours of participation in STEM activities	0.017	0.006	0.027*						
Percentage of total 21st CCLC participation time spent in arts activities				1.011	0.585	0.118			
Percentage of total 21st CCLC participation time spent in physical fitness/sports activities							2.067	0.693	0.015*
Center-level variables									
Mean center-level engagement scale score	-0.846	2.489	0.742	5.249	2.249	0.048*	9.142	3.221	0.022*

Exhibit 49. Summary of HLM Results: Increase in Interest: Best Fitting Model

+p < .10. *p < .05.

	Interest in STEM			Interest in the arts			Interest in sports		
	Coefficient	SE	Significance	Coefficient	SE	Significance	Coefficient	SE	Significance
Other center-level variables									
Score on the PQA agency practices scale	-0.306	0.512	0.567	0.770	0.385	0.081+	1.129	0.713	0.152
Top 5 score on both the PQA learning formats and agency practices scales	0.134	0.602	0.830	0.461	0.532	0.412	1.640	0.733	0.056+
Mean center-level positive affect scale score	-0.017	1.451	0.991	3.019	1.378	0.060+	5.740	1.844	0.014*
Mean center-level interaction scale score	3.104	3.238	0.366	-2.239	2.777	0.443	10.827	4.277	0.035*
Mean center-level challenge scale score	-2.449	1.730	0.195	2.501	1.141	0.060+	-0.781	2.347	0.748
Mean center-level learned something scale score	-0.291	0.923	0.760	-0.668	0.740	0.392	2.449	1.218	0.079+

Exhibit 50. Summary of HLM Results: Increase in Int	terest: Other Center-Level Predictors
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+p < .10. *p < .05.

Similar but less strong associations were seen between PQA-related and youth engagement survey-derived variables and an increase in interest in the arts. A center's score on the PQA agency practices scale was positively associated with an increase in interest in the arts but only moderately so. In a similar fashion, a center's mean engagement, positive affect, and challenge scores were positively related to an increase in interest in the arts, although the latter two constructs were only moderately significant.

HLM Models With Self-Esteem

Exhibits 51 and 52 outline the results from models of growth in youth-reported changes in selfesteem. Exhibit 51 contains results for student-level predictors when the mean center-level positive affect score was included in the model specifically. Exhibit 52 contains results associated with other center-level predictors when they were alternately included in the model.

Exhibit 51. Summary of HLM Results: Self-Esteem Outcomes: Best Fitting Model

	Coefficient	SE	Significance
Student-level variables			
Score on the skill-building experiences scale	0.807	0.134	<0.001***
IEP	-0.593	0.231	0.030*
Center-level variables			
Mean center-level positive affect scale score	1.690	0.616	0.025*

p* < .05. **p* < .001.

Exhibit 52. Summary of HLM Results: Self-Esteem Outcomes: Other Center-Level Predictors

	Coefficient	SE	Significance
Center-level variables			
Mean center-level engagement scale score	2.685	1.076	0.037*
Mean center-level relevance scale score	1.871	0.908	0.073+
Mean center-level interaction scale score	3.184	1.600	0.082+
Mean center-level challenge score	1.410	0.666	0.067+

+*p* < .10. **p* < .05.

What is most prevalent about the results highlighted in Exhibits 51 and 52 is the relatively consistent and strong association between variables derived from the youth engagement survey and an improvement in student's self-esteem. Scores related to positive affect, engagement, relevance, interactions, and challenge were all found to be significantly and positively associated with youth's reported change in self-esteem, although in relation to the

latter three constructs, these relationships were only moderately significant. These results would all be consistent with what was hypothesized.

In addition, higher scores on the skill-building experiences scale was positively associated with an increase in youth-reported self-esteem. This finding is very consistent with the work done by Larson and Angus (2011) and Larson and Dawes (2025) about how grappling with problems in a youth development setting can provide youth with feedback about what they can accomplish and their ability to solve problems and overcome challenges, enhancing an underlying sense of self-efficacy and competence.

Finally, students with an IEP were found to have negative association with improvements in self-esteem as noted in Exhibit 51.

HLM Models With YMEB Outcomes

Exhibit 53 outlines the results from models where growth in positive mindsets and interpersonal skills was the outcome of interest. Of particular interest here is that none of the center-level predictors related to PQA-related quality or youth experiences in programming derived from the youth engagement survey were related to growth on either of these constructs.

As shown in Exhibit 53, the skill-building experiences scale was again found to be positively associated with growth in each area, whereas the perceptions of activity leaders scale was found to be positively associated with student growth on the interpersonal skills scale.

	Ро	Positive mindsets			Interpersonal skills		
	Coefficient	SE	Significance	Coefficient	SE	Significance	
Student-level variables							
Pre-survey score for the scale in question	0.246	0.108	0.048*	0.241	0.111	0.058+	
Score on the skill- building experiences scale	0.284	0.046	<0.001***	0.208	0.059	0.007**	
Perceptions of activity leader scale				0.189	0.080	0.042*	

Exhibit 53. Summar	v of HLM Results:	YMEB Outcomes:	Best Fitting Models

+*p* < .10. **p* < .05. ***p* < .01. ****p* < .001

Summary of Findings Related to Youth Development Outcomes and Key Experiences in Programming

In terms of youth experiences in programming (based on responses to the youth experience and engagement surveys), students reported having positive relationships with activity leaders and feelings of positive affect when participating in activities. In addition, feeling engaged, or what they were doing in programming was relevant, or they were learning something or getting better at something were relatively common experiences among students participating in the middle school programs represented in the study. However, students were less likely to report opportunities to experience a sense of agency through voice and choice or experiencing challenge in program activities. Experiences with other youth also were mixed, with more positive responses provided on the youth engagement survey (taken at the end of programming days) and less positive responses on the youth experience survey (administered once at the end of the school year).

In terms of youth outcomes as measured by the SAYO-T and YMEB, pre-post changes tended to either slightly increase or slightly decline on average, although in either case the average change in student scores was small. For both the SAYO-T and YMEB scales examined, the majority of students with pre-post data either witnessed a decline or stayed the same, whereas about 20% of the students witnessed an improvement equivalent to scoring higher on three or more items associated with a given scale. Nearly half of the middle school youth completing the YMEB indicated their self-esteem had improved during the school year, with a full 20% indicating that their self-esteem had improved a lot. In terms of interest, middle school youth were most likely to report being more interested in sports compared with the beginning of the school year (46%), followed by art (36%) and computers/technology (33%).

Concerning our analysis of how PQA scores and youth experience scales were related to the youth development outcomes measured by the surveys, we found that higher scores on the PQA were associated only with outcomes examined for middle school youth. This included an increase in interest in arts and sports and youth-reported improvements in self-esteem. We did not find PQA-related scores to be related to the outcomes assessed by pre-post scales measured by either the YMEB or SAYO-T, nor improved interest in STEM. Youth experiences in programming derived from the youth engagement survey (e.g., positive affect, challenge, relevance, engagement) were found to be related to a number of outcomes for middle school youth, including an increase in interest in arts and sports and improved self-esteem, the same domain of outcomes also associated with higher scores on PQA-related scales. In addition, certain scales from the youth experience survey taken by middle school participants were positively associated with youth development outcomes. Positive perceptions of activity leaders were associated with an increase in interest in STEM and greater improvement on the

interpersonal skills scale of the YMEB, whereas higher scores on the skill-building scale were associated with greater improvement in self-esteem and improvement on both the positive mindsets and interpersonal skills scales. Each of these results is consistent with the broader literature about how key experiences in programming can promote positive youth development outcomes. Note, however, that all these analyses were strictly correlation: It is not possible to infer that certain practices or experiences caused certain youth development outcomes to occur.

Section 7. Impact Analyses

In addition to the correlational analyses presented in Section 6, we carried out a series of comparisons in which participants were matched with nonparticipants to investigate differences in terms of school-related outcomes. Specifically, we used a PSM approach to compare the two groups in terms of the following:

- Academic achievement in mathematics and English language arts (ELA)
- School-day absences
- Suspension rates
- Disciplinary rates
- Grade promotion rates

The purpose of these comparisons was to help answer RQ3:

• Is there evidence that students participating regularly in higher quality Rhode Island 21st CCLC–funded activities demonstrate better performance on the outcomes of interest? How does this evidence vary by grade level and programmatic focus?

Because there was no immediately clear way to identify center-level subgroups based on program focus, the analyses presented in this section focus on whole-group effects and grade-level effects, with regular participation defined first as 30 days or more of participation and then, second, as 60 days or more of participation.

This section first presents more detail concerning PSM, along with important notes concerning the center sample we used for our treatment group (which was slightly different from the sample we used elsewhere in this report). We then present the results of the comparisons, with brief notes on all results to highlight significant findings. A summary of the results appears at the end of the section.

Accounting for Selection Bias

In any evaluation of a program in which participants are not randomly assigned to participate, the problem of selection is paramount. It is likely that students who participate in 21st CCLC programming are different from those who do not attend. Differences can bias estimates of program effectiveness because they make it difficult to disentangle preexisting differences between students who attended the program and those who did not from the effect of attending the program. The quasi-experimental approach outlined here (PSM) is a method for mitigating that existing bias in program effect (i.e., if one were to simply compare the students who attended and those who did not).

PSM is a two-stage process designed to address this problem. In the first stage, the probability that each student would participate in the 21st CCLC program is modeled on available observable youth characteristics, such as the following:

- Prior achievement in reading and mathematics
- Prior absences and disciplinary incidents
- Student demographic information, including gender, race/ethnicity, socioeconomic status, and limited English proficiency status

The propensity score model also included school fixed-effects for the schools that participants attended in 2018–19 (to account for school-based contextual differences, which may account for differences in the propensity for a student to participate).

By modeling selection into the program using available characteristic data, this approach allows comparison of participating and nonparticipating students who would have had a similar propensity to attend the program based on observable characteristics. The outcome of interest in modeling propensity scores is treatment status (1 for students in treatment, 0 for nontreatment students). To account for this binary outcome, logistic regression models the logit (or log-odds) of student group assignment status. Participant and nonparticipant youth can then be matched using their log-odds of treatment status. In the second stage, the predicted probability of participation can be used to model student outcomes while accounting for selection bias (so far as possible given the extent of the available data). The propensity score model was fit separately for each grade represented in the sample and separately for each definition of treatment (30 days or more and 60 days or more of participation). The final propensity score models for each grade were checked to ensure that the analysis sample was balanced across relevant covariates. The propensity score models all produced comparison samples, which were balanced with the treatment across all student and school covariates. In addition, outcome models included the pretreatment measure of the outcome of interest as a covariate for added robustness.

Filtering Sample Centers to Ensure High-Quality

Our original sample centers, as described earlier, included 11 centers serving elementary youth and 11 centers serving middle school youth. Because RQ3 focuses on the effects of participation in high-quality 21st CCLC programs, prior to conducting our PSM analyses, we further filtered our sample of centers based on the PQA observation data that we collected in 2018–19. In the case of centers serving middle school youth, we used engagement survey data as well. The goal of this filtering was to remove centers that scored especially low relative to the other centers included in the sample. Based on this review, we excluded three elementary centers and two middle school centers from our sample, reducing the sample of interest to 17 centers.

Before finalizing this sample, however, we asked one of our site visitors and the 21st CCLC director to review our exclusions. Both agreed that one elementary center on our exclusion list deserved to be retained, with both stating that the program is, despite our PQA data, very high quality. Specifically, they indicated that this center has shown a commitment to continuous program quality improvement (going so far as to hire staff whose primary responsibility is to support quality initiatives) and has historically received high scores on the PQA administered by RIDE's quality observers. Both also indicated being impressed with the program's overall quality during in-person visits.

Because both the 21st CCLC director and the site visitor were in agreement about this center's inclusion, we reinstated this elementary center in our sample. However, because our own data did not necessarily justify this inclusion, we ran our PSM models both with and without the center to see whether there were any significant differences in outcomes. A review of our results showed that inclusion of this single center did not greatly change previously significant results, while inclusion resulted in several previously nonsignificant effects becoming statistically significant (likely caused by increases in *n* size because effect estimates for these specific effects were generally in the same direction for both center samples). The results presented in this section are therefore based on the sample of centers that includes the previously excluded center, for a total of 18 centers (nine each for elementary and middle schools).

One final, more general note on this adjustment is warranted. As indicated, the positive results that we present in this section were, if anything, reinforced by the addition of the center that was originally filtered out but later reinstated. Although we believe that centers with high scores on the PQA observation scales are indeed relatively high-quality centers (i.e., we believe our filtering successfully concentrated the sample to isolate higher quality programs), it does not follow that centers with lower PQA scores are necessarily lower quality overall; it stands to reason that quality is a multifaceted characteristic not entirely captured by PQA observations. That is, there appear to be important aspects of program quality not captured by the PQA data, at least in terms of our outcome results, because inclusion of a center that scored relatively low on the PQA did not lessen positive results. However, this specific center was vouched for as high quality by key individuals with local knowledge of program quality.

Assessment Outcomes

To investigate academic effects, AIR compared participants with matched nonparticipants in terms of assessment scores. To do this, we used scale scores from 2018–19 as well as student growth percentiles (SGPs) from 2018–19, both based on scores from the Rhode Island

Comprehensive Assessment System as provided by RIDE. Results for ELA and mathematics are in this section.

English Language Arts

We compared participants with nonparticipants in terms of ELA scores, using both scale scores and SGPs. Looking at all youth attending 21st CCLC programming (among selected sample centers) for at least 30 days or more, we found statistically significant positive effects of 21st CCLC programming on both scale scores and SGPs (Exhibit 54).

Exhibit 54. English Language Arts Effects for Participants Attending 30 Days or More Compared With Nonparticipants (Whole Group Effects)

Treatment	Outcome	Effect estimate	SE	<i>n</i> control	n treatment	p	Significance
30+ days	ELA scale score	1.535	0.687	812	702	0.026	*
30+ days	ELA SGP	4.581	1.485	739	665	0.002	**

Note. Effect estimates are presented in original units (scale score points and percentile points). p < .05. p < .01.

Using the same treatment definition of 30 days of participation in 21st CCLC or more, we also investigated ELA scale scores and SGPs by grade level. These results were somewhat mixed, with only one statistically significant positive effect for scale scores observed (for fourth grade) and three for SGPs (fourth, fifth and eighth grades; Exhibit 55).

Exhibit 55. English Language Arts Effects for Participants Attending 30 Days or More
Compared With Nonparticipants (by Grade Level)

Treatment	Outcome	Grade	Effect estimate	SE	<i>n</i> control	n treatment	p	Significance
30+ days	ELA scale score	4	2.952	1.419	133	150	0.038	*
30+ days	ELA scale score	5	2.236	1.715	126	120	0.194	
30+ days	ELA scale score	6	0.453	1.522	221	179	0.766	
30+ days	ELA scale score	7	-0.310	1.441	179	136	0.830	
30+ days	ELA scale score	8	2.654	1.646	153	117	0.108	
30+ days	ELA SGP	4	7.302	3.416	121	146	0.033	*
30+ days	ELA SGP	5	10.237	3.566	113	116	0.004	**
30+ days	ELA SGP	6	-0.776	2.909	214	169	0.790	
30+ days	ELA SGP	7	-0.359	3.277	154	125	0.913	
30+ days	ELA SGP	8	9.910	3.583	137	109	0.006	**

Note. Effect estimates are presented in original units (scale score points and percentile points). p < .05. p < .01.

When the treatment definition is changed from 30 days of participation in 21st CCLC to 60 days or more, we again found statistically significant effects in terms of scale scores and SGPs when analyzing all participants as a group, although the effect related to scale score was only marginally significant (p < .10). For both scale scores and SGPs, however, the effect estimate was higher for the 60 days or more treatment definition than for the 30 days or more treatment definition. See Exhibit 56.

Exhibit 56. English Language Arts Effects for Participants Attending 60 Days or More Compared With Nonparticipants (Whole Group Effects)

Treatment	Outcome	Effect estimate	SE	<i>n</i> control	n treatment	р	Significance
60+ days	ELA scale score	1.748	0.946	413	336	0.065	+
60+ days	ELA SGP	6.873	2.063	408	329	0.001	**

Note. Effect estimates are presented in original units (scale score points and percentile points). +p < .10. **p < .01.

Using the same 60 days or more treatment definition, we also analyzed ELA outcomes by grade level. Interestingly, we saw only three statistically significant results (those for fifth-grade scale scores and SGPs for fourth and fifth grades). Note, however, that the *n* sizes of some grade-level subgroups were low, which reduced our ability to detect effects. See Exhibit 57.

Exhibit 57. English Language Arts Effects for Participants Attending 60 Days or More Compared With Nonparticipants (by Grade Level)

Treatment	Outcome	Grade	Effect estimate	SE	n control	n treatment	р	Significance
60+ days	ELA scale score	4	2.411	1.657	106	111	0.147	
60+ days	ELA scale score	5	4.192	1.858	94	91	0.025	*
60+ days	ELA scale score	6	2.707	2.489	89	58	0.278	
60+ days	ELA scale score	7	-3.266	2.344	67	43	0.166	
60+ days	ELA scale score	8	0.152	2.878	57	33	0.958	
60+ days	ELA SGP	4	9.617	3.719	103	111	0.010	*
60+ days	ELA SGP	5	9.215	3.968	101	91	0.021	*
60+ days	ELA SGP	6	7.120	4.781	87	54	0.139	
60+ days	ELA SGP	7	-4.336	5.567	65	42	0.438	
60+ days	ELA SGP	8	7.034	6.570	52	31	0.287	

Note. Effect estimates are presented in original units (scale score points and percentile points).

**p* < .05.

Mathematics

We investigated mathematics outcomes in the same way we looked at ELA, using two treatment definitions (30 days or more and 60 days or more) and two outcome measures (scale scores and SGPs). Using the 30 days or more treatment definition and looking at all youth grouped together, we found statistically significant positive effects of 21st CCLC participation in terms of both scale scores and SGPs (Exhibit 58).

Exhibit 58. Mathematics Effects for Participants Attending 30 Days or More Compared With Nonparticipants (Whole Group Effects)

Treatment	Outcome	Effect estimate	SE	<i>n</i> control	<i>n</i> treatment	р	Significance
30+ days	Math scale score	1.590	0.590	816	706	0.007	**
30+ days	Math SGP	4.925	1.396	788	683	0.000	**

Note. Effect estimates are presented in original units (scale score points and percentile points). **p < .01.

When viewing the results by grade level, we found statistically significant positive effects for fourth, fifth, and sixth grades with respect to scale scores, but only one statistically significant effect in terms of SGP (for fourth grade). Interestingly, the effect size tended to drop as the grade level increased, which was somewhat different from the effect sizes for ELA (which show a moderately similar pattern, but with a rebound for eighth grade). See Exhibit 59.

Exhibit 59. Mathematics Effects for Participants Attending 30 Days or More Compared With
Nonparticipants (by Grade Level)

Treatment	Outcome	Grade	Effect estimate	SE	<i>n</i> control	N Treatment	р	Significance
30+ days	Math scale score	4	3.070	1.264	122	150	0.016	*
30+ days	Math scale score	5	2.982	1.418	122	121	0.036	*
30+ days	Math scale score	6	2.305	1.166	220	179	0.049	*
30+ days	Math scale score	7	-0.185	1.356	193	137	0.891	
30+ days	Math scale score	8	-0.900	1.453	159	119	0.536	
30+ days	Math SGP	4	11.184	3.073	133	149	0.000	**
30+ days	Math SGP	5	5.714	3.520	120	119	0.106	
30+ days	Math SGP	6	3.423	2.759	217	170	0.216	
30+ days	Math SGP	7	3.566	2.988	167	132	0.234	
30+ days	Math SGP	8	0.374	3.474	151	113	0.914	

Note. Effect estimates are presented in original units (scale score points and percentile points).

*p < .05. **p < .01.

Changing the treatment definition to 60 days or more and looking at all participants as a group, we found only one statistically significant positive effect (for SPG). Interestingly, effect sizes were slightly smaller than they were for the 30 days or more treatment group. See Exhibit 60.

Exhibit 60. Mathematics Effects for Participants Attending 60 Days or More Compared With Nonparticipants (Whole Group Effects)

Treatment	Outcome	Effect estimate	SE	<i>n</i> control	n treatment	р	Significance
60+ days	Math scale score	1.130	0.792	416	338	0.154	
60+ days	Math SGP	4.407	1.988	390	333	0.027	*

Note. Effect estimates are presented in original units (scale score points and percentile points). p < .05.

Using the 60 days or more treatment definition to look at mathematics outcomes by grade level revealed only one statistically significant positive effect, that for fourth-grade scale scores. Low *n* sizes would have made any effects harder to detect, however, and the effect estimates were generally in the theorized direction (except the eighth-grade scale scores). See Exhibit 61.

Nonpartic	vonparticipants (by Grade Level)										
Treatment	Outcome	Grade	Effect estimate	SE	<i>n</i> control	n treatment	р	Significance			
60+ days	Math scale score	4	3.302	1.561	104	112	0.036	*			
60+ days	Math scale score	5	0.799	1.495	88	92	0.593				
60+ days	Math scale score	6	1.117	1.743	90	58	0.523				
60+ days	Math scale score	7	1.091	2.317	72	43	0.638				
60+ days	Math scale score	8	-2.204	2.135	62	33	0.304				
60+ days	Math SGP	4	5.448	3.525	103	113	0.124				
60+ days	Math SGP	5	4.028	3.932	87	92	0.307				
60+ days	Math SGP	6	4.111	4.841	86	55	0.397				
60+ days	Math SGP	7	2.897	5.140	62	42	0.574				
60+ days	Math SGP	8	4.792	6.044	52	31	0.430				

Exhibit 61. Mathematics Effects for Participants Attending 60 Days or More Compared With Nonparticipants (by Grade Level)

Note. Effect estimates are presented in original units (scale score points and percentile points). p < .05.

School-Day Absences

As indicated in Section 5 (interview data), 21st CCLC programs focus on not only academic outcomes but also behavioral and social-emotional outcomes. Although it was not possible to

investigate social-emotional outcomes using PSM (because we were not able to collect survey data for youth in the comparison group), we did investigate some school-related outcomes that at least provide a broader picture of 21st CCLC effects. One of these outcomes is school-day absences, presented in terms log-transformed absence rates. A log transformation of the absence rate was necessary due to most students having near zero attendance rates.

Using a treatment definition of 30 days or more and looking at all sample participants as a group, we found a statistically significant, negative effect (i.e., a reduction) in school-day absence rate compared to similar nonparticipants (Exhibit 62). Note that the result was highly significant (p = 0.000). The median absence rate across all students in the analytic samples was approximately 6.7 percent. The decrease in the log attendance rate of -0.181 represents treatment students having an absence rate that is approximately 1.1 percent lower than the median (5.6 percent).

Exhibit 62. School-Day Absences for Participants Attending 30 Days or More Compared With Nonparticipants (Whole Group Effects)

Treatment	Outcome	Effect estimate	SE	<i>n</i> control	n treatment	p	Significance
30+ days	Absence rate	-0.181	0.036	1,204	1,107	0.000	**

Note. Effect estimates are presented in log-odds units. **p < .01.

As with assessments, we also looked at school-day absences for the 30-day treatment group broken out by grade level. We found multiple statistically significant negative effects (again, reductions) for all grades except first, fourth, and fifth grades. Effects for third and eighth grades were most certain, with *p* values of 0.006. See Exhibit 63.

Exhibit 63. School-Day Absences for Participants Attending 30 Days or More Compared With Nonparticipants (by Grade Level)

Treatment	Outcome	Grade	Effect estimate	SE	<i>n</i> control	n treatment	р	Significance
30+ days	Absence rate	1	-0.119	0.104	121	124	0.255	
30+ days	Absence rate	2	-0.250	0.103	113	149	0.016	*
30+ days	Absence rate	3	-0.263	0.094	131	131	0.006	**
30+ days	Absence rate	4	-0.082	0.102	118	133	0.422	
30+ days	Absence rate	5	0.068	0.113	115	115	0.548	
30+ days	Absence rate	6	-0.253	0.100	241	181	0.012	*
30+ days	Absence rate	7	-0.199	0.100	199	151	0.047	*
30+ days	Absence rate	8	-0.302	0.110	166	123	0.006	**

Note. Effect estimates are presented in log-odds units. *p < .05. **p < .01.

Looking at school-day absences with a treatment definition of 60 days yields a similar result to that obtained for the 30 days or more group, with a highly significant (p < 0.000) negative effect compared with nonparticipants (Exhibit 64). The reduction in the log odds of -0.223 translates to a roughly 1.3 percent decrease in the absence rate (6.7 percent to 5.4 percent).

Exhibit 64. School-Day Absences for Participants Attending 60 Days or More Compared With Nonparticipants (Whole Group Effect)

Treatment	Outcome	Effect estimate	SE	<i>n</i> control	n treatment	p	Significance
60+ days	Absence rate	-0.223	0.045	744	633	0.000	**

Note. Effect estimates are presented in log-odds units. **p < .01.

When analyzing absence rates by grade level, we again found multiple statistically significant negative effects (for first, third, sixth, and eighth grades). As with the findings for the 30 days or more treatment definition, the effects for third and eighth grades were most certain (in terms of *p* value). See Exhibit 65.

Exhibit 65. School-Day Absences for Participants Attending 60 Days or More Compared With Nonparticipants (by Grade Level)

Treatment	Outcome	Grade	Effect estimate	SE	<i>n</i> control	n treatment	р	Significance
60+ days	Log absence rate	1	-0.300	0.119	97	90	0.013	*
60+ days	Log absence rate	2	-0.164	0.112	111	118	0.144	
60+ days	Log absence rate	3	-0.279	0.104	115	102	0.008	**
60+ days	Log absence rate	4	-0.079	0.131	101	94	0.546	
60+ days	Log absence rate	5	-0.108	0.119	90	85	0.367	
60+ days	Log absence rate	6	-0.344	0.161	93	58	0.035	*
60+ days	Log absence rate	7	-0.127	0.144	73	49	0.381	
60+ days	Log absence rate	8	-0.577	0.183	64	37	0.002	**

Note. Effect estimates are presented in log-odds units. *p < .05. **p < .01.

Disciplinary Incidents, Suspensions, and Grade Promotion

We also looked at disciplinary incidents, suspensions, and grade promotion as outcome variables. We did not investigate these by grade level, however, because relatively few youth

had disciplinary incidents, suspensions, or lack of grade promotion for any particular grade level. Models for individual grades did not function. The results for these outcomes are therefore presented only at the overall group level.

As with other outcomes described in this section, we first investigated these outcomes using a treatment definition of 30 days or more. Although effects were all in the theorized direction, we only found one moderately significant effect (p < .10), for disciplinary incidents (Exhibit 66).

Disciplinary incidents and suspension days were modeled using Poisson regression (which is often used for outcomes represented as a count). The effect for those outcomes in the table indicate the change in the rate of occurrence (i.e., 21 percent reduction in disciplinary incidents and a 5 percent reduction in the number of days suspended). Grade promotion was modeled using logistic regression (which is used for binary outcomes, e.g., promoted or not-promoted). Roughly 94 percent of students in the analytic samples were promoted to the next grade, so an effect of 0.168 translates to increase of 1 percent (to 95 percent).

Exhibit 66. Discipline, Suspension, and Grade Promotion Outcomes for Participants Attending 30 Days or More Compared With Nonparticipants (Whole Group Effects)

Treatment	Outcome	Effect estimate	SE	<i>n</i> control	n treatment	p	Significance
30+ days	Discipline incidents	-0.213	0.119	1518	1284	0.074	+
30+ days	Days suspended	-0.048	0.089	1515	1284	0.593	
30+ days	Grade promotion	0.168	0.173	1520	1284	0.333	

Note. Effect estimates for discipline incidents and suspensions are presented in terms of rates, whereas grade promotion is presented in terms of log-odds difference between the treatment and comparison groups. +p < .10.

Looking at the same outcomes but using a treatment definition of 60 days or more instead of 30 days or more, we found two statistically significant, negative effects (reductions) for disciplinary incidents and days suspended (Exhibit 67).

Exhibit 67. Discipline, Suspension, and Grade Promotion Outcomes for Participants Attending
60 Days or More Compared With Nonparticipants (Whole Group Effects)

Treatment	Outcome	Effect estimate	SE	<i>n</i> control	n treatment	p	Significance
60+ days	Discipline incidents	-0.496	0.245	978	754	0.043	*
60+ days	Days suspended	-0.493	0.184	979	754	0.007	**
60+ days	Grade promotion	0.124	0.218	975	754	0.571	

Note. Effect estimates are presented in log-odds units.

p* < .05. *p* < .01.

Summary of Impact Analysis Results

Overall, our results support the proposition that high-quality 21st CCLC programs can have a positive impact on mathematics and ELA assessment scores, as well as school-day absences. Our analyses for these three types of outcomes yielded multiple statistically significant and positive results (in terms of all-group analysis and analysis by grade level). There also was evidence that 21st CCLC programs in our sample were having a positive impact on disciplinary incidents and suspensions (i.e., reductions), although those results were not quite as strong as the other results noted. (We saw fewer statistically significant results when analyzed by grade level.) We did not detect an impact on grade promotion, but this may have been caused by the low number of youth lacking grade promotion in 2018–19.

These results, however, are relevant primarily for the centers included in our sample, which were selected based on evidence that they provide high-quality programming. The results are not generalizable to all 21st CCLCs but may be relevant for programs identified as high quality. That said, there is some question as to how "high quality" is defined; one center that did not score highly on our PQA observation protocol was, at the guidance of the state 21st CCLC director and our site observer, usefully reincluded in our sample, in that effect direction did not generally change with the center's inclusion while *n* sizes (and thereby statistical power) was enhanced. This suggests that our PQA observation scores did not fully capture program quality, and programs scoring lower on the PQA (in relative terms) may still be high quality. However, it would be incorrect to assume that PQA scores do not matter, or that all centers might yield effects similar to what we observed in our study. Rather, the lower PQA scores that we relied on to establish our filtering for the impact analyses were simply overruled because of local, contextual knowledge on the part of disinterested individuals in positions to have a nuanced understanding of program quality at a specific center.

Section 8. Conclusions and Recommendations

Based on our descriptive analysis in Section 3, the 21st CCLC programs selected for our study appear to be serving the populations intended by the 21st CCLC program generally and are offering activities in keeping with overall program goals. Further, as shown by the PQA data presented in Section 4, the centers selected for inclusion in the study were generally of high quality (although opportunities for youth choice may be an area ready for growth). As illustrated by both the descriptive staffing data in Section 3 and the interviews analyzed in Section 5, the centers in the sample achieved a high overall level of quality using a variety of approaches, with different ways of assessing youth need and interest as part of their general operation. The correlational findings presented in Section 6, though not causal, seem to suggest the importance of youth having specific experiences while participating in programming, notably by connecting those experiences to the development of new interests, improved selfesteem, and growth on select social and emotional outcomes. Findings in Section 7 (based on our quasi-experiment) provide evidence that high levels of participation in high-quality 21st CCLC programming has a positive impact on assessment scores, school-day absences, disciplinary incidents, and suspensions. All of this supports Rhode Island's theory of action, shown in Exhibit 68.



Exhibit 68. Rhode Island's Theory of Action

Despite these positive findings, however, it bears repeating that these results are not generalizable to all 21st CCLCs across Rhode Island. These results are predicated on a group of centers specifically chosen because of evidence that their programming was high quality. These
results, therefore, are particular to our evaluation sample and of potential value to centers likewise deemed high quality. The findings also support state efforts to improve overall program quality, suggesting that these efforts have a real impact in terms of positive youth outcomes.

Recommendations

Based on the findings presented in this report, as well as review of Rhode Island's theory of action, we have several recommendations for RIDE's consideration:

- Investigate how COVID-19 and the attendant economic disruption have affected 21st CCLC staffing. One of the findings presented in Section 5 (interview findings) was that the interviewees believed that key to a quality, effective program is the staff, namely staff who understand the challenges their participants are facing and who are able to respond to youth challenges in a meaningful, relational way. How school closures and program shutdowns have affected this dynamic, or even the ability of 21st CCLC programs in Rhode Island to recruit or retain high-quality staff, may be important to explore.
- **Continue exploring social-emotional outcome measures.** As conveyed in the interview findings in Section 5, key 21st CCLC stakeholders believe that their 21st CCLC programs are having an impact in terms of behavior and social-emotional outcomes, yet these types of outcomes can be difficult to measure, especially because centers describe these outcomes in very different ways. However, as shown in Chapter 6, growth on key outcomes such as selfesteem, interpersonal skills, and positive mindsets were connected to youth having a set of positive experiences while participating in programming, particularly for a set of key skillbuilding experiences and experiences measured by the youth engagement survey. Given ongoing uncertainly on the best approach to measure social and emotional outcomes, there may be some value on focusing measurement efforts in this youth experiences space specifically, given greater ease in collecting these data and a sense that surveys are a viable way to collect information about youth experiences in programming, particularly when there is a goal to also use these data to inform and support program improvement efforts. In addition, our sense is the type of outcomes we examined in Chapter 6 (interest development, self-esteem, interpersonal skills, and positive mindsets) may result in a series of cascading effects relative to the types of opportunities youth seek out in the future and how they may interact differently with other learning environments, such as the school day. More work needs to be done in this space to explore how these possible connections play out as a result of student participation in high-quality afterschool programming.
- Consider investigating how often youth have opportunities for youth voice and choice. Looking at both PQA and survey data, this area that might need some improvement. Exploring whether this is true for centers across Rhode Island more generally might be valuable for quality improvement efforts.

- Further explore definitions of program quality. One of the unintentional findings of this report, as conveyed in the description of the sample used in our impact analysis, was that PQA data may not always "catch" high-quality programs. This could have repercussions for how RIDE uses PQA observations or how programs assess their own quality. Especially for programs that rely almost entirely on PQA data to assess their overall quality, additional indicators or measures may be useful to explore. To be clear, we think that the PQA data do supply useful information about program quality, but there are clearly aspects of quality, even important aspects of quality, that PQA observation data may miss. Some of the previously recommended movement to measuring youth experiences in programming may help provide a more expansive of portrait of program quality.
- Consider low-stakes ways to compare higher quality centers with lower quality centers. The evaluation described in this report focused on exploring programming and impact as they relate to high-quality centers. In large part, this narrow focus was necessary to carry out observational work (which would not have been readily feasible if all centers were included in the analysis). However, if possible, comparing youth outcomes associated with higher performing centers against those associated with lower performing centers (across the state) could constitute a useful extension to the findings shown in this report. The challenge to such a study, of course, is determining a way to measure quality that (a) is sufficiently efficient to allow inclusion of all centers across Rhode Island and (b) usefully differentiates actual program quality across centers (connecting to the previous recommendation).
- As a way to further explore Rhode Island's 21st CCLC action plan, consider a longitudinal study. Rhode Island's action plan for 21st CCLC (see Exhibit 68) theorizes that participation in high-quality 21st CCLC programming can lead to college and career readiness. These types of outcomes are difficult to explore when looking at 1 or 2 years' worth of data and were not addressed in this report. It may be useful to consider a longer term study that attempts to follow a cohort of youth or investigates the effect of many years of participation on youth outcomes.

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Appendix A. Center Coordinator Interview Protocol

RI 21st CCLC Evaluation-Spring 2017 Site Coordinator Interview Questions

Thank you again for taking the time to talk with me regarding the 21st Century Community Learning Centers evaluation. This interview should take approximately 30 to 45 minutes. The purpose of this interview is to understand your thoughts and perceptions of how the 21st CCLC program is being implemented at your site, particularly with respect to your program goals. Your responses will be used to help inform the evaluation, and to give us a sense of what your 21st CCLC program is working to accomplish. Information from this interview and other data we collect from your site will be used to help determine how we measure outcomes in the evaluation.

Your responses to my questions will be kept confidential to the extent permitted by law. In our reports, none of the respondents will be identified, nor will specific programs be cited.

I will be taking notes during our interview. Do you have any questions before we begin?

Goals and Intentionality in Program Design

- 1. Is there a set of goals for your program? If so, what are they?
 - Academic skill development
 - Social and emotional learning skill and competency development
 - Development of youth interest in specific content areas
 - Support sense of belonging and school connectedness
 - Career and college readiness
- 2. How are your program activities tied to the program goals you mentioned? Are some activities more central to your program goals than others? Can you give me an example?
- 3. How would you define the target population for the program? How do you interact with schoolday staff to help identify and recruit your center's target population? What draws youth to your program?
- 4. How do you think your program contributes to youth academic performance? What features of your program support positive academic outcomes for participating youth? PROBES:

- a. What steps do you take to ensure staff are qualified to deliver academic-related content?
- b. Are there particular strategies or approaches you especially rely on to help kids connect with academic content?
- c. To what extent is providing students' access to qualified tutors a strategy for supporting academic skill building and mastery?
- 5. To what extent are you trying to support the social and emotional development of participating youth? How do you go about doing this in your program?
- 6. Are there any specific tools or resources that have especially informed your thinking on how to design and provide programming?
- 7. Do you gather student input and feedback in your program (e.g. to determine program offerings, on program quality, on administration of the program, etc.)? If so, how? To what extent are there youth leadership opportunities in your program?
- 8. To what extent does your program rely upon outside organizations and agencies to support the delivery of programming? What types of programming is provided by these organizations? PROBE: How have these partnerships changed during the grant period, if at all? What have you learned about building and sustaining effective partnerships?

Linkages to School Day

- 8. What steps do you take to tie the activities in your afterschool program to specific learning goals related to the school-day curriculum?
- 9. Do you try to monitor how youth are progressing academically? What data do you rely on, and how it is used to benefit students?

Staff

- 10. Tell me about how your program is staffed.PROBE: Were staff hired or provided training based on program goals?
- 11. How do you view your role in the program? What tasks take up the majority of your time? How do you know you are being successful?

Program Quality and Data Use

12. What do you think are the primary features of high-quality programs? How do you and your team go about ensuring your programming is high quality?

- 13. Based on the quality-related data you collect and review, what have you done recently to improve your program (e.g., expanded program offering areas, changed program schedule based on youth input, scheduled training for staff)?
- 14. How do you measure youth outcomes? Are staff involved in interpreting youth outcome results?
- 15. How do you think youth benefit from participating in your program? Please try to name the top three ways in which students benefit from your program. How do you know youth are benefiting in the ways you just described? What do you think is the most important ingredient to your program's success in supporting children's development?

Appendix B. Site Coordinator Survey

21st CCLC Site Coordinator Survey

Welcome to the Rhode Island 21st CCLC program survey! In this survey, we will ask you some general questions about your program goals, structure, and student population. We also ask a couple questions about you.

The survey should take 5-10 minutes to complete. We appreciate your help!

Indicate your 21st CCLC program:

1) Please select your 21st CCLC program from the following drop-down list. [Pre-populated list of sites in the survey]

Program Goals:

In order to gain insight into the specific goals that 21st CCLC programs in Rhode Island are trying to accomplish, please answer the following questions about the program you identified above.

2) On a scale of 1 to 10, where 1 is "Not a priority" and 10 is "Very high priority," please indicate the extent to which each of the following is a priority for your program in terms of overall program goals.

Not a priority	Very High Priority
(1)	(10)

- 1. Helping youth experience a sense of belonging and connectedness through positive and supportive relationships.
- 2. Helping youth develop a sense of agency (e.g., helping develop positive mindsets and beliefs, including confidence and a sense of self-efficacy).
- 3. Developing youth interest and sense of self by exploring new things.
- 4. Building interest in domain-specific content areas like:
 - o STEM
 - o The Arts
 - Reading/Literacy
 - Foreign cultures/languages
- 5. Build youth self-management skills (whether cognitive or emotional).
- 6. Build youth sense of purpose (e.g., "this is why what you do with your life matters").
- 7. Enhance youth engagement in learning.
- 8. Improve youth perseverance and effort.
- 9. Help develop positive youth interpersonal skills.
- 10. Help youth improve critical thinking/problem solving skills.

 Is there anything about your program goals you think we should know, given your answers to question 2 above? (Optional)
 [open field]

Program Structure:

4) During the school year, about how many **hours per week** does your program operate? (This should be a rough estimate or average.)

[open box for number]

- 5) How much time would you ESTIMATE that your program TYPICALLY spends on each of the following types of activities during an **average week**? (If a given activity type is offered every other week, simply halve the time that the activity is offered to derive an average per-week time.)
 - 1. Academic direct instruction MATH
 - 2. Academic direct instruction READING
 - 3. Art enrichment
 - 4. Computer/other technology enrichment
 - 5. Foreign language/cultural studies
 - 6. Homework help
 - 7. Music enrichment
 - 8. Service learning
 - 9. Sports/recreation
 - 10. STEM/STEAM enrichment
 - 11. Tutoring
 - 12. Other academic enrichment
 - 13. Other NON-academic enrichment
 - 14. Youth leadership
 - 15. Social services
 - 16. Other_____
- 6) Is there anything about your program structure that would be important for us to know, given your answers to question 5? [open field question]

Populations of Interest

- 7) Does your program intentionally recruit any of the following populations?
 - □ ELL students
 - □ Students behind grade level
 - □ Financially at-risk student populations
 - □ Students with special needs
 - Other _____

Data Reporting Logistics:

As part of AIR's evaluation, we plan to collect pre and post survey data. This will include youth surveys for youth in grades 4-8, and teacher surveys for youth in grades k-3. Each site will administer EITHER the youth survey OR the teacher survey, not both (AIR will provide instructions about which survey type to administer).

The youth survey PRE will include questions about mindsets, behaviors, and beliefs. The youth survey POST will include all items on the pre but will also include questions about their experience in the program as well as questions about how they think the program has helped them. The teacher survey, PRE and POST, is designed to be taken by a school-day teacher and asks questions about each student's classroom behavior, such as homework completion and engagement in class.

The youth surveys (pre and post) will take 5 and 15 minutes (respectively). The teacher surveys should take approximately 5-10 minutes each.

- Generally speaking, in terms of collecting PRE survey data (taken by students and/or school-day teachers), which month is BEST for your program? Please rank the months from best to worst. October November December
- 9) Generally speaking, in terms of collecting POST survey data (taken by students and/or schoolday teachers), which month is BEST for your program? Please rank the months from best to worst.
 - March April May June
- 10) We know that programs often have many competing or overlapping data-reporting timelines. Is there anything else you would like us to know about your general data-reporting timelines? [open field]

Respondent Demographic/Contact Questions:

- 11) Please provide your full name (in case we need to ask any follow-up questions): [provide boxes for first/last name, position]
- 12) Please provide an email address: [Email address field]

- 13) How would you classify your current role? (Select all that apply.)
 - Grant director
 - **Program site coordinator**
- 14) How long have you been in your current role?
 - O Less than one year
 - O 1-2 years
 - O 3-5 years
 - O 5-10 years
 - More than 10 years
- 15) How long have you worked with out-of-school-time programs, in any capacity?
 - Less than one year
 - O 1-2 years
 - O 3-5 years
 - \odot 5-10 years
 - O More than 10 years

Appendix C. Program Quality Assessment Observation Protocol

Short-Form Youth Program Quality Assessment -

Rhode Island Quality to Youth Outcome Study

The purpose of this tool is to allow for the assessment of program activities at sites participating in the RI 21st CCLC evaluation pilot. This form uses a subset of items from the Youth Program Quality Assessment (YPQA) family of tools.

Please complete the following information about the segment being scored using the domain of PQArelated items found in this tool. **One complete version of the tool should be completed for each activity segment observed.**

Site:	
Offering:	
Segment #:	
Date:	
Observer initials (no periods):	
# of staff:	
# of youth:	
Observation segment start time:	
Observation segment end time:	

SESSION FLOW | Session flow is planned, presented and paced for youth.

	ITEMS			 SUPPORTING EVIDENCE/ANECDOTES
1.	1 Staff does not explain any activities clearly.	3 Staff explains some activities clearly.	5 Staff explains all activities clearly (e.g., youth appear to understand directions; sequence of events and purpose are clear).	

ACTIVE ENGAGEMENT | Activities support active engagement.

	ITEMS			SUPPORTING EVIDENCE/ANECDOTES
1.	1 The activities provide no opportunities for youth to engage with either materials or ideas or to improve a skill through guided practice; activities mostly involve waiting, listening, watching and repeating.	3 The activities provide opportunities for youth to engage with materials or ideas or to improve a skill though guided practice for less than half of the time.	5 The activities involve youth in engaging with (creating, combining, reforming) materials or ideas or improving a skill though guided practice for at least half of the time.	
2.	1 During activities, staff does not provide any youth structured opportunities to talk about (or otherwise communicate) what they are doing and what they are thinking about to others.	3 During activities,staff provides some youth a structured opportunity to talk about (or otherwise communicate) what they are doing and what they are thinking about to others (e.g, staff asks some youth to explain what they are doing or why, staff has half the youth explain their art project to someone else).	5 During activities, staff provides all youth a structured opportunity to talk about (or otherwise communicate) what they are doing and what they are thinking about to others (e.g., each youth explains the reasoning behind his or her design to staff, staff assigns youth to small groups to work on a shared task).	
3. (Y)	1 The activities focus almost exclusively on abstract learning or concepts, providing limited or no related concrete experiences (activities almost exclusively consist of learning about a topic; lecture format).	3 The activities focus almost exclusively on concrete experiences, providing limited or no opportunities to engage with related abstract learning or concepts (activities almost entirely consist of youth doing, practicing, or experiencing, without learning about or discussing the how, what, or why).	5 The activities balance concrete experiences involving materials, people and projects (e.g., field trips, experiments, interviews, practicing dance routines, creative writing) with abstract learning or concepts (e.g., learning, talking about a topic; lectures; staff providing diagrams, formulas).	
4. (Y)	1 The activities do not (will not) lead to tangible products or performances.	3 The activities lead (or will lead) to tangible products or performances, but do not reflect ideas or designs of youth (e.g., youth will perform dances selected by staff, all youth make bird houses according to the design supplied by staff.)	5 The program activities lead (or will lead in future sessions) to tangible products or performances that reflect ideas or designs of youth (e.g. youth explain their projects to whole group, all create dance routines to perform later, youth create their own sculptures).	

IV. ENGAGEMENT: PLANNING | CHOICE | REFLECTION | CONNECTIONS

CONNECTIONS | Staff connect activities to other learning, experiences, issues, and applications.

ITEMS			SUPPORTING EVIDENCE/ANECDOTES
 1 Staff do not help youth connect current activity to personal experiences or previous knowledge. 	3 Once during the session, staff help youth connect current activity to personal experiences or previous knowledge	5 More than once, staff help youth connect current activity to personal experiences, applications, or previous knowledge (e.g. Have you ever noticed how windows start to fog up when it starts to get cold? When I see this, I start to imagine how the molecules are moving more and more slowly as the temperature drops until, finally, they form these amazing little crystals).	

V. Academic Climate

V-I. Youth are supported in the development of specific academic skills.

ITEMS

 1 Activities are too easy or too hard for nearly all participants and several youth may opt not to engage in session activities (e.g., many participants complain they are bored or the activity is too hard). **3** Activities are appropriately challenging for some participants, but for others are too hard or too easy (e.g., participants seem bored or extremely frustrated). Some youth may opt not to engage in session activities. **5** Activities are appropriately challenging (not too easy and not too hard) for all or nearly all the participants (e.g., there is little or no evidence of boredom or extreme frustration on the part of participants) and almost all youth respond to the opportunity to engage in session activities.

SUPPORTING EVIDENCE/ANECDOTES

SKILL-BUILDING | Staff supports youth in building skills.

	ITEMS			 SUPPORTING EVIDENCE/ANECDOTES
1.	1 Staff does not encourage youth to try out skills or attempt higher levels of performance.	3 Staff encourages some youth to try out skills or attempt higher levels of performance.	5 Staff encourages all youth to try out skills or attempt higher levels of performance.	
2.	1 Staff does not model skills.	3 Staff models skills for some youth.	5 Staff models skills for all youth.	
3.	1 When youth struggle (with errors, imperfect results or failure), staff, even once, responds with sarcasm, condescension, criticism, punishment, or making fun of the child.	3 When youth struggle (with errors, imperfect results or failure), staff sometimes does not respond with learning supports or encouragement (e.g., numerous youth are raising their hands for help, but the staff does not get around to responding to all of them; staff ignores struggling youth).	5 When youth struggle (with errors, imperfect results or failure), staff always provides learning supports or encouragement (e.g., youth are helped to problem solve, encouraged to try another approach, told why an error was made, encouraged to keep trying, given guidance or explanation when needed).	If no youth struggle with imperfect results, do not score. Write an "X" in the box at the left. Expect to score this item if item 2 above scores a 3 or 5,

SKILL-BUILDING | Staff supports youth in building skills.

	ITEMS			SUPPORTING EVIDENCE/ANECDOTES
4.	1 Staff attribute success or failure to ability (e.g., "Great job! You're so smart!").	3 Staff do not attribute success or failure to either ability or effort/attention/ persistence.	5 Staff attribute success to effort, attention, practice, or persistence (e.g., "Your brain is like a muscle, the more you exercise it, the better it works." "It may take some extra practice, but you'll get better at it." "I see your effort paid off.").	
5.	1 There are no instances in which staff-youth conversations include substantive back and forth dialogue about offering content.	3 There is at least one instance in which staff- youth conversations include substantive back and forth dialogue about offering content.	5 There are two or more instances with different individual youth in which staff-youth conversations include substantive back and forth dialogue about offering content (i.e., staff talks, youth responds with more than a word or two, staff talks, youth talks more, etc.).	

ENCOURAGEMENT | Staff supports youth with encouragement.

Note: Open-ended questions do not have predetermined, correct answers; they seek the opinions, thoughts and ideas of youth.

	ITEMS			SUPPORTING EVIDENCE/ANECDOTES
1.	1 Staff does not support contributions or accomplishments of youth in either of the ways described for a score of 3 or 5, or simply don't support youth at all.	3 Staff supports many contributions or accomplishments of youth but use subjective or evaluative comments, such as "Good job!", "I like it!" or "You're so smart!"	5 Staff supports at least some contributions or accomplishments of youth by acknowledging what they've said or done with specific, non-evaluative language (e.g., "Yes, the cleanup project you suggested is a way to give back to the community," "I can tell from the audience response that you put a lot of thought into the flow of your video").	
2.	1 Staff rarely or never asks open- ended questions.	3 Staff makes limited use of open-ended questions (e.g., only uses them during certain parts of the activity or repeats the same questions).	5 Staff makes frequent use of open-ended questions (e.g., staff asks open-ended questions throughout the activity and questions are related to the context, most youth have the opportunity to answer questions that seek opinions or require thoughtful answers).	
3. (Y)	1 Staff is not actively involved with youth except for brief introductions, endings or transitions (e.g., they are physically separated from youth or do not interact with them).	3 Staff (or some of the staff) is sometimes or intermittently, actively involved with youth.	5 Staff is almost always actively involved with youth (e.g., they provide directions, answer questions, work as partners or team members, check in with individuals or small groups).	

I. SAFE ENVIRONMENT: EMOTIONAL SAFETY | HEALTHY ENVIRONMENT | EMERGENCY PREPAREDNESS | ACCOMMODATING ENVIRONMENT | NOURISHMENT

EMOTIONAL SAFETY | Psychological and emotional safety is promoted.

	ITEMS			SUPPORTING EVIDENCE/ANECDOTES
1.	1 The emotional climate of the session is predominantly negative (e.g., disrespectful, tense, exclusive, even angry or hostile); negative behaviors, such as rudeness, bragging, insults, "trash talking," negative gestures or other such actions are not mediated by either children or staff.	3 The emotional climate of the session is neutral or characterized by both positive and negative behaviors.	5 The emotional climate of the session is predominantly positive (e.g., mutually respectful, relaxed, supportive; characterized by teamwork, camaraderie, inclusiveness, and an absence of negative behaviors). Any playful negative behaviors (not considered offensive by parties involved) are mediated (countered, curtailed, defused) by staff or youth.	

BELONGING | Youth have opportunities to develop a sense of belonging.

	ITEMS			 SUPPORTING EVIDENCE/ANECDOTES
1.	1 Youth exhibit evidence of excluding peers (e.g., youth are avoided or ostracized by other youth, "I don't want to sit with her – she's not my friend") and staff does not explicitly promote more inclusive relationships (e.g., suggest ways to include others, introduce excluded youth, say, "Remember, being inclusive is one of our ideals").	3 Youth exhibit some evidence of excluding peers and staff intervenes, but not sufficiently to end exclusion (e.g., staff introduces a newcomer to other youth, but the newcomer is treated coolly and avoided or ignored; staff intervenes in some instances of exclusionary behavior but not others).	5 Youth do not exhibit any exclusion or staff successfully intervenes if exclusive behavior occurs (e.g., staff introduces newcomer to other youth and they then include her, staff successfully suggests including a lone youth in a game).	
2.	1 Youth do not identify with the program offering (e.g., many youth complain about or express dislike of the program offering or activities).	3 Youth do not strongly identify with the program offering but do not complain or express dislike.	5 Youth strongly identify with the program offering (e.g., hold one another to established guidelines, use ownership language, such as "our program," engage in shared traditions such as shared jokes, songs, gestures).	

	COLL	ABORATION Y	outh have opportun work cooperative	ities ly w	ties to collaborate and y with others.		
	ITEMS				SUPPORTING EVIDENCE/ANECDOTES		
1. (Y)	1 Staff does not provide opportunities for youth to work cooperatively as a team or in a group.	3 Staff provides opportunities for some youth to work cooperatively as a team or in a group.	5 Staff provides opportunities for all youth to work cooperatively as a team or in a group.				
2. (Y)	1 Staff does not provide opportunities for interdependent youth roles.	3 Staff provides the opportunity for some youth to participate in activities with interdependent roles.	5 Staff provides all youth opportunities to participate in activities with interdependent roles (e.g. note-taker, treasurer, spokesperson for planning committee; tennis players, singles or doubles).				
3. (Y)	1 Staff does not provide opportunities for youth to work toward shared goals.	3 Staff provides opportunities for some youth to work toward shared goals.	5 Staff provides opportunities for all youth (groups or individuals) to work toward shared goals (e.g., each youth contributes a section to a story, youth build a catapult together).				

LEADERSHIP | Youth have opportunities to act as group facilitators and mentors.

	ITEMS			 SUPPORTING EVIDENCE/ANECDOTES
1. (Y)	1 Staff does not provide all youth opportunities to practice group- process skills.	3 Staff provides all youth at least a limited opportunity to practice group-process skills (e.g., a full group discussion is long enough for all youth to contribute, youth briefly share in pairs).	5 Staff provides all youth multiple or extended opportunities to practice group-process skills (e.g., contribute ideas or actions to the group, do a task with others, take responsibility for a part).	

ADULT PARTNERS | Youth have opportunities to partner with adults.

	ITEMS			SUPPORTING EVIDENCE/ANECDOTES
1. (Y)	1 Staff rarely shares or attempts to share control of activities with youth.	3 Staff attempts to share control with youth but ends up controlling most activities themselves.	5 Staff shares control of most activities with youth, providing guidance and facilitation while retaining overall responsibility (e.g., staff uses youth leaders.	
			semiautonomous small groups or individually guided activities).	

IV. ENGAGEMENT: PLANNING | CHOICE | REFLECTION

PLANNING | Youth have opportunities to make plans.

	ITEMS	· · · · · · · · · · · · · · · · · · ·		 SUPPORTING EVIDENCE/ANECDOTES
1. (Y)	1 Staff does not provide opportunities for youth to make plans for projects or activities.	3 Staff provides at least one opportunity for youth (individual or group) to make plans for a project or activity (e.g., how to spend their time, how to do a task).	5 Staff provides multiple opportunities for youth (individual or group) to make plans for projects and activities, (e.g., how to spend their time, how to do a task).	

IV. ENGAGEMENT: PLANNING | CHOICE | REFLECTION

CHOICE | Youth have opportunities to make choices based on their interests.

Note: (a) Discrete refers to a finite list of specific alternatives. (b) Open-ended indicates nondiscrete, open possibilities within some boundaries. (c) All youth refers to situations where all youth make individual choices or situations where all youth participate in group decision making.

ITEMS			SUPPORTING EVIDENCE/ANECDOTES
 1 Staff does not provide (Y) opportunities for all your make content choices. 	 3 Staff provides opportunities for all youth to choose among content alternatives, but choices are limited to discrete choices presented by the leader. 	5 Staff provides opportunities for all youth to make at least one open-ended content choice within the content framework of the activities (e.g., youth decide topics within a given subject area, subtopics or aspects of a given topic).	
 1 Staff does not provide (Y) opportunities for all your make process choices. 	3 Staff provides opportunities for all youth to choose among process alternatives, but choices are limited to discrete choices presented by the leader.	5 Staff provides opportunities for all youth to make at least one open-ended process choice (e.g., youth decide roles, order of activities, tools or materials, or how to present results)	

Appendix D. Teacher Survey (Pre and Postadministration)

Survey of Academic Youth Outcomes (SAYO) – Teacher Version

Welcome to the Rhode Island 21st CCLC Teacher Survey!

This survey will ask you some basic questions regarding students in your class. Please complete one of these surveys for each individual 21st CCLC participant. (Your 21st CCLC program staff should have provided you with a list of the students for whom they want you to complete a survey.)

Background: The purpose of this survey is to find out more about youth and youth programs in Rhode Island. The goal is to help make 21st Century Community Learning Center (21st CCLC) programs better for young people. This survey should take about 5-10 Minutes. Please note that parents have been informed that this survey is taking place and have been provided an opportunity to have their child excluded from this survey.

Your participation in this survey is voluntary. Any data you provide in this survey will be used to help analyze the effect of 21st CCLC program quality on specific youth outcomes, which will in turn benefit student participants. All your answers will be kept confidential and reported only in aggregate (without any identifying information).

SCHOOL-DAY BEHAVIOR									
During this school year, to what extent has your student changed their behavior in terms of:									
Significant Slight No Change Slight Decline Significant Improvement Improvement No Change Slight Decline Decline									
Q1a. Completing homework to your satisfaction.	0	0	0	0	0				
Q1b. Participating in class.	0	0	0	0	0				
Q1c. Behaving well in class.	0	0	0	0	0				

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ENGAGEMENT IN LEARNING							
Please select the option that indicates how often this youth:							
	Never	Rarely	Sometimes	Usually	Always		
Q2a. c. Is interested in participating in new experiences.	0	0	0	0	0		
Q2b. d. Contributes constructively to group discussions.	0	0	0	0	0		
Q2c. e. Actively participates in learning activities (<i>i.e. without</i> needing prompting from adults or peers).	0	0	0	0	0		
Q2d. f. Appears cognitively engaged during activities (e.g. asks questions, shares opinions, offers ideas).	0	0	0	0	0		

SELF REGULATION								
Please select the option that	Please select the option that best describes how often this youth:							
	Never	Rarely	Sometimes	Usually	Always			
Q3a. a. Works well independently when expected to do so	0	0	0	0	0			
Q3b. b. Is able to regain control of behavior or adjust behavior when given a warning	0	0	0	0	0			
Q3c. c. Is able to maintain focus and attention on tasks.	0	0	0	0	0			
Q3d. d. Is self-reflective and can plan and think ahead.	0	0	0	0	0			

RELATIONS WITH PEERS							
Please select the option that best describes how often this youth:							
	Never	Rarely	Sometimes	Usually	Always		
Q4a. a. Works well on	0	0	0	0	0		
cooperative tasks.							
Q4b. b. Forms friendships	0	0	0	0	0		
with peers.							
Q4c. c. Shows respect and	0	0	0	0	0		
consideration for peers							
(including those who may							
differ by gender, age,							
race/ethnicity, or peer							
group).							
Q4d. f. Is able to listen to a	0	0	0	0	0		
peers' point of view during							
a disagreement.							

Appendix E. Youth Survey (Pre and Postadministration Versions)

Youth Outcomes Survey for Middle and High School (6th or 7th-12th Grades)

Rhode Island 21st Century Community Learning Centers

Instructions: The purpose of this survey is to find out more about 21st CCLC outof-school programs in Rhode Island. Our goal is to help make out-of-school time programs better for you and other young people. This survey should take about 15 minutes. Below are questions that ask about you and some of the things you think and feel about yourself and your out-of-school-time program. There are no "wrong" answers. Please choose the answer that is most true or most like you.

This survey is completely <u>voluntary</u>. You do not have to answer any of the questions if you don't want to, and you can stop taking this survey at any time. This survey is confidential, which means that no one (not your parents, teachers, school staff or other students) will be allowed to know how you answer these questions.

[NOTE: Q1 DESIGNED FOR USE IN BOTH PRE AND POST.]

	Not at all	Somewhat	Mostly	Completely
INTERPERSONAL SKILLS	liue	liue	true	nuc
Q1a I listen to other people's ideas	0	0	0	0
Q1b I work well with others on group	_		_	
projects	0	0	0	0
Q1c I feel bad when someone gets				
their feelings hurt	0	0	0	0
Q1d I respect what other people think,			0	
even if I disagree	0	0	0	0
Q1e I try to help when I see someone			0	
having a problem	0	0	0	0
Q1f When I make a decision, I think				
about how it will affect other people	0	0	0	0
Q1g I know how to disagree without				
starting a fight or an argument.	0	0	0	0

1. Young people might describe themselves in many ways. We have listed some things youth might say or think about themselves. How true is each statement for you?

	Not at all	Somewhat	Mostly	Completely
	true	true	true	True
POSITIVE MINDSETS				
Q2a I finish whatever I begin	0	0	0	0
Q2b I stay positive when things don't	0	0	0	0
go the way I want	0	0	0	0
Q2c I don't give up easily	0	0	0	0
Q2d I try things even if I might fail	0	0	0	0
Q2e I can solve difficult problems if I				
try hard enough	0	0	0	0
Q2f I can do a good job if I try hard	_	_	_	_
enough	0	0	0	0
Q2g I stay focused on my work even				
when it's boring	0	0	0	0
Q2h I focus on my goals, even when it	0	0	0	0
is difficult.	Ĵ	Ĵ	Ĵ	

[NOTE: Q2 AND FOLLOWING DESIGNED FOR USE IN THE POST ONLY.]

Q3 2. Over the past school year, how has your self-esteem changed?

- Decreased a lot
- o Decreased a little
- \circ Stayed the same
- o Increased a little
- o Increased a lot

3. Thinking about how you feel today compared to the beginning of the school year, how interested are you in the following topics?

	Less interested	About the same	More interested
Q4a Science	0	0	0
Q4b Computers/Technology	0	0	0
Q4c Music	0	0	0
Q4d Art	0	0	0
Q4e Politics/Government	0	0	0
Q4f History	0	0	0
Q4g Other Countries/Cultures	0	0	0
Q4h Writing	0	0	0
Q4i Drama	0	0	0
Q4j Sports	0	0	0
Q4k Issues in my community	0	0	0

Q5 4. If you indicated *More Interested* to any of the items above, can you please tell us why your interest in this area changed?

[OPEN-ENDED]

5. How has this afterschool program helped you specifically? Pick up to <u>THREE</u> areas where you think the program has helped you the MOST. This program has helped me...

	Pick up to Three
Q6a Feel good about myself.	
Q6b With my confidence.	
Q6c Make new friends.	
Q6d Find out what is important to me.	
Q6e Find out what I'm good at doing.	
Q6f Find out what I like to do.	
Q6g Discover things I want to learn more about.	
Q6h Learn things that will help me in school.	
Q6i Learn things that will be important for my future.	
Q6j Think about the kinds of classes I want to take in the future.	
Q6k Think about what I might like to do when I get older.	
Q6I Learn about things that are important to my community.	
Q6m Feel good because I was helping my community.	
Q6n This program hasn't actually helped me.	
Q60 I prefer not to answer.	

Thank you!

Appendix F. Youth Experience Survey

Youth Experiences Survey for Middle and High School (6th or 7th-12th Grades) Rhode Island 21st Century Community Learning Centers

Instructions: The purpose of this survey is to find out more about 21st CCLC outof-school programs in Rhode Island. Our goal is to help make out-of-school time programs better for you and other young people. This survey should take about 15 minutes. Below are questions that ask about you and some of the things you think and feel about yourself and your out-of-school-time program. There are no "wrong" answers. Please choose the answer that is most true or most like you.

This survey is completely <u>voluntary</u>. You do not have to answer any of the questions if you don't want to, and you can stop taking this survey at any time. This survey is confidential, which means that no one (not your parents, teachers, school staff or other students) will know how you answer these questions.

	Never	Rarely	Sometimes	Often
Q1a Do you get to choose how you spend your time?	0	0	0	0
Q1b Can you suggest your own ideas for new activities?	0	0	0	0
Q1c Do you get to choose which activities you do?	0	0	0	0
Q1d Do you get to help plan activities for the program?	0	0	0	0
Q1e Do you get the chance to lead an activity?	0	0	0	0
Q1f Do you get to be in charge of doing something to help the program?	0	0	0	0
Q1g Do you get to help make decisions or rules for the program?	0	0	0	0

1. Think about this after-school program in particular. When you are at this program, how often...

	Not at all true	Somewhat true	Mostly true	Completely True
Q2a Who is interested in	_	_		_
what I think about things.	0	0	0	0
Q2b Who I can talk to when I	_	_	_	_
am upset.	0	0	0	0
Q2c Who helps me when I			0	
have a problem.	0	0	0	0
Q2d Who I enjoy being				
around.	0	0	0	0
Q2e Who has helped me find				
a special interest or talent.	0	0	0	0
Q2f Who asks me about my			0	
life and goals.	0	0	0	0
Q2g Who I will miss when the			0	
program is over.	0	0	0	0

2. Thinking about the adults in this program, how true are these statements for you? In this program, there is an adult here...

3. At this program, how do kids get along? Indicate how true each statement is based on your own experience in this program.

	Not at all true	Somewhat true	Mostly true	Completely True
Q3a Young people here are friendly	0	0	0	0
with each other.	Ŭ	Ŭ	Ŭ	Ŭ
Q3b Young people here treat each				
other with respect.	0	0	0	0
Q3c Young people here listen to	0	0	0	0
what the teachers tell them to do.				
Q3d Young people here support				
and help one another.	0	0	0	0
4. Please indicate if you have had the following experiences in this after-school program.

In this afterschool program,	Not at all	Sort Of	Yes, Definitely
Q4a I tried new things	0	0	0
Q4b I set goals for myself	0	0	0
Q4c I learned to push myself	0	0	0
Q4d I learned to focus my attention	0	0	0
Q4e I learned about developing plans for solving a problem	0	0	0
Q4f I used my imagination to solve problems	0	0	0
Q4g I learned about setting priorities	0	0	0
Q4h I learned to consider possible obstacles when making plans	0	0	0

Thank you!

Appendix G. Youth Engagement Survey

Quality to Youth Outcomes Study: Youth Engagement Survey

The purpose of this survey is to find out more about afterschool programs in Rhode Island and how students like you feel about these programs. We care about what you think about this program, and your answers will help make afterschool programs better for students in Rhode Island and the nation. We need your honest feedback. The questions on the survey ask about what you experienced in this afterschool program today. There are no "wrong" answers.

This survey is voluntary. Everything you write is confidential, which means that no one (not your parents, teachers, school staff or other students) will know how you answer these questions.

Your answers will be kept private—no one in the program or your family will know what you answered. All answers will be sent to the study researchers, who will pull together all the information without any names.

Please answer each question by checking the boxes or filling in the circle next to the answer. Some questions ask you to fill in only ONE circle, and other questions ask you to check ALL the boxes that apply to you.

QUALITY TO YOUTH OUTCOMES STUDY

[SITE NAME]

Youth Engagement Survey

1. Please answer these questions about TODAY'S AFTERSCHOOL activities

	Not at All	A Little	Somewhat	Very Much
a. How challenging were today's activities?	0	0	0	0
b. Were you good at today's activities?	0	0	0	0
c. Were today's activities interesting?	0	0	0	0
d. Were today's activities important to you?	0	0	0	0
e. Were today's activities important to your future goals?	0	0	0	0
 f. Could you see yourself using what you were learning in today's activities outside this program? 	O	0	0	0
g. Did you work with other kids during today's activities?	0	0	0	0
h. Did you enjoy today's activities?	0	0	0	0
 Did you have to concentrate to do today's activities? 	0	0	0	0
j. Do you feel like you learned somethi or got better at something today?	^{ng} O	0	0	0
k. Do you feel you worked hard during today's activities?	0	0	0	0
I. How HAPPY were you feeling in the program today?	0	0	0	0
m. How EXCITED were you feeling in the program today?	° 0	0	0	0
n. How BORED were you feeling in the program today?	0	0	0	0
 Were youth treating each other well today? 	0	0	0	0
p. Were youth doing what they were supposed to be doing today?	0	0	0	0

2. Did anything happen today that made the activities especially GOOD or BAD? Please describe.





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